

**FIGURE 4**  
**On-site Hydrograph Area Map – Proposed/Existing Conditions**



**FIGURE 5**  
**Hydrology Map – Off-site Drainage Areas to new Nichols Road**

# LEGEND

**--- Drainage Area/Subarea Boundary**  
**→ General Surface Flow Direction**  
**L=1300' Flow Length**  
**(D-3 / 0.26) Drainage Sub Area Designation**  
**Sub Area Acreage**  
**Q<sub>2</sub>=5.55cfs / Q<sub>100</sub>=10.45cfs Sub Area Flow**  
**1440 / 25 Node Elevation / Hydrology Node Number**  
**≥ Q<sub>10</sub>=5.55cfs / ≥ Q<sub>100</sub>=10.45cfs Cumulative Flow**  
**--- Soil Type Boundary**

The design discharge in the various sub-drainage areas considered in this study are listed in the table below:

Summary Hydrology Drainage Area D, Proposed Condition – Rational Method 10-year storm:

| Drainage Area | Area in Acre | Q <sub>10</sub> sub-area in cfs | Q <sub>10</sub> confluence in cfs |
|---------------|--------------|---------------------------------|-----------------------------------|
| D-1           | 4.60         | 8.49                            |                                   |
| D-2           | 2.10         | 3.78                            | 12.97                             |
| D-3           | 15.00        | 25.70                           | 37.97                             |
| D-4           | 4.20         | 6.73                            | 44.69                             |

Summary Hydrology Drainage Area D, Proposed Condition – Rational Method 100-year storm:

| Drainage Area | Area in Acre | Q <sub>100</sub> sub-area in cfs | Q <sub>100</sub> confluence in cfs |
|---------------|--------------|----------------------------------|------------------------------------|
| D-1           | 4.60         | 13.41                            |                                    |
| D-2           | 2.10         | 5.98                             | 19.39                              |
| D-3           | 15.00        | 40.97                            | 60.36                              |
| D-4           | 4.20         | 10.81                            | 71.17                              |

**TRACT 37305**  
**NICHOLS ROAD**  
**CITY OF LAKE ELIZABETH**  
**COUNTY OF RIVERSIDE**  
**SCALE: 1"=100'**  
**0 100 200 300 400**

**TR. 37305 - NICHOLS SOUTH SPECIFIC PLAN**  
**OFF-SITE HYDROLOGY - AREA D**  
**PROPOSED NICHOLS ROAD**

FIGURE 5

**K&A ENGINEERING**  
**LAND PLANNING**  
**SURVEYING**  
 357 N. SHERIDAN STREET  
 SUITE 117  
 CORONA, CALIFORNIA 92880  
 TEL. (951) 279-1800  
 FAX (951) 279-4380

| Drainage Area | Area in Acre | Q <sub>100</sub> sub-area in cfs | Q <sub>100</sub> confluence in cfs |
|---------------|--------------|----------------------------------|------------------------------------|
| D-1           | 4.60         | 13.41                            |                                    |
| D-2           | 2.10         | 5.98                             | 19.39                              |
| D-3           | 15.00        | 40.97                            | 60.36                              |
| D-4           | 4.20         | 10.81                            | 71.17                              |

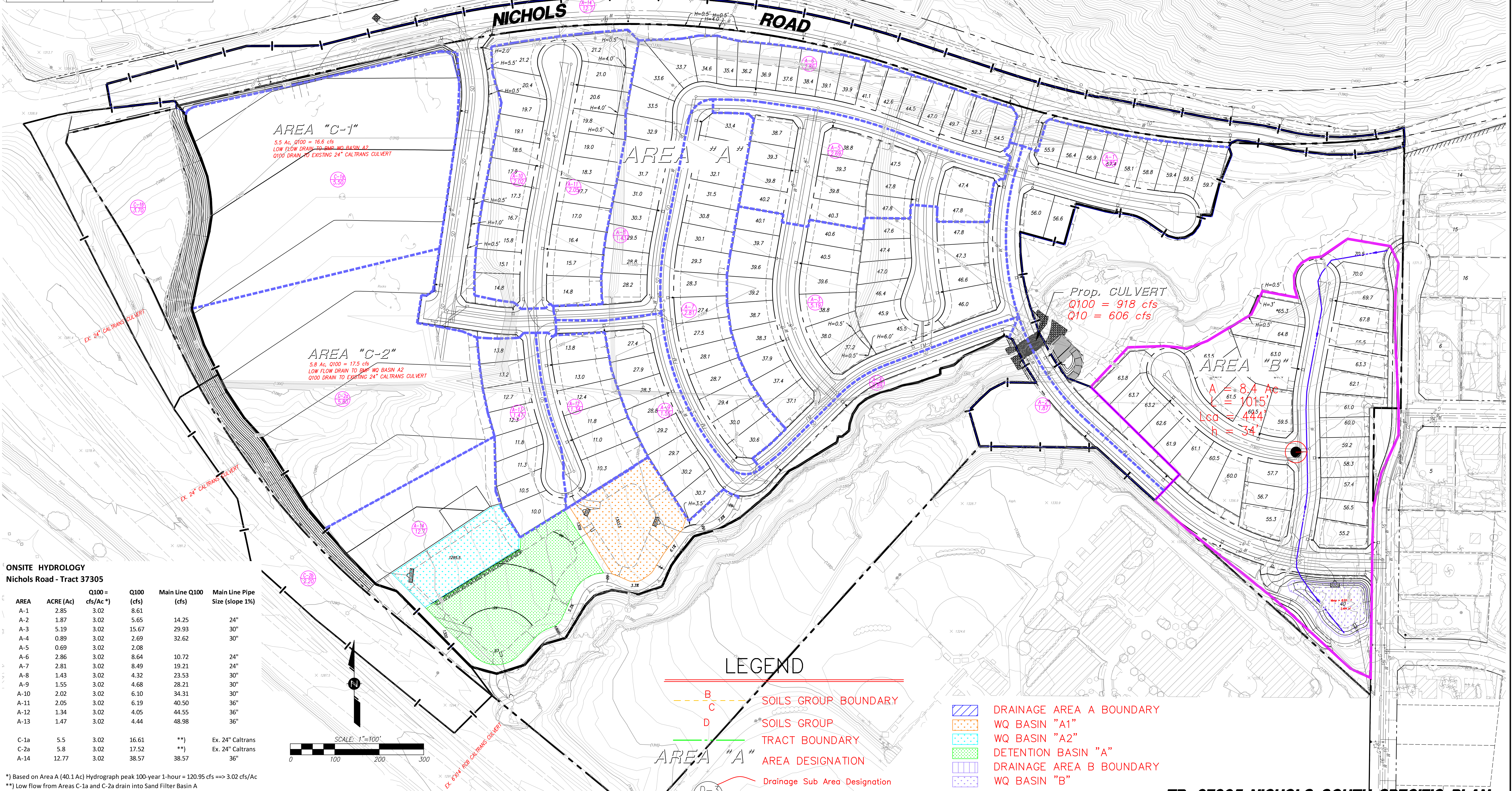
**FIGURE 5**

**FIGURE 6**  
**Hydrology Map – On-site Proposed Condition**

| Drainage Area B – existing (8.4 Ac), proposed (8.4 Ac) |                                     |                                     |                                              |                           |                         |
|--------------------------------------------------------|-------------------------------------|-------------------------------------|----------------------------------------------|---------------------------|-------------------------|
| Storm Frequency                                        | Existing Q <sub>100</sub> (cfs) [1] | Proposed Q <sub>100</sub> (cfs) [2] | Det. Basin Outlet Q <sub>100</sub> (cfs) [2] | Different [2] – [1] (cfs) | Different [2] – [1] (%) |
| 100-year 1-hour                                        | 24.57                               | 26.34                               | 9.81                                         | -14.76                    | -60%                    |
| 100-year 3-hour                                        | 15.27                               | 16.60                               | 12.29                                        | -2.98                     | -19.5%                  |
| 100-year 6-hour                                        | 13.76                               | 15.46                               | 12.08                                        | -1.68                     | -12.2%                  |
| 100-year 24-hour                                       | 6.09                                | 6.54                                | 6.35                                         | 0.26                      | 4.2%                    |

| Drainage Area C1 – existing (18.6 Ac), proposed (9.5 Ac) |                                     |                                     |                           |                         |
|----------------------------------------------------------|-------------------------------------|-------------------------------------|---------------------------|-------------------------|
| Drainage Area C2 – existing (29.2 Ac), proposed (8 Ac)   |                                     |                                     |                           |                         |
| Area                                                     | Existing Q <sub>100</sub> (cfs) [1] | Proposed Q <sub>100</sub> (cfs) [2] | Different [2] – [1] (cfs) | Different [2] – [1] (%) |
| C-1                                                      | 42.04                               | 25.88                               | -16.16                    | -38%                    |
| C-2                                                      | 65.99                               | 22.49                               | -43.50                    | -66%                    |

| Summary of Hydrographs, 1-hour, -3-hour, -6, hour and -24 hour 100-year storm: |                                     |                                     |                                              |                           |                         |
|--------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|----------------------------------------------|---------------------------|-------------------------|
| Drainage Area A – existing (40.1 Ac), proposed (40.1 Ac)                       |                                     |                                     |                                              |                           |                         |
| Storm Frequency                                                                | Existing Q <sub>100</sub> (cfs) [1] | Proposed Q <sub>100</sub> (cfs) [2] | Det. Basin Outlet Q <sub>100</sub> (cfs) [2] | Different [2] – [1] (cfs) | Different [2] – [1] (%) |
| 100-year 1-hour                                                                | 94.27                               | 120.95                              | 13.20                                        | -81.07                    | -86%                    |
| 100-year 3-hour                                                                | 67.65                               | 76.06                               | 20.49                                        | -47.16                    | -70%                    |
| 100-year 6-hour                                                                | 62.58                               | 67.99                               | 32.45                                        | -30.13                    | -48%                    |
| 100-year 24-hour                                                               | 29.03                               | 31.62                               | 23.08                                        | -5.95                     | -20%                    |



TR. 37305-NICHOLS SOUTH SPECIFIC PLAN  
ON-SITE HYDROLOGY MAP

**ATTACHMENTS**

**ATTACHMENT A**  
**Unit Hydrographs**  
**Ultimate Condition – Stovepipe Canyon Creek**  
**(100-Year 1-hr, 3-hr, 6-hr, 24-hr storm)**

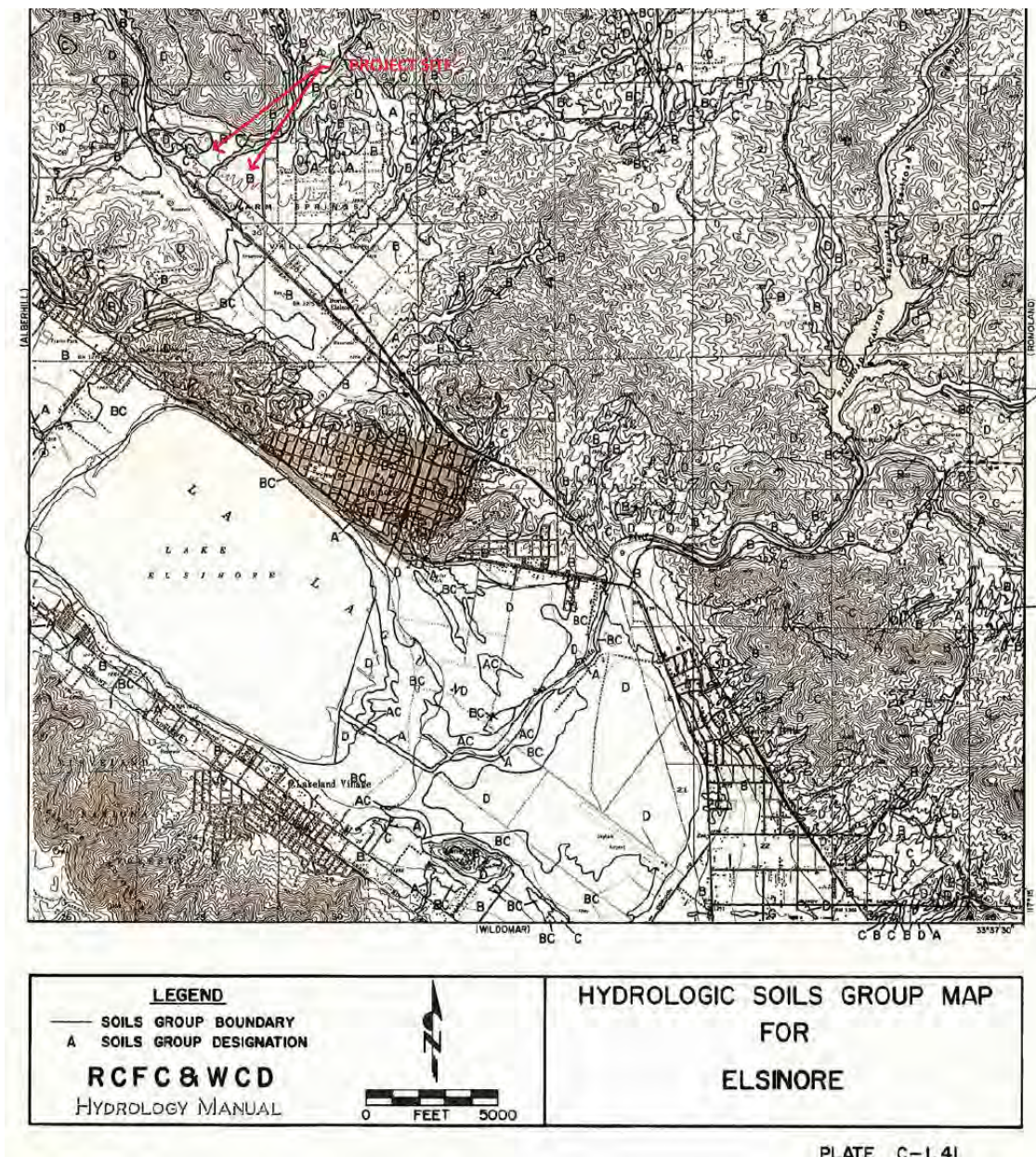
# **Inflow Hydrograph To Stovepipe Canyon Creek**

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

**Stovepipe Canyon Creek Unit Hydrograph Analysis**

The unit hydrograph analysis was conducted using the CivilDesign Corporation Unit Hydrograph software and the Riverside County Hydrology Manual. In this study analysis, the goal was to estimate the quantity of storm water to be detained onsite to mitigate the increase in storm water peak discharge and volume resulting from this development. The 1-hour, 3-hour, 6-hour and 24-hour 100-year storm hydrographs were computed to evaluate that the project peak runoff discharge originating from the site for existing and ultimate/proposed conditions.

The ultimate condition-project hydrographs will be used as inflow hydrograph in HECRAS Stovepipe Canyon Creek model.



Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

| <u>ACTUAL IMPERVIOUS COVER</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |               |                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------------------------------------|
| Land Use (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Range-Percent | Recommended Value<br>For Average<br>Conditions-Percent(2) |
| Natural or Agriculture                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0 - 10        | 0                                                         |
| Single Family Residential: (3)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |               |                                                           |
| 40,000 S. F. (1 Acre) Lots                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10 - 25       | 20                                                        |
| 20,000 S. F. (½ Acre) Lots                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 30 - 45       | 40                                                        |
| 7,200 - 10,000 S. F. Lots                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 45 - 55       | 50                                                        |
| Multiple Family Residential:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |                                                           |
| Condominiums                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 45 - 70       | 65                                                        |
| Apartments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 65 - 90       | 80                                                        |
| Mobile Home Park                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 60 - 85       | 75                                                        |
| Commercial, Downtown<br>Business or Industrial                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 80 -100       | 90                                                        |
| <p>Notes:</p> <ol style="list-style-type: none"> <li>1. Land use should be based on ultimate development of the watershed. Long range master plans for the County and incorporated cities should be reviewed to insure reasonable land use assumptions.</li> <li>2. Recommended values are based on average conditions which may not apply to a particular study area. The percentage impervious may vary greatly even on comparable sized lots due to differences in dwelling size, improvements, etc. Landscape practices should also be considered as it is common in some areas to use ornamental gravels underlain by impervious plastic materials in place of lawns and shrubs. A field investigation of a study area should always be made, and a review of aerial photos, where available may assist in estimating the percentage of impervious cover in developed areas.</li> <li>3. For typical horse ranch subdivisions increase impervious area 5 percent over the values recommended in the table above.</li> </ol> |               |                                                           |
| <b>RCFC &amp; WCD</b><br>HYDROLOGY MANUAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |               | <b>IMPERVIOUS COVER<br/>FOR<br/>DEVELOPED AREAS</b>       |

PLATE D-5.6

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

| RUNOFF INDEX NUMBERS OF HYDROLOGIC SOIL-COVER COMPLEXES FOR PERVIOUS AREAS-AMC II                             |                      |            |    |    |    |
|---------------------------------------------------------------------------------------------------------------|----------------------|------------|----|----|----|
| Cover Type (3)                                                                                                | Quality of Cover (2) | Soil Group |    |    |    |
|                                                                                                               |                      | A          | B  | C  | D  |
| <u>NATURAL COVERS -</u>                                                                                       |                      |            |    |    |    |
| Barren<br>(Rockland, eroded and graded land)                                                                  |                      | 78         | 86 | 91 | 93 |
| Chaparrel, Broadleaf<br>(Manzonita, ceanothus and scrub oak)                                                  | Poor                 | 53         | 70 | 80 | 85 |
|                                                                                                               | Fair                 | 40         | 63 | 75 | 81 |
|                                                                                                               | Good                 | 31         | 57 | 71 | 78 |
| Chaparrel, Narrowleaf<br>(Chamise and redshank)                                                               | Poor                 | 71         | 82 | 88 | 91 |
|                                                                                                               | Fair                 | 55         | 72 | 81 | 86 |
| Grass, Annual or Perennial                                                                                    | Poor                 | 67         | 78 | 86 | 89 |
|                                                                                                               | Fair                 | 50         | 69 | 79 | 84 |
|                                                                                                               | Good                 | 38         | 61 | 74 | 80 |
| Meadows or Cienegas<br>(Areas with seasonally high water table,<br>principal vegetation is sod forming grass) | Poor                 | 63         | 77 | 85 | 88 |
|                                                                                                               | Fair                 | 51         | 70 | 80 | 84 |
|                                                                                                               | Good                 | 30         | 58 | 72 | 78 |
| Open Brush<br>(Soft wood shrubs - buckwheat, sage, etc.)                                                      | Poor                 | 62         | 76 | 84 | 88 |
|                                                                                                               | Fair                 | 46         | 66 | 77 | 83 |
|                                                                                                               | Good                 | 41         | 63 | 75 | 81 |
| Woodland<br>(Coniferous or broadleaf trees predominate.<br>Canopy density is at least 50 percent)             | Poor                 | 45         | 66 | 77 | 83 |
|                                                                                                               | Fair                 | 36         | 60 | 73 | 79 |
|                                                                                                               | Good                 | 28         | 55 | 70 | 77 |
| Woodland, Grass<br>(Coniferous or broadleaf trees with canopy<br>density from 20 to 50 percent)               | Poor                 | 57         | 73 | 82 | 86 |
|                                                                                                               | Fair                 | 44         | 65 | 77 | 82 |
|                                                                                                               | Good                 | 33         | 58 | 72 | 79 |
| <u>URBAN COVERS -</u>                                                                                         |                      |            |    |    |    |
| Residential or Commercial Landscaping<br>(Lawn, shrubs, etc.)                                                 | Good                 | 32         | 56 | 69 | 75 |
| Turf<br>(Irrigated and mowed grass)                                                                           | Poor                 | 58         | 74 | 83 | 87 |
|                                                                                                               | Fair                 | 44         | 65 | 77 | 82 |
|                                                                                                               | Good                 | 33         | 58 | 72 | 79 |
| <u>AGRICULTURAL COVERS -</u>                                                                                  |                      |            |    |    |    |
| Fallow<br>(Land plowed but not tilled or seeded)                                                              |                      | 76         | 85 | 90 | 92 |

RCFC & WCD  
HYDROLOGY MANUAL

RUNOFF INDEX NUMBERS  
FOR  
PERVIOUS AREAS

PLATE E-6.1 (1 of 2)

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

| RUNOFF INDEX NUMBERS OF HYDROLOGIC SOIL-COVER COMPLEXES FOR PERVIOUS AREAS-AMC II |                      |            |    |    |    |
|-----------------------------------------------------------------------------------|----------------------|------------|----|----|----|
| Cover Type (3)                                                                    | Quality of Cover (2) | Soil Group |    |    |    |
|                                                                                   |                      | A          | B  | C  | D  |
| <u>AGRICULTURAL COVERS</u> (cont.) -                                              |                      |            |    |    |    |
| Legumes, Close Seeded<br>(Alfalfa, sweetclover, timothy, etc.)                    | Poor                 | 66         | 77 | 85 | 89 |
|                                                                                   | Good                 | 58         | 72 | 81 | 85 |
| Orchards, Deciduous<br>(Apples, apricots, pears, walnuts, etc.)                   |                      | See Note 4 |    |    |    |
| Orchards, Evergreen<br>(Citrus, avocados, etc.)                                   | Poor                 | 57         | 73 | 82 | 86 |
|                                                                                   | Fair                 | 44         | 65 | 77 | 82 |
|                                                                                   | Good                 | 33         | 58 | 72 | 79 |
| Pasture, Dryland<br>(Annual grasses)                                              | Poor                 | 67         | 78 | 86 | 89 |
|                                                                                   | Fair                 | 50         | 69 | 79 | 84 |
|                                                                                   | Good                 | 38         | 61 | 74 | 80 |
| Pasture, Irrigated<br>(Legumes and perennial grass)                               | Poor                 | 58         | 74 | 83 | 87 |
|                                                                                   | Fair                 | 44         | 65 | 77 | 82 |
|                                                                                   | Good                 | 33         | 58 | 72 | 79 |
| Row Crops<br>(Field crops - tomatoes, sugar beets, etc.)                          | Poor                 | 72         | 81 | 88 | 91 |
|                                                                                   | Good                 | 67         | 78 | 85 | 89 |
| Small Grain<br>(Wheat, oats, barley, etc.)                                        | Poor                 | 65         | 76 | 84 | 88 |
|                                                                                   | Good                 | 63         | 75 | 83 | 87 |
| Vineyard                                                                          |                      | See Note 4 |    |    |    |

Notes:

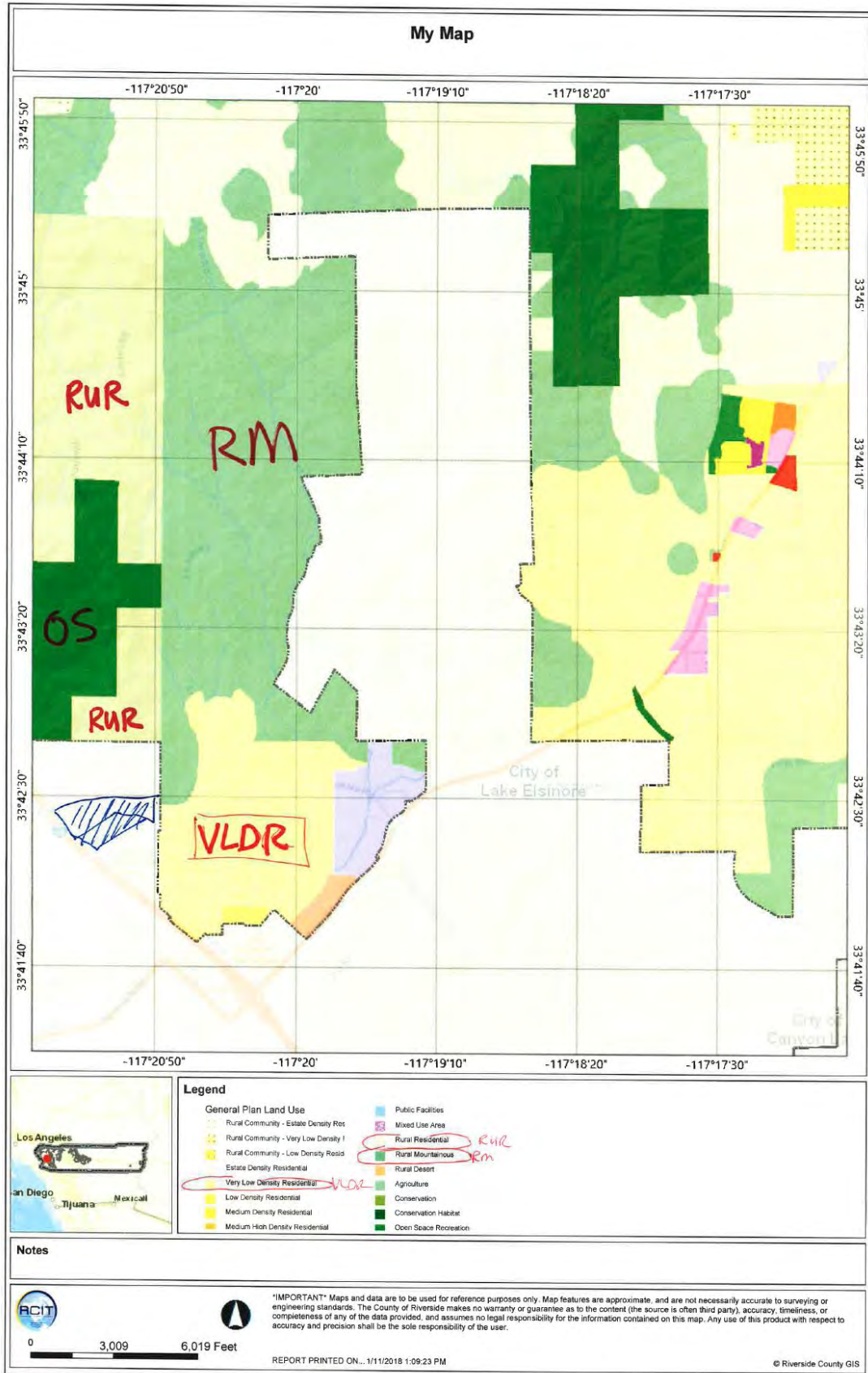
- All runoff index (RI) numbers are for Antecedent Moisture Condition (AMC) II.
- Quality of cover definitions:  
 Poor-Heavily grazed or regularly burned areas. Less than 50 percent of the ground surface is protected by plant cover or brush and tree canopy.  
 Fair-Moderate cover with 50 percent to 75 percent of the ground surface protected.  
 Good-Heavy or dense cover with more than 75 percent of the ground surface protected.
- See Plate C-2 for a detailed description of cover types.
- Use runoff index numbers based on ground cover type. See discussion under "Cover Type Descriptions" on Plate C-2.
- Reference Bibliography item 17.

**RCFC & WCD**  
HYDROLOGY MANUAL

**RUNOFF INDEX NUMBERS  
FOR  
PERVIOUS AREAS**

PLATE E-6.1 (2 of 2)

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition



Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

**Land Use information use in this study:**

“Natural” → use Land Use “**Natural Cover**” with impervious percent = 0.02 (conservative assumption).

“Rural Residential” → use Land Use “**Residential**” with impervious percent = 0.03

“Rural Mountainous” → use Land Use “**Residential**” with impervious percent = 0.05

“Very Low Residential” → use Land Use “**Residential**” with impervious percent = 0.25.

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

| Runoff Index (RI) Worksheet                          |              |            |               |                        |          |                                      |                            |
|------------------------------------------------------|--------------|------------|---------------|------------------------|----------|--------------------------------------|----------------------------|
| Drainage Area A - 837.7 Ac (Stovepipe Drainage Area) |              |            |               |                        |          |                                      |                            |
| [1]                                                  | [2]          | [3]        | [4]           | [5]                    | [6]      | [7]                                  | [8]                        |
| Subarea                                              | Area in (Ac) | Soil Group | Cover Type    | RI Number (Plate E6-1) | Land Use | Decimal portion of Area [2] / SUM[2] | Average RI Value [5] * [7] |
| Open Space                                           |              | A          | Natural cover | 53                     | Natural  | 0.00                                 | 0.0                        |
|                                                      |              | B          | Natural cover | 70                     | Natural  | 0.00                                 | 0.0                        |
|                                                      |              | C          | Natural cover | 80                     | Natural  | 0.00                                 | 0.0                        |
|                                                      | 14           | D          | Natural cover | 85                     | Natural  | 1.00                                 | 85.0                       |
| Sum =                                                | <b>14</b>    |            |               |                        |          | 1.00                                 | <b>85.0</b>                |
|                                                      |              |            |               |                        |          |                                      |                            |
| Rural Mountainous                                    | 40           | A          | Natural cover | 53                     | Natural  | 0.07                                 | 3.5                        |
|                                                      |              | B          | Natural cover | 70                     | Natural  | 0.00                                 | 0.0                        |
|                                                      | 70           | C          | Natural cover | 80                     | Natural  | 0.11                                 | 9.1                        |
|                                                      | 503.7        | D          | Natural cover | 85                     | Natural  | 0.82                                 | 69.8                       |
| Sum =                                                | <b>613.7</b> |            |               |                        |          | 1.00                                 | <b>78.9</b>                |
|                                                      |              |            |               |                        |          |                                      |                            |
| Rural Residential                                    |              | A          | Mix cover     | 53                     | Natural  | 0.00                                 | 0.0                        |
|                                                      |              | B          | Mix cover     | 70                     | Natural  | 0.00                                 | 0.0                        |
|                                                      |              | C          | Mix cover     | 80                     | Natural  | 0.00                                 | 0.0                        |
|                                                      | 134          | D          | Mix cover     | 85                     | Natural  | 1.00                                 | 85.0                       |
| Sum =                                                | <b>134</b>   |            |               |                        |          | 1.00                                 | <b>85.0</b>                |
|                                                      |              |            |               |                        |          |                                      |                            |
| Very Low Residential                                 | 16           | A          | Mix cover     | 53                     | Natural  | 0.21                                 | 11.2                       |
|                                                      |              | B          | Mix cover     | 67                     | Natural  | 0.00                                 | 0.0                        |
|                                                      |              | C          | Mix cover     | 78                     | Natural  | 0.00                                 | 0.0                        |
|                                                      | 60           | D          | Mix cover     | 83                     | Natural  | 0.79                                 | 65.5                       |
| Sum =                                                | <b>76</b>    |            |               |                        |          | 1.00                                 | <b>65.5</b>                |

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

| <b>Soil Low Loss Rate Worksheet</b>                         |              |                        |                            |                                      |                                         |                                    |
|-------------------------------------------------------------|--------------|------------------------|----------------------------|--------------------------------------|-----------------------------------------|------------------------------------|
| <b>Drainage Area A - 837.7 Ac (Stovepipe Drainage Area)</b> |              |                        |                            |                                      |                                         |                                    |
| [1]                                                         | [2]          | [3]                    | [4]                        | [5]                                  | [6]                                     | [7]                                |
| Subarea                                                     | Area in (Ac) | Land Use (Plate D-5.6) | % Impervious (Plate D-5.6) | Soil Low Loss Rate<br>0.9-(0.8)* [4] | Decimal portion of Area<br>[2] / SUM[2] | Average Low Loss Rate<br>[5] * [6] |
|                                                             | 14           | Natural                | 2                          | 0.90                                 | 0.02                                    | 0.02                               |
|                                                             | 134          | Rural Res.             | 3                          | 0.88                                 | 0.16                                    | 0.14                               |
|                                                             | 613.7        | Rural Mountainous      | 5                          | 0.86                                 | 0.73                                    | 0.63                               |
|                                                             | 76           | Very Low Res.          | 25                         | 0.70                                 | 0.09                                    | 0.06                               |
|                                                             |              | Res 1/4 Ac             | 50                         | 0.50                                 | 0.00                                    | 0.00                               |
|                                                             |              | Res < 1/4 Ac           | 65                         | 0.38                                 | 0.00                                    | 0.00                               |
|                                                             |              | Apartment              | 80                         | 0.26                                 | 0.00                                    | 0.00                               |
|                                                             |              | Mobil Home             | 75                         | 0.30                                 | 0.00                                    | 0.00                               |
|                                                             |              | Hospital               | 75                         | 0.30                                 | 0.00                                    | 0.00                               |
|                                                             |              | Commercial             | 90                         | 0.18                                 | 0.00                                    | 0.00                               |
| Sum =                                                       | 837.7        |                        |                            |                                      | 1.00                                    | <b>0.85</b>                        |

| <b>Manning "n" Value Worksheet</b>                          |              |                        |           |                                         |                                |
|-------------------------------------------------------------|--------------|------------------------|-----------|-----------------------------------------|--------------------------------|
| <b>Drainage Area A - 837.7 Ac (Stovepipe Drainage Area)</b> |              |                        |           |                                         |                                |
| [1]                                                         | [2]          | [3]                    | [4]       | [5]                                     | [7]                            |
| Subarea                                                     | Area in (Ac) | Land Use (Plate D-5.6) | "n" Value | Decimal portion of Area<br>[2] / SUM[2] | Average "n" Value<br>[4] * [5] |
|                                                             | 14           | Open Space             | 0.04      | 0.02                                    | 0.001                          |
|                                                             | 613.7        | Rural Mountainous      | 0.035     | 0.73                                    | 0.026                          |
|                                                             | 134          | Rural Residential      | 0.03      | 0.16                                    | 0.005                          |
|                                                             | 76           | Very Low Residential   | 0.02      | 0.09                                    | 0.002                          |
|                                                             |              | Res < 1/4 Ac           | 0.015     | 0.00                                    | 0.000                          |
|                                                             |              | Apartment              | 0.015     | 0.00                                    | 0.000                          |
|                                                             |              | Mobil Home             | 0.015     | 0.00                                    | 0.000                          |
|                                                             |              | Hospital               | 0.02      | 0.00                                    | 0.000                          |
|                                                             |              | Commercial             | 0.015     | 0.00                                    | 0.000                          |
| Sum =                                                       | <b>837.7</b> |                        |           | 1.00                                    | <b>0.033</b>                   |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

### U n i t   H y d r o g r a p h   A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1  
Study date 01/15/18 File: nicholsex1100.out

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Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

-----  
English (in-lb) Input Units Used  
English Rainfall Data (Inches) Input Values Used

English Units used in output format

-----  
Nichols Road Project - Tract 37305  
Drainage Area Stovepipe Canyon Creek = 837.7 Ac (1.3 sq. mi.)  
Ultimate Condition (per County of Riverside General Plan Land Use)  
100-year 1-hour storm

-----  
Drainage Area = 837.70(Ac.) = 1.309 Sq. Mi.  
Drainage Area for Depth-Area Areal Adjustment = 837.70(Ac.) = 1.309 Sq. Mi.  
Length along longest watercourse = 16504.00(Ft.)  
Length along longest watercourse measured to centroid = 8924.00(Ft.)  
Length along longest watercourse = 3.126 Mi.  
Length along longest watercourse measured to centroid = 1.690 Mi.  
Difference in elevation = 792.00(Ft.)  
Slope along watercourse = 253.3786 Ft./Mi.  
Average Manning's 'N' = 0.033  
Lag time = 0.521 Hr.  
Lag time = 31.25 Min.  
25% of lag time = 7.81 Min.  
40% of lag time = 12.50 Min.  
Unit time = 5.00 Min.  
Duration of storm = 1 Hour(s)  
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 837.70        | 0.49             | 411.31         |

100 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 837.70        | 1.38             | 1156.03        |

STORM EVENT (YEAR) = 100.00  
Area Averaged 2-Year Rainfall = 0.491(In)  
Area Averaged 100-Year Rainfall = 1.380(In)

Point rain (area averaged) = 1.380(In)  
Areal adjustment factor = 99.24 %  
Adjusted average point rain = 1.370(In)

Sub-Area Data:  
Area(Ac.)                  Runoff Index      Impervious %

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

|                      |       |              |
|----------------------|-------|--------------|
| 134.000              | 85.00 | 0.030        |
| 14.000               | 85.00 | 0.020        |
| 76.000               | 65.50 | 0.250        |
| 613.700              | 78.90 | 0.050        |
| Total Area Entered = |       | 837.70 (Ac.) |

| RI        | RI    | Infil. Rate | Impervious | Adj. Infil. Rate | Area%  | F       |
|-----------|-------|-------------|------------|------------------|--------|---------|
| AMC2      | AMC-2 | (In/Hr)     | (Dec.%)    | (In/Hr)          | (Dec.) | (In/Hr) |
| 85.0      | 85.0  | 0.187       | 0.030      | 0.182            | 0.160  | 0.029   |
| 85.0      | 85.0  | 0.187       | 0.020      | 0.184            | 0.017  | 0.003   |
| 65.5      | 65.5  | 0.411       | 0.250      | 0.318            | 0.091  | 0.029   |
| 78.9      | 78.9  | 0.257       | 0.050      | 0.245            | 0.733  | 0.180   |
| Sum (F) = |       |             |            |                  |        | 0.241   |

Area averaged mean soil loss (F) (In/Hr) = 0.241

Minimum soil loss rate ((In/Hr)) = 0.120

(for 24 hour storm duration)

Soil loss rate (decimal) = 0.850

Slope of intensity-duration curve for a 1 hour storm =0.4800

## Unit Hydrograph FOOTHILL S-Curve

### Unit Hydrograph Data

| Unit time period<br>(hrs) | Time % of lag | Distribution<br>Graph % | Unit Hydrograph<br>(CFS) |
|---------------------------|---------------|-------------------------|--------------------------|
| 1                         | 0.083         | 16.000                  | 1.015                    |
| 2                         | 0.167         | 32.000                  | 2.641                    |
| 3                         | 0.250         | 47.999                  | 3.796                    |
| 4                         | 0.333         | 63.999                  | 5.150                    |
| 5                         | 0.417         | 79.999                  | 7.727                    |
| 6                         | 0.500         | 95.999                  | 12.895                   |
| 7                         | 0.583         | 111.999                 | 19.182                   |
| 8                         | 0.667         | 127.999                 | 9.062                    |
| 9                         | 0.750         | 143.998                 | 6.117                    |
| 10                        | 0.833         | 159.998                 | 4.726                    |
| 11                        | 0.917         | 175.998                 | 3.835                    |
| 12                        | 1.000         | 191.998                 | 3.310                    |
| 13                        | 1.083         | 207.998                 | 2.864                    |
| 14                        | 1.167         | 223.997                 | 2.384                    |
| 15                        | 1.250         | 239.997                 | 2.135                    |
| 16                        | 1.333         | 255.997                 | 1.894                    |
| 17                        | 1.417         | 271.997                 | 1.611                    |
| 18                        | 1.500         | 287.997                 | 1.452                    |
| 19                        | 1.583         | 303.997                 | 1.277                    |
| 20                        | 1.667         | 319.996                 | 1.096                    |
| 21                        | 1.750         | 335.996                 | 0.964                    |
| 22                        | 1.833         | 351.996                 | 0.780                    |
| 23                        | 1.917         | 367.996                 | 0.689                    |
| 24                        | 2.000         | 383.996                 | 0.610                    |
| 25                        | 2.083         | 399.996                 | 0.466                    |
| 26                        | 2.167         | 415.995                 | 0.320                    |
| 27                        | 2.250         | 431.995                 | 0.192                    |
| 28                        | 2.333         | 447.995                 | 0.192                    |
| 29                        | 2.417         | 463.995                 | 0.180                    |
| 30                        | 2.500         | 479.995                 | 0.160                    |
| 31                        | 2.583         | 495.994                 | 0.160                    |
| 32                        | 2.667         | 511.994                 | 0.142                    |
| 33                        | 2.750         | 527.994                 | 0.098                    |
| 34                        | 2.833         | 543.994                 | 0.096                    |
| 35                        | 2.917         | 559.994                 | 0.102                    |
| 36                        | 3.000         | 575.994                 | 0.126                    |
| 37                        | 3.083         | 591.993                 | 0.128                    |
| 38                        | 3.167         | 607.993                 | 0.120                    |
| 39                        | 3.250         | 623.993                 | 0.072                    |
| 40                        | 3.333         | 639.993                 | 0.064                    |
| 41                        | 3.417         | 655.993                 | 0.062                    |

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

| Unit | Time<br>(Hr.) | Pattern<br>Percent | Storm Rain<br>(In/Hr) | Loss rate(In./Hr) |          | Effective<br>(In/Hr) |
|------|---------------|--------------------|-----------------------|-------------------|----------|----------------------|
|      |               |                    |                       | Max               | Low      |                      |
| 1    | 0.08          | 4.40               | 0.723                 | 0.241             | ( 0.615) | 0.482                |
| 2    | 0.17          | 4.50               | 0.740                 | 0.241             | ( 0.629) | 0.499                |
| 3    | 0.25          | 5.40               | 0.887                 | 0.241             | ( 0.754) | 0.647                |
| 4    | 0.33          | 5.40               | 0.887                 | 0.241             | ( 0.754) | 0.647                |
| 5    | 0.42          | 5.70               | 0.937                 | 0.241             | ( 0.796) | 0.696                |
| 6    | 0.50          | 6.40               | 1.052                 | 0.241             | ( 0.894) | 0.811                |
| 7    | 0.58          | 7.90               | 1.298                 | 0.241             | ( 1.104) | 1.057                |
| 8    | 0.67          | 9.10               | 1.496                 | 0.241             | ( 1.271) | 1.255                |
| 9    | 0.75          | 12.80              | 2.104                 | 0.241             | ( 1.788) | 1.863                |
| 10   | 0.83          | 25.60              | 4.207                 | 0.241             | ( 3.576) | 3.966                |
| 11   | 0.92          | 7.90               | 1.298                 | 0.241             | ( 1.104) | 1.057                |
| 12   | 1.00          | 4.90               | 0.805                 | 0.241             | ( 0.684) | 0.564                |

(Loss Rate Not Used)

```
Sum = 100.0
```

Sum = 13.5

Flood volume = Effective rainfall      1.13(In)

$$\text{times area} \quad 837.7 (\text{Ac.}) / [(\text{In}) / (\text{Ft.})] = 78.8 (\text{Ac. Ft})$$

Total soil loss = 0.24 (In)

Total soil loss = 16.812 (Ac.Ft)

Total rainfall = 1.37 (In)

Flood volume = 3432170.3 Cubic Feet

Total soil loss = 732346.6 Cubic Feet

Peak flow rate of this hydrograph = 1135.398 (CFS)

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1 - H O U R      S T O R M  
R u n o f f      H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time (h+m) | Volume  | Ac.Ft   | Q (CFS) | 0 | 300.0 | 600.0 | 900.0 | 1200.0 |
|------------|---------|---------|---------|---|-------|-------|-------|--------|
| 0+ 5       | 0.0285  | 4.14    | Q       |   |       |       |       |        |
| 0+10       | 0.1320  | 15.03   | Q       |   |       |       |       |        |
| 0+15       | 0.3533  | 32.13   | VQ      |   |       |       |       |        |
| 0+20       | 0.7455  | 56.94   | VQ      |   |       |       |       |        |
| 0+25       | 1.3949  | 94.29   | V Q     |   |       |       |       |        |
| 0+30       | 2.4721  | 156.42  | V Q     |   |       |       |       |        |
| 0+35       | 4.2095  | 252.26  | V Q     |   |       |       |       |        |
| 0+40       | 6.4200  | 320.97  | V Q     |   |       |       |       |        |
| 0+45       | 9.1532  | 396.86  | V Q     |   |       |       |       |        |
| 0+50       | 12.5265 | 489.81  | V Q     |   |       |       |       |        |
| 0+55       | 16.6614 | 600.39  | V Q     |   |       |       |       |        |
| 1+ 0       | 21.5322 | 707.23  | V Q     |   |       |       |       |        |
| 1+ 5       | 27.1727 | 819.01  | V Q     |   |       |       |       |        |
| 1+10       | 33.6506 | 940.58  | V Q     |   |       |       |       |        |
| 1+15       | 41.1262 | 1085.46 | V Q     |   |       |       |       |        |
| 1+20       | 48.9457 | 1135.40 | V Q     |   |       |       |       |        |
| 1+25       | 54.4261 | 795.75  | V Q     |   |       |       |       |        |
| 1+30       | 58.4912 | 590.25  | V Q     |   |       |       |       |        |
| 1+35       | 61.4976 | 436.53  | V Q     |   |       |       |       |        |
| 1+40       | 63.9488 | 355.92  | V Q     |   |       |       |       |        |
| 1+45       | 66.0353 | 302.96  | V Q     |   |       |       |       |        |
| 1+50       | 67.8302 | 260.62  | V Q     |   |       |       |       |        |
| 1+55       | 69.3734 | 224.08  | V Q     |   |       |       |       |        |
| 2+ 0       | 70.7262 | 196.42  | V Q     |   |       |       |       |        |
| 2+ 5       | 71.9085 | 171.68  | V Q     |   |       |       |       |        |
| 2+10       | 72.9331 | 148.77  | V Q     |   |       |       |       |        |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition**

|      |         |        |   |  |  |  |   |  |
|------|---------|--------|---|--|--|--|---|--|
| 2+15 | 73.8268 | 129.75 | Q |  |  |  | V |  |
| 2+20 | 74.5983 | 112.02 | Q |  |  |  | V |  |
| 2+25 | 75.2586 | 95.87  | Q |  |  |  | V |  |
| 2+30 | 75.8216 | 81.75  | Q |  |  |  | V |  |
| 2+35 | 76.2906 | 68.09  | Q |  |  |  | V |  |
| 2+40 | 76.6872 | 57.59  | Q |  |  |  | V |  |
| 2+45 | 77.0168 | 47.86  | Q |  |  |  | V |  |
| 2+50 | 77.2769 | 37.77  | Q |  |  |  | V |  |
| 2+55 | 77.4741 | 28.63  | Q |  |  |  | V |  |
| 3+ 0 | 77.6242 | 21.81  | Q |  |  |  | V |  |
| 3+ 5 | 77.7572 | 19.31  | Q |  |  |  | V |  |
| 3+10 | 77.8788 | 17.65  | Q |  |  |  | V |  |
| 3+15 | 77.9906 | 16.23  | Q |  |  |  | V |  |
| 3+20 | 78.0948 | 15.14  | Q |  |  |  | V |  |
| 3+25 | 78.1885 | 13.61  | Q |  |  |  | V |  |
| 3+30 | 78.2696 | 11.77  | Q |  |  |  | V |  |
| 3+35 | 78.3459 | 11.08  | Q |  |  |  | V |  |
| 3+40 | 78.4208 | 10.87  | Q |  |  |  | V |  |
| 3+45 | 78.4956 | 10.87  | Q |  |  |  | V |  |
| 3+50 | 78.5656 | 10.16  | Q |  |  |  | V |  |
| 3+55 | 78.6262 | 8.80   | Q |  |  |  | V |  |
| 4+ 0 | 78.6713 | 6.55   | Q |  |  |  | V |  |
| 4+ 5 | 78.7078 | 5.30   | Q |  |  |  | V |  |
| 4+10 | 78.7373 | 4.28   | Q |  |  |  | V |  |
| 4+15 | 78.7584 | 3.07   | Q |  |  |  | V |  |
| 4+20 | 78.7745 | 2.34   | Q |  |  |  | V |  |
| 4+25 | 78.7870 | 1.81   | Q |  |  |  | V |  |
| 4+30 | 78.7905 | 0.51   | Q |  |  |  | V |  |
| 4+35 | 78.7918 | 0.19   | Q |  |  |  | V |  |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

### Unit Hydrograph Analysis

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1  
Study date 01/15/18 File: nicholsex3100.out

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Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

English (in-lb) Input Units Used  
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Nichols Road Project - Tract 37305  
Drainage Area Stovepipe Canyon Creek = 837.7 Ac (1.3 sq. mi.)  
Ultimate Condition (per County of Riverside General Plan Land Use)  
100-year 3-hour storm

Drainage Area = 837.70(Ac.) = 1.309 Sq. Mi.  
Drainage Area for Depth-Area Areal Adjustment = 837.70(Ac.) = 1.309 Sq. Mi.  
Length along longest watercourse = 16504.00(Ft.)  
Length along longest watercourse measured to centroid = 8924.00(Ft.)  
Length along longest watercourse = 3.126 Mi.  
Length along longest watercourse measured to centroid = 1.690 Mi.  
Difference in elevation = 792.00(Ft.)  
Slope along watercourse = 253.3786 Ft./Mi.  
Average Manning's 'N' = 0.033  
Lag time = 0.521 Hr.  
Lag time = 31.25 Min.  
25% of lag time = 7.81 Min.  
40% of lag time = 12.50 Min.  
Unit time = 5.00 Min.  
Duration of storm = 3 Hour(s)  
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 837.70        | 0.88             | 738.85         |

100 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 837.70        | 2.22             | 1859.69        |

STORM EVENT (YEAR) = 100.00  
Area Averaged 2-Year Rainfall = 0.882(In)  
Area Averaged 100-Year Rainfall = 2.220(In)

Point rain (area averaged) = 2.220(In)  
Areal adjustment factor = 99.63 %  
Adjusted average point rain = 2.212(In)

Sub-Area Data:  
Area(Ac.)                      Runoff Index                      Impervious %  
134.000                      85.00                      0.030

# **Tract 37305, Nichols South Specific Plan – Lake Elsinore** **ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition**

|                                   |       |       |
|-----------------------------------|-------|-------|
| 14.000                            | 85.00 | 0.020 |
| 76.000                            | 65.50 | 0.250 |
| 613.700                           | 78.90 | 0.050 |
| Total Area Entered = 837.70 (Ac.) |       |       |

| RI        | RI    | Infil. Rate | Impervious | Adj. Infil. Rate | Area%  | F       |
|-----------|-------|-------------|------------|------------------|--------|---------|
| AMC2      | AMC-2 | (In/Hr)     | (Dec.%)    | (In/Hr)          | (Dec.) | (In/Hr) |
| 85.0      | 85.0  | 0.187       | 0.030      | 0.182            | 0.160  | 0.029   |
| 85.0      | 85.0  | 0.187       | 0.020      | 0.184            | 0.017  | 0.003   |
| 65.5      | 65.5  | 0.411       | 0.250      | 0.318            | 0.091  | 0.029   |
| 78.9      | 78.9  | 0.257       | 0.050      | 0.245            | 0.733  | 0.180   |
| Sum (F) = |       |             |            |                  |        | 0.241   |

Area averaged mean soil loss (F) (In/Hr) = 0.241

Minimum soil loss rate ((In/Hr)) = 0.120

(for 24 hour storm duration)

Soil loss rate (decimal) = 0.850

## U n i t   H y d r o g r a p h FOOTHILL S-Curve

### Unit Hydrograph Data

| Unit time period<br>(hrs) | Time % of lag | Distribution<br>Graph % | Unit Hydrograph<br>(CFS) |
|---------------------------|---------------|-------------------------|--------------------------|
| 1                         | 0.083         | 16.000                  | 1.015                    |
| 2                         | 0.167         | 32.000                  | 2.641                    |
| 3                         | 0.250         | 47.999                  | 3.796                    |
| 4                         | 0.333         | 63.999                  | 5.150                    |
| 5                         | 0.417         | 79.999                  | 7.727                    |
| 6                         | 0.500         | 95.999                  | 12.895                   |
| 7                         | 0.583         | 111.999                 | 19.182                   |
| 8                         | 0.667         | 127.999                 | 9.062                    |
| 9                         | 0.750         | 143.998                 | 6.117                    |
| 10                        | 0.833         | 159.998                 | 4.726                    |
| 11                        | 0.917         | 175.998                 | 3.835                    |
| 12                        | 1.000         | 191.998                 | 3.310                    |
| 13                        | 1.083         | 207.998                 | 2.864                    |
| 14                        | 1.167         | 223.997                 | 2.384                    |
| 15                        | 1.250         | 239.997                 | 2.135                    |
| 16                        | 1.333         | 255.997                 | 1.894                    |
| 17                        | 1.417         | 271.997                 | 1.611                    |
| 18                        | 1.500         | 287.997                 | 1.452                    |
| 19                        | 1.583         | 303.997                 | 1.277                    |
| 20                        | 1.667         | 319.996                 | 1.096                    |
| 21                        | 1.750         | 335.996                 | 0.964                    |
| 22                        | 1.833         | 351.996                 | 0.780                    |
| 23                        | 1.917         | 367.996                 | 0.689                    |
| 24                        | 2.000         | 383.996                 | 0.610                    |
| 25                        | 2.083         | 399.996                 | 0.466                    |
| 26                        | 2.167         | 415.995                 | 0.320                    |
| 27                        | 2.250         | 431.995                 | 0.192                    |
| 28                        | 2.333         | 447.995                 | 0.192                    |
| 29                        | 2.417         | 463.995                 | 0.180                    |
| 30                        | 2.500         | 479.995                 | 0.160                    |
| 31                        | 2.583         | 495.994                 | 0.160                    |
| 32                        | 2.667         | 511.994                 | 0.142                    |
| 33                        | 2.750         | 527.994                 | 0.098                    |
| 34                        | 2.833         | 543.994                 | 0.096                    |
| 35                        | 2.917         | 559.994                 | 0.102                    |
| 36                        | 3.000         | 575.994                 | 0.126                    |
| 37                        | 3.083         | 591.993                 | 0.128                    |
| 38                        | 3.167         | 607.993                 | 0.120                    |
| 39                        | 3.250         | 623.993                 | 0.072                    |
| 40                        | 3.333         | 639.993                 | 0.064                    |
| 41                        | 3.417         | 655.993                 | 0.062                    |
| 42                        | 3.500         | 671.992                 | 0.038                    |
| 43                        | 3.583         | 687.992                 | 0.032                    |
| 44                        | 3.667         | 703.992                 | 0.040                    |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

Sum = 100.000      Sum=      844.245

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

| Unit | Time<br>(Hr.) | Pattern<br>Percent | Storm Rain<br>(In/Hr) | Loss rate(In./Hr) |          | Effective<br>(In/Hr) |
|------|---------------|--------------------|-----------------------|-------------------|----------|----------------------|
|      |               |                    |                       | Max               | Low      |                      |
| 1    | 0.08          | 1.30               | 0.345                 | 0.241             | ( 0.293) | 0.104                |
| 2    | 0.17          | 1.30               | 0.345                 | 0.241             | ( 0.293) | 0.104                |
| 3    | 0.25          | 1.10               | 0.292                 | 0.241             | ( 0.248) | 0.051                |
| 4    | 0.33          | 1.50               | 0.398                 | 0.241             | ( 0.338) | 0.157                |
| 5    | 0.42          | 1.50               | 0.398                 | 0.241             | ( 0.338) | 0.157                |
| 6    | 0.50          | 1.80               | 0.478                 | 0.241             | ( 0.406) | 0.237                |
| 7    | 0.58          | 1.50               | 0.398                 | 0.241             | ( 0.338) | 0.157                |
| 8    | 0.67          | 1.80               | 0.478                 | 0.241             | ( 0.406) | 0.237                |
| 9    | 0.75          | 1.80               | 0.478                 | 0.241             | ( 0.406) | 0.237                |
| 10   | 0.83          | 1.50               | 0.398                 | 0.241             | ( 0.338) | 0.157                |
| 11   | 0.92          | 1.60               | 0.425                 | 0.241             | ( 0.361) | 0.184                |
| 12   | 1.00          | 1.80               | 0.478                 | 0.241             | ( 0.406) | 0.237                |
| 13   | 1.08          | 2.20               | 0.584                 | 0.241             | ( 0.496) | 0.343                |
| 14   | 1.17          | 2.20               | 0.584                 | 0.241             | ( 0.496) | 0.343                |
| 15   | 1.25          | 2.20               | 0.584                 | 0.241             | ( 0.496) | 0.343                |
| 16   | 1.33          | 2.00               | 0.531                 | 0.241             | ( 0.451) | 0.290                |
| 17   | 1.42          | 2.60               | 0.690                 | 0.241             | ( 0.587) | 0.449                |
| 18   | 1.50          | 2.70               | 0.717                 | 0.241             | ( 0.609) | 0.476                |
| 19   | 1.58          | 2.40               | 0.637                 | 0.241             | ( 0.541) | 0.396                |
| 20   | 1.67          | 2.70               | 0.717                 | 0.241             | ( 0.609) | 0.476                |
| 21   | 1.75          | 3.30               | 0.876                 | 0.241             | ( 0.745) | 0.635                |
| 22   | 1.83          | 3.10               | 0.823                 | 0.241             | ( 0.699) | 0.582                |
| 23   | 1.92          | 2.90               | 0.770                 | 0.241             | ( 0.654) | 0.529                |
| 24   | 2.00          | 3.00               | 0.796                 | 0.241             | ( 0.677) | 0.555                |
| 25   | 2.08          | 3.10               | 0.823                 | 0.241             | ( 0.699) | 0.582                |
| 26   | 2.17          | 4.20               | 1.115                 | 0.241             | ( 0.948) | 0.874                |
| 27   | 2.25          | 5.00               | 1.327                 | 0.241             | ( 1.128) | 1.086                |
| 28   | 2.33          | 3.50               | 0.929                 | 0.241             | ( 0.790) | 0.688                |
| 29   | 2.42          | 6.80               | 1.805                 | 0.241             | ( 1.534) | 1.564                |
| 30   | 2.50          | 7.30               | 1.938                 | 0.241             | ( 1.647) | 1.697                |
| 31   | 2.58          | 8.20               | 2.176                 | 0.241             | ( 1.850) | 1.936                |
| 32   | 2.67          | 5.90               | 1.566                 | 0.241             | ( 1.331) | 1.325                |
| 33   | 2.75          | 2.00               | 0.531                 | 0.241             | ( 0.451) | 0.290                |
| 34   | 2.83          | 1.80               | 0.478                 | 0.241             | ( 0.406) | 0.237                |
| 35   | 2.92          | 1.80               | 0.478                 | 0.241             | ( 0.406) | 0.237                |
| 36   | 3.00          | 0.60               | 0.159                 | ( 0.241)          | 0.135    | 0.024                |

(Loss Rate Not Used)

Sum = 100.0      Sum = 18.0

Flood volume = Effective rainfall 1.50(In)  
times area 837.7(Ac.) / [(In)/(Ft.)] = 104.6(Ac.Ft)

Total soil loss = 0.71(In)

Total soil loss = 49.824(Ac.Ft)

Total rainfall = 2.21(In)

Flood volume = 4555635.0 Cubic Feet

Total soil loss = 2170313.4 Cubic Feet

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Peak flow rate of this hydrograph = 918.435(CFS)  
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3 - H O U R      S T O R M  
R u n o f f      H y d r o g r a p h

-----  
Hydrograph in 5 Minute intervals ((CFS))  
-----

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 250.0 | 500.0 | 750.0 | 1000.0 |
|-----------|--------------|--------|---|-------|-------|-------|--------|
| 0+ 5      | 0.0062       | 0.89   | Q |       |       |       |        |
| 0+10      | 0.0283       | 3.22   | Q |       |       |       |        |
| 0+15      | 0.0704       | 6.10   | Q |       |       |       |        |
| 0+20      | 0.1417       | 10.36  | Q |       |       |       |        |
| 0+25      | 0.2646       | 17.83  | Q |       |       |       |        |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

|      |          |        |     |  |  |  |  |
|------|----------|--------|-----|--|--|--|--|
| 0+30 | 0.4778   | 30.96  | VQ  |  |  |  |  |
| 0+35 | 0.8228   | 50.09  | V Q |  |  |  |  |
| 0+40 | 1.2407   | 60.68  | V Q |  |  |  |  |
| 0+45 | 1.7346   | 71.71  | V Q |  |  |  |  |
| 0+50 | 2.3724   | 92.62  | V Q |  |  |  |  |
| 0+55 | 3.1077   | 106.77 | V Q |  |  |  |  |
| 1+ 0 | 3.9408   | 120.97 | V Q |  |  |  |  |
| 1+ 5 | 4.8179   | 127.35 | V Q |  |  |  |  |
| 1+10 | 5.7983   | 142.36 | V Q |  |  |  |  |
| 1+15 | 6.8304   | 149.85 | V Q |  |  |  |  |
| 1+20 | 7.8920   | 154.15 | V Q |  |  |  |  |
| 1+25 | 9.0675   | 170.67 | V Q |  |  |  |  |
| 1+30 | 10.4136  | 195.46 | V Q |  |  |  |  |
| 1+35 | 11.9399  | 221.62 | V Q |  |  |  |  |
| 1+40 | 13.5771  | 237.71 | V Q |  |  |  |  |
| 1+45 | 15.3217  | 253.33 | V Q |  |  |  |  |
| 1+50 | 17.2043  | 273.35 | V Q |  |  |  |  |
| 1+55 | 19.3117  | 306.00 | V Q |  |  |  |  |
| 2+ 0 | 21.5563  | 325.91 | V Q |  |  |  |  |
| 2+ 5 | 23.9084  | 341.52 | V Q |  |  |  |  |
| 2+10 | 26.4820  | 373.69 | V Q |  |  |  |  |
| 2+15 | 29.3096  | 410.57 | V Q |  |  |  |  |
| 2+20 | 32.2698  | 429.83 | V Q |  |  |  |  |
| 2+25 | 35.4017  | 454.75 | V Q |  |  |  |  |
| 2+30 | 38.8660  | 503.01 | V Q |  |  |  |  |
| 2+35 | 42.8316  | 575.80 | V Q |  |  |  |  |
| 2+40 | 47.4522  | 670.91 | V Q |  |  |  |  |
| 2+45 | 52.5412  | 738.93 | V Q |  |  |  |  |
| 2+50 | 57.9302  | 782.47 | V Q |  |  |  |  |
| 2+55 | 64.0637  | 890.59 | V Q |  |  |  |  |
| 3+ 0 | 70.3890  | 918.44 | V Q |  |  |  |  |
| 3+ 5 | 76.4080  | 873.95 | V Q |  |  |  |  |
| 3+10 | 81.3299  | 714.66 | V Q |  |  |  |  |
| 3+15 | 84.9998  | 532.87 | V Q |  |  |  |  |
| 3+20 | 88.0237  | 439.07 | V Q |  |  |  |  |
| 3+25 | 90.5546  | 367.49 | V Q |  |  |  |  |
| 3+30 | 92.5918  | 295.80 | V Q |  |  |  |  |
| 3+35 | 94.3037  | 248.57 | V Q |  |  |  |  |
| 3+40 | 95.7710  | 213.05 | V Q |  |  |  |  |
| 3+45 | 97.0373  | 183.86 | V Q |  |  |  |  |
| 3+50 | 98.1383  | 159.87 | V Q |  |  |  |  |
| 3+55 | 99.0920  | 138.47 | V Q |  |  |  |  |
| 4+ 0 | 99.9171  | 119.81 | V Q |  |  |  |  |
| 4+ 5 | 100.6341 | 104.11 | V Q |  |  |  |  |
| 4+10 | 101.2482 | 89.16  | V Q |  |  |  |  |
| 4+15 | 101.7698 | 75.74  | V Q |  |  |  |  |
| 4+20 | 102.2107 | 64.01  | V Q |  |  |  |  |
| 4+25 | 102.5803 | 53.67  | V Q |  |  |  |  |
| 4+30 | 102.8891 | 44.84  | V Q |  |  |  |  |
| 4+35 | 103.1380 | 36.14  | V Q |  |  |  |  |
| 4+40 | 103.3360 | 28.75  | V Q |  |  |  |  |
| 4+45 | 103.4972 | 23.41  | V Q |  |  |  |  |
| 4+50 | 103.6342 | 19.89  | V Q |  |  |  |  |
| 4+55 | 103.7552 | 17.58  | V Q |  |  |  |  |
| 5+ 0 | 103.8634 | 15.70  | V Q |  |  |  |  |
| 5+ 5 | 103.9599 | 14.02  | V Q |  |  |  |  |
| 5+10 | 104.0470 | 12.64  | V Q |  |  |  |  |
| 5+15 | 104.1246 | 11.27  | V Q |  |  |  |  |
| 5+20 | 104.1958 | 10.34  | V Q |  |  |  |  |
| 5+25 | 104.2631 | 9.77   | V Q |  |  |  |  |
| 5+30 | 104.3275 | 9.35   | V Q |  |  |  |  |
| 5+35 | 104.3854 | 8.41   | V Q |  |  |  |  |
| 5+40 | 104.4345 | 7.14   | V Q |  |  |  |  |
| 5+45 | 104.4749 | 5.85   | V Q |  |  |  |  |
| 5+50 | 104.5067 | 4.62   | V Q |  |  |  |  |
| 5+55 | 104.5317 | 3.63   | V Q |  |  |  |  |
| 6+ 0 | 104.5514 | 2.87   | V Q |  |  |  |  |
| 6+ 5 | 104.5650 | 1.97   | V Q |  |  |  |  |
| 6+10 | 104.5745 | 1.37   | V Q |  |  |  |  |
| 6+15 | 104.5796 | 0.74   | V Q |  |  |  |  |
| 6+20 | 104.5813 | 0.25   | V Q |  |  |  |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition**

|      |          |      |   |  |  |  |   |
|------|----------|------|---|--|--|--|---|
| 6+25 | 104.5823 | 0.15 | Q |  |  |  | V |
| 6+30 | 104.5829 | 0.09 | Q |  |  |  | V |
| 6+35 | 104.5830 | 0.01 | Q |  |  |  | V |

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# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

### Unit Hydrograph Analysis

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1  
Study date 01/15/18 File: nicholsex6100.out

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Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

English (in-lb) Input Units Used  
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Nichols Road Project - Tract 37305  
Drainage Area Stovepipe Canyon Creek = 837.7 Ac (1.3 sq. mi.)  
Ultimate Condition (per County of Riverside General Plan Land Use)  
100-year 6-hour storm

Drainage Area = 837.70(Ac.) = 1.309 Sq. Mi.  
Drainage Area for Depth-Area Areal Adjustment = 837.70(Ac.) = 1.309 Sq. Mi.  
Length along longest watercourse = 16504.00(Ft.)  
Length along longest watercourse measured to centroid = 8924.00(Ft.)  
Length along longest watercourse = 3.126 Mi.  
Length along longest watercourse measured to centroid = 1.690 Mi.  
Difference in elevation = 792.00(Ft.)  
Slope along watercourse = 253.3786 Ft./Mi.  
Average Manning's 'N' = 0.033  
Lag time = 0.521 Hr.  
Lag time = 31.25 Min.  
25% of lag time = 7.81 Min.  
40% of lag time = 12.50 Min.  
Unit time = 5.00 Min.  
Duration of storm = 6 Hour(s)  
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 837.70        | 1.26             | 1055.50        |

100 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 837.70        | 3.12             | 2613.62        |

STORM EVENT (YEAR) = 100.00  
Area Averaged 2-Year Rainfall = 1.260(In)  
Area Averaged 100-Year Rainfall = 3.120(In)

Point rain (area averaged) = 3.120(In)  
Areal adjustment factor = 99.71 %  
Adjusted average point rain = 3.111(In)

Sub-Area Data:  
Area(Ac.)                      Runoff Index                      Impervious %  
134.000                      85.00                      0.030

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

|                                   |       |       |
|-----------------------------------|-------|-------|
| 14.000                            | 85.00 | 0.020 |
| 76.000                            | 65.50 | 0.250 |
| 613.700                           | 78.90 | 0.050 |
| Total Area Entered = 837.70 (Ac.) |       |       |

| RI        | RI    | Infil. Rate | Impervious | Adj. Infil. Rate | Area%  | F       |
|-----------|-------|-------------|------------|------------------|--------|---------|
| AMC2      | AMC-2 | (In/Hr)     | (Dec.%)    | (In/Hr)          | (Dec.) | (In/Hr) |
| 85.0      | 85.0  | 0.187       | 0.030      | 0.182            | 0.160  | 0.029   |
| 85.0      | 85.0  | 0.187       | 0.020      | 0.184            | 0.017  | 0.003   |
| 65.5      | 65.5  | 0.411       | 0.250      | 0.318            | 0.091  | 0.029   |
| 78.9      | 78.9  | 0.257       | 0.050      | 0.245            | 0.733  | 0.180   |
| Sum (F) = |       |             |            |                  |        | 0.241   |

Area averaged mean soil loss (F) (In/Hr) = 0.241

Minimum soil loss rate ((In/Hr)) = 0.120

(for 24 hour storm duration)

Soil loss rate (decimal) = 0.850

## Unit Hydrograph FOOTHILL S-Curve

### Unit Hydrograph Data

| Unit time period<br>(hrs) | Time % of lag | Distribution<br>Graph % | Unit Hydrograph<br>(CFS) |
|---------------------------|---------------|-------------------------|--------------------------|
| 1                         | 0.083         | 16.000                  | 1.015                    |
| 2                         | 0.167         | 32.000                  | 2.641                    |
| 3                         | 0.250         | 47.999                  | 3.796                    |
| 4                         | 0.333         | 63.999                  | 5.150                    |
| 5                         | 0.417         | 79.999                  | 7.727                    |
| 6                         | 0.500         | 95.999                  | 12.895                   |
| 7                         | 0.583         | 111.999                 | 19.182                   |
| 8                         | 0.667         | 127.999                 | 9.062                    |
| 9                         | 0.750         | 143.998                 | 6.117                    |
| 10                        | 0.833         | 159.998                 | 4.726                    |
| 11                        | 0.917         | 175.998                 | 3.835                    |
| 12                        | 1.000         | 191.998                 | 3.310                    |
| 13                        | 1.083         | 207.998                 | 2.864                    |
| 14                        | 1.167         | 223.997                 | 2.384                    |
| 15                        | 1.250         | 239.997                 | 2.135                    |
| 16                        | 1.333         | 255.997                 | 1.894                    |
| 17                        | 1.417         | 271.997                 | 1.611                    |
| 18                        | 1.500         | 287.997                 | 1.452                    |
| 19                        | 1.583         | 303.997                 | 1.277                    |
| 20                        | 1.667         | 319.996                 | 1.096                    |
| 21                        | 1.750         | 335.996                 | 0.964                    |
| 22                        | 1.833         | 351.996                 | 0.780                    |
| 23                        | 1.917         | 367.996                 | 0.689                    |
| 24                        | 2.000         | 383.996                 | 0.610                    |
| 25                        | 2.083         | 399.996                 | 0.466                    |
| 26                        | 2.167         | 415.995                 | 0.320                    |
| 27                        | 2.250         | 431.995                 | 0.192                    |
| 28                        | 2.333         | 447.995                 | 0.192                    |
| 29                        | 2.417         | 463.995                 | 0.180                    |
| 30                        | 2.500         | 479.995                 | 0.160                    |
| 31                        | 2.583         | 495.994                 | 0.160                    |
| 32                        | 2.667         | 511.994                 | 0.142                    |
| 33                        | 2.750         | 527.994                 | 0.098                    |
| 34                        | 2.833         | 543.994                 | 0.096                    |
| 35                        | 2.917         | 559.994                 | 0.102                    |
| 36                        | 3.000         | 575.994                 | 0.126                    |
| 37                        | 3.083         | 591.993                 | 0.128                    |
| 38                        | 3.167         | 607.993                 | 0.120                    |
| 39                        | 3.250         | 623.993                 | 0.072                    |
| 40                        | 3.333         | 639.993                 | 0.064                    |
| 41                        | 3.417         | 655.993                 | 0.062                    |
| 42                        | 3.500         | 671.992                 | 0.038                    |
| 43                        | 3.583         | 687.992                 | 0.032                    |
| 44                        | 3.667         | 703.992                 | 0.040                    |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

Sum = 100.000      Sum=      844.245

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

| Unit | Time<br>(Hr.) | Pattern<br>Percent | Storm Rain<br>(In/Hr) | Loss rate(In./Hr) |          | Effective<br>(In/Hr) |
|------|---------------|--------------------|-----------------------|-------------------|----------|----------------------|
|      |               |                    |                       | Max               | Low      |                      |
| 1    | 0.08          | 0.50               | 0.187                 | ( 0.241)          | 0.159    | 0.028                |
| 2    | 0.17          | 0.60               | 0.224                 | ( 0.241)          | 0.190    | 0.034                |
| 3    | 0.25          | 0.60               | 0.224                 | ( 0.241)          | 0.190    | 0.034                |
| 4    | 0.33          | 0.60               | 0.224                 | ( 0.241)          | 0.190    | 0.034                |
| 5    | 0.42          | 0.60               | 0.224                 | ( 0.241)          | 0.190    | 0.034                |
| 6    | 0.50          | 0.70               | 0.261                 | ( 0.241)          | 0.222    | 0.039                |
| 7    | 0.58          | 0.70               | 0.261                 | ( 0.241)          | 0.222    | 0.039                |
| 8    | 0.67          | 0.70               | 0.261                 | ( 0.241)          | 0.222    | 0.039                |
| 9    | 0.75          | 0.70               | 0.261                 | ( 0.241)          | 0.222    | 0.039                |
| 10   | 0.83          | 0.70               | 0.261                 | ( 0.241)          | 0.222    | 0.039                |
| 11   | 0.92          | 0.70               | 0.261                 | ( 0.241)          | 0.222    | 0.039                |
| 12   | 1.00          | 0.80               | 0.299                 | 0.241             | ( 0.254) | 0.058                |
| 13   | 1.08          | 0.80               | 0.299                 | 0.241             | ( 0.254) | 0.058                |
| 14   | 1.17          | 0.80               | 0.299                 | 0.241             | ( 0.254) | 0.058                |
| 15   | 1.25          | 0.80               | 0.299                 | 0.241             | ( 0.254) | 0.058                |
| 16   | 1.33          | 0.80               | 0.299                 | 0.241             | ( 0.254) | 0.058                |
| 17   | 1.42          | 0.80               | 0.299                 | 0.241             | ( 0.254) | 0.058                |
| 18   | 1.50          | 0.80               | 0.299                 | 0.241             | ( 0.254) | 0.058                |
| 19   | 1.58          | 0.80               | 0.299                 | 0.241             | ( 0.254) | 0.058                |
| 20   | 1.67          | 0.80               | 0.299                 | 0.241             | ( 0.254) | 0.058                |
| 21   | 1.75          | 0.80               | 0.299                 | 0.241             | ( 0.254) | 0.058                |
| 22   | 1.83          | 0.80               | 0.299                 | 0.241             | ( 0.254) | 0.058                |
| 23   | 1.92          | 0.80               | 0.299                 | 0.241             | ( 0.254) | 0.058                |
| 24   | 2.00          | 0.90               | 0.336                 | 0.241             | ( 0.286) | 0.095                |
| 25   | 2.08          | 0.80               | 0.299                 | 0.241             | ( 0.254) | 0.058                |
| 26   | 2.17          | 0.90               | 0.336                 | 0.241             | ( 0.286) | 0.095                |
| 27   | 2.25          | 0.90               | 0.336                 | 0.241             | ( 0.286) | 0.095                |
| 28   | 2.33          | 0.90               | 0.336                 | 0.241             | ( 0.286) | 0.095                |
| 29   | 2.42          | 0.90               | 0.336                 | 0.241             | ( 0.286) | 0.095                |
| 30   | 2.50          | 0.90               | 0.336                 | 0.241             | ( 0.286) | 0.095                |
| 31   | 2.58          | 0.90               | 0.336                 | 0.241             | ( 0.286) | 0.095                |
| 32   | 2.67          | 0.90               | 0.336                 | 0.241             | ( 0.286) | 0.095                |
| 33   | 2.75          | 1.00               | 0.373                 | 0.241             | ( 0.317) | 0.132                |
| 34   | 2.83          | 1.00               | 0.373                 | 0.241             | ( 0.317) | 0.132                |
| 35   | 2.92          | 1.00               | 0.373                 | 0.241             | ( 0.317) | 0.132                |
| 36   | 3.00          | 1.00               | 0.373                 | 0.241             | ( 0.317) | 0.132                |
| 37   | 3.08          | 1.00               | 0.373                 | 0.241             | ( 0.317) | 0.132                |
| 38   | 3.17          | 1.10               | 0.411                 | 0.241             | ( 0.349) | 0.170                |
| 39   | 3.25          | 1.10               | 0.411                 | 0.241             | ( 0.349) | 0.170                |
| 40   | 3.33          | 1.10               | 0.411                 | 0.241             | ( 0.349) | 0.170                |
| 41   | 3.42          | 1.20               | 0.448                 | 0.241             | ( 0.381) | 0.207                |
| 42   | 3.50          | 1.30               | 0.485                 | 0.241             | ( 0.413) | 0.244                |
| 43   | 3.58          | 1.40               | 0.523                 | 0.241             | ( 0.444) | 0.282                |
| 44   | 3.67          | 1.40               | 0.523                 | 0.241             | ( 0.444) | 0.282                |
| 45   | 3.75          | 1.50               | 0.560                 | 0.241             | ( 0.476) | 0.319                |
| 46   | 3.83          | 1.50               | 0.560                 | 0.241             | ( 0.476) | 0.319                |
| 47   | 3.92          | 1.60               | 0.597                 | 0.241             | ( 0.508) | 0.356                |
| 48   | 4.00          | 1.60               | 0.597                 | 0.241             | ( 0.508) | 0.356                |
| 49   | 4.08          | 1.70               | 0.635                 | 0.241             | ( 0.539) | 0.394                |
| 50   | 4.17          | 1.80               | 0.672                 | 0.241             | ( 0.571) | 0.431                |
| 51   | 4.25          | 1.90               | 0.709                 | 0.241             | ( 0.603) | 0.468                |
| 52   | 4.33          | 2.00               | 0.747                 | 0.241             | ( 0.635) | 0.506                |
| 53   | 4.42          | 2.10               | 0.784                 | 0.241             | ( 0.666) | 0.543                |
| 54   | 4.50          | 2.10               | 0.784                 | 0.241             | ( 0.666) | 0.543                |
| 55   | 4.58          | 2.20               | 0.821                 | 0.241             | ( 0.698) | 0.580                |
| 56   | 4.67          | 2.30               | 0.859                 | 0.241             | ( 0.730) | 0.618                |
| 57   | 4.75          | 2.40               | 0.896                 | 0.241             | ( 0.762) | 0.655                |
| 58   | 4.83          | 2.40               | 0.896                 | 0.241             | ( 0.762) | 0.655                |
| 59   | 4.92          | 2.50               | 0.933                 | 0.241             | ( 0.793) | 0.692                |
| 60   | 5.00          | 2.60               | 0.971                 | 0.241             | ( 0.825) | 0.730                |
| 61   | 5.08          | 3.10               | 1.157                 | 0.241             | ( 0.984) | 0.916                |
| 62   | 5.17          | 3.60               | 1.344                 | 0.241             | ( 1.142) | 1.103                |

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

|    |      |      |       |          |          |       |
|----|------|------|-------|----------|----------|-------|
| 63 | 5.25 | 3.90 | 1.456 | 0.241    | ( 1.238) | 1.215 |
| 64 | 5.33 | 4.20 | 1.568 | 0.241    | ( 1.333) | 1.327 |
| 65 | 5.42 | 4.70 | 1.755 | 0.241    | ( 1.491) | 1.514 |
| 66 | 5.50 | 5.60 | 2.091 | 0.241    | ( 1.777) | 1.850 |
| 67 | 5.58 | 1.90 | 0.709 | 0.241    | ( 0.603) | 0.468 |
| 68 | 5.67 | 0.90 | 0.336 | 0.241    | ( 0.286) | 0.095 |
| 69 | 5.75 | 0.60 | 0.224 | ( 0.241) | 0.190    | 0.034 |
| 70 | 5.83 | 0.50 | 0.187 | ( 0.241) | 0.159    | 0.028 |
| 71 | 5.92 | 0.30 | 0.112 | ( 0.241) | 0.095    | 0.017 |
| 72 | 6.00 | 0.20 | 0.075 | ( 0.241) | 0.063    | 0.011 |

(Loss Rate Not Used)

```
Sum = 100.0
```

Sum = 20.8

Flood volume = Effective rainfall      1.74(In)

$$\text{times area} \quad 837.7 (\text{Ac.}) / [(\text{In}) / (\text{Ft.})] = 121.3 (\text{Ac. Ft})$$

Total soil loss = 1.37 (In)

Total soil loss = 95.919 (Ac.Ft)

Total rainfall = 3.11 (In)

Flood volume = 5281911.5 Cubic Feet

Total soil loss = 4178223.6 Cubic Feet

Peak flow rate of this hydrograph = 843.125 (CFS)

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6 - H O U R      S T O R M

Runoff Hydrograph

Hydrograph in 5 Minute intervals ((CFS))

| Time (h+m) | Volume  | Ac.Ft | Q (CFS) | 0 | 225.0 | 450.0 | 675.0 | 900.0 |
|------------|---------|-------|---------|---|-------|-------|-------|-------|
| 0+ 5       | 0.0017  |       | 0.24    | Q |       |       |       |       |
| 0+10       | 0.0079  |       | 0.91    | Q |       |       |       |       |
| 0+15       | 0.0213  |       | 1.94    | Q |       |       |       |       |
| 0+20       | 0.0442  |       | 3.33    | Q |       |       |       |       |
| 0+25       | 0.0814  |       | 5.40    | Q |       |       |       |       |
| 0+30       | 0.1425  |       | 8.87    | Q |       |       |       |       |
| 0+35       | 0.2399  | 14.14 | Q       |   |       |       |       |       |
| 0+40       | 0.3595  | 17.37 | Q       |   |       |       |       |       |
| 0+45       | 0.4937  | 19.49 | Q       |   |       |       |       |       |
| 0+50       | 0.6401  | 21.26 | Q       |   |       |       |       |       |
| 0+55       | 0.7985  | 23.00 | VQ      |   |       |       |       |       |
| 1+ 0       | 0.9709  | 25.03 | VQ      |   |       |       |       |       |
| 1+ 5       | 1.1549  | 26.71 | VQ      |   |       |       |       |       |
| 1+10       | 1.3498  | 28.30 | VQ      |   |       |       |       |       |
| 1+15       | 1.5560  | 29.95 | VQ      |   |       |       |       |       |
| 1+20       | 1.7756  | 31.89 | VQ      |   |       |       |       |       |
| 1+25       | 2.0136  | 34.55 | VQ      |   |       |       |       |       |
| 1+30       | 2.2761  | 38.12 | VQ      |   |       |       |       |       |
| 1+35       | 2.5518  | 40.03 | VQ      |   |       |       |       |       |
| 1+40       | 2.8370  | 41.41 | VQ      |   |       |       |       |       |
| 1+45       | 3.1299  | 42.52 | IQ      |   |       |       |       |       |
| 1+50       | 3.4290  | 43.43 | IQ      |   |       |       |       |       |
| 1+55       | 3.7336  | 44.22 | IQ      |   |       |       |       |       |
| 2+ 0       | 4.0451  | 45.23 | IVQ     |   |       |       |       |       |
| 2+ 5       | 4.3640  | 46.31 | IVQ     |   |       |       |       |       |
| 2+10       | 4.6910  | 47.47 | IVQ     |   |       |       |       |       |
| 2+15       | 5.0293  | 49.13 | IVQ     |   |       |       |       |       |
| 2+20       | 5.3839  | 51.48 | IVQ     |   |       |       |       |       |
| 2+25       | 5.7629  | 55.04 | IVQ     |   |       |       |       |       |
| 2+30       | 6.1743  | 59.73 | I Q     |   |       |       |       |       |
| 2+35       | 6.5933  | 60.84 | I Q     |   |       |       |       |       |
| 2+40       | 7.0489  | 66.16 | I Q     |   |       |       |       |       |
| 2+45       | 7.5245  | 69.06 | I VQ    |   |       |       |       |       |
| 2+50       | 8.0182  | 71.68 | I VQ    |   |       |       |       |       |
| 2+55       | 8.5302  | 74.34 | I VQ    |   |       |       |       |       |
| 3+ 0       | 9.0615  | 77.15 | I VQ    |   |       |       |       |       |
| 3+ 5       | 9.6164  | 80.57 | I Q     |   |       |       |       |       |
| 3+10       | 10.2077 | 85.85 | I Q     |   |       |       |       |       |
| 3+15       | 10.8514 | 93.46 | I VQ    |   |       |       |       |       |
| 3+20       | 11.5273 | 98.15 | I VQ    |   |       |       |       |       |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

|      |          |        |  |       |  |  |  |  |  |
|------|----------|--------|--|-------|--|--|--|--|--|
| 3+25 | 12.2341  | 102.62 |  | Q     |  |  |  |  |  |
| 3+30 | 12.9793  | 108.20 |  | Q     |  |  |  |  |  |
| 3+35 | 13.7800  | 116.26 |  | VQ    |  |  |  |  |  |
| 3+40 | 14.6574  | 127.40 |  | VQ    |  |  |  |  |  |
| 3+45 | 15.6012  | 137.05 |  | VQ    |  |  |  |  |  |
| 3+50 | 16.6273  | 148.98 |  | VQ    |  |  |  |  |  |
| 3+55 | 17.7668  | 165.45 |  | V Q   |  |  |  |  |  |
| 4+ 0 | 19.0263  | 182.88 |  | V Q   |  |  |  |  |  |
| 4+ 5 | 20.3995  | 199.39 |  | V Q   |  |  |  |  |  |
| 4+10 | 21.8733  | 213.99 |  | V Q   |  |  |  |  |  |
| 4+15 | 23.4623  | 230.72 |  | V Q   |  |  |  |  |  |
| 4+20 | 25.1596  | 246.45 |  | V Q   |  |  |  |  |  |
| 4+25 | 26.9843  | 264.95 |  | V  Q  |  |  |  |  |  |
| 4+30 | 28.9331  | 282.97 |  | V   Q |  |  |  |  |  |
| 4+35 | 31.0327  | 304.86 |  | V Q   |  |  |  |  |  |
| 4+40 | 33.2932  | 328.23 |  | V Q   |  |  |  |  |  |
| 4+45 | 35.7199  | 352.35 |  | V Q   |  |  |  |  |  |
| 4+50 | 38.3107  | 376.19 |  | V Q   |  |  |  |  |  |
| 4+55 | 41.0558  | 398.59 |  | V Q   |  |  |  |  |  |
| 5+ 0 | 43.9433  | 419.26 |  | V Q   |  |  |  |  |  |
| 5+ 5 | 47.0048  | 444.54 |  | V Q   |  |  |  |  |  |
| 5+10 | 50.2670  | 473.67 |  | V  Q  |  |  |  |  |  |
| 5+15 | 53.7527  | 506.12 |  | V Q   |  |  |  |  |  |
| 5+20 | 57.4856  | 542.02 |  | V Q   |  |  |  |  |  |
| 5+25 | 61.5459  | 589.56 |  | V Q   |  |  |  |  |  |
| 5+30 | 66.0525  | 654.35 |  | V Q   |  |  |  |  |  |
| 5+35 | 71.0817  | 730.25 |  | V Q   |  |  |  |  |  |
| 5+40 | 76.5111  | 788.35 |  | V Q   |  |  |  |  |  |
| 5+45 | 82.1858  | 823.97 |  | V Q   |  |  |  |  |  |
| 5+50 | 87.9925  | 843.12 |  | V  Q  |  |  |  |  |  |
| 5+55 | 93.7424  | 834.89 |  | V Q   |  |  |  |  |  |
| 6+ 0 | 98.9219  | 752.06 |  | VQ    |  |  |  |  |  |
| 6+ 5 | 102.6419 | 540.15 |  | V     |  |  |  |  |  |
| 6+10 | 105.4617 | 409.43 |  | Q     |  |  |  |  |  |
| 6+15 | 107.7559 | 333.12 |  | Q     |  |  |  |  |  |
| 6+20 | 109.6916 | 281.07 |  | Q     |  |  |  |  |  |
| 6+25 | 111.3489 | 240.63 |  | Q     |  |  |  |  |  |
| 6+30 | 112.7722 | 206.66 |  | Q     |  |  |  |  |  |
| 6+35 | 113.9925 | 177.18 |  | Q     |  |  |  |  |  |
| 6+40 | 115.0527 | 153.94 |  | Q     |  |  |  |  |  |
| 6+45 | 115.9727 | 133.59 |  | Q     |  |  |  |  |  |
| 6+50 | 116.7665 | 115.27 |  | Q     |  |  |  |  |  |
| 6+55 | 117.4531 | 99.69  |  | Q     |  |  |  |  |  |
| 7+ 0 | 118.0430 | 85.65  |  | Q     |  |  |  |  |  |
| 7+ 5 | 118.5453 | 72.94  |  | Q     |  |  |  |  |  |
| 7+10 | 118.9704 | 61.71  |  | Q     |  |  |  |  |  |
| 7+15 | 119.3244 | 51.41  |  | Q     |  |  |  |  |  |
| 7+20 | 119.6200 | 42.92  |  | Q     |  |  |  |  |  |
| 7+25 | 119.8638 | 35.41  |  | Q     |  |  |  |  |  |
| 7+30 | 120.0595 | 28.42  |  | Q     |  |  |  |  |  |
| 7+35 | 120.2161 | 22.74  |  | Q     |  |  |  |  |  |
| 7+40 | 120.3460 | 18.86  |  | Q     |  |  |  |  |  |
| 7+45 | 120.4622 | 16.87  |  | Q     |  |  |  |  |  |
| 7+50 | 120.5670 | 15.21  |  | Q     |  |  |  |  |  |
| 7+55 | 120.6611 | 13.67  |  | Q     |  |  |  |  |  |
| 8+ 0 | 120.7463 | 12.38  |  | Q     |  |  |  |  |  |
| 8+ 5 | 120.8226 | 11.07  |  | Q     |  |  |  |  |  |
| 8+10 | 120.8906 | 9.88   |  | Q     |  |  |  |  |  |
| 8+15 | 120.9539 | 9.19   |  | Q     |  |  |  |  |  |
| 8+20 | 121.0133 | 8.62   |  | Q     |  |  |  |  |  |
| 8+25 | 121.0683 | 7.99   |  | Q     |  |  |  |  |  |
| 8+30 | 121.1162 | 6.97   |  | Q     |  |  |  |  |  |
| 8+35 | 121.1554 | 5.68   |  | Q     |  |  |  |  |  |
| 8+40 | 121.1850 | 4.30   |  | Q     |  |  |  |  |  |
| 8+45 | 121.2083 | 3.39   |  | Q     |  |  |  |  |  |
| 8+50 | 121.2264 | 2.63   |  | Q     |  |  |  |  |  |
| 8+55 | 121.2390 | 1.83   |  | Q     |  |  |  |  |  |
| 9+ 0 | 121.2478 | 1.28   |  | Q     |  |  |  |  |  |
| 9+ 5 | 121.2536 | 0.84   |  | Q     |  |  |  |  |  |
| 9+10 | 121.2551 | 0.23   |  | Q     |  |  |  |  |  |
| 9+15 | 121.2556 | 0.07   |  | Q     |  |  |  |  |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition**

|      |          |      |   |  |  |  |   |
|------|----------|------|---|--|--|--|---|
| 9+20 | 121.2558 | 0.03 | Q |  |  |  | V |
| 9+25 | 121.2559 | 0.02 | Q |  |  |  | V |
| 9+30 | 121.2560 | 0.01 | Q |  |  |  | V |
| 9+35 | 121.2560 | 0.00 | Q |  |  |  | V |

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# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

### Unit Hydrograph Analysis

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1  
Study date 01/15/18 File: nicholsex24100.out

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Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

English (in-lb) Input Units Used  
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Nichols Road Project - Tract 37305  
Drainage Area Stovepipe Canyon Creek = 837.7 Ac (1.3 sq. mi.)  
Ultimate Condition (per County of Riverside General Plan Land Use)  
100-year 24-hour storm

Drainage Area = 837.70(Ac.) = 1.309 Sq. Mi.  
Drainage Area for Depth-Area Areal Adjustment = 837.70(Ac.) = 1.309 Sq. Mi.  
Length along longest watercourse = 16504.00(Ft.)  
Length along longest watercourse measured to centroid = 8924.00(Ft.)  
Length along longest watercourse = 3.126 Mi.  
Length along longest watercourse measured to centroid = 1.690 Mi.  
Difference in elevation = 792.00(Ft.)  
Slope along watercourse = 253.3786 Ft./Mi.  
Average Manning's 'N' = 0.033  
Lag time = 0.521 Hr.  
Lag time = 31.25 Min.  
25% of lag time = 7.81 Min.  
40% of lag time = 12.50 Min.  
Unit time = 5.00 Min.  
Duration of storm = 24 Hour(s)  
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 837.70        | 2.38             | 1993.73        |

100 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 837.70        | 6.35             | 5319.40        |

STORM EVENT (YEAR) = 100.00  
Area Averaged 2-Year Rainfall = 2.380(In)  
Area Averaged 100-Year Rainfall = 6.350(In)

Point rain (area averaged) = 6.350(In)  
Areal adjustment factor = 99.84 %  
Adjusted average point rain = 6.340(In)

Sub-Area Data:  
Area(Ac.)                      Runoff Index                      Impervious %  
134.000                      85.00                      0.030

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

14.000                      85.00                      0.020  
76.000                      65.50                      0.250  
613.700                      78.90                      0.050  
Total Area Entered =        837.70 (Ac.)

| RI        | RI    | Infil. Rate | Impervious | Adj. Infil. Rate | Area%  | F       |
|-----------|-------|-------------|------------|------------------|--------|---------|
| AMC2      | AMC-2 | (In/Hr)     | (Dec.%)    | (In/Hr)          | (Dec.) | (In/Hr) |
| 85.0      | 85.0  | 0.187       | 0.030      | 0.182            | 0.160  | 0.029   |
| 85.0      | 85.0  | 0.187       | 0.020      | 0.184            | 0.017  | 0.003   |
| 65.5      | 65.5  | 0.411       | 0.250      | 0.318            | 0.091  | 0.029   |
| 78.9      | 78.9  | 0.257       | 0.050      | 0.245            | 0.733  | 0.180   |
| Sum (F) = |       |             |            |                  |        | 0.241   |

Area averaged mean soil loss (F) (In/Hr) = 0.241

Minimum soil loss rate ((In/Hr)) = 0.120

(for 24 hour storm duration)

Soil loss rate (decimal) = 0.850

## Unit Hydrograph FOOTHILL S-Curve

### Unit Hydrograph Data

| Unit time period<br>(hrs) | Time % of lag | Distribution<br>Graph % | Unit Hydrograph<br>(CFS) |
|---------------------------|---------------|-------------------------|--------------------------|
| 1                         | 0.083         | 16.000                  | 1.015                    |
| 2                         | 0.167         | 32.000                  | 2.641                    |
| 3                         | 0.250         | 47.999                  | 3.796                    |
| 4                         | 0.333         | 63.999                  | 5.150                    |
| 5                         | 0.417         | 79.999                  | 7.727                    |
| 6                         | 0.500         | 95.999                  | 12.895                   |
| 7                         | 0.583         | 111.999                 | 19.182                   |
| 8                         | 0.667         | 127.999                 | 9.062                    |
| 9                         | 0.750         | 143.998                 | 6.117                    |
| 10                        | 0.833         | 159.998                 | 4.726                    |
| 11                        | 0.917         | 175.998                 | 3.835                    |
| 12                        | 1.000         | 191.998                 | 3.310                    |
| 13                        | 1.083         | 207.998                 | 2.864                    |
| 14                        | 1.167         | 223.997                 | 2.384                    |
| 15                        | 1.250         | 239.997                 | 2.135                    |
| 16                        | 1.333         | 255.997                 | 1.894                    |
| 17                        | 1.417         | 271.997                 | 1.611                    |
| 18                        | 1.500         | 287.997                 | 1.452                    |
| 19                        | 1.583         | 303.997                 | 1.277                    |
| 20                        | 1.667         | 319.996                 | 1.096                    |
| 21                        | 1.750         | 335.996                 | 0.964                    |
| 22                        | 1.833         | 351.996                 | 0.780                    |
| 23                        | 1.917         | 367.996                 | 0.689                    |
| 24                        | 2.000         | 383.996                 | 0.610                    |
| 25                        | 2.083         | 399.996                 | 0.466                    |
| 26                        | 2.167         | 415.995                 | 0.320                    |
| 27                        | 2.250         | 431.995                 | 0.192                    |
| 28                        | 2.333         | 447.995                 | 0.192                    |
| 29                        | 2.417         | 463.995                 | 0.180                    |
| 30                        | 2.500         | 479.995                 | 0.160                    |
| 31                        | 2.583         | 495.994                 | 0.160                    |
| 32                        | 2.667         | 511.994                 | 0.142                    |
| 33                        | 2.750         | 527.994                 | 0.098                    |
| 34                        | 2.833         | 543.994                 | 0.096                    |
| 35                        | 2.917         | 559.994                 | 0.102                    |
| 36                        | 3.000         | 575.994                 | 0.126                    |
| 37                        | 3.083         | 591.993                 | 0.128                    |
| 38                        | 3.167         | 607.993                 | 0.120                    |
| 39                        | 3.250         | 623.993                 | 0.072                    |
| 40                        | 3.333         | 639.993                 | 0.064                    |
| 41                        | 3.417         | 655.993                 | 0.062                    |
| 42                        | 3.500         | 671.992                 | 0.038                    |
| 43                        | 3.583         | 687.992                 | 0.032                    |
| 44                        | 3.667         | 703.992                 | 0.040                    |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

Sum = 100.000      Sum=      844.245

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

| Unit | Time<br>(Hr.) | Pattern<br>Percent | Storm Rain<br>(In/Hr) | Loss rate(In./Hr) |       | Effective<br>(In/Hr) |
|------|---------------|--------------------|-----------------------|-------------------|-------|----------------------|
|      |               |                    |                       | Max               | Low   |                      |
| 1    | 0.08          | 0.07               | 0.051                 | ( 0.427)          | 0.043 | 0.008                |
| 2    | 0.17          | 0.07               | 0.051                 | ( 0.425)          | 0.043 | 0.008                |
| 3    | 0.25          | 0.07               | 0.051                 | ( 0.424)          | 0.043 | 0.008                |
| 4    | 0.33          | 0.10               | 0.076                 | ( 0.422)          | 0.065 | 0.011                |
| 5    | 0.42          | 0.10               | 0.076                 | ( 0.420)          | 0.065 | 0.011                |
| 6    | 0.50          | 0.10               | 0.076                 | ( 0.419)          | 0.065 | 0.011                |
| 7    | 0.58          | 0.10               | 0.076                 | ( 0.417)          | 0.065 | 0.011                |
| 8    | 0.67          | 0.10               | 0.076                 | ( 0.415)          | 0.065 | 0.011                |
| 9    | 0.75          | 0.10               | 0.076                 | ( 0.414)          | 0.065 | 0.011                |
| 10   | 0.83          | 0.13               | 0.101                 | ( 0.412)          | 0.086 | 0.015                |
| 11   | 0.92          | 0.13               | 0.101                 | ( 0.411)          | 0.086 | 0.015                |
| 12   | 1.00          | 0.13               | 0.101                 | ( 0.409)          | 0.086 | 0.015                |
| 13   | 1.08          | 0.10               | 0.076                 | ( 0.407)          | 0.065 | 0.011                |
| 14   | 1.17          | 0.10               | 0.076                 | ( 0.406)          | 0.065 | 0.011                |
| 15   | 1.25          | 0.10               | 0.076                 | ( 0.404)          | 0.065 | 0.011                |
| 16   | 1.33          | 0.10               | 0.076                 | ( 0.403)          | 0.065 | 0.011                |
| 17   | 1.42          | 0.10               | 0.076                 | ( 0.401)          | 0.065 | 0.011                |
| 18   | 1.50          | 0.10               | 0.076                 | ( 0.399)          | 0.065 | 0.011                |
| 19   | 1.58          | 0.10               | 0.076                 | ( 0.398)          | 0.065 | 0.011                |
| 20   | 1.67          | 0.10               | 0.076                 | ( 0.396)          | 0.065 | 0.011                |
| 21   | 1.75          | 0.10               | 0.076                 | ( 0.395)          | 0.065 | 0.011                |
| 22   | 1.83          | 0.13               | 0.101                 | ( 0.393)          | 0.086 | 0.015                |
| 23   | 1.92          | 0.13               | 0.101                 | ( 0.391)          | 0.086 | 0.015                |
| 24   | 2.00          | 0.13               | 0.101                 | ( 0.390)          | 0.086 | 0.015                |
| 25   | 2.08          | 0.13               | 0.101                 | ( 0.388)          | 0.086 | 0.015                |
| 26   | 2.17          | 0.13               | 0.101                 | ( 0.387)          | 0.086 | 0.015                |
| 27   | 2.25          | 0.13               | 0.101                 | ( 0.385)          | 0.086 | 0.015                |
| 28   | 2.33          | 0.13               | 0.101                 | ( 0.383)          | 0.086 | 0.015                |
| 29   | 2.42          | 0.13               | 0.101                 | ( 0.382)          | 0.086 | 0.015                |
| 30   | 2.50          | 0.13               | 0.101                 | ( 0.380)          | 0.086 | 0.015                |
| 31   | 2.58          | 0.17               | 0.127                 | ( 0.379)          | 0.108 | 0.019                |
| 32   | 2.67          | 0.17               | 0.127                 | ( 0.377)          | 0.108 | 0.019                |
| 33   | 2.75          | 0.17               | 0.127                 | ( 0.376)          | 0.108 | 0.019                |
| 34   | 2.83          | 0.17               | 0.127                 | ( 0.374)          | 0.108 | 0.019                |
| 35   | 2.92          | 0.17               | 0.127                 | ( 0.373)          | 0.108 | 0.019                |
| 36   | 3.00          | 0.17               | 0.127                 | ( 0.371)          | 0.108 | 0.019                |
| 37   | 3.08          | 0.17               | 0.127                 | ( 0.370)          | 0.108 | 0.019                |
| 38   | 3.17          | 0.17               | 0.127                 | ( 0.368)          | 0.108 | 0.019                |
| 39   | 3.25          | 0.17               | 0.127                 | ( 0.366)          | 0.108 | 0.019                |
| 40   | 3.33          | 0.17               | 0.127                 | ( 0.365)          | 0.108 | 0.019                |
| 41   | 3.42          | 0.17               | 0.127                 | ( 0.363)          | 0.108 | 0.019                |
| 42   | 3.50          | 0.17               | 0.127                 | ( 0.362)          | 0.108 | 0.019                |
| 43   | 3.58          | 0.17               | 0.127                 | ( 0.360)          | 0.108 | 0.019                |
| 44   | 3.67          | 0.17               | 0.127                 | ( 0.359)          | 0.108 | 0.019                |
| 45   | 3.75          | 0.17               | 0.127                 | ( 0.357)          | 0.108 | 0.019                |
| 46   | 3.83          | 0.20               | 0.152                 | ( 0.356)          | 0.129 | 0.023                |
| 47   | 3.92          | 0.20               | 0.152                 | ( 0.354)          | 0.129 | 0.023                |
| 48   | 4.00          | 0.20               | 0.152                 | ( 0.353)          | 0.129 | 0.023                |
| 49   | 4.08          | 0.20               | 0.152                 | ( 0.351)          | 0.129 | 0.023                |
| 50   | 4.17          | 0.20               | 0.152                 | ( 0.350)          | 0.129 | 0.023                |
| 51   | 4.25          | 0.20               | 0.152                 | ( 0.348)          | 0.129 | 0.023                |
| 52   | 4.33          | 0.23               | 0.178                 | ( 0.347)          | 0.151 | 0.027                |
| 53   | 4.42          | 0.23               | 0.178                 | ( 0.345)          | 0.151 | 0.027                |
| 54   | 4.50          | 0.23               | 0.178                 | ( 0.344)          | 0.151 | 0.027                |
| 55   | 4.58          | 0.23               | 0.178                 | ( 0.342)          | 0.151 | 0.027                |
| 56   | 4.67          | 0.23               | 0.178                 | ( 0.341)          | 0.151 | 0.027                |
| 57   | 4.75          | 0.23               | 0.178                 | ( 0.340)          | 0.151 | 0.027                |
| 58   | 4.83          | 0.27               | 0.203                 | ( 0.338)          | 0.172 | 0.030                |
| 59   | 4.92          | 0.27               | 0.203                 | ( 0.337)          | 0.172 | 0.030                |
| 60   | 5.00          | 0.27               | 0.203                 | ( 0.335)          | 0.172 | 0.030                |
| 61   | 5.08          | 0.20               | 0.152                 | ( 0.334)          | 0.129 | 0.023                |
| 62   | 5.17          | 0.20               | 0.152                 | ( 0.332)          | 0.129 | 0.023                |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition**

|     |       |      |       |                |       |       |
|-----|-------|------|-------|----------------|-------|-------|
| 63  | 5.25  | 0.20 | 0.152 | ( 0.331)       | 0.129 | 0.023 |
| 64  | 5.33  | 0.23 | 0.178 | ( 0.329)       | 0.151 | 0.027 |
| 65  | 5.42  | 0.23 | 0.178 | ( 0.328)       | 0.151 | 0.027 |
| 66  | 5.50  | 0.23 | 0.178 | ( 0.326)       | 0.151 | 0.027 |
| 67  | 5.58  | 0.27 | 0.203 | ( 0.325)       | 0.172 | 0.030 |
| 68  | 5.67  | 0.27 | 0.203 | ( 0.324)       | 0.172 | 0.030 |
| 69  | 5.75  | 0.27 | 0.203 | ( 0.322)       | 0.172 | 0.030 |
| 70  | 5.83  | 0.27 | 0.203 | ( 0.321)       | 0.172 | 0.030 |
| 71  | 5.92  | 0.27 | 0.203 | ( 0.319)       | 0.172 | 0.030 |
| 72  | 6.00  | 0.27 | 0.203 | ( 0.318)       | 0.172 | 0.030 |
| 73  | 6.08  | 0.30 | 0.228 | ( 0.316)       | 0.194 | 0.034 |
| 74  | 6.17  | 0.30 | 0.228 | ( 0.315)       | 0.194 | 0.034 |
| 75  | 6.25  | 0.30 | 0.228 | ( 0.314)       | 0.194 | 0.034 |
| 76  | 6.33  | 0.30 | 0.228 | ( 0.312)       | 0.194 | 0.034 |
| 77  | 6.42  | 0.30 | 0.228 | ( 0.311)       | 0.194 | 0.034 |
| 78  | 6.50  | 0.30 | 0.228 | ( 0.309)       | 0.194 | 0.034 |
| 79  | 6.58  | 0.33 | 0.254 | ( 0.308)       | 0.216 | 0.038 |
| 80  | 6.67  | 0.33 | 0.254 | ( 0.307)       | 0.216 | 0.038 |
| 81  | 6.75  | 0.33 | 0.254 | ( 0.305)       | 0.216 | 0.038 |
| 82  | 6.83  | 0.33 | 0.254 | ( 0.304)       | 0.216 | 0.038 |
| 83  | 6.92  | 0.33 | 0.254 | ( 0.303)       | 0.216 | 0.038 |
| 84  | 7.00  | 0.33 | 0.254 | ( 0.301)       | 0.216 | 0.038 |
| 85  | 7.08  | 0.33 | 0.254 | ( 0.300)       | 0.216 | 0.038 |
| 86  | 7.17  | 0.33 | 0.254 | ( 0.298)       | 0.216 | 0.038 |
| 87  | 7.25  | 0.33 | 0.254 | ( 0.297)       | 0.216 | 0.038 |
| 88  | 7.33  | 0.37 | 0.279 | ( 0.296)       | 0.237 | 0.042 |
| 89  | 7.42  | 0.37 | 0.279 | ( 0.294)       | 0.237 | 0.042 |
| 90  | 7.50  | 0.37 | 0.279 | ( 0.293)       | 0.237 | 0.042 |
| 91  | 7.58  | 0.40 | 0.304 | ( 0.292)       | 0.259 | 0.046 |
| 92  | 7.67  | 0.40 | 0.304 | ( 0.290)       | 0.259 | 0.046 |
| 93  | 7.75  | 0.40 | 0.304 | ( 0.289)       | 0.259 | 0.046 |
| 94  | 7.83  | 0.43 | 0.330 | ( 0.288)       | 0.280 | 0.049 |
| 95  | 7.92  | 0.43 | 0.330 | ( 0.286)       | 0.280 | 0.049 |
| 96  | 8.00  | 0.43 | 0.330 | ( 0.285)       | 0.280 | 0.049 |
| 97  | 8.08  | 0.50 | 0.380 | 0.284 ( 0.323) |       | 0.097 |
| 98  | 8.17  | 0.50 | 0.380 | 0.282 ( 0.323) |       | 0.098 |
| 99  | 8.25  | 0.50 | 0.380 | 0.281 ( 0.323) |       | 0.099 |
| 100 | 8.33  | 0.50 | 0.380 | 0.280 ( 0.323) |       | 0.101 |
| 101 | 8.42  | 0.50 | 0.380 | 0.278 ( 0.323) |       | 0.102 |
| 102 | 8.50  | 0.50 | 0.380 | 0.277 ( 0.323) |       | 0.103 |
| 103 | 8.58  | 0.53 | 0.406 | 0.276 ( 0.345) |       | 0.130 |
| 104 | 8.67  | 0.53 | 0.406 | 0.275 ( 0.345) |       | 0.131 |
| 105 | 8.75  | 0.53 | 0.406 | 0.273 ( 0.345) |       | 0.132 |
| 106 | 8.83  | 0.57 | 0.431 | 0.272 ( 0.366) |       | 0.159 |
| 107 | 8.92  | 0.57 | 0.431 | 0.271 ( 0.366) |       | 0.160 |
| 108 | 9.00  | 0.57 | 0.431 | 0.269 ( 0.366) |       | 0.162 |
| 109 | 9.08  | 0.63 | 0.482 | 0.268 ( 0.410) |       | 0.214 |
| 110 | 9.17  | 0.63 | 0.482 | 0.267 ( 0.410) |       | 0.215 |
| 111 | 9.25  | 0.63 | 0.482 | 0.266 ( 0.410) |       | 0.216 |
| 112 | 9.33  | 0.67 | 0.507 | 0.264 ( 0.431) |       | 0.243 |
| 113 | 9.42  | 0.67 | 0.507 | 0.263 ( 0.431) |       | 0.244 |
| 114 | 9.50  | 0.67 | 0.507 | 0.262 ( 0.431) |       | 0.245 |
| 115 | 9.58  | 0.70 | 0.533 | 0.261 ( 0.453) |       | 0.272 |
| 116 | 9.67  | 0.70 | 0.533 | 0.259 ( 0.453) |       | 0.273 |
| 117 | 9.75  | 0.70 | 0.533 | 0.258 ( 0.453) |       | 0.274 |
| 118 | 9.83  | 0.73 | 0.558 | 0.257 ( 0.474) |       | 0.301 |
| 119 | 9.92  | 0.73 | 0.558 | 0.256 ( 0.474) |       | 0.302 |
| 120 | 10.00 | 0.73 | 0.558 | 0.254 ( 0.474) |       | 0.304 |
| 121 | 10.08 | 0.50 | 0.380 | 0.253 ( 0.323) |       | 0.127 |
| 122 | 10.17 | 0.50 | 0.380 | 0.252 ( 0.323) |       | 0.129 |
| 123 | 10.25 | 0.50 | 0.380 | 0.251 ( 0.323) |       | 0.130 |
| 124 | 10.33 | 0.50 | 0.380 | 0.249 ( 0.323) |       | 0.131 |
| 125 | 10.42 | 0.50 | 0.380 | 0.248 ( 0.323) |       | 0.132 |
| 126 | 10.50 | 0.50 | 0.380 | 0.247 ( 0.323) |       | 0.133 |
| 127 | 10.58 | 0.67 | 0.507 | 0.246 ( 0.431) |       | 0.261 |
| 128 | 10.67 | 0.67 | 0.507 | 0.245 ( 0.431) |       | 0.263 |
| 129 | 10.75 | 0.67 | 0.507 | 0.243 ( 0.431) |       | 0.264 |
| 130 | 10.83 | 0.67 | 0.507 | 0.242 ( 0.431) |       | 0.265 |
| 131 | 10.92 | 0.67 | 0.507 | 0.241 ( 0.431) |       | 0.266 |
| 132 | 11.00 | 0.67 | 0.507 | 0.240 ( 0.431) |       | 0.267 |
| 133 | 11.08 | 0.63 | 0.482 | 0.239 ( 0.410) |       | 0.243 |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition**

|     |       |      |       |          |          |       |
|-----|-------|------|-------|----------|----------|-------|
| 134 | 11.17 | 0.63 | 0.482 | 0.237    | ( 0.410) | 0.244 |
| 135 | 11.25 | 0.63 | 0.482 | 0.236    | ( 0.410) | 0.246 |
| 136 | 11.33 | 0.63 | 0.482 | 0.235    | ( 0.410) | 0.247 |
| 137 | 11.42 | 0.63 | 0.482 | 0.234    | ( 0.410) | 0.248 |
| 138 | 11.50 | 0.63 | 0.482 | 0.233    | ( 0.410) | 0.249 |
| 139 | 11.58 | 0.57 | 0.431 | 0.232    | ( 0.366) | 0.199 |
| 140 | 11.67 | 0.57 | 0.431 | 0.231    | ( 0.366) | 0.201 |
| 141 | 11.75 | 0.57 | 0.431 | 0.229    | ( 0.366) | 0.202 |
| 142 | 11.83 | 0.60 | 0.456 | 0.228    | ( 0.388) | 0.228 |
| 143 | 11.92 | 0.60 | 0.456 | 0.227    | ( 0.388) | 0.229 |
| 144 | 12.00 | 0.60 | 0.456 | 0.226    | ( 0.388) | 0.231 |
| 145 | 12.08 | 0.83 | 0.634 | 0.225    | ( 0.539) | 0.409 |
| 146 | 12.17 | 0.83 | 0.634 | 0.224    | ( 0.539) | 0.410 |
| 147 | 12.25 | 0.83 | 0.634 | 0.223    | ( 0.539) | 0.411 |
| 148 | 12.33 | 0.87 | 0.659 | 0.221    | ( 0.560) | 0.438 |
| 149 | 12.42 | 0.87 | 0.659 | 0.220    | ( 0.560) | 0.439 |
| 150 | 12.50 | 0.87 | 0.659 | 0.219    | ( 0.560) | 0.440 |
| 151 | 12.58 | 0.93 | 0.710 | 0.218    | ( 0.604) | 0.492 |
| 152 | 12.67 | 0.93 | 0.710 | 0.217    | ( 0.604) | 0.493 |
| 153 | 12.75 | 0.93 | 0.710 | 0.216    | ( 0.604) | 0.494 |
| 154 | 12.83 | 0.97 | 0.735 | 0.215    | ( 0.625) | 0.521 |
| 155 | 12.92 | 0.97 | 0.735 | 0.214    | ( 0.625) | 0.522 |
| 156 | 13.00 | 0.97 | 0.735 | 0.213    | ( 0.625) | 0.523 |
| 157 | 13.08 | 1.13 | 0.862 | 0.212    | ( 0.733) | 0.651 |
| 158 | 13.17 | 1.13 | 0.862 | 0.211    | ( 0.733) | 0.652 |
| 159 | 13.25 | 1.13 | 0.862 | 0.209    | ( 0.733) | 0.653 |
| 160 | 13.33 | 1.13 | 0.862 | 0.208    | ( 0.733) | 0.654 |
| 161 | 13.42 | 1.13 | 0.862 | 0.207    | ( 0.733) | 0.655 |
| 162 | 13.50 | 1.13 | 0.862 | 0.206    | ( 0.733) | 0.656 |
| 163 | 13.58 | 0.77 | 0.583 | 0.205    | ( 0.496) | 0.378 |
| 164 | 13.67 | 0.77 | 0.583 | 0.204    | ( 0.496) | 0.379 |
| 165 | 13.75 | 0.77 | 0.583 | 0.203    | ( 0.496) | 0.380 |
| 166 | 13.83 | 0.77 | 0.583 | 0.202    | ( 0.496) | 0.381 |
| 167 | 13.92 | 0.77 | 0.583 | 0.201    | ( 0.496) | 0.382 |
| 168 | 14.00 | 0.77 | 0.583 | 0.200    | ( 0.496) | 0.383 |
| 169 | 14.08 | 0.90 | 0.685 | 0.199    | ( 0.582) | 0.486 |
| 170 | 14.17 | 0.90 | 0.685 | 0.198    | ( 0.582) | 0.487 |
| 171 | 14.25 | 0.90 | 0.685 | 0.197    | ( 0.582) | 0.488 |
| 172 | 14.33 | 0.87 | 0.659 | 0.196    | ( 0.560) | 0.463 |
| 173 | 14.42 | 0.87 | 0.659 | 0.195    | ( 0.560) | 0.464 |
| 174 | 14.50 | 0.87 | 0.659 | 0.194    | ( 0.560) | 0.465 |
| 175 | 14.58 | 0.87 | 0.659 | 0.193    | ( 0.560) | 0.466 |
| 176 | 14.67 | 0.87 | 0.659 | 0.192    | ( 0.560) | 0.467 |
| 177 | 14.75 | 0.87 | 0.659 | 0.191    | ( 0.560) | 0.468 |
| 178 | 14.83 | 0.83 | 0.634 | 0.190    | ( 0.539) | 0.444 |
| 179 | 14.92 | 0.83 | 0.634 | 0.189    | ( 0.539) | 0.445 |
| 180 | 15.00 | 0.83 | 0.634 | 0.188    | ( 0.539) | 0.446 |
| 181 | 15.08 | 0.80 | 0.609 | 0.187    | ( 0.517) | 0.421 |
| 182 | 15.17 | 0.80 | 0.609 | 0.186    | ( 0.517) | 0.422 |
| 183 | 15.25 | 0.80 | 0.609 | 0.185    | ( 0.517) | 0.423 |
| 184 | 15.33 | 0.77 | 0.583 | 0.184    | ( 0.496) | 0.399 |
| 185 | 15.42 | 0.77 | 0.583 | 0.183    | ( 0.496) | 0.400 |
| 186 | 15.50 | 0.77 | 0.583 | 0.182    | ( 0.496) | 0.401 |
| 187 | 15.58 | 0.63 | 0.482 | 0.181    | ( 0.410) | 0.300 |
| 188 | 15.67 | 0.63 | 0.482 | 0.181    | ( 0.410) | 0.301 |
| 189 | 15.75 | 0.63 | 0.482 | 0.180    | ( 0.410) | 0.302 |
| 190 | 15.83 | 0.63 | 0.482 | 0.179    | ( 0.410) | 0.303 |
| 191 | 15.92 | 0.63 | 0.482 | 0.178    | ( 0.410) | 0.304 |
| 192 | 16.00 | 0.63 | 0.482 | 0.177    | ( 0.410) | 0.305 |
| 193 | 16.08 | 0.13 | 0.101 | ( 0.176) | 0.086    | 0.015 |
| 194 | 16.17 | 0.13 | 0.101 | ( 0.175) | 0.086    | 0.015 |
| 195 | 16.25 | 0.13 | 0.101 | ( 0.174) | 0.086    | 0.015 |
| 196 | 16.33 | 0.13 | 0.101 | ( 0.173) | 0.086    | 0.015 |
| 197 | 16.42 | 0.13 | 0.101 | ( 0.172) | 0.086    | 0.015 |
| 198 | 16.50 | 0.13 | 0.101 | ( 0.172) | 0.086    | 0.015 |
| 199 | 16.58 | 0.10 | 0.076 | ( 0.171) | 0.065    | 0.011 |
| 200 | 16.67 | 0.10 | 0.076 | ( 0.170) | 0.065    | 0.011 |
| 201 | 16.75 | 0.10 | 0.076 | ( 0.169) | 0.065    | 0.011 |
| 202 | 16.83 | 0.10 | 0.076 | ( 0.168) | 0.065    | 0.011 |
| 203 | 16.92 | 0.10 | 0.076 | ( 0.167) | 0.065    | 0.011 |
| 204 | 17.00 | 0.10 | 0.076 | ( 0.166) | 0.065    | 0.011 |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition**

|     |       |      |       |          |       |       |
|-----|-------|------|-------|----------|-------|-------|
| 205 | 17.08 | 0.17 | 0.127 | ( 0.166) | 0.108 | 0.019 |
| 206 | 17.17 | 0.17 | 0.127 | ( 0.165) | 0.108 | 0.019 |
| 207 | 17.25 | 0.17 | 0.127 | ( 0.164) | 0.108 | 0.019 |
| 208 | 17.33 | 0.17 | 0.127 | ( 0.163) | 0.108 | 0.019 |
| 209 | 17.42 | 0.17 | 0.127 | ( 0.162) | 0.108 | 0.019 |
| 210 | 17.50 | 0.17 | 0.127 | ( 0.161) | 0.108 | 0.019 |
| 211 | 17.58 | 0.17 | 0.127 | ( 0.161) | 0.108 | 0.019 |
| 212 | 17.67 | 0.17 | 0.127 | ( 0.160) | 0.108 | 0.019 |
| 213 | 17.75 | 0.17 | 0.127 | ( 0.159) | 0.108 | 0.019 |
| 214 | 17.83 | 0.13 | 0.101 | ( 0.158) | 0.086 | 0.015 |
| 215 | 17.92 | 0.13 | 0.101 | ( 0.157) | 0.086 | 0.015 |
| 216 | 18.00 | 0.13 | 0.101 | ( 0.157) | 0.086 | 0.015 |
| 217 | 18.08 | 0.13 | 0.101 | ( 0.156) | 0.086 | 0.015 |
| 218 | 18.17 | 0.13 | 0.101 | ( 0.155) | 0.086 | 0.015 |
| 219 | 18.25 | 0.13 | 0.101 | ( 0.154) | 0.086 | 0.015 |
| 220 | 18.33 | 0.13 | 0.101 | ( 0.154) | 0.086 | 0.015 |
| 221 | 18.42 | 0.13 | 0.101 | ( 0.153) | 0.086 | 0.015 |
| 222 | 18.50 | 0.13 | 0.101 | ( 0.152) | 0.086 | 0.015 |
| 223 | 18.58 | 0.10 | 0.076 | ( 0.151) | 0.065 | 0.011 |
| 224 | 18.67 | 0.10 | 0.076 | ( 0.151) | 0.065 | 0.011 |
| 225 | 18.75 | 0.10 | 0.076 | ( 0.150) | 0.065 | 0.011 |
| 226 | 18.83 | 0.07 | 0.051 | ( 0.149) | 0.043 | 0.008 |
| 227 | 18.92 | 0.07 | 0.051 | ( 0.148) | 0.043 | 0.008 |
| 228 | 19.00 | 0.07 | 0.051 | ( 0.148) | 0.043 | 0.008 |
| 229 | 19.08 | 0.10 | 0.076 | ( 0.147) | 0.065 | 0.011 |
| 230 | 19.17 | 0.10 | 0.076 | ( 0.146) | 0.065 | 0.011 |
| 231 | 19.25 | 0.10 | 0.076 | ( 0.146) | 0.065 | 0.011 |
| 232 | 19.33 | 0.13 | 0.101 | ( 0.145) | 0.086 | 0.015 |
| 233 | 19.42 | 0.13 | 0.101 | ( 0.144) | 0.086 | 0.015 |
| 234 | 19.50 | 0.13 | 0.101 | ( 0.144) | 0.086 | 0.015 |
| 235 | 19.58 | 0.10 | 0.076 | ( 0.143) | 0.065 | 0.011 |
| 236 | 19.67 | 0.10 | 0.076 | ( 0.142) | 0.065 | 0.011 |
| 237 | 19.75 | 0.10 | 0.076 | ( 0.142) | 0.065 | 0.011 |
| 238 | 19.83 | 0.07 | 0.051 | ( 0.141) | 0.043 | 0.008 |
| 239 | 19.92 | 0.07 | 0.051 | ( 0.140) | 0.043 | 0.008 |
| 240 | 20.00 | 0.07 | 0.051 | ( 0.140) | 0.043 | 0.008 |
| 241 | 20.08 | 0.10 | 0.076 | ( 0.139) | 0.065 | 0.011 |
| 242 | 20.17 | 0.10 | 0.076 | ( 0.139) | 0.065 | 0.011 |
| 243 | 20.25 | 0.10 | 0.076 | ( 0.138) | 0.065 | 0.011 |
| 244 | 20.33 | 0.10 | 0.076 | ( 0.137) | 0.065 | 0.011 |
| 245 | 20.42 | 0.10 | 0.076 | ( 0.137) | 0.065 | 0.011 |
| 246 | 20.50 | 0.10 | 0.076 | ( 0.136) | 0.065 | 0.011 |
| 247 | 20.58 | 0.10 | 0.076 | ( 0.136) | 0.065 | 0.011 |
| 248 | 20.67 | 0.10 | 0.076 | ( 0.135) | 0.065 | 0.011 |
| 249 | 20.75 | 0.10 | 0.076 | ( 0.135) | 0.065 | 0.011 |
| 250 | 20.83 | 0.07 | 0.051 | ( 0.134) | 0.043 | 0.008 |
| 251 | 20.92 | 0.07 | 0.051 | ( 0.133) | 0.043 | 0.008 |
| 252 | 21.00 | 0.07 | 0.051 | ( 0.133) | 0.043 | 0.008 |
| 253 | 21.08 | 0.10 | 0.076 | ( 0.132) | 0.065 | 0.011 |
| 254 | 21.17 | 0.10 | 0.076 | ( 0.132) | 0.065 | 0.011 |
| 255 | 21.25 | 0.10 | 0.076 | ( 0.131) | 0.065 | 0.011 |
| 256 | 21.33 | 0.07 | 0.051 | ( 0.131) | 0.043 | 0.008 |
| 257 | 21.42 | 0.07 | 0.051 | ( 0.130) | 0.043 | 0.008 |
| 258 | 21.50 | 0.07 | 0.051 | ( 0.130) | 0.043 | 0.008 |
| 259 | 21.58 | 0.10 | 0.076 | ( 0.129) | 0.065 | 0.011 |
| 260 | 21.67 | 0.10 | 0.076 | ( 0.129) | 0.065 | 0.011 |
| 261 | 21.75 | 0.10 | 0.076 | ( 0.128) | 0.065 | 0.011 |
| 262 | 21.83 | 0.07 | 0.051 | ( 0.128) | 0.043 | 0.008 |
| 263 | 21.92 | 0.07 | 0.051 | ( 0.128) | 0.043 | 0.008 |
| 264 | 22.00 | 0.07 | 0.051 | ( 0.127) | 0.043 | 0.008 |
| 265 | 22.08 | 0.10 | 0.076 | ( 0.127) | 0.065 | 0.011 |
| 266 | 22.17 | 0.10 | 0.076 | ( 0.126) | 0.065 | 0.011 |
| 267 | 22.25 | 0.10 | 0.076 | ( 0.126) | 0.065 | 0.011 |
| 268 | 22.33 | 0.07 | 0.051 | ( 0.126) | 0.043 | 0.008 |
| 269 | 22.42 | 0.07 | 0.051 | ( 0.125) | 0.043 | 0.008 |
| 270 | 22.50 | 0.07 | 0.051 | ( 0.125) | 0.043 | 0.008 |
| 271 | 22.58 | 0.07 | 0.051 | ( 0.124) | 0.043 | 0.008 |
| 272 | 22.67 | 0.07 | 0.051 | ( 0.124) | 0.043 | 0.008 |
| 273 | 22.75 | 0.07 | 0.051 | ( 0.124) | 0.043 | 0.008 |
| 274 | 22.83 | 0.07 | 0.051 | ( 0.123) | 0.043 | 0.008 |
| 275 | 22.92 | 0.07 | 0.051 | ( 0.123) | 0.043 | 0.008 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

|     |       |      |       |          |       |       |
|-----|-------|------|-------|----------|-------|-------|
| 276 | 23.00 | 0.07 | 0.051 | ( 0.123) | 0.043 | 0.008 |
| 277 | 23.08 | 0.07 | 0.051 | ( 0.123) | 0.043 | 0.008 |
| 278 | 23.17 | 0.07 | 0.051 | ( 0.122) | 0.043 | 0.008 |
| 279 | 23.25 | 0.07 | 0.051 | ( 0.122) | 0.043 | 0.008 |
| 280 | 23.33 | 0.07 | 0.051 | ( 0.122) | 0.043 | 0.008 |
| 281 | 23.42 | 0.07 | 0.051 | ( 0.121) | 0.043 | 0.008 |
| 282 | 23.50 | 0.07 | 0.051 | ( 0.121) | 0.043 | 0.008 |
| 283 | 23.58 | 0.07 | 0.051 | ( 0.121) | 0.043 | 0.008 |
| 284 | 23.67 | 0.07 | 0.051 | ( 0.121) | 0.043 | 0.008 |
| 285 | 23.75 | 0.07 | 0.051 | ( 0.121) | 0.043 | 0.008 |
| 286 | 23.83 | 0.07 | 0.051 | ( 0.121) | 0.043 | 0.008 |
| 287 | 23.92 | 0.07 | 0.051 | ( 0.121) | 0.043 | 0.008 |
| 288 | 24.00 | 0.07 | 0.051 | ( 0.120) | 0.043 | 0.008 |

(Loss Rate Not Used)

Sum = 100.0 Sum = 34.8

Flood volume = Effective rainfall 2.90 (In)  
times area 837.7 (Ac.) / [(In) / (Ft.)] = 202.5 (Ac.Ft)  
Total soil loss = 3.44 (In)  
Total soil loss = 240.024 (Ac.Ft)  
Total rainfall = 6.34 (In)  
Flood volume = 8822370.6 Cubic Feet  
Total soil loss = 10455440.5 Cubic Feet

-----  
Peak flow rate of this hydrograph = 477.922 (CFS)  
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+++++  
24 - H O U R S T O R M  
R u n o f f H y d r o g r a p h  
-----  
Hydrograph in 5 Minute intervals ((CFS))  
-----

| Time(h+m) | Volume | Ac.Ft | Q(CFS) | 0 | 125.0 | 250.0 | 375.0 | 500.0 |
|-----------|--------|-------|--------|---|-------|-------|-------|-------|
| 0+ 5      | 0.0004 | 0.07  | Q      |   |       |       |       |       |
| 0+10      | 0.0021 | 0.23  | Q      |   |       |       |       |       |
| 0+15      | 0.0054 | 0.48  | Q      |   |       |       |       |       |
| 0+20      | 0.0112 | 0.84  | Q      |   |       |       |       |       |
| 0+25      | 0.0210 | 1.42  | Q      |   |       |       |       |       |
| 0+30      | 0.0373 | 2.37  | Q      |   |       |       |       |       |
| 0+35      | 0.0633 | 3.77  | Q      |   |       |       |       |       |
| 0+40      | 0.0950 | 4.60  | Q      |   |       |       |       |       |
| 0+45      | 0.1323 | 5.41  | Q      |   |       |       |       |       |
| 0+50      | 0.1761 | 6.36  | Q      |   |       |       |       |       |
| 0+55      | 0.2242 | 6.99  | Q      |   |       |       |       |       |
| 1+ 0      | 0.2760 | 7.52  | Q      |   |       |       |       |       |
| 1+ 5      | 0.3310 | 7.99  | Q      |   |       |       |       |       |
| 1+10      | 0.3890 | 8.43  | Q      |   |       |       |       |       |
| 1+15      | 0.4507 | 8.96  | Q      |   |       |       |       |       |
| 1+20      | 0.5170 | 9.63  | Q      |   |       |       |       |       |
| 1+25      | 0.5848 | 9.85  | Q      |   |       |       |       |       |
| 1+30      | 0.6523 | 9.79  | Q      |   |       |       |       |       |
| 1+35      | 0.7175 | 9.47  | Q      |   |       |       |       |       |
| 1+40      | 0.7824 | 9.43  | Q      |   |       |       |       |       |
| 1+45      | 0.8475 | 9.44  | Q      |   |       |       |       |       |
| 1+50      | 0.9129 | 9.51  | Q      |   |       |       |       |       |
| 1+55      | 0.9792 | 9.63  | Q      |   |       |       |       |       |
| 2+ 0      | 1.0466 | 9.78  | Q      |   |       |       |       |       |
| 2+ 5      | 1.1152 | 9.97  | Q      |   |       |       |       |       |
| 2+10      | 1.1857 | 10.24 | Q      |   |       |       |       |       |
| 2+15      | 1.2591 | 10.66 | Q      |   |       |       |       |       |
| 2+20      | 1.3368 | 11.28 | Q      |   |       |       |       |       |
| 2+25      | 1.4166 | 11.58 | Q      |   |       |       |       |       |
| 2+30      | 1.4977 | 11.78 | Q      |   |       |       |       |       |
| 2+35      | 1.5801 | 11.96 | Q      |   |       |       |       |       |
| 2+40      | 1.6639 | 12.17 | Q      |   |       |       |       |       |
| 2+45      | 1.7493 | 12.40 | Q      |   |       |       |       |       |
| 2+50      | 1.8365 | 12.66 | VQ     |   |       |       |       |       |
| 2+55      | 1.9259 | 12.98 | VQ     |   |       |       |       |       |
| 3+ 0      | 2.0186 | 13.46 | VQ     |   |       |       |       |       |
| 3+ 5      | 2.1161 | 14.14 | VQ     |   |       |       |       |       |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition**

|      |         |       |       |  |  |  |  |
|------|---------|-------|-------|--|--|--|--|
| 3+10 | 2.2159  | 14.49 | VQ    |  |  |  |  |
| 3+15 | 2.3174  | 14.74 | VQ    |  |  |  |  |
| 3+20 | 2.4203  | 14.94 | VQ    |  |  |  |  |
| 3+25 | 2.5244  | 15.11 | VQ    |  |  |  |  |
| 3+30 | 2.6294  | 15.25 | VQ    |  |  |  |  |
| 3+35 | 2.7352  | 15.37 | VQ    |  |  |  |  |
| 3+40 | 2.8418  | 15.47 | VQ    |  |  |  |  |
| 3+45 | 2.9490  | 15.56 | VQ    |  |  |  |  |
| 3+50 | 3.0569  | 15.67 | VQ    |  |  |  |  |
| 3+55 | 3.1658  | 15.82 | VQ    |  |  |  |  |
| 4+ 0 | 3.2760  | 15.99 | VQ    |  |  |  |  |
| 4+ 5 | 3.3876  | 16.20 | VQ    |  |  |  |  |
| 4+10 | 3.5011  | 16.49 | VQ    |  |  |  |  |
| 4+15 | 3.6178  | 16.94 | VQ    |  |  |  |  |
| 4+20 | 3.7391  | 17.62 | VQ    |  |  |  |  |
| 4+25 | 3.8632  | 18.02 | VQ    |  |  |  |  |
| 4+30 | 3.9897  | 18.36 | VQ    |  |  |  |  |
| 4+35 | 4.1184  | 18.69 | VQ    |  |  |  |  |
| 4+40 | 4.2498  | 19.08 | VQ    |  |  |  |  |
| 4+45 | 4.3849  | 19.61 | VQ    |  |  |  |  |
| 4+50 | 4.5251  | 20.36 | VQ    |  |  |  |  |
| 4+55 | 4.6685  | 20.82 | VQ    |  |  |  |  |
| 5+ 0 | 4.8146  | 21.22 | VQ    |  |  |  |  |
| 5+ 5 | 4.9630  | 21.54 | VQ    |  |  |  |  |
| 5+10 | 5.1131  | 21.80 | IQ    |  |  |  |  |
| 5+15 | 5.2655  | 22.13 | IQ    |  |  |  |  |
| 5+20 | 5.4210  | 22.58 | IQ    |  |  |  |  |
| 5+25 | 5.5765  | 22.58 | IQ    |  |  |  |  |
| 5+30 | 5.7291  | 22.17 | IQ    |  |  |  |  |
| 5+35 | 5.8764  | 21.38 | IQ    |  |  |  |  |
| 5+40 | 6.0233  | 21.33 | IQ    |  |  |  |  |
| 5+45 | 6.1723  | 21.65 | IQ    |  |  |  |  |
| 5+50 | 6.3257  | 22.27 | IQ    |  |  |  |  |
| 5+55 | 6.4820  | 22.69 | IQ    |  |  |  |  |
| 6+ 0 | 6.6418  | 23.20 | IQ    |  |  |  |  |
| 6+ 5 | 6.8064  | 23.91 | IQ    |  |  |  |  |
| 6+10 | 6.9740  | 24.33 | IQ    |  |  |  |  |
| 6+15 | 7.1441  | 24.69 | IQ    |  |  |  |  |
| 6+20 | 7.3166  | 25.04 | IVQ   |  |  |  |  |
| 6+25 | 7.4917  | 25.44 | IVQ   |  |  |  |  |
| 6+30 | 7.6706  | 25.97 | IVQ   |  |  |  |  |
| 6+35 | 7.8547  | 26.73 | IVQ   |  |  |  |  |
| 6+40 | 8.0419  | 27.19 | IVQ   |  |  |  |  |
| 6+45 | 8.2320  | 27.59 | IVQ   |  |  |  |  |
| 6+50 | 8.4247  | 27.99 | IVQ   |  |  |  |  |
| 6+55 | 8.6204  | 28.42 | IVQ   |  |  |  |  |
| 7+ 0 | 8.8201  | 28.99 | IVQ   |  |  |  |  |
| 7+ 5 | 9.0249  | 29.75 | IVQ   |  |  |  |  |
| 7+10 | 9.2327  | 30.16 | IVQ   |  |  |  |  |
| 7+15 | 9.4425  | 30.47 | IVQ   |  |  |  |  |
| 7+20 | 9.6544  | 30.76 | IVQ   |  |  |  |  |
| 7+25 | 9.8682  | 31.05 | IVQ   |  |  |  |  |
| 7+30 | 10.0841 | 31.34 | IVQ   |  |  |  |  |
| 7+35 | 10.3023 | 31.69 | I Q   |  |  |  |  |
| 7+40 | 10.5237 | 32.15 | I Q   |  |  |  |  |
| 7+45 | 10.7496 | 32.79 | I Q   |  |  |  |  |
| 7+50 | 10.9817 | 33.70 | I Q   |  |  |  |  |
| 7+55 | 11.2187 | 34.41 | I Q   |  |  |  |  |
| 8+ 0 | 11.4612 | 35.21 | I Q   |  |  |  |  |
| 8+ 5 | 11.7134 | 36.61 | I Q   |  |  |  |  |
| 8+10 | 11.9777 | 38.39 | I VQ  |  |  |  |  |
| 8+15 | 12.2580 | 40.70 | I VQ  |  |  |  |  |
| 8+20 | 12.5592 | 43.73 | I VQ  |  |  |  |  |
| 8+25 | 12.8862 | 47.48 | I VQ  |  |  |  |  |
| 8+30 | 13.2529 | 53.25 | I V Q |  |  |  |  |
| 8+35 | 13.6786 | 61.82 | I V Q |  |  |  |  |
| 8+40 | 14.1390 | 66.85 | I V Q |  |  |  |  |
| 8+45 | 14.6281 | 71.02 | I V Q |  |  |  |  |
| 8+50 | 15.1459 | 75.18 | I V Q |  |  |  |  |
| 8+55 | 15.6962 | 79.90 | I V Q |  |  |  |  |
| 9+ 0 | 16.2870 | 85.79 | I V Q |  |  |  |  |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

|       |          |        |  |   |   |  |  |  |  |  |
|-------|----------|--------|--|---|---|--|--|--|--|--|
| 9+ 5  | 16.9316  | 93.59  |  | V | Q |  |  |  |  |  |
| 9+10  | 17.6223  | 100.29 |  | V | Q |  |  |  |  |  |
| 9+15  | 18.3652  | 107.87 |  | V | Q |  |  |  |  |  |
| 9+20  | 19.1723  | 117.20 |  | V | Q |  |  |  |  |  |
| 9+25  | 20.0368  | 125.52 |  | V | Q |  |  |  |  |  |
| 9+30  | 20.9700  | 135.50 |  | V | Q |  |  |  |  |  |
| 9+35  | 21.9907  | 148.22 |  | V | Q |  |  |  |  |  |
| 9+40  | 23.0730  | 157.14 |  | V | Q |  |  |  |  |  |
| 9+45  | 24.2157  | 165.93 |  | V | Q |  |  |  |  |  |
| 9+50  | 25.4262  | 175.76 |  | V | Q |  |  |  |  |  |
| 9+55  | 26.6917  | 183.75 |  | V | Q |  |  |  |  |  |
| 10+ 0 | 28.0147  | 192.11 |  | V | Q |  |  |  |  |  |
| 10+ 5 | 29.3918  | 199.95 |  | V | Q |  |  |  |  |  |
| 10+10 | 30.7912  | 203.19 |  | V | Q |  |  |  |  |  |
| 10+15 | 32.2020  | 204.84 |  | V | Q |  |  |  |  |  |
| 10+20 | 33.6154  | 205.23 |  | V | Q |  |  |  |  |  |
| 10+25 | 34.9867  | 199.11 |  | V | Q |  |  |  |  |  |
| 10+30 | 36.2561  | 184.32 |  | V | Q |  |  |  |  |  |
| 10+35 | 37.3621  | 160.59 |  | V | Q |  |  |  |  |  |
| 10+40 | 38.4178  | 153.29 |  | V | Q |  |  |  |  |  |
| 10+45 | 39.4600  | 151.32 |  | V | Q |  |  |  |  |  |
| 10+50 | 40.5109  | 152.59 |  | V | Q |  |  |  |  |  |
| 10+55 | 41.5968  | 157.68 |  | V | Q |  |  |  |  |  |
| 11+ 0 | 42.7602  | 168.92 |  | V | Q |  |  |  |  |  |
| 11+ 5 | 44.0490  | 187.14 |  | V | Q |  |  |  |  |  |
| 11+10 | 45.3900  | 194.71 |  | V | Q |  |  |  |  |  |
| 11+15 | 46.7611  | 199.08 |  | V | Q |  |  |  |  |  |
| 11+20 | 48.1516  | 201.91 |  | V | Q |  |  |  |  |  |
| 11+25 | 49.5536  | 203.57 |  | V | Q |  |  |  |  |  |
| 11+30 | 50.9564  | 203.69 |  | V | Q |  |  |  |  |  |
| 11+35 | 52.3459  | 201.74 |  | V | Q |  |  |  |  |  |
| 11+40 | 53.7299  | 200.96 |  | V | Q |  |  |  |  |  |
| 11+45 | 55.1083  | 200.15 |  | V | Q |  |  |  |  |  |
| 11+50 | 56.4807  | 199.26 |  | V | Q |  |  |  |  |  |
| 11+55 | 57.8416  | 197.60 |  | V | Q |  |  |  |  |  |
| 12+ 0 | 59.1776  | 193.98 |  | V | Q |  |  |  |  |  |
| 12+ 5 | 60.4834  | 189.60 |  | V | Q |  |  |  |  |  |
| 12+10 | 61.8103  | 192.66 |  | V | Q |  |  |  |  |  |
| 12+15 | 63.1868  | 199.88 |  | V | Q |  |  |  |  |  |
| 12+20 | 64.6409  | 211.13 |  | V | Q |  |  |  |  |  |
| 12+25 | 66.1891  | 224.79 |  | V | Q |  |  |  |  |  |
| 12+30 | 67.8831  | 245.98 |  | V | Q |  |  |  |  |  |
| 12+35 | 69.7915  | 277.09 |  | V | Q |  |  |  |  |  |
| 12+40 | 71.8176  | 294.19 |  | V | Q |  |  |  |  |  |
| 12+45 | 73.9416  | 308.40 |  | V | Q |  |  |  |  |  |
| 12+50 | 76.1642  | 322.72 |  | V | Q |  |  |  |  |  |
| 12+55 | 78.4713  | 335.00 |  | V | Q |  |  |  |  |  |
| 13+ 0 | 80.8698  | 348.26 |  | V | Q |  |  |  |  |  |
| 13+ 5 | 83.3813  | 364.68 |  | V | Q |  |  |  |  |  |
| 13+10 | 85.9858  | 378.17 |  | V | Q |  |  |  |  |  |
| 13+15 | 88.6878  | 392.33 |  | V | Q |  |  |  |  |  |
| 13+20 | 91.4996  | 408.27 |  | V | Q |  |  |  |  |  |
| 13+25 | 94.4191  | 423.91 |  | V | Q |  |  |  |  |  |
| 13+30 | 97.4769  | 443.99 |  | V | Q |  |  |  |  |  |
| 13+35 | 100.6976 | 467.64 |  | V | Q |  |  |  |  |  |
| 13+40 | 103.9753 | 475.92 |  | V | Q |  |  |  |  |  |
| 13+45 | 107.2667 | 477.92 |  | V | Q |  |  |  |  |  |
| 13+50 | 110.5359 | 474.69 |  | V | Q |  |  |  |  |  |
| 13+55 | 113.7315 | 464.00 |  | V | Q |  |  |  |  |  |
| 14+ 0 | 116.7635 | 440.25 |  | V | Q |  |  |  |  |  |
| 14+ 5 | 119.5299 | 401.68 |  | V | Q |  |  |  |  |  |
| 14+10 | 122.1985 | 387.47 |  | V | Q |  |  |  |  |  |
| 14+15 | 124.8197 | 380.61 |  | V | Q |  |  |  |  |  |
| 14+20 | 127.4200 | 377.55 |  | V | Q |  |  |  |  |  |
| 14+25 | 130.0234 | 378.02 |  | V | Q |  |  |  |  |  |
| 14+30 | 132.6652 | 383.59 |  | V | Q |  |  |  |  |  |
| 14+35 | 135.3858 | 395.02 |  | V | Q |  |  |  |  |  |
| 14+40 | 138.1272 | 398.06 |  | V | Q |  |  |  |  |  |
| 14+45 | 140.8668 | 397.79 |  | V | Q |  |  |  |  |  |
| 14+50 | 143.5879 | 395.11 |  | V | Q |  |  |  |  |  |
| 14+55 | 146.3015 | 394.01 |  | V | Q |  |  |  |  |  |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition

|       |          |        |  |  |  |      |  |
|-------|----------|--------|--|--|--|------|--|
| 15+ 0 | 149.0090 | 393.13 |  |  |  | V Q  |  |
| 15+ 5 | 151.7081 | 391.91 |  |  |  | V Q  |  |
| 15+10 | 154.3928 | 389.81 |  |  |  | VQ   |  |
| 15+15 | 157.0536 | 386.35 |  |  |  | QV   |  |
| 15+20 | 159.6799 | 381.34 |  |  |  | QV   |  |
| 15+25 | 162.2809 | 377.66 |  |  |  | Q V  |  |
| 15+30 | 164.8516 | 373.27 |  |  |  | Q  V |  |
| 15+35 | 167.3784 | 366.89 |  |  |  | Q  V |  |
| 15+40 | 169.8658 | 361.17 |  |  |  | Q  V |  |
| 15+45 | 172.3051 | 354.19 |  |  |  | Q  V |  |
| 15+50 | 174.6809 | 344.96 |  |  |  | Q V  |  |
| 15+55 | 176.9948 | 335.98 |  |  |  | Q V  |  |
| 16+ 0 | 179.2217 | 323.36 |  |  |  | Q V  |  |
| 16+ 5 | 181.3100 | 303.22 |  |  |  | Q V  |  |
| 16+10 | 183.2937 | 288.03 |  |  |  | Q V  |  |
| 16+15 | 185.1715 | 272.65 |  |  |  | Q V  |  |
| 16+20 | 186.9298 | 255.30 |  |  |  | Q V  |  |
| 16+25 | 188.5314 | 232.56 |  |  |  | Q V  |  |
| 16+30 | 189.8921 | 197.56 |  |  |  | Q V  |  |
| 16+35 | 190.9079 | 147.49 |  |  |  | Q V  |  |
| 16+40 | 191.7523 | 122.61 |  |  |  | Q V  |  |
| 16+45 | 192.4766 | 105.17 |  |  |  | Q V  |  |
| 16+50 | 193.1060 | 91.40  |  |  |  | Q V  |  |
| 16+55 | 193.6572 | 80.03  |  |  |  | Q V  |  |
| 17+ 0 | 194.1397 | 70.05  |  |  |  | Q V  |  |
| 17+ 5 | 194.5615 | 61.25  |  |  |  | Q V  |  |
| 17+10 | 194.9348 | 54.20  |  |  |  | Q V  |  |
| 17+15 | 195.2663 | 48.13  |  |  |  | Q V  |  |
| 17+20 | 195.5621 | 42.95  |  |  |  | Q V  |  |
| 17+25 | 195.8290 | 38.76  |  |  |  | Q V  |  |
| 17+30 | 196.0728 | 35.39  |  |  |  | Q V  |  |
| 17+35 | 196.2999 | 32.98  |  |  |  | Q V  |  |
| 17+40 | 196.5100 | 30.51  |  |  |  | Q V  |  |
| 17+45 | 196.7046 | 28.26  |  |  |  | Q V  |  |
| 17+50 | 196.8860 | 26.34  |  |  |  | Q V  |  |
| 17+55 | 197.0550 | 24.55  |  |  |  | Q V  |  |
| 18+ 0 | 197.2129 | 22.92  |  |  |  | Q V  |  |
| 18+ 5 | 197.3615 | 21.58  |  |  |  | Q V  |  |
| 18+10 | 197.5026 | 20.50  |  |  |  | Q V  |  |
| 18+15 | 197.6376 | 19.60  |  |  |  | Q V  |  |
| 18+20 | 197.7649 | 18.49  |  |  |  | Q V  |  |
| 18+25 | 197.8870 | 17.72  |  |  |  | Q V  |  |
| 18+30 | 198.0046 | 17.08  |  |  |  | Q V  |  |
| 18+35 | 198.1179 | 16.45  |  |  |  | Q V  |  |
| 18+40 | 198.2270 | 15.84  |  |  |  | Q V  |  |
| 18+45 | 198.3328 | 15.36  |  |  |  | Q V  |  |
| 18+50 | 198.4349 | 14.83  |  |  |  | Q V  |  |
| 18+55 | 198.5323 | 14.15  |  |  |  | Q V  |  |
| 19+ 0 | 198.6235 | 13.24  |  |  |  | Q V  |  |
| 19+ 5 | 198.7070 | 12.12  |  |  |  | Q V  |  |
| 19+10 | 198.7848 | 11.30  |  |  |  | Q V  |  |
| 19+15 | 198.8579 | 10.60  |  |  |  | Q V  |  |
| 19+20 | 198.9257 | 9.85   |  |  |  | Q V  |  |
| 19+25 | 198.9917 | 9.59   |  |  |  | Q V  |  |
| 19+30 | 199.0585 | 9.70   |  |  |  | Q V  |  |
| 19+35 | 199.1281 | 10.11  |  |  |  | Q V  |  |
| 19+40 | 199.1987 | 10.25  |  |  |  | Q V  |  |
| 19+45 | 199.2714 | 10.55  |  |  |  | Q V  |  |
| 19+50 | 199.3468 | 10.96  |  |  |  | Q V  |  |
| 19+55 | 199.4219 | 10.90  |  |  |  | Q V  |  |
| 20+ 0 | 199.4946 | 10.55  |  |  |  | Q V  |  |
| 20+ 5 | 199.5631 | 9.95   |  |  |  | Q V  |  |
| 20+10 | 199.6293 | 9.61   |  |  |  | Q V  |  |
| 20+15 | 199.6928 | 9.22   |  |  |  | Q V  |  |
| 20+20 | 199.7527 | 8.70   |  |  |  | Q V  |  |
| 20+25 | 199.8119 | 8.60   |  |  |  | Q V  |  |
| 20+30 | 199.8724 | 8.78   |  |  |  | Q V  |  |
| 20+35 | 199.9358 | 9.21   |  |  |  | Q V  |  |
| 20+40 | 200.0003 | 9.36   |  |  |  | Q V  |  |
| 20+45 | 200.0652 | 9.43   |  |  |  | Q V  |  |
| 20+50 | 200.1302 | 9.43   |  |  |  | Q V  |  |

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**ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition**

|       |          |      |   |  |  |  |   |
|-------|----------|------|---|--|--|--|---|
| 20+55 | 200.1948 | 9.38 | Q |  |  |  | V |
| 21+ 0 | 200.2587 | 9.29 | Q |  |  |  | V |
| 21+ 5 | 200.3219 | 9.17 | Q |  |  |  | V |
| 21+10 | 200.3840 | 9.02 | Q |  |  |  | V |
| 21+15 | 200.4441 | 8.73 | Q |  |  |  | V |
| 21+20 | 200.5010 | 8.26 | Q |  |  |  | V |
| 21+25 | 200.5569 | 8.13 | Q |  |  |  | V |
| 21+30 | 200.6136 | 8.22 | Q |  |  |  | V |
| 21+35 | 200.6726 | 8.56 | Q |  |  |  | V |
| 21+40 | 200.7316 | 8.57 | Q |  |  |  | V |
| 21+45 | 200.7893 | 8.38 | Q |  |  |  | V |
| 21+50 | 200.8441 | 7.96 | Q |  |  |  | V |
| 21+55 | 200.8984 | 7.89 | Q |  |  |  | V |
| 22+ 0 | 200.9537 | 8.03 | Q |  |  |  | V |
| 22+ 5 | 201.0116 | 8.40 | Q |  |  |  | V |
| 22+10 | 201.0697 | 8.44 | Q |  |  |  | V |
| 22+15 | 201.1266 | 8.26 | Q |  |  |  | V |
| 22+20 | 201.1807 | 7.86 | Q |  |  |  | V |
| 22+25 | 201.2344 | 7.80 | Q |  |  |  | V |
| 22+30 | 201.2891 | 7.95 | Q |  |  |  | V |
| 22+35 | 201.3462 | 8.29 | Q |  |  |  | V |
| 22+40 | 201.4030 | 8.25 | Q |  |  |  | V |
| 22+45 | 201.4579 | 7.96 | Q |  |  |  | V |
| 22+50 | 201.5090 | 7.43 | Q |  |  |  | V |
| 22+55 | 201.5587 | 7.21 | Q |  |  |  | V |
| 23+ 0 | 201.6075 | 7.08 | Q |  |  |  | V |
| 23+ 5 | 201.6556 | 6.99 | Q |  |  |  | V |
| 23+10 | 201.7032 | 6.91 | Q |  |  |  | V |
| 23+15 | 201.7503 | 6.84 | Q |  |  |  | V |
| 23+20 | 201.7970 | 6.78 | Q |  |  |  | V |
| 23+25 | 201.8433 | 6.73 | Q |  |  |  | V |
| 23+30 | 201.8894 | 6.70 | Q |  |  |  | V |
| 23+35 | 201.9353 | 6.66 | Q |  |  |  | V |
| 23+40 | 201.9810 | 6.63 | Q |  |  |  | V |
| 23+45 | 202.0264 | 6.60 | Q |  |  |  | V |
| 23+50 | 202.0716 | 6.56 | Q |  |  |  | V |
| 23+55 | 202.1167 | 6.54 | Q |  |  |  | V |
| 24+ 0 | 202.1616 | 6.53 | Q |  |  |  | V |
| 24+ 5 | 202.2060 | 6.45 | Q |  |  |  | V |
| 24+10 | 202.2492 | 6.27 | Q |  |  |  | V |
| 24+15 | 202.2905 | 6.00 | Q |  |  |  | V |
| 24+20 | 202.3295 | 5.66 | Q |  |  |  | V |
| 24+25 | 202.3650 | 5.15 | Q |  |  |  | V |
| 24+30 | 202.3948 | 4.32 | Q |  |  |  | V |
| 24+35 | 202.4161 | 3.09 | Q |  |  |  | V |
| 24+40 | 202.4333 | 2.51 | Q |  |  |  | V |
| 24+45 | 202.4479 | 2.11 | Q |  |  |  | V |
| 24+50 | 202.4603 | 1.80 | Q |  |  |  | V |
| 24+55 | 202.4709 | 1.55 | Q |  |  |  | V |
| 25+ 0 | 202.4801 | 1.34 | Q |  |  |  | V |
| 25+ 5 | 202.4881 | 1.15 | Q |  |  |  | V |
| 25+10 | 202.4949 | 1.00 | Q |  |  |  | V |
| 25+15 | 202.5008 | 0.86 | Q |  |  |  | V |
| 25+20 | 202.5059 | 0.73 | Q |  |  |  | V |
| 25+25 | 202.5102 | 0.63 | Q |  |  |  | V |
| 25+30 | 202.5139 | 0.53 | Q |  |  |  | V |
| 25+35 | 202.5170 | 0.45 | Q |  |  |  | V |
| 25+40 | 202.5196 | 0.38 | Q |  |  |  | V |
| 25+45 | 202.5217 | 0.32 | Q |  |  |  | V |
| 25+50 | 202.5236 | 0.26 | Q |  |  |  | V |
| 25+55 | 202.5251 | 0.22 | Q |  |  |  | V |
| 26+ 0 | 202.5263 | 0.18 | Q |  |  |  | V |
| 26+ 5 | 202.5273 | 0.15 | Q |  |  |  | V |
| 26+10 | 202.5282 | 0.13 | Q |  |  |  | V |
| 26+15 | 202.5290 | 0.12 | Q |  |  |  | V |
| 26+20 | 202.5297 | 0.10 | Q |  |  |  | V |
| 26+25 | 202.5304 | 0.09 | Q |  |  |  | V |
| 26+30 | 202.5309 | 0.08 | Q |  |  |  | V |
| 26+35 | 202.5314 | 0.07 | Q |  |  |  | V |
| 26+40 | 202.5319 | 0.06 | Q |  |  |  | V |
| 26+45 | 202.5323 | 0.06 | Q |  |  |  | V |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT A – Off-site Inflow Hydrographs, Ultimate Condition**

|       |          |      |   |  |  |  |   |
|-------|----------|------|---|--|--|--|---|
| 26+50 | 202.5326 | 0.05 | Q |  |  |  | V |
| 26+55 | 202.5329 | 0.04 | Q |  |  |  | V |
| 27+ 0 | 202.5332 | 0.04 | Q |  |  |  | V |
| 27+ 5 | 202.5333 | 0.03 | Q |  |  |  | V |
| 27+10 | 202.5335 | 0.02 | Q |  |  |  | V |
| 27+15 | 202.5336 | 0.02 | Q |  |  |  | V |
| 27+20 | 202.5337 | 0.01 | Q |  |  |  | V |
| 27+25 | 202.5337 | 0.01 | Q |  |  |  | V |
| 27+30 | 202.5337 | 0.00 | Q |  |  |  | V |
| 27+35 | 202.5338 | 0.00 | Q |  |  |  | V |

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**ATTACHMENT B**  
**Unit Hydrographs**  
**Proposed Condition – Areas A and B**  
**100-Year 1-hr, 3-hr, 6-hr, 24-hr storm and 2-year 24-hr storm**

# **Inflow Hydrographs**

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT B – Inflow Hydrographs, Proposed Condition

### Unit Hydrograph Analysis

The unit hydrograph analysis was conducted using the CivilDesign Corporation Unit Hydrograph software and the Riverside County Hydrology Manual. In this study analysis, the goal was to estimate the quantity of storm water to be detained onsite to mitigate the increase in storm water peak discharge and volume resulting from this development. The 1-hour, 3-hour, 6-hour and 24-hour 2-year, 5-year, 10-year and 100-year storm hydrographs were computed to evaluate that the project peak runoff discharge originating from the site for existing and ultimate/proposed conditions.

The ultimate condition-project hydrographs will be used as inflow hydrograph in detention basin routing with restricted outlet structure works.

| <b>Soil Low Loss Rate Worksheet</b>         |              |                        |                            |                                      |                                         |                                    |
|---------------------------------------------|--------------|------------------------|----------------------------|--------------------------------------|-----------------------------------------|------------------------------------|
| <b>Drainage Area A (proposed) - 40.1 Ac</b> |              |                        |                            |                                      |                                         |                                    |
| [1]                                         | [2]          | [3]                    | [4]                        | [5]                                  | [6]                                     | [7]                                |
| Subarea                                     | Area in (Ac) | Land Use (Plate D-5.6) | % Impervious (Plate D-5.6) | Soil Low Loss Rate<br>0.9-(0.8)* [4] | Decimal portion of Area<br>[2] / SUM[2] | Average Low Loss Rate<br>[5] * [6] |
|                                             | 3.5          | Basin                  | 0                          | 0.90                                 | 0.09                                    | 0.08                               |
|                                             |              | Res 1 Ac               | 20                         | 0.74                                 | 0.00                                    | 0.00                               |
|                                             |              | Res 1/2 Ac             | 40                         | 0.58                                 | 0.00                                    | 0.00                               |
|                                             |              | Res 1/4 Ac             | 50                         | 0.50                                 | 0.00                                    | 0.00                               |
|                                             | 29.5         | Res < 1/4 Ac           | 65                         | 0.38                                 | 0.74                                    | 0.28                               |
|                                             |              | Apartment              | 80                         | 0.26                                 | 0.00                                    | 0.00                               |
|                                             |              | Mobil Home             | 75                         | 0.30                                 | 0.00                                    | 0.00                               |
|                                             | 5            | Streets                | 90                         | 0.18                                 | 0.12                                    | 0.02                               |
|                                             | 2.1          | Commercial             | 90                         | 0.18                                 | 0.05                                    | 0.01                               |
| Sum =                                       | 40.1         |                        |                            |                                      | 1.00                                    | <b>0.39</b>                        |

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT B – Inflow Hydrographs, Proposed Condition

| <b>Runoff Index (RI) Worksheet</b>          |              |            |            |                        |          |                                      |                            |
|---------------------------------------------|--------------|------------|------------|------------------------|----------|--------------------------------------|----------------------------|
| <b>Drainage Area A (proposed) - 40.1 Ac</b> |              |            |            |                        |          |                                      |                            |
| [1]                                         | [2]          | [3]        | [4]        | [5]                    | [6]      | [7]                                  | [8]                        |
| Subarea                                     | Area in (Ac) | Soil Group | Cover Type | RI Number (Plate E6-1) | Land Use | Decimal portion of Area [2] / SUM[2] | Average RI Value [5] * [7] |
| <b>Basin</b>                                |              | B          | Landscape  | 56                     | Basin    | 0.00                                 | 0.0                        |
|                                             | 3.5          | C          | Landscape  | 69                     | Basin    | 1.00                                 | 69.0                       |
|                                             |              | D          | Landscape  | 75                     | Basin    | 0.00                                 | 0.0                        |
| <i>Sum =</i>                                | <b>3.5</b>   |            |            |                        |          | 1.00                                 | <b>69.0</b>                |
|                                             |              |            |            |                        |          |                                      |                            |
| <b>Res</b>                                  |              | B          | Landscape  | 56                     | Res      | 0.00                                 | 0.0                        |
|                                             | 29.5         | C          | Landscape  | 69                     | Res      | 1.00                                 | 69.0                       |
|                                             |              | D          | Landscape  | 75                     | Res      | 0.00                                 | 0.0                        |
| <i>Sum =</i>                                | <b>29.5</b>  |            |            |                        |          | 1.00                                 | <b>69.0</b>                |
|                                             |              |            |            |                        |          |                                      |                            |
| <b>Street</b>                               |              | B          | Landscape  | 56                     | Street   | 0.00                                 | 0.0                        |
|                                             | 5            | C          | Landscape  | 69                     | Street   | 1.00                                 | 69.0                       |
|                                             |              | D          | Landscape  | 75                     | Street   | 0.00                                 | 0.0                        |
| <i>Sum =</i>                                | <b>5</b>     |            |            |                        |          | 1.00                                 | <b>69.0</b>                |
|                                             |              |            |            |                        |          |                                      |                            |
| <b>Comm</b>                                 |              | B          | Landscape  | 56                     | Comm     | 0.00                                 | 0.0                        |
|                                             | 2.1          | C          | Landscape  | 69                     | Comm     | 1.00                                 | 69.0                       |
|                                             |              | D          | Landscape  | 75                     | Comm     | 0.00                                 | 0.0                        |
| <i>Sum =</i>                                | <b>2.1</b>   |            |            |                        |          | 1.00                                 | <b>69.0</b>                |

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT B – Inflow Hydrographs, Proposed Condition

| <b>Manning "n" Value Worksheet</b>          |              |                        |           |                                      |                             |
|---------------------------------------------|--------------|------------------------|-----------|--------------------------------------|-----------------------------|
| <b>Drainage Area A (proposed) - 40.1 Ac</b> |              |                        |           |                                      |                             |
| [1]                                         | [2]          | [3]                    | [4]       | [5]                                  | [7]                         |
| Subarea                                     | Area in (Ac) | Land Use (Plate D-5.6) | "n" Value | Decimal portion of Area [2] / SUM[2] | Average "n" Value [4] * [5] |
|                                             | 3.5          | Basin                  | 0.035     | 0.09                                 | 0.003                       |
|                                             |              | Res 1 Ac               | 0.015     | 0.00                                 | 0.000                       |
|                                             |              | Res 1/2 Ac             | 0.015     | 0.00                                 | 0.000                       |
|                                             |              | Res 1/4 Ac             | 0.015     | 0.00                                 | 0.000                       |
|                                             | 29.5         | Res < 1/4 Ac           | 0.015     | 0.74                                 | 0.011                       |
|                                             |              | Apartment              | 0.015     | 0.00                                 | 0.000                       |
|                                             |              | Mobil Home             | 0.015     | 0.00                                 | 0.000                       |
|                                             | 5            | Streets                | 0.015     | 0.12                                 | 0.002                       |
|                                             | 2.1          | Commercial             | 0.015     | 0.05                                 | 0.001                       |
|                                             |              |                        |           |                                      |                             |
| Sum =                                       | <b>40.1</b>  |                        |           | 1.00                                 | <b>0.017</b>                |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

## U n i t   H y d r o g r a p h   A n a l y s i s

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Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

-----  
English (in-lb) Input Units Used  
English Rainfall Data (Inches) Input Values Used

English Units used in output format

-----  
Nichols Road Project - Tract 37305  
Drainage Area A = 40.1 Ac  
Proposed Condition to Detention Basin A  
100-year 1-hour storm

-----  
Drainage Area = 40.10(Ac.) = 0.063 Sq. Mi.  
Drainage Area for Depth-Area Areal Adjustment = 40.10(Ac.) = 0.063 Sq. Mi.  
Length along longest watercourse = 3463.00(Ft.)  
Length along longest watercourse measured to centroid = 840.00(Ft.)  
Length along longest watercourse = 0.656 Mi.  
Length along longest watercourse measured to centroid = 0.159 Mi.  
Difference in elevation = 77.00(Ft.)  
Slope along watercourse = 117.4011 Ft./Mi.  
Average Manning's 'N' = 0.017  
Lag time = 0.070 Hr.  
Lag time = 4.19 Min.  
25% of lag time = 1.05 Min.  
40% of lag time = 1.68 Min.  
Unit time = 5.00 Min.  
Duration of storm = 1 Hour(s)  
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 40.10         | 0.49             | 19.65          |

100 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 40.10         | 1.38             | 55.34          |

STORM EVENT (YEAR) = 100.00  
Area Averaged 2-Year Rainfall = 0.490(In)  
Area Averaged 100-Year Rainfall = 1.380(In)

Point rain (area averaged) = 1.380(In)  
Areal adjustment factor = 99.96 %  
Adjusted average point rain = 1.379(In)

Sub-Area Data:  
Area(Ac.)                  Runoff Index      Impervious %  
3.500                      69.00              0.050

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

29.500                      69.00                      0.550  
5.000                      69.00                      0.900  
2.100                      69.00                      0.900  
Total Area Entered =            40.10 (Ac.)

| RI        | RI    | Infil. Rate | Impervious | Adj. Infil. Rate | Area%  | F       |
|-----------|-------|-------------|------------|------------------|--------|---------|
| AMC2      | AMC-3 | (In/Hr)     | (Dec.%)    | (In/Hr)          | (Dec.) | (In/Hr) |
| 69.0      | 84.4  | 0.194       | 0.050      | 0.185            | 0.087  | 0.016   |
| 69.0      | 84.4  | 0.194       | 0.550      | 0.098            | 0.736  | 0.072   |
| 69.0      | 84.4  | 0.194       | 0.900      | 0.037            | 0.125  | 0.005   |
| 69.0      | 84.4  | 0.194       | 0.900      | 0.037            | 0.052  | 0.002   |
| Sum (F) = |       |             |            |                  |        | 0.095   |

Area averaged mean soil loss (F) (In/Hr) = 0.095  
Minimum soil loss rate ((In/Hr)) = 0.047  
(for 24 hour storm duration)  
Soil loss rate (decimal) = 0.390

Slope of intensity-duration curve for a 1 hour storm =0.4800

## Unit Hydrograph FOOTHILL S-Curve

### Unit Hydrograph Data

| Unit time period<br>(hrs) | Time % of lag | Distribution<br>Graph % | Unit Hydrograph<br>(CFS) |
|---------------------------|---------------|-------------------------|--------------------------|
| 1                         | 0.083         | 119.228                 | 21.144                   |
| 2                         | 0.167         | 238.457                 | 56.086                   |
| 3                         | 0.250         | 357.685                 | 15.616                   |
| 4                         | 0.333         | 476.914                 | 5.121                    |
| 5                         | 0.417         | 596.142                 | 1.262                    |
| 6                         | 0.500         | 715.371                 | 0.772                    |
| Sum =                     |               | 100.000                 | Sum= 40.413              |

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

| Unit Time<br>(Hr.) | Pattern<br>Percent | Storm Rain<br>(In/Hr) | Loss rate(In./Hr)<br>Max   Low | Effective<br>(In/Hr) |       |
|--------------------|--------------------|-----------------------|--------------------------------|----------------------|-------|
| 1                  | 0.08               | 4.40                  | 0.728                          | 0.095 ( 0.284)       | 0.634 |
| 2                  | 0.17               | 4.50                  | 0.745                          | 0.095 ( 0.291)       | 0.650 |
| 3                  | 0.25               | 5.40                  | 0.894                          | 0.095 ( 0.349)       | 0.799 |
| 4                  | 0.33               | 5.40                  | 0.894                          | 0.095 ( 0.349)       | 0.799 |
| 5                  | 0.42               | 5.70                  | 0.944                          | 0.095 ( 0.368)       | 0.849 |
| 6                  | 0.50               | 6.40                  | 1.059                          | 0.095 ( 0.413)       | 0.965 |
| 7                  | 0.58               | 7.90                  | 1.308                          | 0.095 ( 0.510)       | 1.213 |
| 8                  | 0.67               | 9.10                  | 1.506                          | 0.095 ( 0.588)       | 1.412 |
| 9                  | 0.75               | 12.80                 | 2.119                          | 0.095 ( 0.826)       | 2.024 |
| 10                 | 0.83               | 25.60                 | 4.238                          | 0.095 ( 1.653)       | 4.143 |
| 11                 | 0.92               | 7.90                  | 1.308                          | 0.095 ( 0.510)       | 1.213 |
| 12                 | 1.00               | 4.90                  | 0.811                          | 0.095 ( 0.316)       | 0.716 |

(Loss Rate Not Used)

Sum = 100.0                      Sum = 15.4

Flood volume = Effective rainfall 1.28(In)  
times area 40.1(Ac.) / [(In) / (Ft.)] = 4.3 (Ac.Ft)  
Total soil loss = 0.09(In)  
Total soil loss = 0.316(Ac.Ft)  
Total rainfall = 1.38(In)  
Flood volume = 187020.4 Cubic Feet  
Total soil loss = 13783.6 Cubic Feet

Peak flow rate of this hydrograph = 120.953(CFS)

## 1 - H O U R            S T O R M R u n o f f            H y d r o g r a p h

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

| Hydrograph in 5 Minute intervals ((CFS)) |        |        |         |   |      |       |       |       |
|------------------------------------------|--------|--------|---------|---|------|-------|-------|-------|
| Time (h+m)                               | Volume | Ac.Ft  | Q (CFS) | 0 | 50.0 | 100.0 | 150.0 | 200.0 |
| 0+ 5                                     | 0.0373 | 5.42   | VQ      |   |      |       |       |       |
| 0+10                                     | 0.1746 | 19.93  | V Q     |   |      |       |       |       |
| 0+15                                     | 0.3507 | 25.58  | V Q     |   |      |       |       |       |
| 0+20                                     | 0.5599 | 30.38  | VQ      |   |      |       |       |       |
| 0+25                                     | 0.7810 | 32.10  | QV      |   |      |       |       |       |
| 0+30                                     | 1.0202 | 34.73  | Q V     |   |      |       |       |       |
| 0+35                                     | 1.2948 | 39.88  | Q V     |   |      |       |       |       |
| 0+40                                     | 1.6260 | 48.09  | Q V     |   |      |       |       |       |
| 0+45                                     | 2.0369 | 59.66  | Q V     |   |      |       |       |       |
| 0+50                                     | 2.6809 | 93.51  | Q V     |   |      |       |       |       |
| 0+55                                     | 3.5139 | 120.95 | Q V     |   |      |       |       |       |
| 1+ 0                                     | 3.9621 | 65.09  | Q V     |   |      |       |       |       |
| 1+ 5                                     | 4.1960 | 33.96  | Q V     |   |      |       |       |       |
| 1+10                                     | 4.2633 | 9.78   | Q V     |   |      |       |       |       |
| 1+15                                     | 4.2867 | 3.40   | Q V     |   |      |       |       |       |
| 1+20                                     | 4.2919 | 0.74   | Q V     |   |      |       |       |       |
| 1+25                                     | 4.2934 | 0.22   | Q V     |   |      |       |       |       |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT B – Inflow Hydrographs, Proposed Condition

### Unit Hydrograph Analysis

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Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

English (in-lb) Input Units Used  
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Nichols Road Project - Tract 37305  
Drainage Area A = 40.1 Ac  
Proposed Condition to Detention Basin A  
100-year 3-hour storm

Drainage Area = 40.10(Ac.) = 0.063 Sq. Mi.  
Drainage Area for Depth-Area Areal Adjustment = 40.10(Ac.) = 0.063 Sq. Mi.  
Length along longest watercourse = 3463.00(Ft.)  
Length along longest watercourse measured to centroid = 840.00(Ft.)  
Length along longest watercourse = 0.656 Mi.  
Length along longest watercourse measured to centroid = 0.159 Mi.  
Difference in elevation = 77.00(Ft.)  
Slope along watercourse = 117.4011 Ft./Mi.  
Average Manning's 'N' = 0.017  
Lag time = 0.070 Hr.  
Lag time = 4.19 Min.  
25% of lag time = 1.05 Min.  
40% of lag time = 1.68 Min.  
Unit time = 5.00 Min.  
Duration of storm = 3 Hour(s)  
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 40.10         | 0.88             | 35.29          |

100 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 40.10         | 2.22             | 89.02          |

STORM EVENT (YEAR) = 100.00  
Area Averaged 2-Year Rainfall = 0.880(In)  
Area Averaged 100-Year Rainfall = 2.220(In)

Point rain (area averaged) = 2.220(In)  
Areal adjustment factor = 99.98 %  
Adjusted average point rain = 2.220(In)

Sub-Area Data:  
Area(Ac.)                  Runoff Index      Impervious %  
3.500                      69.00              0.050

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

29.500                      69.00                      0.550  
5.000                      69.00                      0.900  
2.100                      69.00                      0.900  
Total Area Entered =        40.10 (Ac.)

| RI        | RI    | Infil. Rate | Impervious | Adj. Infil. Rate | Area%  | F       |
|-----------|-------|-------------|------------|------------------|--------|---------|
| AMC2      | AMC-3 | (In/Hr)     | (Dec.%)    | (In/Hr)          | (Dec.) | (In/Hr) |
| 69.0      | 84.4  | 0.194       | 0.050      | 0.185            | 0.087  | 0.016   |
| 69.0      | 84.4  | 0.194       | 0.550      | 0.098            | 0.736  | 0.072   |
| 69.0      | 84.4  | 0.194       | 0.900      | 0.037            | 0.125  | 0.005   |
| 69.0      | 84.4  | 0.194       | 0.900      | 0.037            | 0.052  | 0.002   |
| Sum (F) = |       |             |            |                  |        | 0.095   |

Area averaged mean soil loss (F) (In/Hr) = 0.095  
Minimum soil loss rate ((In/Hr)) = 0.047  
(for 24 hour storm duration)  
Soil loss rate (decimal) = 0.390

## Unit Hydrograph FOOTHILL S-Curve

### Unit Hydrograph Data

| Unit time period<br>(hrs) | Time % of lag | Distribution<br>Graph % | Unit Hydrograph<br>(CFS) |
|---------------------------|---------------|-------------------------|--------------------------|
| 1                         | 0.083         | 119.228                 | 21.144                   |
| 2                         | 0.167         | 238.457                 | 56.086                   |
| 3                         | 0.250         | 357.685                 | 15.616                   |
| 4                         | 0.333         | 476.914                 | 5.121                    |
| 5                         | 0.417         | 596.142                 | 1.262                    |
| 6                         | 0.500         | 715.371                 | 0.772                    |
| Sum = 100.000             |               | Sum=                    | 40.413                   |

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

| Unit Time<br>(Hr.) | Pattern<br>Percent | Storm Rain<br>(In/Hr) | Loss rate(In./Hr)<br>Max   Low | Effective<br>(In/Hr) |       |
|--------------------|--------------------|-----------------------|--------------------------------|----------------------|-------|
| 1                  | 0.08               | 1.30                  | 0.346                          | 0.095 ( 0.135)       | 0.252 |
| 2                  | 0.17               | 1.30                  | 0.346                          | 0.095 ( 0.135)       | 0.252 |
| 3                  | 0.25               | 1.10                  | 0.293                          | 0.095 ( 0.114)       | 0.198 |
| 4                  | 0.33               | 1.50                  | 0.400                          | 0.095 ( 0.156)       | 0.305 |
| 5                  | 0.42               | 1.50                  | 0.400                          | 0.095 ( 0.156)       | 0.305 |
| 6                  | 0.50               | 1.80                  | 0.479                          | 0.095 ( 0.187)       | 0.385 |
| 7                  | 0.58               | 1.50                  | 0.400                          | 0.095 ( 0.156)       | 0.305 |
| 8                  | 0.67               | 1.80                  | 0.479                          | 0.095 ( 0.187)       | 0.385 |
| 9                  | 0.75               | 1.80                  | 0.479                          | 0.095 ( 0.187)       | 0.385 |
| 10                 | 0.83               | 1.50                  | 0.400                          | 0.095 ( 0.156)       | 0.305 |
| 11                 | 0.92               | 1.60                  | 0.426                          | 0.095 ( 0.166)       | 0.331 |
| 12                 | 1.00               | 1.80                  | 0.479                          | 0.095 ( 0.187)       | 0.385 |
| 13                 | 1.08               | 2.20                  | 0.586                          | 0.095 ( 0.229)       | 0.491 |
| 14                 | 1.17               | 2.20                  | 0.586                          | 0.095 ( 0.229)       | 0.491 |
| 15                 | 1.25               | 2.20                  | 0.586                          | 0.095 ( 0.229)       | 0.491 |
| 16                 | 1.33               | 2.00                  | 0.533                          | 0.095 ( 0.208)       | 0.438 |
| 17                 | 1.42               | 2.60                  | 0.693                          | 0.095 ( 0.270)       | 0.598 |
| 18                 | 1.50               | 2.70                  | 0.719                          | 0.095 ( 0.280)       | 0.624 |
| 19                 | 1.58               | 2.40                  | 0.639                          | 0.095 ( 0.249)       | 0.545 |
| 20                 | 1.67               | 2.70                  | 0.719                          | 0.095 ( 0.280)       | 0.624 |
| 21                 | 1.75               | 3.30                  | 0.879                          | 0.095 ( 0.343)       | 0.784 |
| 22                 | 1.83               | 3.10                  | 0.826                          | 0.095 ( 0.322)       | 0.731 |
| 23                 | 1.92               | 2.90                  | 0.772                          | 0.095 ( 0.301)       | 0.678 |
| 24                 | 2.00               | 3.00                  | 0.799                          | 0.095 ( 0.312)       | 0.704 |
| 25                 | 2.08               | 3.10                  | 0.826                          | 0.095 ( 0.322)       | 0.731 |
| 26                 | 2.17               | 4.20                  | 1.119                          | 0.095 ( 0.436)       | 1.024 |
| 27                 | 2.25               | 5.00                  | 1.332                          | 0.095 ( 0.519)       | 1.237 |
| 28                 | 2.33               | 3.50                  | 0.932                          | 0.095 ( 0.364)       | 0.838 |
| 29                 | 2.42               | 6.80                  | 1.811                          | 0.095 ( 0.706)       | 1.717 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

|    |      |      |       |          |          |       |
|----|------|------|-------|----------|----------|-------|
| 30 | 2.50 | 7.30 | 1.944 | 0.095    | ( 0.758) | 1.850 |
| 31 | 2.58 | 8.20 | 2.184 | 0.095    | ( 0.852) | 2.089 |
| 32 | 2.67 | 5.90 | 1.571 | 0.095    | ( 0.613) | 1.477 |
| 33 | 2.75 | 2.00 | 0.533 | 0.095    | ( 0.208) | 0.438 |
| 34 | 2.83 | 1.80 | 0.479 | 0.095    | ( 0.187) | 0.385 |
| 35 | 2.92 | 1.80 | 0.479 | 0.095    | ( 0.187) | 0.385 |
| 36 | 3.00 | 0.60 | 0.160 | ( 0.095) | 0.062    | 0.097 |

(Loss Rate Not Used)

Sum = 100.0 Sum = 23.3

Flood volume = Effective rainfall 1.94 (In)  
times area 40.1 (Ac.) / [(In) / (Ft.)] = 6.5 (Ac.Ft)  
Total soil loss = 0.28 (In)  
Total soil loss = 0.940 (Ac.Ft)  
Total rainfall = 2.22 (In)  
Flood volume = 282135.0 Cubic Feet  
Total soil loss = 40958.2 Cubic Feet

Peak flow rate of this hydrograph = 76.056 (CFS)

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3 - H O U R S T O R M  
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time (h+m) | Volume | Ac.Ft | Q (CFS) | 0 | 20.0 | 40.0 | 60.0 | 80.0 |
|------------|--------|-------|---------|---|------|------|------|------|
| 0+ 5       | 0.0148 | 2.15  | VQ      |   |      |      |      |      |
| 0+10       | 0.0689 | 7.86  | V Q     |   |      |      |      |      |
| 0+15       | 0.1308 | 8.99  | V Q     |   |      |      |      |      |
| 0+20       | 0.1943 | 9.21  | V Q     |   |      |      |      |      |
| 0+25       | 0.2729 | 11.42 | V Q     |   |      |      |      |      |
| 0+30       | 0.3607 | 12.74 | V Q     |   |      |      |      |      |
| 0+35       | 0.4576 | 14.07 | V Q     |   |      |      |      |      |
| 0+40       | 0.5504 | 13.48 | V Q     |   |      |      |      |      |
| 0+45       | 0.6536 | 14.99 | V Q     |   |      |      |      |      |
| 0+50       | 0.7548 | 14.68 | V Q     |   |      |      |      |      |
| 0+55       | 0.8460 | 13.25 | VQ      |   |      |      |      |      |
| 1+ 0       | 0.9412 | 13.82 | VQ      |   |      |      |      |      |
| 1+ 5       | 1.0511 | 15.97 | VQ      |   |      |      |      |      |
| 1+10       | 1.1801 | 18.73 | V Q     |   |      |      |      |      |
| 1+15       | 1.3145 | 19.50 | VQ      |   |      |      |      |      |
| 1+20       | 1.4474 | 19.31 | VQ      |   |      |      |      |      |
| 1+25       | 1.5820 | 19.53 | Q       |   |      |      |      |      |
| 1+30       | 1.7409 | 23.08 | VQ      |   |      |      |      |      |
| 1+35       | 1.9056 | 23.90 | Q       |   |      |      |      |      |
| 1+40       | 2.0656 | 23.25 | QV      |   |      |      |      |      |
| 1+45       | 2.2450 | 26.04 | Q       |   |      |      |      |      |
| 1+50       | 2.4489 | 29.61 | QV      |   |      |      |      |      |
| 1+55       | 2.6493 | 29.09 | Q V     |   |      |      |      |      |
| 2+ 0       | 2.8429 | 28.12 | Q V     |   |      |      |      |      |
| 2+ 5       | 3.0400 | 28.61 | Q V     |   |      |      |      |      |
| 2+10       | 3.2590 | 31.80 | Q V     |   |      |      |      |      |
| 2+15       | 3.5375 | 40.45 | QV      |   |      |      |      |      |
| 2+20       | 3.8389 | 43.76 | Q V     |   |      |      |      |      |
| 2+25       | 4.1433 | 44.19 | Q V     |   |      |      |      |      |
| 2+30       | 4.5795 | 63.34 | V  Q    |   |      |      |      |      |
| 2+35       | 5.0846 | 73.33 | V  Q    |   |      |      |      |      |
| 2+40       | 5.6084 | 76.06 | V  Q    |   |      |      |      |      |
| 2+45       | 5.9899 | 55.40 | Q V     |   |      |      |      |      |
| 2+50       | 6.1851 | 28.35 | Q V     |   |      |      |      |      |
| 2+55       | 6.3193 | 19.48 | Q       |   |      |      |      |      |
| 3+ 0       | 6.4178 | 14.30 | Q       |   |      |      |      |      |
| 3+ 5       | 6.4600 | 6.12  | Q       |   |      |      |      |      |
| 3+10       | 6.4720 | 1.75  | Q       |   |      |      |      |      |
| 3+15       | 6.4755 | 0.52  | Q       |   |      |      |      |      |
| 3+20       | 6.4767 | 0.17  | Q       |   |      |      |      |      |
| 3+25       | 6.4769 | 0.03  | Q       |   |      |      |      |      |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

## Unit Hydrograph Analysis

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1  
Study date 01/31/18 File: nrareaaprx6100.out

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Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

English (in-lb) Input Units Used  
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Nichols Road Project - Tract 37305  
Drainage Area A = 40.1 Ac  
Proposed Condition to Detention Basin A  
100-year 6-hour storm

Drainage Area = 40.10(Ac.) = 0.063 Sq. Mi.  
Drainage Area for Depth-Area Areal Adjustment = 40.10(Ac.) = 0.063 Sq. Mi.  
Length along longest watercourse = 3463.00(Ft.)  
Length along longest watercourse measured to centroid = 840.00(Ft.)  
Length along longest watercourse = 0.656 Mi.  
Length along longest watercourse measured to centroid = 0.159 Mi.  
Difference in elevation = 77.00(Ft.)  
Slope along watercourse = 117.4011 Ft./Mi.  
Average Manning's 'N' = 0.017  
Lag time = 0.070 Hr.  
Lag time = 4.19 Min.  
25% of lag time = 1.05 Min.  
40% of lag time = 1.68 Min.  
Unit time = 5.00 Min.  
Duration of storm = 6 Hour(s)  
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

|               |                  |                |
|---------------|------------------|----------------|
| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
| 40.10         | 1.26             | 50.53          |

100 YEAR Area rainfall data:

|               |                  |                |
|---------------|------------------|----------------|
| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
| 40.10         | 3.12             | 125.11         |

STORM EVENT (YEAR) = 100.00  
Area Averaged 2-Year Rainfall = 1.260(In)  
Area Averaged 100-Year Rainfall = 3.120(In)

Point rain (area averaged) = 3.120(In)  
Areal adjustment factor = 99.99 %  
Adjusted average point rain = 3.120(In)

Sub-Area Data:

|           |              |              |
|-----------|--------------|--------------|
| Area(Ac.) | Runoff Index | Impervious % |
| 3.500     | 69.00        | 0.050        |
| 29.500    | 69.00        | 0.550        |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

5.000                      69.00                      0.900  
2.100                      69.00                      0.900  
Total Area Entered =            40.10 (Ac.)

| RI        | RI    | Infil. Rate | Impervious | Adj. Infil. Rate | Area%  | F       |
|-----------|-------|-------------|------------|------------------|--------|---------|
| AMC2      | AMC-3 | (In/Hr)     | (Dec.%)    | (In/Hr)          | (Dec.) | (In/Hr) |
| 69.0      | 84.4  | 0.194       | 0.050      | 0.185            | 0.087  | 0.016   |
| 69.0      | 84.4  | 0.194       | 0.550      | 0.098            | 0.736  | 0.072   |
| 69.0      | 84.4  | 0.194       | 0.900      | 0.037            | 0.125  | 0.005   |
| 69.0      | 84.4  | 0.194       | 0.900      | 0.037            | 0.052  | 0.002   |
| Sum (F) = |       |             |            |                  |        | 0.095   |

Area averaged mean soil loss (F) (In/Hr) = 0.095  
Minimum soil loss rate ((In/Hr)) = 0.047  
(for 24 hour storm duration)  
Soil low loss rate (decimal) = 0.390

## Unit Hydrograph FOOTHILL S-Curve

### Unit Hydrograph Data

| Unit time period<br>(hrs) | Time % of lag | Distribution<br>Graph % | Unit Hydrograph<br>(CFS) |
|---------------------------|---------------|-------------------------|--------------------------|
| 1                         | 0.083         | 119.228                 | 8.545                    |
| 2                         | 0.167         | 238.457                 | 22.666                   |
| 3                         | 0.250         | 357.685                 | 6.311                    |
| 4                         | 0.333         | 476.914                 | 2.069                    |
| 5                         | 0.417         | 596.142                 | 0.510                    |
| 6                         | 0.500         | 715.371                 | 0.312                    |
| Sum = 100.000             |               | Sum=                    | 40.413                   |

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

| Unit Time<br>(Hr.) | Pattern<br>Percent | Storm Rain<br>(In/Hr) | Loss rate(In./Hr) |          | Effective<br>(In/Hr) |
|--------------------|--------------------|-----------------------|-------------------|----------|----------------------|
|                    |                    |                       | Max               | Low      |                      |
| 1                  | 0.08               | 0.187                 | ( 0.095)          | 0.073    | 0.114                |
| 2                  | 0.17               | 0.225                 | ( 0.095)          | 0.088    | 0.137                |
| 3                  | 0.25               | 0.225                 | ( 0.095)          | 0.088    | 0.137                |
| 4                  | 0.33               | 0.225                 | ( 0.095)          | 0.088    | 0.137                |
| 5                  | 0.42               | 0.225                 | ( 0.095)          | 0.088    | 0.137                |
| 6                  | 0.50               | 0.262                 | 0.095             | ( 0.102) | 0.167                |
| 7                  | 0.58               | 0.262                 | 0.095             | ( 0.102) | 0.167                |
| 8                  | 0.67               | 0.262                 | 0.095             | ( 0.102) | 0.167                |
| 9                  | 0.75               | 0.262                 | 0.095             | ( 0.102) | 0.167                |
| 10                 | 0.83               | 0.262                 | 0.095             | ( 0.102) | 0.167                |
| 11                 | 0.92               | 0.262                 | 0.095             | ( 0.102) | 0.167                |
| 12                 | 1.00               | 0.299                 | 0.095             | ( 0.117) | 0.205                |
| 13                 | 1.08               | 0.299                 | 0.095             | ( 0.117) | 0.205                |
| 14                 | 1.17               | 0.299                 | 0.095             | ( 0.117) | 0.205                |
| 15                 | 1.25               | 0.299                 | 0.095             | ( 0.117) | 0.205                |
| 16                 | 1.33               | 0.299                 | 0.095             | ( 0.117) | 0.205                |
| 17                 | 1.42               | 0.299                 | 0.095             | ( 0.117) | 0.205                |
| 18                 | 1.50               | 0.299                 | 0.095             | ( 0.117) | 0.205                |
| 19                 | 1.58               | 0.299                 | 0.095             | ( 0.117) | 0.205                |
| 20                 | 1.67               | 0.299                 | 0.095             | ( 0.117) | 0.205                |
| 21                 | 1.75               | 0.299                 | 0.095             | ( 0.117) | 0.205                |
| 22                 | 1.83               | 0.299                 | 0.095             | ( 0.117) | 0.205                |
| 23                 | 1.92               | 0.299                 | 0.095             | ( 0.117) | 0.205                |
| 24                 | 2.00               | 0.337                 | 0.095             | ( 0.131) | 0.242                |
| 25                 | 2.08               | 0.299                 | 0.095             | ( 0.117) | 0.205                |
| 26                 | 2.17               | 0.337                 | 0.095             | ( 0.131) | 0.242                |
| 27                 | 2.25               | 0.337                 | 0.095             | ( 0.131) | 0.242                |
| 28                 | 2.33               | 0.337                 | 0.095             | ( 0.131) | 0.242                |
| 29                 | 2.42               | 0.337                 | 0.095             | ( 0.131) | 0.242                |
| 30                 | 2.50               | 0.337                 | 0.095             | ( 0.131) | 0.242                |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

|    |      |      |       |          |          |       |
|----|------|------|-------|----------|----------|-------|
| 31 | 2.58 | 0.90 | 0.337 | 0.095    | ( 0.131) | 0.242 |
| 32 | 2.67 | 0.90 | 0.337 | 0.095    | ( 0.131) | 0.242 |
| 33 | 2.75 | 1.00 | 0.374 | 0.095    | ( 0.146) | 0.280 |
| 34 | 2.83 | 1.00 | 0.374 | 0.095    | ( 0.146) | 0.280 |
| 35 | 2.92 | 1.00 | 0.374 | 0.095    | ( 0.146) | 0.280 |
| 36 | 3.00 | 1.00 | 0.374 | 0.095    | ( 0.146) | 0.280 |
| 37 | 3.08 | 1.00 | 0.374 | 0.095    | ( 0.146) | 0.280 |
| 38 | 3.17 | 1.10 | 0.412 | 0.095    | ( 0.161) | 0.317 |
| 39 | 3.25 | 1.10 | 0.412 | 0.095    | ( 0.161) | 0.317 |
| 40 | 3.33 | 1.10 | 0.412 | 0.095    | ( 0.161) | 0.317 |
| 41 | 3.42 | 1.20 | 0.449 | 0.095    | ( 0.175) | 0.355 |
| 42 | 3.50 | 1.30 | 0.487 | 0.095    | ( 0.190) | 0.392 |
| 43 | 3.58 | 1.40 | 0.524 | 0.095    | ( 0.204) | 0.429 |
| 44 | 3.67 | 1.40 | 0.524 | 0.095    | ( 0.204) | 0.429 |
| 45 | 3.75 | 1.50 | 0.562 | 0.095    | ( 0.219) | 0.467 |
| 46 | 3.83 | 1.50 | 0.562 | 0.095    | ( 0.219) | 0.467 |
| 47 | 3.92 | 1.60 | 0.599 | 0.095    | ( 0.234) | 0.504 |
| 48 | 4.00 | 1.60 | 0.599 | 0.095    | ( 0.234) | 0.504 |
| 49 | 4.08 | 1.70 | 0.636 | 0.095    | ( 0.248) | 0.542 |
| 50 | 4.17 | 1.80 | 0.674 | 0.095    | ( 0.263) | 0.579 |
| 51 | 4.25 | 1.90 | 0.711 | 0.095    | ( 0.277) | 0.617 |
| 52 | 4.33 | 2.00 | 0.749 | 0.095    | ( 0.292) | 0.654 |
| 53 | 4.42 | 2.10 | 0.786 | 0.095    | ( 0.307) | 0.691 |
| 54 | 4.50 | 2.10 | 0.786 | 0.095    | ( 0.307) | 0.691 |
| 55 | 4.58 | 2.20 | 0.824 | 0.095    | ( 0.321) | 0.729 |
| 56 | 4.67 | 2.30 | 0.861 | 0.095    | ( 0.336) | 0.766 |
| 57 | 4.75 | 2.40 | 0.898 | 0.095    | ( 0.350) | 0.804 |
| 58 | 4.83 | 2.40 | 0.898 | 0.095    | ( 0.350) | 0.804 |
| 59 | 4.92 | 2.50 | 0.936 | 0.095    | ( 0.365) | 0.841 |
| 60 | 5.00 | 2.60 | 0.973 | 0.095    | ( 0.380) | 0.879 |
| 61 | 5.08 | 3.10 | 1.160 | 0.095    | ( 0.453) | 1.066 |
| 62 | 5.17 | 3.60 | 1.348 | 0.095    | ( 0.526) | 1.253 |
| 63 | 5.25 | 3.90 | 1.460 | 0.095    | ( 0.569) | 1.365 |
| 64 | 5.33 | 4.20 | 1.572 | 0.095    | ( 0.613) | 1.478 |
| 65 | 5.42 | 4.70 | 1.759 | 0.095    | ( 0.686) | 1.665 |
| 66 | 5.50 | 5.60 | 2.096 | 0.095    | ( 0.818) | 2.002 |
| 67 | 5.58 | 1.90 | 0.711 | 0.095    | ( 0.277) | 0.617 |
| 68 | 5.67 | 0.90 | 0.337 | 0.095    | ( 0.131) | 0.242 |
| 69 | 5.75 | 0.60 | 0.225 | ( 0.095) | 0.088    | 0.137 |
| 70 | 5.83 | 0.50 | 0.187 | ( 0.095) | 0.073    | 0.114 |
| 71 | 5.92 | 0.30 | 0.112 | ( 0.095) | 0.044    | 0.069 |
| 72 | 6.00 | 0.20 | 0.075 | ( 0.095) | 0.029    | 0.046 |

(Loss Rate Not Used)  
Sum = 100.0 Sum = 30.8

Flood volume = Effective rainfall 2.57(In)  
times area 40.1(Ac.) / [(In) / (Ft.)] = 8.6(Ac.Ft)  
Total soil loss = 0.55(In)  
Total soil loss = 1.844(Ac.Ft)  
Total rainfall = 3.12(In)  
Flood volume = 373760.8 Cubic Feet  
Total soil loss = 80333.2 Cubic Feet

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Peak flow rate of this hydrograph = 67.994 (CFS)  
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6 - H O U R S T O R M  
R u n o f f H y d r o g r a p h

-----  
Hydrograph in 5 Minute intervals ((CFS))  
-----

| Time(h+m) | Volume | Ac.Ft | Q(CFS) | 0   | 17.5 | 35.0 | 52.5 | 70.0 |
|-----------|--------|-------|--------|-----|------|------|------|------|
| 0+ 5      | 0.0067 |       | 0.98   | Q   |      |      |      |      |
| 0+10      | 0.0326 |       | 3.76   | V Q |      |      |      |      |
| 0+15      | 0.0671 |       | 5.00   | V Q |      |      |      |      |
| 0+20      | 0.1041 |       | 5.38   | V Q |      |      |      |      |
| 0+25      | 0.1419 |       | 5.49   | V Q |      |      |      |      |
| 0+30      | 0.1818 |       | 5.79   | V Q |      |      |      |      |
| 0+35      | 0.2265 |       | 6.49   | V Q |      |      |      |      |
| 0+40      | 0.2725 |       | 6.68   | V Q |      |      |      |      |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|      |        |       |       |  |  |  |  |
|------|--------|-------|-------|--|--|--|--|
| 0+45 | 0.3189 | 6.74  | V Q   |  |  |  |  |
| 0+50 | 0.3654 | 6.76  | V Q   |  |  |  |  |
| 0+55 | 0.4120 | 6.77  | V Q   |  |  |  |  |
| 1+ 0 | 0.4608 | 7.09  | V Q   |  |  |  |  |
| 1+ 5 | 0.5155 | 7.94  | V Q   |  |  |  |  |
| 1+10 | 0.5718 | 8.17  | V Q   |  |  |  |  |
| 1+15 | 0.6286 | 8.25  | V Q   |  |  |  |  |
| 1+20 | 0.6855 | 8.27  | VQ    |  |  |  |  |
| 1+25 | 0.7426 | 8.28  | VQ    |  |  |  |  |
| 1+30 | 0.7996 | 8.28  | VQ    |  |  |  |  |
| 1+35 | 0.8566 | 8.28  | VQ    |  |  |  |  |
| 1+40 | 0.9136 | 8.28  | Q     |  |  |  |  |
| 1+45 | 0.9707 | 8.28  | Q     |  |  |  |  |
| 1+50 | 1.0277 | 8.28  | Q     |  |  |  |  |
| 1+55 | 1.0847 | 8.28  | QV    |  |  |  |  |
| 2+ 0 | 1.1440 | 8.60  | QV    |  |  |  |  |
| 2+ 5 | 1.2068 | 9.13  | Q     |  |  |  |  |
| 2+10 | 1.2677 | 8.84  | Q     |  |  |  |  |
| 2+15 | 1.3333 | 9.53  | QV    |  |  |  |  |
| 2+20 | 1.4001 | 9.70  | QV    |  |  |  |  |
| 2+25 | 1.4675 | 9.77  | QV    |  |  |  |  |
| 2+30 | 1.5348 | 9.78  | Q V   |  |  |  |  |
| 2+35 | 1.6023 | 9.79  | Q V   |  |  |  |  |
| 2+40 | 1.6697 | 9.79  | Q V   |  |  |  |  |
| 2+45 | 1.7394 | 10.11 | Q V   |  |  |  |  |
| 2+50 | 1.8149 | 10.96 | Q V   |  |  |  |  |
| 2+55 | 1.8920 | 11.20 | Q V   |  |  |  |  |
| 3+ 0 | 1.9697 | 11.28 | Q V   |  |  |  |  |
| 3+ 5 | 2.0475 | 11.30 | Q V   |  |  |  |  |
| 3+10 | 2.1276 | 11.63 | Q V   |  |  |  |  |
| 3+15 | 2.2135 | 12.48 | Q V   |  |  |  |  |
| 3+20 | 2.3011 | 12.71 | Q V   |  |  |  |  |
| 3+25 | 2.3913 | 13.11 | Q   V |  |  |  |  |
| 3+30 | 2.4898 | 14.30 | Q   V |  |  |  |  |
| 3+35 | 2.5981 | 15.72 | Q   V |  |  |  |  |
| 3+40 | 2.7143 | 16.88 | Q   V |  |  |  |  |
| 3+45 | 2.8350 | 17.53 | Q V   |  |  |  |  |
| 3+50 | 2.9624 | 18.49 | Q V   |  |  |  |  |
| 3+55 | 3.0937 | 19.08 | Q V   |  |  |  |  |
| 4+ 0 | 3.2316 | 20.01 | Q V   |  |  |  |  |
| 4+ 5 | 3.3734 | 20.59 | Q V   |  |  |  |  |
| 4+10 | 3.5239 | 21.85 | Q V   |  |  |  |  |
| 4+15 | 3.6841 | 23.27 | Q V   |  |  |  |  |
| 4+20 | 3.8547 | 24.77 | Q V   |  |  |  |  |
| 4+25 | 4.0356 | 26.27 | Q V   |  |  |  |  |
| 4+30 | 4.2248 | 27.46 | Q V   |  |  |  |  |
| 4+35 | 4.4185 | 28.13 | Q V   |  |  |  |  |
| 4+40 | 4.6210 | 29.40 | Q V   |  |  |  |  |
| 4+45 | 4.8334 | 30.84 | Q V   |  |  |  |  |
| 4+50 | 5.0539 | 32.02 | Q V   |  |  |  |  |
| 4+55 | 5.2789 | 32.67 | Q V   |  |  |  |  |
| 5+ 0 | 5.5126 | 33.95 | Q V   |  |  |  |  |
| 5+ 5 | 5.7651 | 36.66 | Q V   |  |  |  |  |
| 5+10 | 6.0601 | 42.83 | Q V   |  |  |  |  |
| 5+15 | 6.3997 | 49.32 | QV    |  |  |  |  |
| 5+20 | 6.7746 | 54.42 | Q VQ  |  |  |  |  |
| 5+25 | 7.1862 | 59.77 | V Q   |  |  |  |  |
| 5+30 | 7.6545 | 67.99 | V Q   |  |  |  |  |
| 5+35 | 8.1044 | 65.32 | Q V   |  |  |  |  |
| 5+40 | 8.3339 | 33.32 | Q V   |  |  |  |  |
| 5+45 | 8.4441 | 16.01 | Q V   |  |  |  |  |
| 5+50 | 8.5022 | 8.43  | Q V   |  |  |  |  |
| 5+55 | 8.5399 | 5.48  | Q V   |  |  |  |  |
| 6+ 0 | 8.5624 | 3.26  | Q V   |  |  |  |  |
| 6+ 5 | 8.5752 | 1.85  | Q V   |  |  |  |  |
| 6+10 | 8.5788 | 0.53  | Q V   |  |  |  |  |
| 6+15 | 8.5800 | 0.17  | Q V   |  |  |  |  |
| 6+20 | 8.5803 | 0.04  | Q V   |  |  |  |  |
| 6+25 | 8.5804 | 0.01  | Q V   |  |  |  |  |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT B – Inflow Hydrographs, Proposed Condition

### Unit Hydrograph Analysis

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1  
Study date 01/31/18 File: nrareaaprx24100.out

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Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

-----  
English (in-lb) Input Units Used  
English Rainfall Data (Inches) Input Values Used

English Units used in output format

-----  
Nichols Road Project - Tract 37305  
Drainage Area A = 40.1 Ac  
Proposed Condition to Detention Basin A  
100-year 24-hour storm

-----  
Drainage Area = 40.10(Ac.) = 0.063 Sq. Mi.  
Drainage Area for Depth-Area Areal Adjustment = 40.10(Ac.) = 0.063 Sq. Mi.  
Length along longest watercourse = 3463.00(Ft.)  
Length along longest watercourse measured to centroid = 840.00(Ft.)  
Length along longest watercourse = 0.656 Mi.  
Length along longest watercourse measured to centroid = 0.159 Mi.  
Difference in elevation = 77.00(Ft.)  
Slope along watercourse = 117.4011 Ft./Mi.  
Average Manning's 'N' = 0.017  
Lag time = 0.070 Hr.  
Lag time = 4.19 Min.  
25% of lag time = 1.05 Min.  
40% of lag time = 1.68 Min.  
Unit time = 5.00 Min.  
Duration of storm = 24 Hour(s)  
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 40.10         | 2.38             | 95.44          |

100 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 40.10         | 6.35             | 254.63         |

STORM EVENT (YEAR) = 100.00  
Area Averaged 2-Year Rainfall = 2.380(In)  
Area Averaged 100-Year Rainfall = 6.350(In)

Point rain (area averaged) = 6.350(In)  
Areal adjustment factor = 99.99 %  
Adjusted average point rain = 6.350(In)

Sub-Area Data:

| Area(Ac.) | Runoff Index | Impervious % |
|-----------|--------------|--------------|
| 3.500     | 69.00        | 0.050        |
| 29.500    | 69.00        | 0.550        |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

5.000                      69.00                      0.900  
2.100                      69.00                      0.900  
Total Area Entered =            40.10 (Ac.)

| RI        | RI    | Infil. Rate | Impervious | Adj. Infil. Rate | Area%  | F       |
|-----------|-------|-------------|------------|------------------|--------|---------|
| AMC2      | AMC-3 | (In/Hr)     | (Dec.%)    | (In/Hr)          | (Dec.) | (In/Hr) |
| 69.0      | 84.4  | 0.194       | 0.050      | 0.185            | 0.087  | 0.016   |
| 69.0      | 84.4  | 0.194       | 0.550      | 0.098            | 0.736  | 0.072   |
| 69.0      | 84.4  | 0.194       | 0.900      | 0.037            | 0.125  | 0.005   |
| 69.0      | 84.4  | 0.194       | 0.900      | 0.037            | 0.052  | 0.002   |
| Sum (F) = |       |             |            |                  |        | 0.095   |

Area averaged mean soil loss (F) (In/Hr) = 0.095  
Minimum soil loss rate ((In/Hr)) = 0.047  
(for 24 hour storm duration)  
Soil low loss rate (decimal) = 0.390

## Unit Hydrograph FOOTHILL S-Curve

### Unit Hydrograph Data

| Unit time period<br>(hrs) | Time % of lag | Distribution<br>Graph % | Unit Hydrograph<br>(CFS) |
|---------------------------|---------------|-------------------------|--------------------------|
| 1                         | 0.083         | 119.228                 | 8.545                    |
| 2                         | 0.167         | 238.457                 | 22.666                   |
| 3                         | 0.250         | 357.685                 | 6.311                    |
| 4                         | 0.333         | 476.914                 | 2.069                    |
| 5                         | 0.417         | 596.142                 | 0.510                    |
| 6                         | 0.500         | 715.371                 | 0.312                    |
| Sum = 100.000             |               | Sum=                    | 40.413                   |

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

| Unit Time<br>(Hr.) | Pattern<br>Percent | Storm Rain<br>(In/Hr) | Loss rate(In./Hr)<br>Max   Low | Effective<br>(In/Hr) |
|--------------------|--------------------|-----------------------|--------------------------------|----------------------|
| 1                  | 0.08               | 0.07                  | ( 0.168)                       | 0.031                |
| 2                  | 0.17               | 0.07                  | ( 0.167)                       | 0.031                |
| 3                  | 0.25               | 0.07                  | ( 0.167)                       | 0.031                |
| 4                  | 0.33               | 0.10                  | ( 0.166)                       | 0.046                |
| 5                  | 0.42               | 0.10                  | ( 0.165)                       | 0.046                |
| 6                  | 0.50               | 0.10                  | ( 0.165)                       | 0.046                |
| 7                  | 0.58               | 0.10                  | ( 0.164)                       | 0.046                |
| 8                  | 0.67               | 0.10                  | ( 0.163)                       | 0.046                |
| 9                  | 0.75               | 0.10                  | ( 0.163)                       | 0.046                |
| 10                 | 0.83               | 0.13                  | ( 0.162)                       | 0.062                |
| 11                 | 0.92               | 0.13                  | ( 0.161)                       | 0.062                |
| 12                 | 1.00               | 0.13                  | ( 0.161)                       | 0.062                |
| 13                 | 1.08               | 0.10                  | ( 0.160)                       | 0.046                |
| 14                 | 1.17               | 0.10                  | ( 0.160)                       | 0.046                |
| 15                 | 1.25               | 0.10                  | ( 0.159)                       | 0.046                |
| 16                 | 1.33               | 0.10                  | ( 0.158)                       | 0.046                |
| 17                 | 1.42               | 0.10                  | ( 0.158)                       | 0.046                |
| 18                 | 1.50               | 0.10                  | ( 0.157)                       | 0.046                |
| 19                 | 1.58               | 0.10                  | ( 0.156)                       | 0.046                |
| 20                 | 1.67               | 0.10                  | ( 0.156)                       | 0.046                |
| 21                 | 1.75               | 0.10                  | ( 0.155)                       | 0.046                |
| 22                 | 1.83               | 0.13                  | ( 0.154)                       | 0.062                |
| 23                 | 1.92               | 0.13                  | ( 0.154)                       | 0.062                |
| 24                 | 2.00               | 0.13                  | ( 0.153)                       | 0.062                |
| 25                 | 2.08               | 0.13                  | ( 0.153)                       | 0.062                |
| 26                 | 2.17               | 0.13                  | ( 0.152)                       | 0.062                |
| 27                 | 2.25               | 0.13                  | ( 0.151)                       | 0.062                |
| 28                 | 2.33               | 0.13                  | ( 0.151)                       | 0.062                |
| 29                 | 2.42               | 0.13                  | ( 0.150)                       | 0.062                |
| 30                 | 2.50               | 0.13                  | ( 0.150)                       | 0.062                |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|     |      |      |       |          |          |       |
|-----|------|------|-------|----------|----------|-------|
| 31  | 2.58 | 0.17 | 0.127 | ( 0.149) | 0.050    | 0.077 |
| 32  | 2.67 | 0.17 | 0.127 | ( 0.148) | 0.050    | 0.077 |
| 33  | 2.75 | 0.17 | 0.127 | ( 0.148) | 0.050    | 0.077 |
| 34  | 2.83 | 0.17 | 0.127 | ( 0.147) | 0.050    | 0.077 |
| 35  | 2.92 | 0.17 | 0.127 | ( 0.147) | 0.050    | 0.077 |
| 36  | 3.00 | 0.17 | 0.127 | ( 0.146) | 0.050    | 0.077 |
| 37  | 3.08 | 0.17 | 0.127 | ( 0.145) | 0.050    | 0.077 |
| 38  | 3.17 | 0.17 | 0.127 | ( 0.145) | 0.050    | 0.077 |
| 39  | 3.25 | 0.17 | 0.127 | ( 0.144) | 0.050    | 0.077 |
| 40  | 3.33 | 0.17 | 0.127 | ( 0.143) | 0.050    | 0.077 |
| 41  | 3.42 | 0.17 | 0.127 | ( 0.143) | 0.050    | 0.077 |
| 42  | 3.50 | 0.17 | 0.127 | ( 0.142) | 0.050    | 0.077 |
| 43  | 3.58 | 0.17 | 0.127 | ( 0.142) | 0.050    | 0.077 |
| 44  | 3.67 | 0.17 | 0.127 | ( 0.141) | 0.050    | 0.077 |
| 45  | 3.75 | 0.17 | 0.127 | ( 0.141) | 0.050    | 0.077 |
| 46  | 3.83 | 0.20 | 0.152 | ( 0.140) | 0.059    | 0.093 |
| 47  | 3.92 | 0.20 | 0.152 | ( 0.139) | 0.059    | 0.093 |
| 48  | 4.00 | 0.20 | 0.152 | ( 0.139) | 0.059    | 0.093 |
| 49  | 4.08 | 0.20 | 0.152 | ( 0.138) | 0.059    | 0.093 |
| 50  | 4.17 | 0.20 | 0.152 | ( 0.138) | 0.059    | 0.093 |
| 51  | 4.25 | 0.20 | 0.152 | ( 0.137) | 0.059    | 0.093 |
| 52  | 4.33 | 0.23 | 0.178 | ( 0.136) | 0.069    | 0.108 |
| 53  | 4.42 | 0.23 | 0.178 | ( 0.136) | 0.069    | 0.108 |
| 54  | 4.50 | 0.23 | 0.178 | ( 0.135) | 0.069    | 0.108 |
| 55  | 4.58 | 0.23 | 0.178 | ( 0.135) | 0.069    | 0.108 |
| 56  | 4.67 | 0.23 | 0.178 | ( 0.134) | 0.069    | 0.108 |
| 57  | 4.75 | 0.23 | 0.178 | ( 0.133) | 0.069    | 0.108 |
| 58  | 4.83 | 0.27 | 0.203 | ( 0.133) | 0.079    | 0.124 |
| 59  | 4.92 | 0.27 | 0.203 | ( 0.132) | 0.079    | 0.124 |
| 60  | 5.00 | 0.27 | 0.203 | ( 0.132) | 0.079    | 0.124 |
| 61  | 5.08 | 0.20 | 0.152 | ( 0.131) | 0.059    | 0.093 |
| 62  | 5.17 | 0.20 | 0.152 | ( 0.131) | 0.059    | 0.093 |
| 63  | 5.25 | 0.20 | 0.152 | ( 0.130) | 0.059    | 0.093 |
| 64  | 5.33 | 0.23 | 0.178 | ( 0.129) | 0.069    | 0.108 |
| 65  | 5.42 | 0.23 | 0.178 | ( 0.129) | 0.069    | 0.108 |
| 66  | 5.50 | 0.23 | 0.178 | ( 0.128) | 0.069    | 0.108 |
| 67  | 5.58 | 0.27 | 0.203 | ( 0.128) | 0.079    | 0.124 |
| 68  | 5.67 | 0.27 | 0.203 | ( 0.127) | 0.079    | 0.124 |
| 69  | 5.75 | 0.27 | 0.203 | ( 0.127) | 0.079    | 0.124 |
| 70  | 5.83 | 0.27 | 0.203 | ( 0.126) | 0.079    | 0.124 |
| 71  | 5.92 | 0.27 | 0.203 | ( 0.126) | 0.079    | 0.124 |
| 72  | 6.00 | 0.27 | 0.203 | ( 0.125) | 0.079    | 0.124 |
| 73  | 6.08 | 0.30 | 0.229 | ( 0.124) | 0.089    | 0.139 |
| 74  | 6.17 | 0.30 | 0.229 | ( 0.124) | 0.089    | 0.139 |
| 75  | 6.25 | 0.30 | 0.229 | ( 0.123) | 0.089    | 0.139 |
| 76  | 6.33 | 0.30 | 0.229 | ( 0.123) | 0.089    | 0.139 |
| 77  | 6.42 | 0.30 | 0.229 | ( 0.122) | 0.089    | 0.139 |
| 78  | 6.50 | 0.30 | 0.229 | ( 0.122) | 0.089    | 0.139 |
| 79  | 6.58 | 0.33 | 0.254 | ( 0.121) | 0.099    | 0.155 |
| 80  | 6.67 | 0.33 | 0.254 | ( 0.121) | 0.099    | 0.155 |
| 81  | 6.75 | 0.33 | 0.254 | ( 0.120) | 0.099    | 0.155 |
| 82  | 6.83 | 0.33 | 0.254 | ( 0.120) | 0.099    | 0.155 |
| 83  | 6.92 | 0.33 | 0.254 | ( 0.119) | 0.099    | 0.155 |
| 84  | 7.00 | 0.33 | 0.254 | ( 0.118) | 0.099    | 0.155 |
| 85  | 7.08 | 0.33 | 0.254 | ( 0.118) | 0.099    | 0.155 |
| 86  | 7.17 | 0.33 | 0.254 | ( 0.117) | 0.099    | 0.155 |
| 87  | 7.25 | 0.33 | 0.254 | ( 0.117) | 0.099    | 0.155 |
| 88  | 7.33 | 0.37 | 0.279 | ( 0.116) | 0.109    | 0.170 |
| 89  | 7.42 | 0.37 | 0.279 | ( 0.116) | 0.109    | 0.170 |
| 90  | 7.50 | 0.37 | 0.279 | ( 0.115) | 0.109    | 0.170 |
| 91  | 7.58 | 0.40 | 0.305 | 0.115    | ( 0.119) | 0.190 |
| 92  | 7.67 | 0.40 | 0.305 | 0.114    | ( 0.119) | 0.191 |
| 93  | 7.75 | 0.40 | 0.305 | 0.114    | ( 0.119) | 0.191 |
| 94  | 7.83 | 0.43 | 0.330 | 0.113    | ( 0.129) | 0.217 |
| 95  | 7.92 | 0.43 | 0.330 | 0.113    | ( 0.129) | 0.218 |
| 96  | 8.00 | 0.43 | 0.330 | 0.112    | ( 0.129) | 0.218 |
| 97  | 8.08 | 0.50 | 0.381 | 0.112    | ( 0.149) | 0.269 |
| 98  | 8.17 | 0.50 | 0.381 | 0.111    | ( 0.149) | 0.270 |
| 99  | 8.25 | 0.50 | 0.381 | 0.111    | ( 0.149) | 0.270 |
| 100 | 8.33 | 0.50 | 0.381 | 0.110    | ( 0.149) | 0.271 |
| 101 | 8.42 | 0.50 | 0.381 | 0.109    | ( 0.149) | 0.271 |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|     |       |      |       |       |          |       |
|-----|-------|------|-------|-------|----------|-------|
| 102 | 8.50  | 0.50 | 0.381 | 0.109 | ( 0.149) | 0.272 |
| 103 | 8.58  | 0.53 | 0.406 | 0.108 | ( 0.158) | 0.298 |
| 104 | 8.67  | 0.53 | 0.406 | 0.108 | ( 0.158) | 0.298 |
| 105 | 8.75  | 0.53 | 0.406 | 0.107 | ( 0.158) | 0.299 |
| 106 | 8.83  | 0.57 | 0.432 | 0.107 | ( 0.168) | 0.325 |
| 107 | 8.92  | 0.57 | 0.432 | 0.106 | ( 0.168) | 0.325 |
| 108 | 9.00  | 0.57 | 0.432 | 0.106 | ( 0.168) | 0.326 |
| 109 | 9.08  | 0.63 | 0.483 | 0.105 | ( 0.188) | 0.377 |
| 110 | 9.17  | 0.63 | 0.483 | 0.105 | ( 0.188) | 0.378 |
| 111 | 9.25  | 0.63 | 0.483 | 0.104 | ( 0.188) | 0.378 |
| 112 | 9.33  | 0.67 | 0.508 | 0.104 | ( 0.198) | 0.404 |
| 113 | 9.42  | 0.67 | 0.508 | 0.103 | ( 0.198) | 0.405 |
| 114 | 9.50  | 0.67 | 0.508 | 0.103 | ( 0.198) | 0.405 |
| 115 | 9.58  | 0.70 | 0.533 | 0.102 | ( 0.208) | 0.431 |
| 116 | 9.67  | 0.70 | 0.533 | 0.102 | ( 0.208) | 0.431 |
| 117 | 9.75  | 0.70 | 0.533 | 0.101 | ( 0.208) | 0.432 |
| 118 | 9.83  | 0.73 | 0.559 | 0.101 | ( 0.218) | 0.458 |
| 119 | 9.92  | 0.73 | 0.559 | 0.100 | ( 0.218) | 0.458 |
| 120 | 10.00 | 0.73 | 0.559 | 0.100 | ( 0.218) | 0.459 |
| 121 | 10.08 | 0.50 | 0.381 | 0.100 | ( 0.149) | 0.281 |
| 122 | 10.17 | 0.50 | 0.381 | 0.099 | ( 0.149) | 0.282 |
| 123 | 10.25 | 0.50 | 0.381 | 0.099 | ( 0.149) | 0.282 |
| 124 | 10.33 | 0.50 | 0.381 | 0.098 | ( 0.149) | 0.283 |
| 125 | 10.42 | 0.50 | 0.381 | 0.098 | ( 0.149) | 0.283 |
| 126 | 10.50 | 0.50 | 0.381 | 0.097 | ( 0.149) | 0.284 |
| 127 | 10.58 | 0.67 | 0.508 | 0.097 | ( 0.198) | 0.411 |
| 128 | 10.67 | 0.67 | 0.508 | 0.096 | ( 0.198) | 0.412 |
| 129 | 10.75 | 0.67 | 0.508 | 0.096 | ( 0.198) | 0.412 |
| 130 | 10.83 | 0.67 | 0.508 | 0.095 | ( 0.198) | 0.413 |
| 131 | 10.92 | 0.67 | 0.508 | 0.095 | ( 0.198) | 0.413 |
| 132 | 11.00 | 0.67 | 0.508 | 0.094 | ( 0.198) | 0.414 |
| 133 | 11.08 | 0.63 | 0.483 | 0.094 | ( 0.188) | 0.389 |
| 134 | 11.17 | 0.63 | 0.483 | 0.093 | ( 0.188) | 0.389 |
| 135 | 11.25 | 0.63 | 0.483 | 0.093 | ( 0.188) | 0.390 |
| 136 | 11.33 | 0.63 | 0.483 | 0.092 | ( 0.188) | 0.390 |
| 137 | 11.42 | 0.63 | 0.483 | 0.092 | ( 0.188) | 0.391 |
| 138 | 11.50 | 0.63 | 0.483 | 0.092 | ( 0.188) | 0.391 |
| 139 | 11.58 | 0.57 | 0.432 | 0.091 | ( 0.168) | 0.341 |
| 140 | 11.67 | 0.57 | 0.432 | 0.091 | ( 0.168) | 0.341 |
| 141 | 11.75 | 0.57 | 0.432 | 0.090 | ( 0.168) | 0.342 |
| 142 | 11.83 | 0.60 | 0.457 | 0.090 | ( 0.178) | 0.367 |
| 143 | 11.92 | 0.60 | 0.457 | 0.089 | ( 0.178) | 0.368 |
| 144 | 12.00 | 0.60 | 0.457 | 0.089 | ( 0.178) | 0.368 |
| 145 | 12.08 | 0.83 | 0.635 | 0.088 | ( 0.248) | 0.547 |
| 146 | 12.17 | 0.83 | 0.635 | 0.088 | ( 0.248) | 0.547 |
| 147 | 12.25 | 0.83 | 0.635 | 0.088 | ( 0.248) | 0.547 |
| 148 | 12.33 | 0.87 | 0.660 | 0.087 | ( 0.258) | 0.573 |
| 149 | 12.42 | 0.87 | 0.660 | 0.087 | ( 0.258) | 0.574 |
| 150 | 12.50 | 0.87 | 0.660 | 0.086 | ( 0.258) | 0.574 |
| 151 | 12.58 | 0.93 | 0.711 | 0.086 | ( 0.277) | 0.625 |
| 152 | 12.67 | 0.93 | 0.711 | 0.085 | ( 0.277) | 0.626 |
| 153 | 12.75 | 0.93 | 0.711 | 0.085 | ( 0.277) | 0.626 |
| 154 | 12.83 | 0.97 | 0.737 | 0.084 | ( 0.287) | 0.652 |
| 155 | 12.92 | 0.97 | 0.737 | 0.084 | ( 0.287) | 0.652 |
| 156 | 13.00 | 0.97 | 0.737 | 0.084 | ( 0.287) | 0.653 |
| 157 | 13.08 | 1.13 | 0.864 | 0.083 | ( 0.337) | 0.780 |
| 158 | 13.17 | 1.13 | 0.864 | 0.083 | ( 0.337) | 0.781 |
| 159 | 13.25 | 1.13 | 0.864 | 0.082 | ( 0.337) | 0.781 |
| 160 | 13.33 | 1.13 | 0.864 | 0.082 | ( 0.337) | 0.782 |
| 161 | 13.42 | 1.13 | 0.864 | 0.082 | ( 0.337) | 0.782 |
| 162 | 13.50 | 1.13 | 0.864 | 0.081 | ( 0.337) | 0.782 |
| 163 | 13.58 | 0.77 | 0.584 | 0.081 | ( 0.228) | 0.503 |
| 164 | 13.67 | 0.77 | 0.584 | 0.080 | ( 0.228) | 0.504 |
| 165 | 13.75 | 0.77 | 0.584 | 0.080 | ( 0.228) | 0.504 |
| 166 | 13.83 | 0.77 | 0.584 | 0.079 | ( 0.228) | 0.505 |
| 167 | 13.92 | 0.77 | 0.584 | 0.079 | ( 0.228) | 0.505 |
| 168 | 14.00 | 0.77 | 0.584 | 0.079 | ( 0.228) | 0.505 |
| 169 | 14.08 | 0.90 | 0.686 | 0.078 | ( 0.267) | 0.607 |
| 170 | 14.17 | 0.90 | 0.686 | 0.078 | ( 0.267) | 0.608 |
| 171 | 14.25 | 0.90 | 0.686 | 0.077 | ( 0.267) | 0.608 |
| 172 | 14.33 | 0.87 | 0.660 | 0.077 | ( 0.258) | 0.583 |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|     |       |      |       |          |          |       |
|-----|-------|------|-------|----------|----------|-------|
| 173 | 14.42 | 0.87 | 0.660 | 0.077    | ( 0.258) | 0.584 |
| 174 | 14.50 | 0.87 | 0.660 | 0.076    | ( 0.258) | 0.584 |
| 175 | 14.58 | 0.87 | 0.660 | 0.076    | ( 0.258) | 0.584 |
| 176 | 14.67 | 0.87 | 0.660 | 0.075    | ( 0.258) | 0.585 |
| 177 | 14.75 | 0.87 | 0.660 | 0.075    | ( 0.258) | 0.585 |
| 178 | 14.83 | 0.83 | 0.635 | 0.075    | ( 0.248) | 0.560 |
| 179 | 14.92 | 0.83 | 0.635 | 0.074    | ( 0.248) | 0.561 |
| 180 | 15.00 | 0.83 | 0.635 | 0.074    | ( 0.248) | 0.561 |
| 181 | 15.08 | 0.80 | 0.610 | 0.074    | ( 0.238) | 0.536 |
| 182 | 15.17 | 0.80 | 0.610 | 0.073    | ( 0.238) | 0.536 |
| 183 | 15.25 | 0.80 | 0.610 | 0.073    | ( 0.238) | 0.537 |
| 184 | 15.33 | 0.77 | 0.584 | 0.072    | ( 0.228) | 0.512 |
| 185 | 15.42 | 0.77 | 0.584 | 0.072    | ( 0.228) | 0.512 |
| 186 | 15.50 | 0.77 | 0.584 | 0.072    | ( 0.228) | 0.512 |
| 187 | 15.58 | 0.63 | 0.483 | 0.071    | ( 0.188) | 0.411 |
| 188 | 15.67 | 0.63 | 0.483 | 0.071    | ( 0.188) | 0.412 |
| 189 | 15.75 | 0.63 | 0.483 | 0.071    | ( 0.188) | 0.412 |
| 190 | 15.83 | 0.63 | 0.483 | 0.070    | ( 0.188) | 0.412 |
| 191 | 15.92 | 0.63 | 0.483 | 0.070    | ( 0.188) | 0.413 |
| 192 | 16.00 | 0.63 | 0.483 | 0.070    | ( 0.188) | 0.413 |
| 193 | 16.08 | 0.13 | 0.102 | ( 0.069) | 0.040    | 0.062 |
| 194 | 16.17 | 0.13 | 0.102 | ( 0.069) | 0.040    | 0.062 |
| 195 | 16.25 | 0.13 | 0.102 | ( 0.068) | 0.040    | 0.062 |
| 196 | 16.33 | 0.13 | 0.102 | ( 0.068) | 0.040    | 0.062 |
| 197 | 16.42 | 0.13 | 0.102 | ( 0.068) | 0.040    | 0.062 |
| 198 | 16.50 | 0.13 | 0.102 | ( 0.067) | 0.040    | 0.062 |
| 199 | 16.58 | 0.10 | 0.076 | ( 0.067) | 0.030    | 0.046 |
| 200 | 16.67 | 0.10 | 0.076 | ( 0.067) | 0.030    | 0.046 |
| 201 | 16.75 | 0.10 | 0.076 | ( 0.066) | 0.030    | 0.046 |
| 202 | 16.83 | 0.10 | 0.076 | ( 0.066) | 0.030    | 0.046 |
| 203 | 16.92 | 0.10 | 0.076 | ( 0.066) | 0.030    | 0.046 |
| 204 | 17.00 | 0.10 | 0.076 | ( 0.065) | 0.030    | 0.046 |
| 205 | 17.08 | 0.17 | 0.127 | ( 0.065) | 0.050    | 0.077 |
| 206 | 17.17 | 0.17 | 0.127 | ( 0.065) | 0.050    | 0.077 |
| 207 | 17.25 | 0.17 | 0.127 | ( 0.064) | 0.050    | 0.077 |
| 208 | 17.33 | 0.17 | 0.127 | ( 0.064) | 0.050    | 0.077 |
| 209 | 17.42 | 0.17 | 0.127 | ( 0.064) | 0.050    | 0.077 |
| 210 | 17.50 | 0.17 | 0.127 | ( 0.063) | 0.050    | 0.077 |
| 211 | 17.58 | 0.17 | 0.127 | ( 0.063) | 0.050    | 0.077 |
| 212 | 17.67 | 0.17 | 0.127 | ( 0.063) | 0.050    | 0.077 |
| 213 | 17.75 | 0.17 | 0.127 | ( 0.063) | 0.050    | 0.077 |
| 214 | 17.83 | 0.13 | 0.102 | ( 0.062) | 0.040    | 0.062 |
| 215 | 17.92 | 0.13 | 0.102 | ( 0.062) | 0.040    | 0.062 |
| 216 | 18.00 | 0.13 | 0.102 | ( 0.062) | 0.040    | 0.062 |
| 217 | 18.08 | 0.13 | 0.102 | ( 0.061) | 0.040    | 0.062 |
| 218 | 18.17 | 0.13 | 0.102 | ( 0.061) | 0.040    | 0.062 |
| 219 | 18.25 | 0.13 | 0.102 | ( 0.061) | 0.040    | 0.062 |
| 220 | 18.33 | 0.13 | 0.102 | ( 0.060) | 0.040    | 0.062 |
| 221 | 18.42 | 0.13 | 0.102 | ( 0.060) | 0.040    | 0.062 |
| 222 | 18.50 | 0.13 | 0.102 | ( 0.060) | 0.040    | 0.062 |
| 223 | 18.58 | 0.10 | 0.076 | ( 0.060) | 0.030    | 0.046 |
| 224 | 18.67 | 0.10 | 0.076 | ( 0.059) | 0.030    | 0.046 |
| 225 | 18.75 | 0.10 | 0.076 | ( 0.059) | 0.030    | 0.046 |
| 226 | 18.83 | 0.07 | 0.051 | ( 0.059) | 0.020    | 0.031 |
| 227 | 18.92 | 0.07 | 0.051 | ( 0.058) | 0.020    | 0.031 |
| 228 | 19.00 | 0.07 | 0.051 | ( 0.058) | 0.020    | 0.031 |
| 229 | 19.08 | 0.10 | 0.076 | ( 0.058) | 0.030    | 0.046 |
| 230 | 19.17 | 0.10 | 0.076 | ( 0.058) | 0.030    | 0.046 |
| 231 | 19.25 | 0.10 | 0.076 | ( 0.057) | 0.030    | 0.046 |
| 232 | 19.33 | 0.13 | 0.102 | ( 0.057) | 0.040    | 0.062 |
| 233 | 19.42 | 0.13 | 0.102 | ( 0.057) | 0.040    | 0.062 |
| 234 | 19.50 | 0.13 | 0.102 | ( 0.056) | 0.040    | 0.062 |
| 235 | 19.58 | 0.10 | 0.076 | ( 0.056) | 0.030    | 0.046 |
| 236 | 19.67 | 0.10 | 0.076 | ( 0.056) | 0.030    | 0.046 |
| 237 | 19.75 | 0.10 | 0.076 | ( 0.056) | 0.030    | 0.046 |
| 238 | 19.83 | 0.07 | 0.051 | ( 0.055) | 0.020    | 0.031 |
| 239 | 19.92 | 0.07 | 0.051 | ( 0.055) | 0.020    | 0.031 |
| 240 | 20.00 | 0.07 | 0.051 | ( 0.055) | 0.020    | 0.031 |
| 241 | 20.08 | 0.10 | 0.076 | ( 0.055) | 0.030    | 0.046 |
| 242 | 20.17 | 0.10 | 0.076 | ( 0.055) | 0.030    | 0.046 |
| 243 | 20.25 | 0.10 | 0.076 | ( 0.054) | 0.030    | 0.046 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

|     |       |      |       |          |       |       |
|-----|-------|------|-------|----------|-------|-------|
| 244 | 20.33 | 0.10 | 0.076 | ( 0.054) | 0.030 | 0.046 |
| 245 | 20.42 | 0.10 | 0.076 | ( 0.054) | 0.030 | 0.046 |
| 246 | 20.50 | 0.10 | 0.076 | ( 0.054) | 0.030 | 0.046 |
| 247 | 20.58 | 0.10 | 0.076 | ( 0.053) | 0.030 | 0.046 |
| 248 | 20.67 | 0.10 | 0.076 | ( 0.053) | 0.030 | 0.046 |
| 249 | 20.75 | 0.10 | 0.076 | ( 0.053) | 0.030 | 0.046 |
| 250 | 20.83 | 0.07 | 0.051 | ( 0.053) | 0.020 | 0.031 |
| 251 | 20.92 | 0.07 | 0.051 | ( 0.052) | 0.020 | 0.031 |
| 252 | 21.00 | 0.07 | 0.051 | ( 0.052) | 0.020 | 0.031 |
| 253 | 21.08 | 0.10 | 0.076 | ( 0.052) | 0.030 | 0.046 |
| 254 | 21.17 | 0.10 | 0.076 | ( 0.052) | 0.030 | 0.046 |
| 255 | 21.25 | 0.10 | 0.076 | ( 0.052) | 0.030 | 0.046 |
| 256 | 21.33 | 0.07 | 0.051 | ( 0.051) | 0.020 | 0.031 |
| 257 | 21.42 | 0.07 | 0.051 | ( 0.051) | 0.020 | 0.031 |
| 258 | 21.50 | 0.07 | 0.051 | ( 0.051) | 0.020 | 0.031 |
| 259 | 21.58 | 0.10 | 0.076 | ( 0.051) | 0.030 | 0.046 |
| 260 | 21.67 | 0.10 | 0.076 | ( 0.051) | 0.030 | 0.046 |
| 261 | 21.75 | 0.10 | 0.076 | ( 0.051) | 0.030 | 0.046 |
| 262 | 21.83 | 0.07 | 0.051 | ( 0.050) | 0.020 | 0.031 |
| 263 | 21.92 | 0.07 | 0.051 | ( 0.050) | 0.020 | 0.031 |
| 264 | 22.00 | 0.07 | 0.051 | ( 0.050) | 0.020 | 0.031 |
| 265 | 22.08 | 0.10 | 0.076 | ( 0.050) | 0.030 | 0.046 |
| 266 | 22.17 | 0.10 | 0.076 | ( 0.050) | 0.030 | 0.046 |
| 267 | 22.25 | 0.10 | 0.076 | ( 0.050) | 0.030 | 0.046 |
| 268 | 22.33 | 0.07 | 0.051 | ( 0.049) | 0.020 | 0.031 |
| 269 | 22.42 | 0.07 | 0.051 | ( 0.049) | 0.020 | 0.031 |
| 270 | 22.50 | 0.07 | 0.051 | ( 0.049) | 0.020 | 0.031 |
| 271 | 22.58 | 0.07 | 0.051 | ( 0.049) | 0.020 | 0.031 |
| 272 | 22.67 | 0.07 | 0.051 | ( 0.049) | 0.020 | 0.031 |
| 273 | 22.75 | 0.07 | 0.051 | ( 0.049) | 0.020 | 0.031 |
| 274 | 22.83 | 0.07 | 0.051 | ( 0.049) | 0.020 | 0.031 |
| 275 | 22.92 | 0.07 | 0.051 | ( 0.048) | 0.020 | 0.031 |
| 276 | 23.00 | 0.07 | 0.051 | ( 0.048) | 0.020 | 0.031 |
| 277 | 23.08 | 0.07 | 0.051 | ( 0.048) | 0.020 | 0.031 |
| 278 | 23.17 | 0.07 | 0.051 | ( 0.048) | 0.020 | 0.031 |
| 279 | 23.25 | 0.07 | 0.051 | ( 0.048) | 0.020 | 0.031 |
| 280 | 23.33 | 0.07 | 0.051 | ( 0.048) | 0.020 | 0.031 |
| 281 | 23.42 | 0.07 | 0.051 | ( 0.048) | 0.020 | 0.031 |
| 282 | 23.50 | 0.07 | 0.051 | ( 0.048) | 0.020 | 0.031 |
| 283 | 23.58 | 0.07 | 0.051 | ( 0.048) | 0.020 | 0.031 |
| 284 | 23.67 | 0.07 | 0.051 | ( 0.048) | 0.020 | 0.031 |
| 285 | 23.75 | 0.07 | 0.051 | ( 0.047) | 0.020 | 0.031 |
| 286 | 23.83 | 0.07 | 0.051 | ( 0.047) | 0.020 | 0.031 |
| 287 | 23.92 | 0.07 | 0.051 | ( 0.047) | 0.020 | 0.031 |
| 288 | 24.00 | 0.07 | 0.051 | ( 0.047) | 0.020 | 0.031 |

(Loss Rate Not Used)

Sum = 100.0 Sum = 58.7

Flood volume = Effective rainfall 4.90(In)  
times area 40.1(Ac.)/[ (In)/(Ft.) ] = 16.4(Ac.Ft)

Total soil loss = 1.45(In)  
Total soil loss = 4.860(Ac.Ft)  
Total rainfall = 6.35(In)  
Flood volume = 712561.6 Cubic Feet  
Total soil loss = 211691.1 Cubic Feet

-----  
Peak flow rate of this hydrograph = 31.618(CFS)  
-----

+++++

24 - H O U R S T O R M  
R u n o f f H y d r o g r a p h

-----  
Hydrograph in 5 Minute intervals ((CFS))  
-----

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0  | 10.0 | 20.0 | 30.0 | 40.0 |
|-----------|--------------|--------|----|------|------|------|------|
| 0+ 5      | 0.0018       | 0.26   | Q  |      |      |      |      |
| 0+10      | 0.0085       | 0.97   | Q  |      |      |      |      |
| 0+15      | 0.0165       | 1.16   | VQ |      |      |      |      |
| 0+20      | 0.0259       | 1.36   | VQ |      |      |      |      |
| 0+25      | 0.0378       | 1.73   | VQ |      |      |      |      |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|      |        |      |      |  |  |  |  |
|------|--------|------|------|--|--|--|--|
| 0+30 | 0.0504 | 1.83 | VQ   |  |  |  |  |
| 0+35 | 0.0632 | 1.87 | VQ   |  |  |  |  |
| 0+40 | 0.0762 | 1.87 | VQ   |  |  |  |  |
| 0+45 | 0.0891 | 1.88 | VQ   |  |  |  |  |
| 0+50 | 0.1030 | 2.01 | V Q  |  |  |  |  |
| 0+55 | 0.1192 | 2.36 | V Q  |  |  |  |  |
| 1+ 0 | 0.1362 | 2.46 | V Q  |  |  |  |  |
| 1+ 5 | 0.1524 | 2.36 | V Q  |  |  |  |  |
| 1+10 | 0.1663 | 2.02 | V Q  |  |  |  |  |
| 1+15 | 0.1796 | 1.92 | VQ   |  |  |  |  |
| 1+20 | 0.1926 | 1.89 | VQ   |  |  |  |  |
| 1+25 | 0.2056 | 1.88 | VQ   |  |  |  |  |
| 1+30 | 0.2185 | 1.88 | VQ   |  |  |  |  |
| 1+35 | 0.2315 | 1.88 | VQ   |  |  |  |  |
| 1+40 | 0.2444 | 1.88 | VQ   |  |  |  |  |
| 1+45 | 0.2574 | 1.88 | VQ   |  |  |  |  |
| 1+50 | 0.2712 | 2.01 | V Q  |  |  |  |  |
| 1+55 | 0.2875 | 2.36 | V Q  |  |  |  |  |
| 2+ 0 | 0.3044 | 2.46 | V Q  |  |  |  |  |
| 2+ 5 | 0.3216 | 2.49 | V Q  |  |  |  |  |
| 2+10 | 0.3388 | 2.50 | V Q  |  |  |  |  |
| 2+15 | 0.3561 | 2.51 | V Q  |  |  |  |  |
| 2+20 | 0.3733 | 2.51 | V Q  |  |  |  |  |
| 2+25 | 0.3906 | 2.51 | V Q  |  |  |  |  |
| 2+30 | 0.4079 | 2.51 | V Q  |  |  |  |  |
| 2+35 | 0.4260 | 2.64 | IVQ  |  |  |  |  |
| 2+40 | 0.4466 | 2.99 | IVQ  |  |  |  |  |
| 2+45 | 0.4679 | 3.09 | IV Q |  |  |  |  |
| 2+50 | 0.4894 | 3.12 | IV Q |  |  |  |  |
| 2+55 | 0.5109 | 3.13 | IV Q |  |  |  |  |
| 3+ 0 | 0.5325 | 3.13 | IV Q |  |  |  |  |
| 3+ 5 | 0.5540 | 3.13 | IV Q |  |  |  |  |
| 3+10 | 0.5756 | 3.13 | IV Q |  |  |  |  |
| 3+15 | 0.5972 | 3.13 | IV Q |  |  |  |  |
| 3+20 | 0.6188 | 3.13 | IV Q |  |  |  |  |
| 3+25 | 0.6403 | 3.13 | IV Q |  |  |  |  |
| 3+30 | 0.6619 | 3.13 | IV Q |  |  |  |  |
| 3+35 | 0.6835 | 3.13 | IV Q |  |  |  |  |
| 3+40 | 0.7050 | 3.13 | IV Q |  |  |  |  |
| 3+45 | 0.7266 | 3.13 | IV Q |  |  |  |  |
| 3+50 | 0.7491 | 3.26 | IV Q |  |  |  |  |
| 3+55 | 0.7740 | 3.62 | IV Q |  |  |  |  |
| 4+ 0 | 0.7996 | 3.71 | IV Q |  |  |  |  |
| 4+ 5 | 0.8254 | 3.75 | VQ   |  |  |  |  |
| 4+10 | 0.8512 | 3.75 | VQ   |  |  |  |  |
| 4+15 | 0.8771 | 3.76 | VQ   |  |  |  |  |
| 4+20 | 0.9039 | 3.89 | VQ   |  |  |  |  |
| 4+25 | 0.9331 | 4.24 | V Q  |  |  |  |  |
| 4+30 | 0.9630 | 4.34 | V Q  |  |  |  |  |
| 4+35 | 0.9931 | 4.37 | V Q  |  |  |  |  |
| 4+40 | 1.0233 | 4.38 | V Q  |  |  |  |  |
| 4+45 | 1.0535 | 4.39 | V Q  |  |  |  |  |
| 4+50 | 1.0846 | 4.52 | V Q  |  |  |  |  |
| 4+55 | 1.1182 | 4.87 | V Q  |  |  |  |  |
| 5+ 0 | 1.1524 | 4.97 | V Q  |  |  |  |  |
| 5+ 5 | 1.1850 | 4.73 | V Q  |  |  |  |  |
| 5+10 | 1.2128 | 4.04 | V Q  |  |  |  |  |
| 5+15 | 1.2393 | 3.85 | Q    |  |  |  |  |
| 5+20 | 1.2663 | 3.92 | Q    |  |  |  |  |
| 5+25 | 1.2955 | 4.25 | VQ   |  |  |  |  |
| 5+30 | 1.3254 | 4.34 | VQ   |  |  |  |  |
| 5+35 | 1.3565 | 4.50 | VQ   |  |  |  |  |
| 5+40 | 1.3900 | 4.86 | VQ   |  |  |  |  |
| 5+45 | 1.4242 | 4.97 | VQ   |  |  |  |  |
| 5+50 | 1.4586 | 5.00 | VQ   |  |  |  |  |
| 5+55 | 1.4931 | 5.01 | V Q  |  |  |  |  |
| 6+ 0 | 1.5276 | 5.01 | V Q  |  |  |  |  |
| 6+ 5 | 1.5630 | 5.14 | V Q  |  |  |  |  |
| 6+10 | 1.6009 | 5.50 | V Q  |  |  |  |  |
| 6+15 | 1.6394 | 5.59 | VQ   |  |  |  |  |
| 6+20 | 1.6781 | 5.63 | VQ   |  |  |  |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|       |        |       |  |       |  |  |  |  |  |
|-------|--------|-------|--|-------|--|--|--|--|--|
| 6+25  | 1.7169 | 5.63  |  | VQ    |  |  |  |  |  |
| 6+30  | 1.7557 | 5.64  |  | VQ    |  |  |  |  |  |
| 6+35  | 1.7955 | 5.77  |  | VQ    |  |  |  |  |  |
| 6+40  | 1.8376 | 6.12  |  | V Q   |  |  |  |  |  |
| 6+45  | 1.8805 | 6.22  |  | V Q   |  |  |  |  |  |
| 6+50  | 1.9235 | 6.25  |  | V Q   |  |  |  |  |  |
| 6+55  | 1.9666 | 6.26  |  | V Q   |  |  |  |  |  |
| 7+ 0  | 2.0098 | 6.26  |  | V Q   |  |  |  |  |  |
| 7+ 5  | 2.0529 | 6.26  |  | VQ    |  |  |  |  |  |
| 7+10  | 2.0961 | 6.26  |  | VQ    |  |  |  |  |  |
| 7+15  | 2.1392 | 6.26  |  | VQ    |  |  |  |  |  |
| 7+20  | 2.1833 | 6.40  |  | VQ    |  |  |  |  |  |
| 7+25  | 2.2297 | 6.75  |  | VQ    |  |  |  |  |  |
| 7+30  | 2.2769 | 6.85  |  | VQ    |  |  |  |  |  |
| 7+35  | 2.3254 | 7.05  |  | V Q   |  |  |  |  |  |
| 7+40  | 2.3771 | 7.50  |  | V Q   |  |  |  |  |  |
| 7+45  | 2.4298 | 7.65  |  | V Q   |  |  |  |  |  |
| 7+50  | 2.4844 | 7.93  |  | VQ    |  |  |  |  |  |
| 7+55  | 2.5432 | 8.53  |  | V Q   |  |  |  |  |  |
| 8+ 0  | 2.6032 | 8.72  |  | V Q   |  |  |  |  |  |
| 8+ 5  | 2.6668 | 9.23  |  | V Q   |  |  |  |  |  |
| 8+10  | 2.7385 | 10.42 |  | V Q   |  |  |  |  |  |
| 8+15  | 2.8127 | 10.77 |  | V Q   |  |  |  |  |  |
| 8+20  | 2.8877 | 10.89 |  | V Q   |  |  |  |  |  |
| 8+25  | 2.9630 | 10.94 |  | V Q   |  |  |  |  |  |
| 8+30  | 3.0386 | 10.98 |  | V Q   |  |  |  |  |  |
| 8+35  | 3.1158 | 11.21 |  | V  Q  |  |  |  |  |  |
| 8+40  | 3.1972 | 11.81 |  | V  Q  |  |  |  |  |  |
| 8+45  | 3.2798 | 11.99 |  | V  Q  |  |  |  |  |  |
| 8+50  | 3.3643 | 12.28 |  | V   Q |  |  |  |  |  |
| 8+55  | 3.4531 | 12.89 |  | V   Q |  |  |  |  |  |
| 9+ 0  | 3.5432 | 13.08 |  | V   Q |  |  |  |  |  |
| 9+ 5  | 3.6368 | 13.59 |  | V   Q |  |  |  |  |  |
| 9+10  | 3.7385 | 14.77 |  | V   Q |  |  |  |  |  |
| 9+15  | 3.8426 | 15.12 |  | V   Q |  |  |  |  |  |
| 9+20  | 3.9491 | 15.46 |  | V   Q |  |  |  |  |  |
| 9+25  | 4.0599 | 16.09 |  | V   Q |  |  |  |  |  |
| 9+30  | 4.1720 | 16.28 |  | V Q   |  |  |  |  |  |
| 9+35  | 4.2862 | 16.57 |  | V Q   |  |  |  |  |  |
| 9+40  | 4.4045 | 17.18 |  | V Q   |  |  |  |  |  |
| 9+45  | 4.5241 | 17.37 |  | V Q   |  |  |  |  |  |
| 9+50  | 4.6457 | 17.66 |  | V Q   |  |  |  |  |  |
| 9+55  | 4.7715 | 18.27 |  | V Q   |  |  |  |  |  |
| 10+ 0 | 4.8986 | 18.45 |  | V Q   |  |  |  |  |  |
| 10+ 5 | 5.0157 | 17.01 |  | V Q   |  |  |  |  |  |
| 10+10 | 5.1053 | 13.01 |  | VQ    |  |  |  |  |  |
| 10+15 | 5.1873 | 11.91 |  | QV    |  |  |  |  |  |
| 10+20 | 5.2670 | 11.56 |  | QV    |  |  |  |  |  |
| 10+25 | 5.3461 | 11.49 |  | Q V   |  |  |  |  |  |
| 10+30 | 5.4250 | 11.46 |  | Q V   |  |  |  |  |  |
| 10+35 | 5.5115 | 12.56 |  | QV    |  |  |  |  |  |
| 10+40 | 5.6180 | 15.46 |  | V Q   |  |  |  |  |  |
| 10+45 | 5.7301 | 16.28 |  | V Q   |  |  |  |  |  |
| 10+50 | 5.8442 | 16.56 |  | V Q   |  |  |  |  |  |
| 10+55 | 5.9588 | 16.65 |  | V Q   |  |  |  |  |  |
| 11+ 0 | 6.0739 | 16.71 |  | V Q   |  |  |  |  |  |
| 11+ 5 | 6.1876 | 16.51 |  | VQ    |  |  |  |  |  |
| 11+10 | 6.2974 | 15.95 |  | Q     |  |  |  |  |  |
| 11+15 | 6.4063 | 15.81 |  | Q     |  |  |  |  |  |
| 11+20 | 6.5149 | 15.77 |  | Q     |  |  |  |  |  |
| 11+25 | 6.6236 | 15.78 |  | QV    |  |  |  |  |  |
| 11+30 | 6.7323 | 15.79 |  | QV    |  |  |  |  |  |
| 11+35 | 6.8382 | 15.37 |  | QV    |  |  |  |  |  |
| 11+40 | 6.9363 | 14.24 |  | Q V   |  |  |  |  |  |
| 11+45 | 7.0323 | 13.94 |  | Q V   |  |  |  |  |  |
| 11+50 | 7.1292 | 14.07 |  | Q V   |  |  |  |  |  |
| 11+55 | 7.2300 | 14.64 |  | Q V   |  |  |  |  |  |
| 12+ 0 | 7.3319 | 14.80 |  | Q V   |  |  |  |  |  |
| 12+ 5 | 7.4448 | 16.39 |  | Q V   |  |  |  |  |  |
| 12+10 | 7.5857 | 20.45 |  | V Q   |  |  |  |  |  |
| 12+15 | 7.7344 | 21.60 |  | V  Q  |  |  |  |  |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|       |         |       |  |   |      |  |  |
|-------|---------|-------|--|---|------|--|--|
| 12+20 | 7.8874  | 22.20 |  |   | V  Q |  |  |
| 12+25 | 8.0450  | 22.89 |  |   | V  Q |  |  |
| 12+30 | 8.2042  | 23.12 |  |   | V Q  |  |  |
| 12+35 | 8.3669  | 23.63 |  |   | V Q  |  |  |
| 12+40 | 8.5378  | 24.81 |  |   | V Q  |  |  |
| 12+45 | 8.7111  | 25.16 |  |   | V Q  |  |  |
| 12+50 | 8.8866  | 25.49 |  |   | V Q  |  |  |
| 12+55 | 9.0665  | 26.11 |  |   | V Q  |  |  |
| 13+ 0 | 9.2477  | 26.31 |  |   | V Q  |  |  |
| 13+ 5 | 9.4368  | 27.46 |  |   | V Q  |  |  |
| 13+10 | 9.6460  | 30.37 |  |   | V Q  |  |  |
| 13+15 | 9.8609  | 31.20 |  |   | V Q  |  |  |
| 13+20 | 10.0777 | 31.48 |  |   | V Q  |  |  |
| 13+25 | 10.2950 | 31.56 |  |   | V Q  |  |  |
| 13+30 | 10.5128 | 31.62 |  |   | V Q  |  |  |
| 13+35 | 10.7142 | 29.25 |  |   | V Q  |  |  |
| 13+40 | 10.8721 | 22.93 |  |   | Q V  |  |  |
| 13+45 | 11.0180 | 21.18 |  |   | Q V  |  |  |
| 13+50 | 11.1600 | 20.62 |  |   | Q V  |  |  |
| 13+55 | 11.3011 | 20.49 |  |   | Q V  |  |  |
| 14+ 0 | 11.4418 | 20.42 |  |   | Q V  |  |  |
| 14+ 5 | 11.5885 | 21.31 |  |   | Q V  |  |  |
| 14+10 | 11.7512 | 23.63 |  |   | Q V  |  |  |
| 14+15 | 11.9184 | 24.28 |  |   | Q V  |  |  |
| 14+20 | 12.0858 | 24.29 |  |   | Q V  |  |  |
| 14+25 | 12.2496 | 23.79 |  |   | Q V  |  |  |
| 14+30 | 12.4126 | 23.67 |  |   | Q V  |  |  |
| 14+35 | 12.5754 | 23.64 |  |   | Q V  |  |  |
| 14+40 | 12.7382 | 23.64 |  |   | Q V  |  |  |
| 14+45 | 12.9010 | 23.65 |  |   | Q V  |  |  |
| 14+50 | 13.0625 | 23.44 |  |   | Q V  |  |  |
| 14+55 | 13.2201 | 22.88 |  |   | Q V  |  |  |
| 15+ 0 | 13.3767 | 22.74 |  |   | Q V  |  |  |
| 15+ 5 | 13.5316 | 22.49 |  |   | Q V  |  |  |
| 15+10 | 13.6825 | 21.91 |  |   | Q V  |  |  |
| 15+15 | 13.8323 | 21.76 |  |   | Q V  |  |  |
| 15+20 | 13.9804 | 21.50 |  |   | Q V  |  |  |
| 15+25 | 14.1246 | 20.93 |  |   | Q V  |  |  |
| 15+30 | 14.2677 | 20.78 |  |   | Q V  |  |  |
| 15+35 | 14.4045 | 19.87 |  |   | Q V  |  |  |
| 15+40 | 14.5255 | 17.57 |  |   | Q V  |  |  |
| 15+45 | 14.6421 | 16.93 |  |   | Q V  |  |  |
| 15+50 | 14.7574 | 16.74 |  |   | Q V  |  |  |
| 15+55 | 14.8724 | 16.70 |  |   | Q V  |  |  |
| 16+ 0 | 14.9873 | 16.68 |  |   | Q V  |  |  |
| 16+ 5 | 15.0817 | 13.69 |  | Q | Q V  |  |  |
| 16+10 | 15.1212 | 5.74  |  | Q | Q V  |  |  |
| 16+15 | 15.1454 | 3.52  |  | Q | Q V  |  |  |
| 16+20 | 15.1647 | 2.79  |  | Q | Q V  |  |  |
| 16+25 | 15.1827 | 2.62  |  | Q | Q V  |  |  |
| 16+30 | 15.1999 | 2.51  |  | Q | Q V  |  |  |
| 16+35 | 15.2163 | 2.37  |  | Q | Q V  |  |  |
| 16+40 | 15.2302 | 2.02  |  | Q | Q V  |  |  |
| 16+45 | 15.2434 | 1.92  |  | Q | Q V  |  |  |
| 16+50 | 15.2565 | 1.89  |  | Q | Q V  |  |  |
| 16+55 | 15.2695 | 1.88  |  | Q | Q V  |  |  |
| 17+ 0 | 15.2824 | 1.88  |  | Q | Q V  |  |  |
| 17+ 5 | 15.2972 | 2.14  |  | Q | Q V  |  |  |
| 17+10 | 15.3168 | 2.85  |  | Q | Q V  |  |  |
| 17+15 | 15.3377 | 3.04  |  | Q | Q V  |  |  |
| 17+20 | 15.3591 | 3.11  |  | Q | Q V  |  |  |
| 17+25 | 15.3806 | 3.12  |  | Q | Q V  |  |  |
| 17+30 | 15.4022 | 3.13  |  | Q | Q V  |  |  |
| 17+35 | 15.4238 | 3.13  |  | Q | Q V  |  |  |
| 17+40 | 15.4453 | 3.13  |  | Q | Q V  |  |  |
| 17+45 | 15.4669 | 3.13  |  | Q | Q V  |  |  |
| 17+50 | 15.4876 | 3.00  |  | Q | Q V  |  |  |
| 17+55 | 15.5058 | 2.65  |  | Q | Q V  |  |  |
| 18+ 0 | 15.5234 | 2.55  |  | Q | Q V  |  |  |
| 18+ 5 | 15.5407 | 2.52  |  | Q | Q V  |  |  |
| 18+10 | 15.5580 | 2.51  |  | Q | Q V  |  |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|       |         |      |   |  |  |  |   |
|-------|---------|------|---|--|--|--|---|
| 18+15 | 15.5753 | 2.51 | Q |  |  |  | V |
| 18+20 | 15.5925 | 2.51 | Q |  |  |  | V |
| 18+25 | 15.6098 | 2.51 | Q |  |  |  | V |
| 18+30 | 15.6270 | 2.51 | Q |  |  |  | V |
| 18+35 | 15.6434 | 2.37 | Q |  |  |  | V |
| 18+40 | 15.6573 | 2.02 | Q |  |  |  | V |
| 18+45 | 15.6706 | 1.92 | Q |  |  |  | V |
| 18+50 | 15.6827 | 1.76 | Q |  |  |  | V |
| 18+55 | 15.6923 | 1.40 | Q |  |  |  | V |
| 19+ 0 | 15.7013 | 1.30 | Q |  |  |  | V |
| 19+ 5 | 15.7109 | 1.40 | Q |  |  |  | V |
| 19+10 | 15.7229 | 1.74 | Q |  |  |  | V |
| 19+15 | 15.7355 | 1.83 | Q |  |  |  | V |
| 19+20 | 15.7493 | 2.00 | Q |  |  |  | V |
| 19+25 | 15.7655 | 2.36 | Q |  |  |  | V |
| 19+30 | 15.7825 | 2.46 | Q |  |  |  | V |
| 19+35 | 15.7987 | 2.36 | Q |  |  |  | V |
| 19+40 | 15.8126 | 2.02 | Q |  |  |  | V |
| 19+45 | 15.8259 | 1.92 | Q |  |  |  | V |
| 19+50 | 15.8380 | 1.76 | Q |  |  |  | V |
| 19+55 | 15.8476 | 1.40 | Q |  |  |  | V |
| 20+ 0 | 15.8566 | 1.30 | Q |  |  |  | V |
| 20+ 5 | 15.8662 | 1.40 | Q |  |  |  | V |
| 20+10 | 15.8782 | 1.74 | Q |  |  |  | V |
| 20+15 | 15.8908 | 1.83 | Q |  |  |  | V |
| 20+20 | 15.9037 | 1.87 | Q |  |  |  | V |
| 20+25 | 15.9166 | 1.87 | Q |  |  |  | V |
| 20+30 | 15.9295 | 1.88 | Q |  |  |  | V |
| 20+35 | 15.9425 | 1.88 | Q |  |  |  | V |
| 20+40 | 15.9554 | 1.88 | Q |  |  |  | V |
| 20+45 | 15.9684 | 1.88 | Q |  |  |  | V |
| 20+50 | 15.9804 | 1.75 | Q |  |  |  | V |
| 20+55 | 15.9900 | 1.40 | Q |  |  |  | V |
| 21+ 0 | 15.9990 | 1.30 | Q |  |  |  | V |
| 21+ 5 | 16.0086 | 1.40 | Q |  |  |  | V |
| 21+10 | 16.0206 | 1.74 | Q |  |  |  | V |
| 21+15 | 16.0332 | 1.83 | Q |  |  |  | V |
| 21+20 | 16.0452 | 1.73 | Q |  |  |  | V |
| 21+25 | 16.0547 | 1.39 | Q |  |  |  | V |
| 21+30 | 16.0637 | 1.30 | Q |  |  |  | V |
| 21+35 | 16.0733 | 1.40 | Q |  |  |  | V |
| 21+40 | 16.0853 | 1.74 | Q |  |  |  | V |
| 21+45 | 16.0979 | 1.83 | Q |  |  |  | V |
| 21+50 | 16.1099 | 1.73 | Q |  |  |  | V |
| 21+55 | 16.1194 | 1.39 | Q |  |  |  | V |
| 22+ 0 | 16.1284 | 1.30 | Q |  |  |  | V |
| 22+ 5 | 16.1380 | 1.40 | Q |  |  |  | V |
| 22+10 | 16.1500 | 1.74 | Q |  |  |  | V |
| 22+15 | 16.1626 | 1.83 | Q |  |  |  | V |
| 22+20 | 16.1746 | 1.73 | Q |  |  |  | V |
| 22+25 | 16.1842 | 1.39 | Q |  |  |  | V |
| 22+30 | 16.1931 | 1.30 | Q |  |  |  | V |
| 22+35 | 16.2018 | 1.27 | Q |  |  |  | V |
| 22+40 | 16.2105 | 1.26 | Q |  |  |  | V |
| 22+45 | 16.2191 | 1.25 | Q |  |  |  | V |
| 22+50 | 16.2277 | 1.25 | Q |  |  |  | V |
| 22+55 | 16.2364 | 1.25 | Q |  |  |  | V |
| 23+ 0 | 16.2450 | 1.25 | Q |  |  |  | V |
| 23+ 5 | 16.2536 | 1.25 | Q |  |  |  | V |
| 23+10 | 16.2622 | 1.25 | Q |  |  |  | V |
| 23+15 | 16.2709 | 1.25 | Q |  |  |  | V |
| 23+20 | 16.2795 | 1.25 | Q |  |  |  | V |
| 23+25 | 16.2881 | 1.25 | Q |  |  |  | V |
| 23+30 | 16.2968 | 1.25 | Q |  |  |  | V |
| 23+35 | 16.3054 | 1.25 | Q |  |  |  | V |
| 23+40 | 16.3140 | 1.25 | Q |  |  |  | V |
| 23+45 | 16.3226 | 1.25 | Q |  |  |  | V |
| 23+50 | 16.3313 | 1.25 | Q |  |  |  | V |
| 23+55 | 16.3399 | 1.25 | Q |  |  |  | V |
| 24+ 0 | 16.3485 | 1.25 | Q |  |  |  | V |
| 24+ 5 | 16.3553 | 0.99 | Q |  |  |  | V |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|       |         |      |   |  |  |  |   |
|-------|---------|------|---|--|--|--|---|
| 24+10 | 16.3573 | 0.29 | Q |  |  |  | V |
| 24+15 | 16.3579 | 0.09 | Q |  |  |  | V |
| 24+20 | 16.3581 | 0.03 | Q |  |  |  | V |
| 24+25 | 16.3582 | 0.01 | Q |  |  |  | V |

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Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT B – Inflow Hydrographs, Proposed Condition

| <b>Soil Low Loss Rate Worksheet</b>         |              |                        |                            |                                   |                                      |                                 |
|---------------------------------------------|--------------|------------------------|----------------------------|-----------------------------------|--------------------------------------|---------------------------------|
| <b>Drainage Area A (proposed) - 51.4 Ac</b> |              |                        |                            |                                   |                                      |                                 |
| [1]                                         | [2]          | [3]                    | [4]                        | [5]                               | [6]                                  | [7]                             |
| Subarea                                     | Area in (Ac) | Land Use (Plate D-5.6) | % Impervious (Plate D-5.6) | Soil Low Loss Rate 0.9-(0.8)* [4] | Decimal portion of Area [2] / SUM[2] | Average Low Loss Rate [5] * [6] |
|                                             | 3.5          | Basin                  | 0                          | 0.90                              | 0.07                                 | 0.06                            |
|                                             |              | Res 1 Ac               | 20                         | 0.74                              | 0.00                                 | 0.00                            |
|                                             |              | Res 1/2 Ac             | 40                         | 0.58                              | 0.00                                 | 0.00                            |
|                                             |              | Res 1/4 Ac             | 50                         | 0.50                              | 0.00                                 | 0.00                            |
|                                             | 29.5         | Res < 1/4 Ac           | 65                         | 0.38                              | 0.57                                 | 0.22                            |
|                                             |              | Apartment              | 80                         | 0.26                              | 0.00                                 | 0.00                            |
|                                             |              | Mobil Home             | 75                         | 0.30                              | 0.00                                 | 0.00                            |
|                                             | 5            | Streets                | 90                         | 0.18                              | 0.10                                 | 0.02                            |
|                                             | 13.4         | Commercial             | 90                         | 0.18                              | 0.26                                 | 0.05                            |
| Sum =                                       | 51.4         |                        |                            |                                   | 1.00                                 | <b>0.34</b>                     |

| <b>Runoff Index (RI) Worksheet</b>          |              |            |            |                        |          |                                      |                            |
|---------------------------------------------|--------------|------------|------------|------------------------|----------|--------------------------------------|----------------------------|
| <b>Drainage Area A (proposed) - 51.4 Ac</b> |              |            |            |                        |          |                                      |                            |
| [1]                                         | [2]          | [3]        | [4]        | [5]                    | [6]      | [7]                                  | [8]                        |
| Subarea                                     | Area in (Ac) | Soil Group | Cover Type | RI Number (Plate E6-1) | Land Use | Decimal portion of Area [2] / SUM[2] | Average RI Value [5] * [7] |
| <b>Basin</b>                                |              | B          | Landscape  | 56                     | Basin    | 0.00                                 | 0.0                        |
|                                             | 3.5          | C          | Landscape  | 69                     | Basin    | 1.00                                 | 69.0                       |
|                                             |              | D          | Landscape  | 75                     | Basin    | 0.00                                 | 0.0                        |
| Sum =                                       | <b>3.5</b>   |            |            |                        |          | 1.00                                 | <b>69.0</b>                |
| <b>Res</b>                                  |              | B          | Landscape  | 56                     | Res      | 0.00                                 | 0.0                        |
|                                             | 29.5         | C          | Landscape  | 69                     | Res      | 1.00                                 | 69.0                       |
|                                             |              | D          | Landscape  | 75                     | Res      | 0.00                                 | 0.0                        |
| Sum =                                       | <b>29.5</b>  |            |            |                        |          | 1.00                                 | <b>69.0</b>                |
| <b>Street</b>                               |              | B          | Landscape  | 56                     | Street   | 0.00                                 | 0.0                        |
|                                             | 5            | C          | Landscape  | 69                     | Street   | 1.00                                 | 69.0                       |
|                                             |              | D          | Landscape  | 75                     | Street   | 0.00                                 | 0.0                        |
| Sum =                                       | <b>5</b>     |            |            |                        |          | 1.00                                 | <b>69.0</b>                |
| <b>Comm</b>                                 |              | B          | Landscape  | 56                     | Comm     | 0.00                                 | 0.0                        |
|                                             | 13.4         | C          | Landscape  | 69                     | Comm     | 1.00                                 | 69.0                       |
|                                             |              | D          | Landscape  | 75                     | Comm     | 0.00                                 | 0.0                        |
| Sum =                                       | <b>13.4</b>  |            |            |                        |          | 1.00                                 | <b>69.0</b>                |

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT B – Inflow Hydrographs, Proposed Condition

| <b>Manning "n" Value Worksheet</b>          |                     |                               |                  |                                             |                                    |
|---------------------------------------------|---------------------|-------------------------------|------------------|---------------------------------------------|------------------------------------|
| <b>Drainage Area A (proposed) - 51.4 Ac</b> |                     |                               |                  |                                             |                                    |
| [1]                                         | [2]                 | [3]                           | [4]              | [5]                                         | [7]                                |
| <b>Subarea</b>                              | <b>Area in (Ac)</b> | <b>Land Use (Plate D-5.6)</b> | <b>"n" Value</b> | <b>Decimal portion of Area [2] / SUM[2]</b> | <b>Average "n" Value [4] * [5]</b> |
|                                             | 3.5                 | Basin                         | 0.035            | 0.07                                        | 0.002                              |
|                                             |                     | Res 1 Ac                      | 0.015            | 0.00                                        | 0.000                              |
|                                             |                     | Res 1/2 Ac                    | 0.015            | 0.00                                        | 0.000                              |
|                                             |                     | Res 1/4 Ac                    | 0.015            | 0.00                                        | 0.000                              |
|                                             | 29.5                | Res < 1/4 Ac                  | 0.015            | 0.57                                        | 0.009                              |
|                                             |                     | Apartment                     | 0.015            | 0.00                                        | 0.000                              |
|                                             |                     | Mobil Home                    | 0.015            | 0.00                                        | 0.000                              |
|                                             | 5                   | Streets                       | 0.015            | 0.10                                        | 0.001                              |
|                                             | 13.4                | Commercial                    | 0.015            | 0.26                                        | 0.004                              |
|                                             |                     |                               |                  |                                             |                                    |
| <b>Sum =</b>                                | <b>51.4</b>         |                               |                  | <b>1.00</b>                                 | <b>0.016</b>                       |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT B – Inflow Hydrographs, Proposed Condition

### U n i t   H y d r o g r a p h   A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1  
Study date 01/29/18 File: nrareaapr2242.out

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Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

-----  
English (in-lb) Input Units Used  
English Rainfall Data (Inches) Input Values Used

English Units used in output format

-----  
Nichols Road Project - Tract 37305  
Drainage Area A = 51.4 Ac  
Proposed Condition - for HCOC mitigation  
2-year 24-hour storm

-----  
Drainage Area = 51.40(Ac.) = 0.080 Sq. Mi.  
Drainage Area for Depth-Area Areal Adjustment = 51.40(Ac.) = 0.080 Sq. Mi.  
Length along longest watercourse = 3463.00(Ft.)  
Length along longest watercourse measured to centroid = 834.00(Ft.)  
Length along longest watercourse = 0.656 Mi.  
Length along longest watercourse measured to centroid = 0.158 Mi.  
Difference in elevation = 77.00(Ft.)  
Slope along watercourse = 117.4011 Ft./Mi.  
Average Manning's 'N' = 0.016  
Lag time = 0.066 Hr.  
Lag time = 3.94 Min.  
25% of lag time = 0.98 Min.  
40% of lag time = 1.57 Min.  
Unit time = 5.00 Min.  
Duration of storm = 24 Hour(s)  
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 51.40         | 2.38             | 122.33         |

100 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 51.40         | 6.35             | 326.39         |

STORM EVENT (YEAR) = 2.00  
Area Averaged 2-Year Rainfall = 2.380(In)  
Area Averaged 100-Year Rainfall = 6.350(In)

Point rain (area averaged) = 2.380(In)  
Areal adjustment factor = 99.99 %  
Adjusted average point rain = 2.380(In)

Sub-Area Data:

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

| Area (Ac.)                       | Runoff Index | Impervious % |
|----------------------------------|--------------|--------------|
| 3.500                            | 69.00        | 0.050        |
| 29.500                           | 69.00        | 0.550        |
| 5.000                            | 69.00        | 0.900        |
| 13.400                           | 69.00        | 0.900        |
| Total Area Entered = 51.40 (Ac.) |              |              |

| RI        | RI    | Infil. Rate | Impervious | Adj. Infil. Rate | Area%  | F       |
|-----------|-------|-------------|------------|------------------|--------|---------|
| AMC2      | AMC-3 | (In/Hr)     | (Dec.%)    | (In/Hr)          | (Dec.) | (In/Hr) |
| 69.0      | 84.4  | 0.194       | 0.050      | 0.185            | 0.068  | 0.013   |
| 69.0      | 84.4  | 0.194       | 0.550      | 0.098            | 0.574  | 0.056   |
| 69.0      | 84.4  | 0.194       | 0.900      | 0.037            | 0.097  | 0.004   |
| 69.0      | 84.4  | 0.194       | 0.900      | 0.037            | 0.261  | 0.010   |
| Sum (F) = |       |             |            |                  |        | 0.082   |

Area averaged mean soil loss (F) (In/Hr) = 0.082

Minimum soil loss rate ((In/Hr)) = 0.041

(for 24 hour storm duration)

Soil loss rate (decimal) = 0.340

## Unit Hydrograph FOOTHILL S-Curve

### Unit Hydrograph Data

| Unit time period<br>(hrs) | Time % of lag | Distribution<br>Graph % | Unit Hydrograph<br>(CFS) |
|---------------------------|---------------|-------------------------|--------------------------|
| 1                         | 0.083         | 127.026                 | 23.707                   |
| 2                         | 0.167         | 254.052                 | 55.790                   |
| 3                         | 0.250         | 381.077                 | 14.636                   |
| 4                         | 0.333         | 508.103                 | 4.252                    |
| 5                         | 0.417         | 635.129                 | 1.082                    |
| 6                         | 0.500         | 762.155                 | 0.533                    |
| Sum = 100.000             |               |                         | Sum= 51.802              |

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

| Unit Time<br>(Hr.) | Pattern<br>Percent | Storm Rain<br>(In/Hr) | Loss rate (In./Hr)<br>Max   Low | Effective<br>(In/Hr) |
|--------------------|--------------------|-----------------------|---------------------------------|----------------------|
| 1                  | 0.08               | 0.019                 | ( 0.145)                        | 0.006                |
| 2                  | 0.17               | 0.019                 | ( 0.145)                        | 0.006                |
| 3                  | 0.25               | 0.019                 | ( 0.144)                        | 0.006                |
| 4                  | 0.33               | 0.029                 | ( 0.144)                        | 0.010                |
| 5                  | 0.42               | 0.029                 | ( 0.143)                        | 0.010                |
| 6                  | 0.50               | 0.029                 | ( 0.143)                        | 0.010                |
| 7                  | 0.58               | 0.029                 | ( 0.142)                        | 0.010                |
| 8                  | 0.67               | 0.029                 | ( 0.141)                        | 0.010                |
| 9                  | 0.75               | 0.029                 | ( 0.141)                        | 0.010                |
| 10                 | 0.83               | 0.038                 | ( 0.140)                        | 0.013                |
| 11                 | 0.92               | 0.038                 | ( 0.140)                        | 0.013                |
| 12                 | 1.00               | 0.038                 | ( 0.139)                        | 0.013                |
| 13                 | 1.08               | 0.029                 | ( 0.139)                        | 0.010                |
| 14                 | 1.17               | 0.029                 | ( 0.138)                        | 0.010                |
| 15                 | 1.25               | 0.029                 | ( 0.138)                        | 0.010                |
| 16                 | 1.33               | 0.029                 | ( 0.137)                        | 0.010                |
| 17                 | 1.42               | 0.029                 | ( 0.136)                        | 0.010                |
| 18                 | 1.50               | 0.029                 | ( 0.136)                        | 0.010                |
| 19                 | 1.58               | 0.029                 | ( 0.135)                        | 0.010                |
| 20                 | 1.67               | 0.029                 | ( 0.135)                        | 0.010                |
| 21                 | 1.75               | 0.029                 | ( 0.134)                        | 0.010                |
| 22                 | 1.83               | 0.038                 | ( 0.134)                        | 0.013                |
| 23                 | 1.92               | 0.038                 | ( 0.133)                        | 0.013                |
| 24                 | 2.00               | 0.038                 | ( 0.133)                        | 0.013                |
| 25                 | 2.08               | 0.038                 | ( 0.132)                        | 0.013                |
| 26                 | 2.17               | 0.038                 | ( 0.132)                        | 0.013                |
| 27                 | 2.25               | 0.038                 | ( 0.131)                        | 0.013                |

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|    |      |      |       |          |       |       |
|----|------|------|-------|----------|-------|-------|
| 28 | 2.33 | 0.13 | 0.038 | ( 0.131) | 0.013 | 0.025 |
| 29 | 2.42 | 0.13 | 0.038 | ( 0.130) | 0.013 | 0.025 |
| 30 | 2.50 | 0.13 | 0.038 | ( 0.129) | 0.013 | 0.025 |
| 31 | 2.58 | 0.17 | 0.048 | ( 0.129) | 0.016 | 0.031 |
| 32 | 2.67 | 0.17 | 0.048 | ( 0.128) | 0.016 | 0.031 |
| 33 | 2.75 | 0.17 | 0.048 | ( 0.128) | 0.016 | 0.031 |
| 34 | 2.83 | 0.17 | 0.048 | ( 0.127) | 0.016 | 0.031 |
| 35 | 2.92 | 0.17 | 0.048 | ( 0.127) | 0.016 | 0.031 |
| 36 | 3.00 | 0.17 | 0.048 | ( 0.126) | 0.016 | 0.031 |
| 37 | 3.08 | 0.17 | 0.048 | ( 0.126) | 0.016 | 0.031 |
| 38 | 3.17 | 0.17 | 0.048 | ( 0.125) | 0.016 | 0.031 |
| 39 | 3.25 | 0.17 | 0.048 | ( 0.125) | 0.016 | 0.031 |
| 40 | 3.33 | 0.17 | 0.048 | ( 0.124) | 0.016 | 0.031 |
| 41 | 3.42 | 0.17 | 0.048 | ( 0.124) | 0.016 | 0.031 |
| 42 | 3.50 | 0.17 | 0.048 | ( 0.123) | 0.016 | 0.031 |
| 43 | 3.58 | 0.17 | 0.048 | ( 0.123) | 0.016 | 0.031 |
| 44 | 3.67 | 0.17 | 0.048 | ( 0.122) | 0.016 | 0.031 |
| 45 | 3.75 | 0.17 | 0.048 | ( 0.122) | 0.016 | 0.031 |
| 46 | 3.83 | 0.20 | 0.057 | ( 0.121) | 0.019 | 0.038 |
| 47 | 3.92 | 0.20 | 0.057 | ( 0.121) | 0.019 | 0.038 |
| 48 | 4.00 | 0.20 | 0.057 | ( 0.120) | 0.019 | 0.038 |
| 49 | 4.08 | 0.20 | 0.057 | ( 0.120) | 0.019 | 0.038 |
| 50 | 4.17 | 0.20 | 0.057 | ( 0.119) | 0.019 | 0.038 |
| 51 | 4.25 | 0.20 | 0.057 | ( 0.119) | 0.019 | 0.038 |
| 52 | 4.33 | 0.23 | 0.067 | ( 0.118) | 0.023 | 0.044 |
| 53 | 4.42 | 0.23 | 0.067 | ( 0.118) | 0.023 | 0.044 |
| 54 | 4.50 | 0.23 | 0.067 | ( 0.117) | 0.023 | 0.044 |
| 55 | 4.58 | 0.23 | 0.067 | ( 0.117) | 0.023 | 0.044 |
| 56 | 4.67 | 0.23 | 0.067 | ( 0.116) | 0.023 | 0.044 |
| 57 | 4.75 | 0.23 | 0.067 | ( 0.116) | 0.023 | 0.044 |
| 58 | 4.83 | 0.27 | 0.076 | ( 0.115) | 0.026 | 0.050 |
| 59 | 4.92 | 0.27 | 0.076 | ( 0.115) | 0.026 | 0.050 |
| 60 | 5.00 | 0.27 | 0.076 | ( 0.114) | 0.026 | 0.050 |
| 61 | 5.08 | 0.20 | 0.057 | ( 0.114) | 0.019 | 0.038 |
| 62 | 5.17 | 0.20 | 0.057 | ( 0.113) | 0.019 | 0.038 |
| 63 | 5.25 | 0.20 | 0.057 | ( 0.113) | 0.019 | 0.038 |
| 64 | 5.33 | 0.23 | 0.067 | ( 0.112) | 0.023 | 0.044 |
| 65 | 5.42 | 0.23 | 0.067 | ( 0.112) | 0.023 | 0.044 |
| 66 | 5.50 | 0.23 | 0.067 | ( 0.111) | 0.023 | 0.044 |
| 67 | 5.58 | 0.27 | 0.076 | ( 0.111) | 0.026 | 0.050 |
| 68 | 5.67 | 0.27 | 0.076 | ( 0.110) | 0.026 | 0.050 |
| 69 | 5.75 | 0.27 | 0.076 | ( 0.110) | 0.026 | 0.050 |
| 70 | 5.83 | 0.27 | 0.076 | ( 0.109) | 0.026 | 0.050 |
| 71 | 5.92 | 0.27 | 0.076 | ( 0.109) | 0.026 | 0.050 |
| 72 | 6.00 | 0.27 | 0.076 | ( 0.108) | 0.026 | 0.050 |
| 73 | 6.08 | 0.30 | 0.086 | ( 0.108) | 0.029 | 0.057 |
| 74 | 6.17 | 0.30 | 0.086 | ( 0.107) | 0.029 | 0.057 |
| 75 | 6.25 | 0.30 | 0.086 | ( 0.107) | 0.029 | 0.057 |
| 76 | 6.33 | 0.30 | 0.086 | ( 0.106) | 0.029 | 0.057 |
| 77 | 6.42 | 0.30 | 0.086 | ( 0.106) | 0.029 | 0.057 |
| 78 | 6.50 | 0.30 | 0.086 | ( 0.105) | 0.029 | 0.057 |
| 79 | 6.58 | 0.33 | 0.095 | ( 0.105) | 0.032 | 0.063 |
| 80 | 6.67 | 0.33 | 0.095 | ( 0.104) | 0.032 | 0.063 |
| 81 | 6.75 | 0.33 | 0.095 | ( 0.104) | 0.032 | 0.063 |
| 82 | 6.83 | 0.33 | 0.095 | ( 0.103) | 0.032 | 0.063 |
| 83 | 6.92 | 0.33 | 0.095 | ( 0.103) | 0.032 | 0.063 |
| 84 | 7.00 | 0.33 | 0.095 | ( 0.103) | 0.032 | 0.063 |
| 85 | 7.08 | 0.33 | 0.095 | ( 0.102) | 0.032 | 0.063 |
| 86 | 7.17 | 0.33 | 0.095 | ( 0.102) | 0.032 | 0.063 |
| 87 | 7.25 | 0.33 | 0.095 | ( 0.101) | 0.032 | 0.063 |
| 88 | 7.33 | 0.37 | 0.105 | ( 0.101) | 0.036 | 0.069 |
| 89 | 7.42 | 0.37 | 0.105 | ( 0.100) | 0.036 | 0.069 |
| 90 | 7.50 | 0.37 | 0.105 | ( 0.100) | 0.036 | 0.069 |
| 91 | 7.58 | 0.40 | 0.114 | ( 0.099) | 0.039 | 0.075 |
| 92 | 7.67 | 0.40 | 0.114 | ( 0.099) | 0.039 | 0.075 |
| 93 | 7.75 | 0.40 | 0.114 | ( 0.098) | 0.039 | 0.075 |
| 94 | 7.83 | 0.43 | 0.124 | ( 0.098) | 0.042 | 0.082 |
| 95 | 7.92 | 0.43 | 0.124 | ( 0.097) | 0.042 | 0.082 |
| 96 | 8.00 | 0.43 | 0.124 | ( 0.097) | 0.042 | 0.082 |
| 97 | 8.08 | 0.50 | 0.143 | ( 0.097) | 0.049 | 0.094 |
| 98 | 8.17 | 0.50 | 0.143 | ( 0.096) | 0.049 | 0.094 |

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|     |       |      |       |                |       |       |
|-----|-------|------|-------|----------------|-------|-------|
| 99  | 8.25  | 0.50 | 0.143 | ( 0.096)       | 0.049 | 0.094 |
| 100 | 8.33  | 0.50 | 0.143 | ( 0.095)       | 0.049 | 0.094 |
| 101 | 8.42  | 0.50 | 0.143 | ( 0.095)       | 0.049 | 0.094 |
| 102 | 8.50  | 0.50 | 0.143 | ( 0.094)       | 0.049 | 0.094 |
| 103 | 8.58  | 0.53 | 0.152 | ( 0.094)       | 0.052 | 0.101 |
| 104 | 8.67  | 0.53 | 0.152 | ( 0.093)       | 0.052 | 0.101 |
| 105 | 8.75  | 0.53 | 0.152 | ( 0.093)       | 0.052 | 0.101 |
| 106 | 8.83  | 0.57 | 0.162 | ( 0.093)       | 0.055 | 0.107 |
| 107 | 8.92  | 0.57 | 0.162 | ( 0.092)       | 0.055 | 0.107 |
| 108 | 9.00  | 0.57 | 0.162 | ( 0.092)       | 0.055 | 0.107 |
| 109 | 9.08  | 0.63 | 0.181 | ( 0.091)       | 0.061 | 0.119 |
| 110 | 9.17  | 0.63 | 0.181 | ( 0.091)       | 0.061 | 0.119 |
| 111 | 9.25  | 0.63 | 0.181 | ( 0.090)       | 0.061 | 0.119 |
| 112 | 9.33  | 0.67 | 0.190 | ( 0.090)       | 0.065 | 0.126 |
| 113 | 9.42  | 0.67 | 0.190 | ( 0.090)       | 0.065 | 0.126 |
| 114 | 9.50  | 0.67 | 0.190 | ( 0.089)       | 0.065 | 0.126 |
| 115 | 9.58  | 0.70 | 0.200 | ( 0.089)       | 0.068 | 0.132 |
| 116 | 9.67  | 0.70 | 0.200 | ( 0.088)       | 0.068 | 0.132 |
| 117 | 9.75  | 0.70 | 0.200 | ( 0.088)       | 0.068 | 0.132 |
| 118 | 9.83  | 0.73 | 0.209 | ( 0.087)       | 0.071 | 0.138 |
| 119 | 9.92  | 0.73 | 0.209 | ( 0.087)       | 0.071 | 0.138 |
| 120 | 10.00 | 0.73 | 0.209 | ( 0.087)       | 0.071 | 0.138 |
| 121 | 10.08 | 0.50 | 0.143 | ( 0.086)       | 0.049 | 0.094 |
| 122 | 10.17 | 0.50 | 0.143 | ( 0.086)       | 0.049 | 0.094 |
| 123 | 10.25 | 0.50 | 0.143 | ( 0.085)       | 0.049 | 0.094 |
| 124 | 10.33 | 0.50 | 0.143 | ( 0.085)       | 0.049 | 0.094 |
| 125 | 10.42 | 0.50 | 0.143 | ( 0.084)       | 0.049 | 0.094 |
| 126 | 10.50 | 0.50 | 0.143 | ( 0.084)       | 0.049 | 0.094 |
| 127 | 10.58 | 0.67 | 0.190 | ( 0.084)       | 0.065 | 0.126 |
| 128 | 10.67 | 0.67 | 0.190 | ( 0.083)       | 0.065 | 0.126 |
| 129 | 10.75 | 0.67 | 0.190 | ( 0.083)       | 0.065 | 0.126 |
| 130 | 10.83 | 0.67 | 0.190 | ( 0.082)       | 0.065 | 0.126 |
| 131 | 10.92 | 0.67 | 0.190 | ( 0.082)       | 0.065 | 0.126 |
| 132 | 11.00 | 0.67 | 0.190 | ( 0.082)       | 0.065 | 0.126 |
| 133 | 11.08 | 0.63 | 0.181 | ( 0.081)       | 0.061 | 0.119 |
| 134 | 11.17 | 0.63 | 0.181 | ( 0.081)       | 0.061 | 0.119 |
| 135 | 11.25 | 0.63 | 0.181 | ( 0.080)       | 0.061 | 0.119 |
| 136 | 11.33 | 0.63 | 0.181 | ( 0.080)       | 0.061 | 0.119 |
| 137 | 11.42 | 0.63 | 0.181 | ( 0.080)       | 0.061 | 0.119 |
| 138 | 11.50 | 0.63 | 0.181 | ( 0.079)       | 0.061 | 0.119 |
| 139 | 11.58 | 0.57 | 0.162 | ( 0.079)       | 0.055 | 0.107 |
| 140 | 11.67 | 0.57 | 0.162 | ( 0.078)       | 0.055 | 0.107 |
| 141 | 11.75 | 0.57 | 0.162 | ( 0.078)       | 0.055 | 0.107 |
| 142 | 11.83 | 0.60 | 0.171 | ( 0.078)       | 0.058 | 0.113 |
| 143 | 11.92 | 0.60 | 0.171 | ( 0.077)       | 0.058 | 0.113 |
| 144 | 12.00 | 0.60 | 0.171 | ( 0.077)       | 0.058 | 0.113 |
| 145 | 12.08 | 0.83 | 0.238 | 0.077 ( 0.081) |       | 0.161 |
| 146 | 12.17 | 0.83 | 0.238 | 0.076 ( 0.081) |       | 0.162 |
| 147 | 12.25 | 0.83 | 0.238 | 0.076 ( 0.081) |       | 0.162 |
| 148 | 12.33 | 0.87 | 0.247 | 0.075 ( 0.084) |       | 0.172 |
| 149 | 12.42 | 0.87 | 0.247 | 0.075 ( 0.084) |       | 0.173 |
| 150 | 12.50 | 0.87 | 0.247 | 0.075 ( 0.084) |       | 0.173 |
| 151 | 12.58 | 0.93 | 0.267 | 0.074 ( 0.091) |       | 0.192 |
| 152 | 12.67 | 0.93 | 0.267 | 0.074 ( 0.091) |       | 0.193 |
| 153 | 12.75 | 0.93 | 0.267 | 0.073 ( 0.091) |       | 0.193 |
| 154 | 12.83 | 0.97 | 0.276 | 0.073 ( 0.094) |       | 0.203 |
| 155 | 12.92 | 0.97 | 0.276 | 0.073 ( 0.094) |       | 0.203 |
| 156 | 13.00 | 0.97 | 0.276 | 0.072 ( 0.094) |       | 0.204 |
| 157 | 13.08 | 1.13 | 0.324 | 0.072 ( 0.110) |       | 0.252 |
| 158 | 13.17 | 1.13 | 0.324 | 0.072 ( 0.110) |       | 0.252 |
| 159 | 13.25 | 1.13 | 0.324 | 0.071 ( 0.110) |       | 0.252 |
| 160 | 13.33 | 1.13 | 0.324 | 0.071 ( 0.110) |       | 0.253 |
| 161 | 13.42 | 1.13 | 0.324 | 0.071 ( 0.110) |       | 0.253 |
| 162 | 13.50 | 1.13 | 0.324 | 0.070 ( 0.110) |       | 0.253 |
| 163 | 13.58 | 0.77 | 0.219 | 0.070 ( 0.074) |       | 0.149 |
| 164 | 13.67 | 0.77 | 0.219 | 0.069 ( 0.074) |       | 0.149 |
| 165 | 13.75 | 0.77 | 0.219 | 0.069 ( 0.074) |       | 0.150 |
| 166 | 13.83 | 0.77 | 0.219 | 0.069 ( 0.074) |       | 0.150 |
| 167 | 13.92 | 0.77 | 0.219 | 0.068 ( 0.074) |       | 0.150 |
| 168 | 14.00 | 0.77 | 0.219 | 0.068 ( 0.074) |       | 0.151 |
| 169 | 14.08 | 0.90 | 0.257 | 0.068 ( 0.087) |       | 0.189 |

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|     |       |      |       |          |          |       |
|-----|-------|------|-------|----------|----------|-------|
| 170 | 14.17 | 0.90 | 0.257 | 0.067    | ( 0.087) | 0.190 |
| 171 | 14.25 | 0.90 | 0.257 | 0.067    | ( 0.087) | 0.190 |
| 172 | 14.33 | 0.87 | 0.247 | 0.067    | ( 0.084) | 0.181 |
| 173 | 14.42 | 0.87 | 0.247 | 0.066    | ( 0.084) | 0.181 |
| 174 | 14.50 | 0.87 | 0.247 | 0.066    | ( 0.084) | 0.181 |
| 175 | 14.58 | 0.87 | 0.247 | 0.066    | ( 0.084) | 0.182 |
| 176 | 14.67 | 0.87 | 0.247 | 0.065    | ( 0.084) | 0.182 |
| 177 | 14.75 | 0.87 | 0.247 | 0.065    | ( 0.084) | 0.182 |
| 178 | 14.83 | 0.83 | 0.238 | 0.065    | ( 0.081) | 0.173 |
| 179 | 14.92 | 0.83 | 0.238 | 0.064    | ( 0.081) | 0.174 |
| 180 | 15.00 | 0.83 | 0.238 | 0.064    | ( 0.081) | 0.174 |
| 181 | 15.08 | 0.80 | 0.228 | 0.064    | ( 0.078) | 0.165 |
| 182 | 15.17 | 0.80 | 0.228 | 0.063    | ( 0.078) | 0.165 |
| 183 | 15.25 | 0.80 | 0.228 | 0.063    | ( 0.078) | 0.165 |
| 184 | 15.33 | 0.77 | 0.219 | 0.063    | ( 0.074) | 0.156 |
| 185 | 15.42 | 0.77 | 0.219 | 0.062    | ( 0.074) | 0.157 |
| 186 | 15.50 | 0.77 | 0.219 | 0.062    | ( 0.074) | 0.157 |
| 187 | 15.58 | 0.63 | 0.181 | ( 0.062) | 0.061    | 0.119 |
| 188 | 15.67 | 0.63 | 0.181 | 0.061    | ( 0.061) | 0.119 |
| 189 | 15.75 | 0.63 | 0.181 | 0.061    | ( 0.061) | 0.120 |
| 190 | 15.83 | 0.63 | 0.181 | 0.061    | ( 0.061) | 0.120 |
| 191 | 15.92 | 0.63 | 0.181 | 0.061    | ( 0.061) | 0.120 |
| 192 | 16.00 | 0.63 | 0.181 | 0.060    | ( 0.061) | 0.121 |
| 193 | 16.08 | 0.13 | 0.038 | ( 0.060) | 0.013    | 0.025 |
| 194 | 16.17 | 0.13 | 0.038 | ( 0.060) | 0.013    | 0.025 |
| 195 | 16.25 | 0.13 | 0.038 | ( 0.059) | 0.013    | 0.025 |
| 196 | 16.33 | 0.13 | 0.038 | ( 0.059) | 0.013    | 0.025 |
| 197 | 16.42 | 0.13 | 0.038 | ( 0.059) | 0.013    | 0.025 |
| 198 | 16.50 | 0.13 | 0.038 | ( 0.058) | 0.013    | 0.025 |
| 199 | 16.58 | 0.10 | 0.029 | ( 0.058) | 0.010    | 0.019 |
| 200 | 16.67 | 0.10 | 0.029 | ( 0.058) | 0.010    | 0.019 |
| 201 | 16.75 | 0.10 | 0.029 | ( 0.057) | 0.010    | 0.019 |
| 202 | 16.83 | 0.10 | 0.029 | ( 0.057) | 0.010    | 0.019 |
| 203 | 16.92 | 0.10 | 0.029 | ( 0.057) | 0.010    | 0.019 |
| 204 | 17.00 | 0.10 | 0.029 | ( 0.057) | 0.010    | 0.019 |
| 205 | 17.08 | 0.17 | 0.048 | ( 0.056) | 0.016    | 0.031 |
| 206 | 17.17 | 0.17 | 0.048 | ( 0.056) | 0.016    | 0.031 |
| 207 | 17.25 | 0.17 | 0.048 | ( 0.056) | 0.016    | 0.031 |
| 208 | 17.33 | 0.17 | 0.048 | ( 0.055) | 0.016    | 0.031 |
| 209 | 17.42 | 0.17 | 0.048 | ( 0.055) | 0.016    | 0.031 |
| 210 | 17.50 | 0.17 | 0.048 | ( 0.055) | 0.016    | 0.031 |
| 211 | 17.58 | 0.17 | 0.048 | ( 0.055) | 0.016    | 0.031 |
| 212 | 17.67 | 0.17 | 0.048 | ( 0.054) | 0.016    | 0.031 |
| 213 | 17.75 | 0.17 | 0.048 | ( 0.054) | 0.016    | 0.031 |
| 214 | 17.83 | 0.13 | 0.038 | ( 0.054) | 0.013    | 0.025 |
| 215 | 17.92 | 0.13 | 0.038 | ( 0.054) | 0.013    | 0.025 |
| 216 | 18.00 | 0.13 | 0.038 | ( 0.053) | 0.013    | 0.025 |
| 217 | 18.08 | 0.13 | 0.038 | ( 0.053) | 0.013    | 0.025 |
| 218 | 18.17 | 0.13 | 0.038 | ( 0.053) | 0.013    | 0.025 |
| 219 | 18.25 | 0.13 | 0.038 | ( 0.053) | 0.013    | 0.025 |
| 220 | 18.33 | 0.13 | 0.038 | ( 0.052) | 0.013    | 0.025 |
| 221 | 18.42 | 0.13 | 0.038 | ( 0.052) | 0.013    | 0.025 |
| 222 | 18.50 | 0.13 | 0.038 | ( 0.052) | 0.013    | 0.025 |
| 223 | 18.58 | 0.10 | 0.029 | ( 0.052) | 0.010    | 0.019 |
| 224 | 18.67 | 0.10 | 0.029 | ( 0.051) | 0.010    | 0.019 |
| 225 | 18.75 | 0.10 | 0.029 | ( 0.051) | 0.010    | 0.019 |
| 226 | 18.83 | 0.07 | 0.019 | ( 0.051) | 0.006    | 0.013 |
| 227 | 18.92 | 0.07 | 0.019 | ( 0.051) | 0.006    | 0.013 |
| 228 | 19.00 | 0.07 | 0.019 | ( 0.050) | 0.006    | 0.013 |
| 229 | 19.08 | 0.10 | 0.029 | ( 0.050) | 0.010    | 0.019 |
| 230 | 19.17 | 0.10 | 0.029 | ( 0.050) | 0.010    | 0.019 |
| 231 | 19.25 | 0.10 | 0.029 | ( 0.050) | 0.010    | 0.019 |
| 232 | 19.33 | 0.13 | 0.038 | ( 0.049) | 0.013    | 0.025 |
| 233 | 19.42 | 0.13 | 0.038 | ( 0.049) | 0.013    | 0.025 |
| 234 | 19.50 | 0.13 | 0.038 | ( 0.049) | 0.013    | 0.025 |
| 235 | 19.58 | 0.10 | 0.029 | ( 0.049) | 0.010    | 0.019 |
| 236 | 19.67 | 0.10 | 0.029 | ( 0.048) | 0.010    | 0.019 |
| 237 | 19.75 | 0.10 | 0.029 | ( 0.048) | 0.010    | 0.019 |
| 238 | 19.83 | 0.07 | 0.019 | ( 0.048) | 0.006    | 0.013 |
| 239 | 19.92 | 0.07 | 0.019 | ( 0.048) | 0.006    | 0.013 |
| 240 | 20.00 | 0.07 | 0.019 | ( 0.048) | 0.006    | 0.013 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

|     |       |      |       |          |       |       |
|-----|-------|------|-------|----------|-------|-------|
| 241 | 20.08 | 0.10 | 0.029 | ( 0.047) | 0.010 | 0.019 |
| 242 | 20.17 | 0.10 | 0.029 | ( 0.047) | 0.010 | 0.019 |
| 243 | 20.25 | 0.10 | 0.029 | ( 0.047) | 0.010 | 0.019 |
| 244 | 20.33 | 0.10 | 0.029 | ( 0.047) | 0.010 | 0.019 |
| 245 | 20.42 | 0.10 | 0.029 | ( 0.047) | 0.010 | 0.019 |
| 246 | 20.50 | 0.10 | 0.029 | ( 0.046) | 0.010 | 0.019 |
| 247 | 20.58 | 0.10 | 0.029 | ( 0.046) | 0.010 | 0.019 |
| 248 | 20.67 | 0.10 | 0.029 | ( 0.046) | 0.010 | 0.019 |
| 249 | 20.75 | 0.10 | 0.029 | ( 0.046) | 0.010 | 0.019 |
| 250 | 20.83 | 0.07 | 0.019 | ( 0.046) | 0.006 | 0.013 |
| 251 | 20.92 | 0.07 | 0.019 | ( 0.045) | 0.006 | 0.013 |
| 252 | 21.00 | 0.07 | 0.019 | ( 0.045) | 0.006 | 0.013 |
| 253 | 21.08 | 0.10 | 0.029 | ( 0.045) | 0.010 | 0.019 |
| 254 | 21.17 | 0.10 | 0.029 | ( 0.045) | 0.010 | 0.019 |
| 255 | 21.25 | 0.10 | 0.029 | ( 0.045) | 0.010 | 0.019 |
| 256 | 21.33 | 0.07 | 0.019 | ( 0.045) | 0.006 | 0.013 |
| 257 | 21.42 | 0.07 | 0.019 | ( 0.044) | 0.006 | 0.013 |
| 258 | 21.50 | 0.07 | 0.019 | ( 0.044) | 0.006 | 0.013 |
| 259 | 21.58 | 0.10 | 0.029 | ( 0.044) | 0.010 | 0.019 |
| 260 | 21.67 | 0.10 | 0.029 | ( 0.044) | 0.010 | 0.019 |
| 261 | 21.75 | 0.10 | 0.029 | ( 0.044) | 0.010 | 0.019 |
| 262 | 21.83 | 0.07 | 0.019 | ( 0.044) | 0.006 | 0.013 |
| 263 | 21.92 | 0.07 | 0.019 | ( 0.043) | 0.006 | 0.013 |
| 264 | 22.00 | 0.07 | 0.019 | ( 0.043) | 0.006 | 0.013 |
| 265 | 22.08 | 0.10 | 0.029 | ( 0.043) | 0.010 | 0.019 |
| 266 | 22.17 | 0.10 | 0.029 | ( 0.043) | 0.010 | 0.019 |
| 267 | 22.25 | 0.10 | 0.029 | ( 0.043) | 0.010 | 0.019 |
| 268 | 22.33 | 0.07 | 0.019 | ( 0.043) | 0.006 | 0.013 |
| 269 | 22.42 | 0.07 | 0.019 | ( 0.043) | 0.006 | 0.013 |
| 270 | 22.50 | 0.07 | 0.019 | ( 0.042) | 0.006 | 0.013 |
| 271 | 22.58 | 0.07 | 0.019 | ( 0.042) | 0.006 | 0.013 |
| 272 | 22.67 | 0.07 | 0.019 | ( 0.042) | 0.006 | 0.013 |
| 273 | 22.75 | 0.07 | 0.019 | ( 0.042) | 0.006 | 0.013 |
| 274 | 22.83 | 0.07 | 0.019 | ( 0.042) | 0.006 | 0.013 |
| 275 | 22.92 | 0.07 | 0.019 | ( 0.042) | 0.006 | 0.013 |
| 276 | 23.00 | 0.07 | 0.019 | ( 0.042) | 0.006 | 0.013 |
| 277 | 23.08 | 0.07 | 0.019 | ( 0.042) | 0.006 | 0.013 |
| 278 | 23.17 | 0.07 | 0.019 | ( 0.042) | 0.006 | 0.013 |
| 279 | 23.25 | 0.07 | 0.019 | ( 0.042) | 0.006 | 0.013 |
| 280 | 23.33 | 0.07 | 0.019 | ( 0.041) | 0.006 | 0.013 |
| 281 | 23.42 | 0.07 | 0.019 | ( 0.041) | 0.006 | 0.013 |
| 282 | 23.50 | 0.07 | 0.019 | ( 0.041) | 0.006 | 0.013 |
| 283 | 23.58 | 0.07 | 0.019 | ( 0.041) | 0.006 | 0.013 |
| 284 | 23.67 | 0.07 | 0.019 | ( 0.041) | 0.006 | 0.013 |
| 285 | 23.75 | 0.07 | 0.019 | ( 0.041) | 0.006 | 0.013 |
| 286 | 23.83 | 0.07 | 0.019 | ( 0.041) | 0.006 | 0.013 |
| 287 | 23.92 | 0.07 | 0.019 | ( 0.041) | 0.006 | 0.013 |
| 288 | 24.00 | 0.07 | 0.019 | ( 0.041) | 0.006 | 0.013 |

(Loss Rate Not Used)

Sum = 100.0 Sum = 19.6

Flood volume = Effective rainfall 1.63(In)  
times area 51.4(Ac.)/[ (In)/(Ft.) ] = 7.0(Ac.Ft)

Total soil loss = 0.75(In)

Total soil loss = 3.207(Ac.Ft)

Total rainfall = 2.38(In)

Flood volume = 304303.6 Cubic Feet

Total soil loss = 139716.9 Cubic Feet

-----  
Peak flow rate of this hydrograph = 13.116(CFS)  
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+++++

24 - H O U R S T O R M  
R u n o f f H y d r o g r a p h

-----  
Hydrograph in 5 Minute intervals ((CFS))  
-----

| Time(h+m) | Volume Ac.Ft | Q(CFS)  | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|-----------|--------------|---------|---|-----|------|------|------|
| 0+ 5      | 0.0011       | 0.15 Q  |   |     |      |      |      |
| 0+10      | 0.0046       | 0.52 VQ |   |     |      |      |      |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|      |        |      |      |  |  |  |  |
|------|--------|------|------|--|--|--|--|
| 0+15 | 0.0089 | 0.61 | VQ   |  |  |  |  |
| 0+20 | 0.0138 | 0.72 | VQ   |  |  |  |  |
| 0+25 | 0.0200 | 0.91 | VQ   |  |  |  |  |
| 0+30 | 0.0266 | 0.96 | VQ   |  |  |  |  |
| 0+35 | 0.0333 | 0.97 | VQ   |  |  |  |  |
| 0+40 | 0.0400 | 0.98 | VQ   |  |  |  |  |
| 0+45 | 0.0468 | 0.98 | VQ   |  |  |  |  |
| 0+50 | 0.0540 | 1.05 | V Q  |  |  |  |  |
| 0+55 | 0.0625 | 1.24 | V Q  |  |  |  |  |
| 1+ 0 | 0.0714 | 1.28 | V Q  |  |  |  |  |
| 1+ 5 | 0.0798 | 1.22 | V Q  |  |  |  |  |
| 1+10 | 0.0870 | 1.04 | V Q  |  |  |  |  |
| 1+15 | 0.0938 | 1.00 | VQ   |  |  |  |  |
| 1+20 | 0.1006 | 0.98 | VQ   |  |  |  |  |
| 1+25 | 0.1073 | 0.98 | VQ   |  |  |  |  |
| 1+30 | 0.1140 | 0.98 | VQ   |  |  |  |  |
| 1+35 | 0.1208 | 0.98 | VQ   |  |  |  |  |
| 1+40 | 0.1275 | 0.98 | VQ   |  |  |  |  |
| 1+45 | 0.1342 | 0.98 | VQ   |  |  |  |  |
| 1+50 | 0.1415 | 1.05 | V Q  |  |  |  |  |
| 1+55 | 0.1500 | 1.24 | V Q  |  |  |  |  |
| 2+ 0 | 0.1588 | 1.28 | V Q  |  |  |  |  |
| 2+ 5 | 0.1678 | 1.30 | V Q  |  |  |  |  |
| 2+10 | 0.1767 | 1.30 | IVQ  |  |  |  |  |
| 2+15 | 0.1857 | 1.30 | IVQ  |  |  |  |  |
| 2+20 | 0.1947 | 1.30 | IVQ  |  |  |  |  |
| 2+25 | 0.2036 | 1.30 | IVQ  |  |  |  |  |
| 2+30 | 0.2126 | 1.30 | IVQ  |  |  |  |  |
| 2+35 | 0.2221 | 1.38 | IVQ  |  |  |  |  |
| 2+40 | 0.2329 | 1.56 | IV Q |  |  |  |  |
| 2+45 | 0.2439 | 1.61 | IV Q |  |  |  |  |
| 2+50 | 0.2551 | 1.62 | IV Q |  |  |  |  |
| 2+55 | 0.2663 | 1.63 | IV Q |  |  |  |  |
| 3+ 0 | 0.2775 | 1.63 | IV Q |  |  |  |  |
| 3+ 5 | 0.2887 | 1.63 | IV Q |  |  |  |  |
| 3+10 | 0.3000 | 1.63 | IV Q |  |  |  |  |
| 3+15 | 0.3112 | 1.63 | IV Q |  |  |  |  |
| 3+20 | 0.3224 | 1.63 | IV Q |  |  |  |  |
| 3+25 | 0.3336 | 1.63 | IV Q |  |  |  |  |
| 3+30 | 0.3448 | 1.63 | IV Q |  |  |  |  |
| 3+35 | 0.3560 | 1.63 | VQ   |  |  |  |  |
| 3+40 | 0.3672 | 1.63 | VQ   |  |  |  |  |
| 3+45 | 0.3784 | 1.63 | VQ   |  |  |  |  |
| 3+50 | 0.3902 | 1.71 | VQ   |  |  |  |  |
| 3+55 | 0.4032 | 1.89 | VQ   |  |  |  |  |
| 4+ 0 | 0.4165 | 1.93 | VQ   |  |  |  |  |
| 4+ 5 | 0.4299 | 1.95 | VQ   |  |  |  |  |
| 4+10 | 0.4434 | 1.95 | VQ   |  |  |  |  |
| 4+15 | 0.4568 | 1.95 | VQ   |  |  |  |  |
| 4+20 | 0.4708 | 2.03 | V Q  |  |  |  |  |
| 4+25 | 0.4861 | 2.21 | V Q  |  |  |  |  |
| 4+30 | 0.5016 | 2.26 | V Q  |  |  |  |  |
| 4+35 | 0.5173 | 2.27 | V Q  |  |  |  |  |
| 4+40 | 0.5330 | 2.28 | VQ   |  |  |  |  |
| 4+45 | 0.5487 | 2.28 | VQ   |  |  |  |  |
| 4+50 | 0.5649 | 2.36 | VQ   |  |  |  |  |
| 4+55 | 0.5824 | 2.54 | V Q  |  |  |  |  |
| 5+ 0 | 0.6002 | 2.59 | V Q  |  |  |  |  |
| 5+ 5 | 0.6170 | 2.45 | VQ   |  |  |  |  |
| 5+10 | 0.6314 | 2.09 | VQ   |  |  |  |  |
| 5+15 | 0.6451 | 1.99 | Q    |  |  |  |  |
| 5+20 | 0.6592 | 2.04 | VQ   |  |  |  |  |
| 5+25 | 0.6744 | 2.22 | VQ   |  |  |  |  |
| 5+30 | 0.6900 | 2.26 | VQ   |  |  |  |  |
| 5+35 | 0.7062 | 2.35 | Q    |  |  |  |  |
| 5+40 | 0.7237 | 2.54 | VQ   |  |  |  |  |
| 5+45 | 0.7415 | 2.59 | VQ   |  |  |  |  |
| 5+50 | 0.7594 | 2.60 | VQ   |  |  |  |  |
| 5+55 | 0.7773 | 2.60 | VQ   |  |  |  |  |
| 6+ 0 | 0.7952 | 2.60 | VQ   |  |  |  |  |
| 6+ 5 | 0.8137 | 2.68 | VQ   |  |  |  |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|       |        |      |  |      |  |  |  |  |  |  |  |
|-------|--------|------|--|------|--|--|--|--|--|--|--|
| 6+10  | 0.8334 | 2.86 |  | VQ   |  |  |  |  |  |  |  |
| 6+15  | 0.8535 | 2.91 |  | VQ   |  |  |  |  |  |  |  |
| 6+20  | 0.8736 | 2.93 |  | Q    |  |  |  |  |  |  |  |
| 6+25  | 0.8938 | 2.93 |  | Q    |  |  |  |  |  |  |  |
| 6+30  | 0.9140 | 2.93 |  | Q    |  |  |  |  |  |  |  |
| 6+35  | 0.9347 | 3.01 |  | VQ   |  |  |  |  |  |  |  |
| 6+40  | 0.9567 | 3.19 |  | VQ   |  |  |  |  |  |  |  |
| 6+45  | 0.9790 | 3.24 |  | VQ   |  |  |  |  |  |  |  |
| 6+50  | 1.0013 | 3.25 |  | VQ   |  |  |  |  |  |  |  |
| 6+55  | 1.0238 | 3.25 |  | VQ   |  |  |  |  |  |  |  |
| 7+ 0  | 1.0462 | 3.26 |  | VQ   |  |  |  |  |  |  |  |
| 7+ 5  | 1.0686 | 3.26 |  | Q    |  |  |  |  |  |  |  |
| 7+10  | 1.0910 | 3.26 |  | Q    |  |  |  |  |  |  |  |
| 7+15  | 1.1135 | 3.26 |  | Q    |  |  |  |  |  |  |  |
| 7+20  | 1.1364 | 3.33 |  | Q    |  |  |  |  |  |  |  |
| 7+25  | 1.1606 | 3.52 |  | VQ   |  |  |  |  |  |  |  |
| 7+30  | 1.1852 | 3.56 |  | VQ   |  |  |  |  |  |  |  |
| 7+35  | 1.2103 | 3.65 |  | VQ   |  |  |  |  |  |  |  |
| 7+40  | 1.2368 | 3.84 |  | Q    |  |  |  |  |  |  |  |
| 7+45  | 1.2635 | 3.89 |  | Q    |  |  |  |  |  |  |  |
| 7+50  | 1.2909 | 3.98 |  | Q    |  |  |  |  |  |  |  |
| 7+55  | 1.3196 | 4.16 |  | VQ   |  |  |  |  |  |  |  |
| 8+ 0  | 1.3486 | 4.21 |  | VQ   |  |  |  |  |  |  |  |
| 8+ 5  | 1.3788 | 4.38 |  | VQ   |  |  |  |  |  |  |  |
| 8+10  | 1.4115 | 4.75 |  | VQ   |  |  |  |  |  |  |  |
| 8+15  | 1.4449 | 4.85 |  | VQ   |  |  |  |  |  |  |  |
| 8+20  | 1.4785 | 4.87 |  | VQ   |  |  |  |  |  |  |  |
| 8+25  | 1.5121 | 4.88 |  | VQ   |  |  |  |  |  |  |  |
| 8+30  | 1.5457 | 4.88 |  | VQ   |  |  |  |  |  |  |  |
| 8+35  | 1.5799 | 4.96 |  | Q    |  |  |  |  |  |  |  |
| 8+40  | 1.6153 | 5.14 |  | VQ   |  |  |  |  |  |  |  |
| 8+45  | 1.6511 | 5.19 |  | VQ   |  |  |  |  |  |  |  |
| 8+50  | 1.6874 | 5.28 |  | VQ   |  |  |  |  |  |  |  |
| 8+55  | 1.7251 | 5.47 |  | VQ   |  |  |  |  |  |  |  |
| 9+ 0  | 1.7631 | 5.52 |  | VQ   |  |  |  |  |  |  |  |
| 9+ 5  | 1.8022 | 5.68 |  | VQ   |  |  |  |  |  |  |  |
| 9+10  | 1.8439 | 6.05 |  | V Q  |  |  |  |  |  |  |  |
| 9+15  | 1.8863 | 6.15 |  | V Q  |  |  |  |  |  |  |  |
| 9+20  | 1.9293 | 6.25 |  | VQ   |  |  |  |  |  |  |  |
| 9+25  | 1.9737 | 6.44 |  | VQ   |  |  |  |  |  |  |  |
| 9+30  | 2.0184 | 6.49 |  | VQ   |  |  |  |  |  |  |  |
| 9+35  | 2.0638 | 6.58 |  | V Q  |  |  |  |  |  |  |  |
| 9+40  | 2.1104 | 6.77 |  | VQ   |  |  |  |  |  |  |  |
| 9+45  | 2.1573 | 6.82 |  | VQ   |  |  |  |  |  |  |  |
| 9+50  | 2.2049 | 6.91 |  | VQ   |  |  |  |  |  |  |  |
| 9+55  | 2.2538 | 7.10 |  | V Q  |  |  |  |  |  |  |  |
| 10+ 0 | 2.3030 | 7.14 |  | VQ   |  |  |  |  |  |  |  |
| 10+ 5 | 2.3486 | 6.62 |  | Q    |  |  |  |  |  |  |  |
| 10+10 | 2.3854 | 5.35 |  | Q V  |  |  |  |  |  |  |  |
| 10+15 | 2.4200 | 5.02 |  | Q V  |  |  |  |  |  |  |  |
| 10+20 | 2.4539 | 4.92 |  | Q  V |  |  |  |  |  |  |  |
| 10+25 | 2.4876 | 4.90 |  | Q  V |  |  |  |  |  |  |  |
| 10+30 | 2.5212 | 4.88 |  | Q  V |  |  |  |  |  |  |  |
| 10+35 | 2.5575 | 5.27 |  | Q V  |  |  |  |  |  |  |  |
| 10+40 | 2.6001 | 6.18 |  | Q V  |  |  |  |  |  |  |  |
| 10+45 | 2.6443 | 6.42 |  | Q V  |  |  |  |  |  |  |  |
| 10+50 | 2.6889 | 6.49 |  | Q V  |  |  |  |  |  |  |  |
| 10+55 | 2.7337 | 6.50 |  | Q V  |  |  |  |  |  |  |  |
| 11+ 0 | 2.7786 | 6.51 |  | Q V  |  |  |  |  |  |  |  |
| 11+ 5 | 2.8229 | 6.44 |  | Q V  |  |  |  |  |  |  |  |
| 11+10 | 2.8660 | 6.25 |  | Q V  |  |  |  |  |  |  |  |
| 11+15 | 2.9087 | 6.21 |  | Q V  |  |  |  |  |  |  |  |
| 11+20 | 2.9513 | 6.19 |  | Q V  |  |  |  |  |  |  |  |
| 11+25 | 2.9940 | 6.19 |  | Q V  |  |  |  |  |  |  |  |
| 11+30 | 3.0366 | 6.19 |  | Q V  |  |  |  |  |  |  |  |
| 11+35 | 3.0781 | 6.03 |  | Q V  |  |  |  |  |  |  |  |
| 11+40 | 3.1172 | 5.67 |  | Q V  |  |  |  |  |  |  |  |
| 11+45 | 3.1555 | 5.57 |  | Q V  |  |  |  |  |  |  |  |
| 11+50 | 3.1943 | 5.62 |  | Q V  |  |  |  |  |  |  |  |
| 11+55 | 3.2342 | 5.80 |  | Q V  |  |  |  |  |  |  |  |
| 12+ 0 | 3.2744 | 5.84 |  | Q V  |  |  |  |  |  |  |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|       |        |       |  |   |   |   |   |  |  |
|-------|--------|-------|--|---|---|---|---|--|--|
| 12+ 5 | 3.3189 | 6.45  |  |   | Q | V |   |  |  |
| 12+10 | 3.3730 | 7.86  |  |   | Q | V |   |  |  |
| 12+15 | 3.4297 | 8.24  |  |   | Q | V |   |  |  |
| 12+20 | 3.4882 | 8.48  |  |   | Q | V |   |  |  |
| 12+25 | 3.5488 | 8.81  |  |   | Q | V |   |  |  |
| 12+30 | 3.6102 | 8.91  |  |   | Q | V |   |  |  |
| 12+35 | 3.6734 | 9.18  |  |   | Q | V |   |  |  |
| 12+40 | 3.7406 | 9.76  |  |   | Q | V |   |  |  |
| 12+45 | 3.8090 | 9.93  |  |   | Q | V |   |  |  |
| 12+50 | 3.8786 | 10.10 |  |   | Q | V |   |  |  |
| 12+55 | 3.9503 | 10.41 |  |   | Q | V |   |  |  |
| 13+ 0 | 4.0227 | 10.51 |  |   | Q | V |   |  |  |
| 13+ 5 | 4.0993 | 11.13 |  |   | Q | V |   |  |  |
| 13+10 | 4.1856 | 12.53 |  |   |   | V | Q |  |  |
| 13+15 | 4.2746 | 12.91 |  |   |   | V | Q |  |  |
| 13+20 | 4.3644 | 13.04 |  |   |   | V | Q |  |  |
| 13+25 | 4.4545 | 13.08 |  |   |   | V | Q |  |  |
| 13+30 | 4.5448 | 13.12 |  |   |   |   | Q |  |  |
| 13+35 | 4.6264 | 11.85 |  |   |   | Q | V |  |  |
| 13+40 | 4.6873 | 8.84  |  |   | Q |   | V |  |  |
| 13+45 | 4.7428 | 8.06  |  |   | Q |   | V |  |  |
| 13+50 | 4.7969 | 7.85  |  |   | Q |   | V |  |  |
| 13+55 | 4.8507 | 7.81  |  |   | Q |   | V |  |  |
| 14+ 0 | 4.9044 | 7.80  |  |   | Q |   | V |  |  |
| 14+ 5 | 4.9614 | 8.29  |  |   | Q |   | V |  |  |
| 14+10 | 5.0262 | 9.40  |  |   | Q |   | V |  |  |
| 14+15 | 5.0931 | 9.71  |  |   | Q |   | V |  |  |
| 14+20 | 5.1599 | 9.70  |  |   | Q |   | V |  |  |
| 14+25 | 5.2250 | 9.46  |  |   | Q |   | V |  |  |
| 14+30 | 5.2899 | 9.42  |  |   | Q |   | V |  |  |
| 14+35 | 5.3547 | 9.41  |  |   | Q |   | V |  |  |
| 14+40 | 5.4196 | 9.42  |  |   | Q |   | V |  |  |
| 14+45 | 5.4846 | 9.44  |  |   | Q |   | V |  |  |
| 14+50 | 5.5489 | 9.34  |  |   | Q |   | V |  |  |
| 14+55 | 5.6115 | 9.08  |  |   | Q |   | V |  |  |
| 15+ 0 | 5.6736 | 9.03  |  |   | Q |   | V |  |  |
| 15+ 5 | 5.7350 | 8.91  |  |   | Q |   | V |  |  |
| 15+10 | 5.7945 | 8.64  |  |   | Q |   | V |  |  |
| 15+15 | 5.8536 | 8.58  |  |   | Q |   | V |  |  |
| 15+20 | 5.9119 | 8.46  |  |   | Q |   | V |  |  |
| 15+25 | 5.9684 | 8.20  |  |   | Q |   | V |  |  |
| 15+30 | 6.0244 | 8.14  |  |   | Q |   | V |  |  |
| 15+35 | 6.0773 | 7.67  |  |   | Q |   | V |  |  |
| 15+40 | 6.1226 | 6.59  |  |   | Q |   | V |  |  |
| 15+45 | 6.1661 | 6.31  |  |   | Q |   | V |  |  |
| 15+50 | 6.2090 | 6.24  |  |   | Q |   | V |  |  |
| 15+55 | 6.2519 | 6.23  |  |   | Q |   | V |  |  |
| 16+ 0 | 6.2949 | 6.24  |  |   | Q |   | V |  |  |
| 16+ 5 | 6.3299 | 5.08  |  | Q |   |   | V |  |  |
| 16+10 | 6.3458 | 2.32  |  | Q |   |   | V |  |  |
| 16+15 | 6.3568 | 1.59  |  | Q |   |   | V |  |  |
| 16+20 | 6.3663 | 1.38  |  | Q |   |   | V |  |  |
| 16+25 | 6.3755 | 1.33  |  | Q |   |   | V |  |  |
| 16+30 | 6.3844 | 1.30  |  | Q |   |   | V |  |  |
| 16+35 | 6.3929 | 1.23  |  | Q |   |   | V |  |  |
| 16+40 | 6.4000 | 1.04  |  | Q |   |   | V |  |  |
| 16+45 | 6.4069 | 1.00  |  | Q |   |   | V |  |  |
| 16+50 | 6.4137 | 0.98  |  | Q |   |   | V |  |  |
| 16+55 | 6.4204 | 0.98  |  | Q |   |   | V |  |  |
| 17+ 0 | 6.4271 | 0.98  |  | Q |   |   | V |  |  |
| 17+ 5 | 6.4349 | 1.13  |  | Q |   |   | V |  |  |
| 17+10 | 6.4452 | 1.49  |  | Q |   |   | V |  |  |
| 17+15 | 6.4562 | 1.59  |  | Q |   |   | V |  |  |
| 17+20 | 6.4673 | 1.62  |  | Q |   |   | V |  |  |
| 17+25 | 6.4785 | 1.62  |  | Q |   |   | V |  |  |
| 17+30 | 6.4897 | 1.63  |  | Q |   |   | V |  |  |
| 17+35 | 6.5009 | 1.63  |  | Q |   |   | V |  |  |
| 17+40 | 6.5121 | 1.63  |  | Q |   |   | V |  |  |
| 17+45 | 6.5234 | 1.63  |  | Q |   |   | V |  |  |
| 17+50 | 6.5340 | 1.55  |  | Q |   |   | V |  |  |
| 17+55 | 6.5435 | 1.37  |  | Q |   |   | V |  |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|       |        |      |   |  |  |  |   |  |
|-------|--------|------|---|--|--|--|---|--|
| 18+ 0 | 6.5526 | 1.32 | Q |  |  |  | V |  |
| 18+ 5 | 6.5616 | 1.31 | Q |  |  |  | V |  |
| 18+10 | 6.5706 | 1.30 | Q |  |  |  | V |  |
| 18+15 | 6.5795 | 1.30 | Q |  |  |  | V |  |
| 18+20 | 6.5885 | 1.30 | Q |  |  |  | V |  |
| 18+25 | 6.5975 | 1.30 | Q |  |  |  | V |  |
| 18+30 | 6.6064 | 1.30 | Q |  |  |  | V |  |
| 18+35 | 6.6149 | 1.23 | Q |  |  |  | V |  |
| 18+40 | 6.6221 | 1.04 | Q |  |  |  | V |  |
| 18+45 | 6.6289 | 1.00 | Q |  |  |  | V |  |
| 18+50 | 6.6351 | 0.90 | Q |  |  |  | V |  |
| 18+55 | 6.6401 | 0.72 | Q |  |  |  | V |  |
| 19+ 0 | 6.6447 | 0.67 | Q |  |  |  | V |  |
| 19+ 5 | 6.6498 | 0.73 | Q |  |  |  | V |  |
| 19+10 | 6.6561 | 0.91 | Q |  |  |  | V |  |
| 19+15 | 6.6627 | 0.96 | Q |  |  |  | V |  |
| 19+20 | 6.6699 | 1.05 | Q |  |  |  | V |  |
| 19+25 | 6.6784 | 1.23 | Q |  |  |  | V |  |
| 19+30 | 6.6872 | 1.28 | Q |  |  |  | V |  |
| 19+35 | 6.6956 | 1.22 | Q |  |  |  | V |  |
| 19+40 | 6.7028 | 1.04 | Q |  |  |  | V |  |
| 19+45 | 6.7096 | 1.00 | Q |  |  |  | V |  |
| 19+50 | 6.7159 | 0.90 | Q |  |  |  | V |  |
| 19+55 | 6.7208 | 0.72 | Q |  |  |  | V |  |
| 20+ 0 | 6.7255 | 0.67 | Q |  |  |  | V |  |
| 20+ 5 | 6.7305 | 0.73 | Q |  |  |  | V |  |
| 20+10 | 6.7368 | 0.91 | Q |  |  |  | V |  |
| 20+15 | 6.7434 | 0.96 | Q |  |  |  | V |  |
| 20+20 | 6.7501 | 0.97 | Q |  |  |  | V |  |
| 20+25 | 6.7568 | 0.98 | Q |  |  |  | V |  |
| 20+30 | 6.7635 | 0.98 | Q |  |  |  | V |  |
| 20+35 | 6.7702 | 0.98 | Q |  |  |  | V |  |
| 20+40 | 6.7770 | 0.98 | Q |  |  |  | V |  |
| 20+45 | 6.7837 | 0.98 | Q |  |  |  | V |  |
| 20+50 | 6.7899 | 0.90 | Q |  |  |  | V |  |
| 20+55 | 6.7948 | 0.72 | Q |  |  |  | V |  |
| 21+ 0 | 6.7995 | 0.67 | Q |  |  |  | V |  |
| 21+ 5 | 6.8045 | 0.73 | Q |  |  |  | V |  |
| 21+10 | 6.8108 | 0.91 | Q |  |  |  | V |  |
| 21+15 | 6.8174 | 0.96 | Q |  |  |  | V |  |
| 21+20 | 6.8235 | 0.89 | Q |  |  |  | V |  |
| 21+25 | 6.8285 | 0.72 | Q |  |  |  | V |  |
| 21+30 | 6.8331 | 0.67 | Q |  |  |  | V |  |
| 21+35 | 6.8381 | 0.73 | Q |  |  |  | V |  |
| 21+40 | 6.8444 | 0.91 | Q |  |  |  | V |  |
| 21+45 | 6.8510 | 0.96 | Q |  |  |  | V |  |
| 21+50 | 6.8572 | 0.89 | Q |  |  |  | V |  |
| 21+55 | 6.8621 | 0.72 | Q |  |  |  | V |  |
| 22+ 0 | 6.8667 | 0.67 | Q |  |  |  | V |  |
| 22+ 5 | 6.8718 | 0.73 | Q |  |  |  | V |  |
| 22+10 | 6.8781 | 0.91 | Q |  |  |  | V |  |
| 22+15 | 6.8847 | 0.96 | Q |  |  |  | V |  |
| 22+20 | 6.8908 | 0.89 | Q |  |  |  | V |  |
| 22+25 | 6.8958 | 0.72 | Q |  |  |  | V |  |
| 22+30 | 6.9004 | 0.67 | Q |  |  |  | V |  |
| 22+35 | 6.9049 | 0.66 | Q |  |  |  | V |  |
| 22+40 | 6.9094 | 0.65 | Q |  |  |  | V |  |
| 22+45 | 6.9139 | 0.65 | Q |  |  |  | V |  |
| 22+50 | 6.9184 | 0.65 | Q |  |  |  | V |  |
| 22+55 | 6.9228 | 0.65 | Q |  |  |  | V |  |
| 23+ 0 | 6.9273 | 0.65 | Q |  |  |  | V |  |
| 23+ 5 | 6.9318 | 0.65 | Q |  |  |  | V |  |
| 23+10 | 6.9363 | 0.65 | Q |  |  |  | V |  |
| 23+15 | 6.9408 | 0.65 | Q |  |  |  | V |  |
| 23+20 | 6.9453 | 0.65 | Q |  |  |  | V |  |
| 23+25 | 6.9498 | 0.65 | Q |  |  |  | V |  |
| 23+30 | 6.9542 | 0.65 | Q |  |  |  | V |  |
| 23+35 | 6.9587 | 0.65 | Q |  |  |  | V |  |
| 23+40 | 6.9632 | 0.65 | Q |  |  |  | V |  |
| 23+45 | 6.9677 | 0.65 | Q |  |  |  | V |  |
| 23+50 | 6.9722 | 0.65 | Q |  |  |  | V |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|       |        |      |    |  |  |  |   |
|-------|--------|------|----|--|--|--|---|
| 23+55 | 6.9767 | 0.65 | IQ |  |  |  | V |
| 24+ 0 | 6.9811 | 0.65 | IQ |  |  |  | V |
| 24+ 5 | 6.9846 | 0.50 | Q  |  |  |  | V |
| 24+10 | 6.9855 | 0.13 | Q  |  |  |  | V |
| 24+15 | 6.9858 | 0.04 | Q  |  |  |  | V |
| 24+20 | 6.9858 | 0.01 | Q  |  |  |  | V |
| 24+25 | 6.9859 | 0.00 | Q  |  |  |  | V |

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Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT B – Inflow Hydrographs, Proposed Condition

| Soil Low Loss Rate Worksheet        |              |                        |                            |                                      |                                         |                                    |
|-------------------------------------|--------------|------------------------|----------------------------|--------------------------------------|-----------------------------------------|------------------------------------|
| Drainage Area B (proposed) - 8.4 Ac |              |                        |                            |                                      |                                         |                                    |
| [1]                                 | [2]          | [3]                    | [4]                        | [5]                                  | [6]                                     | [7]                                |
| Subarea                             | Area in (Ac) | Land Use (Plate D-5.6) | % Impervious (Plate D-5.6) | Soil Low Loss Rate<br>0.9-(0.8)* [4] | Decimal portion of Area<br>[2] / SUM[2] | Average Low Loss Rate<br>[5] * [6] |
|                                     | 0.8          | Basin                  | 0                          | 0.90                                 | 0.10                                    | 0.09                               |
|                                     |              | Res 1 Ac               | 20                         | 0.74                                 | 0.00                                    | 0.00                               |
|                                     |              | Res 1/2 Ac             | 40                         | 0.58                                 | 0.00                                    | 0.00                               |
|                                     |              | Res 1/4 Ac             | 50                         | 0.50                                 | 0.00                                    | 0.00                               |
|                                     | 7.6          | Res < 1/4 Ac           | 65                         | 0.38                                 | 0.90                                    | 0.34                               |
|                                     |              | Apartment              | 80                         | 0.26                                 | 0.00                                    | 0.00                               |
|                                     |              | Mobil Home             | 75                         | 0.30                                 | 0.00                                    | 0.00                               |
|                                     |              | Hospital               | 75                         | 0.30                                 | 0.00                                    | 0.00                               |
|                                     |              | Commercial             | 90                         | 0.18                                 | 0.00                                    | 0.00                               |
| Sum =                               | 8.4          |                        |                            |                                      | 1.00                                    | <b>0.43</b>                        |

| Runoff Index (RI) Worksheet         |              |            |            |                        |          |                                         |                               |
|-------------------------------------|--------------|------------|------------|------------------------|----------|-----------------------------------------|-------------------------------|
| Drainage Area B (proposed) - 8.4 Ac |              |            |            |                        |          |                                         |                               |
| [1]                                 | [2]          | [3]        | [4]        | [5]                    | [6]      | [7]                                     | [8]                           |
| Subarea                             | Area in (Ac) | Soil Group | Cover Type | RI Number (Plate E6-1) | Land Use | Decimal portion of Area<br>[2] / SUM[2] | Average RI Value<br>[5] * [7] |
| Basin                               |              | B          | Landscape  | 56                     | Basin    | 0.00                                    | 0.0                           |
|                                     | 0.8          | C          | Landscape  | 69                     | Basin    | 1.00                                    | 69.0                          |
|                                     |              | D          | Landscape  | 75                     | Basin    | 0.00                                    | 0.0                           |
| Sum =                               | <b>0.8</b>   |            |            |                        |          | 1.00                                    | <b>69.0</b>                   |
|                                     |              |            |            |                        |          |                                         |                               |
| Res                                 |              | B          | Landscape  | 56                     | Res      | 0.00                                    | 0.0                           |
|                                     | 7.6          | C          | Landscape  | 69                     | Res      | 1.00                                    | 69.0                          |
|                                     |              | D          | Landscape  | 75                     | Res      | 0.00                                    | 0.0                           |
| Sum =                               | <b>7.6</b>   |            |            |                        |          | 1.00                                    | <b>69.0</b>                   |

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT B – Inflow Hydrographs, Proposed Condition

| <b>Manning "n" Value Worksheet</b>         |              |                        |           |                                      |                             |
|--------------------------------------------|--------------|------------------------|-----------|--------------------------------------|-----------------------------|
| <b>Drainage Area B (proposed) - 8.4 Ac</b> |              |                        |           |                                      |                             |
| [1]                                        | [2]          | [3]                    | [4]       | [5]                                  | [7]                         |
| Subarea                                    | Area in (Ac) | Land Use (Plate D-5.6) | "n" Value | Decimal portion of Area [2] / SUM[2] | Average "n" Value [4] * [5] |
|                                            | 0.8          | Basin                  | 0.035     | 0.10                                 | 0.003                       |
|                                            |              | Res 1 Ac               | 0.015     | 0.00                                 | 0.000                       |
|                                            |              | Res 1/2 Ac             | 0.015     | 0.00                                 | 0.000                       |
|                                            |              | Res 1/4 Ac             | 0.015     | 0.00                                 | 0.000                       |
|                                            | 7.6          | Res < 1/4 Ac           | 0.015     | 0.90                                 | 0.014                       |
|                                            |              | Apartment              | 0.015     | 0.00                                 | 0.000                       |
|                                            |              | Mobil Home             | 0.015     | 0.00                                 | 0.000                       |
|                                            |              | Streets                | 0.015     | 0.00                                 | 0.000                       |
|                                            |              | Commercial             | 0.015     | 0.00                                 | 0.000                       |
| Sum =                                      | <b>8.4</b>   |                        |           | 1.00                                 | <b>0.017</b>                |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

## U n i t   H y d r o g r a p h   A n a l y s i s

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Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

-----  
English (in-lb) Input Units Used  
English Rainfall Data (Inches) Input Values Used

English Units used in output format

-----  
Nichols Road Project - Tract 37305  
Drainage Area B = 8.4 Ac  
Proposed Condition  
100-year 1-hour storm

-----  
Drainage Area = 8.40(Ac.) = 0.013 Sq. Mi.  
Drainage Area for Depth-Area Areal Adjustment = 8.40(Ac.) = 0.013 Sq. Mi.  
Length along longest watercourse = 1015.00(Ft.)  
Length along longest watercourse measured to centroid = 444.00(Ft.)  
Length along longest watercourse = 0.192 Mi.  
Length along longest watercourse measured to centroid = 0.084 Mi.  
Difference in elevation = 34.00(Ft.)  
Slope along watercourse = 176.8670 Ft./Mi.  
Average Manning's 'N' = 0.017  
Lag time = 0.032 Hr.  
Lag time = 1.91 Min.  
25% of lag time = 0.48 Min.  
40% of lag time = 0.76 Min.  
Unit time = 5.00 Min.  
Duration of storm = 1 Hour(s)  
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 8.40          | 0.49             | 4.12           |

100 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 8.40          | 1.38             | 11.59          |

STORM EVENT (YEAR) = 100.00  
Area Averaged 2-Year Rainfall = 0.490(In)  
Area Averaged 100-Year Rainfall = 1.380(In)

Point rain (area averaged) = 1.380(In)  
Areal adjustment factor = 99.99 %  
Adjusted average point rain = 1.380(In)

Sub-Area Data:  
Area(Ac.)                  Runoff Index      Impervious %  
0.800                      69.00              0.050

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

7.600                      69.00                      0.550  
Total Area Entered =                      8.40 (Ac.)

| RI        | RI    | Infil. Rate | Impervious | Adj. Infil. Rate | Area%  | F       |
|-----------|-------|-------------|------------|------------------|--------|---------|
| AMC2      | AMC-3 | (In/Hr)     | (Dec.%)    | (In/Hr)          | (Dec.) | (In/Hr) |
| 69.0      | 84.4  | 0.194       | 0.050      | 0.185            | 0.095  | 0.018   |
| 69.0      | 84.4  | 0.194       | 0.550      | 0.098            | 0.905  | 0.089   |
| Sum (F) = |       |             |            |                  |        | 0.106   |

Area averaged mean soil loss (F) (In/Hr) = 0.106

Minimum soil loss rate ((In/Hr)) = 0.053

(for 24 hour storm duration)

Soil loss rate (decimal) = 0.430

-----  
Slope of intensity-duration curve for a 1 hour storm =0.4800  
-----

## U n i t   H y d r o g r a p h FOOTHILL S-Curve

### Unit Hydrograph Data

| Unit time period<br>(hrs) | Time % of lag | Distribution<br>Graph % | Unit Hydrograph<br>(CFS) |
|---------------------------|---------------|-------------------------|--------------------------|
| 1                         | 0.083         | 261.789                 | 52.730                   |
| 2                         | 0.167         | 523.577                 | 43.889                   |
| 3                         | 0.250         | 785.366                 | 3.381                    |
| Sum = 100.000             |               | Sum=                    | 8.466                    |

-----  
The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

| Unit Time<br>(Hr.) | Pattern<br>Percent | Storm Rain<br>(In/Hr) | Loss rate(In./Hr)<br>Max   Low | Effective<br>(In/Hr) |       |
|--------------------|--------------------|-----------------------|--------------------------------|----------------------|-------|
| 1                  | 0.08               | 4.40                  | 0.729                          | ( 0.313)             | 0.622 |
| 2                  | 0.17               | 4.50                  | 0.745                          | ( 0.320)             | 0.639 |
| 3                  | 0.25               | 5.40                  | 0.894                          | ( 0.384)             | 0.788 |
| 4                  | 0.33               | 5.40                  | 0.894                          | ( 0.384)             | 0.788 |
| 5                  | 0.42               | 5.70                  | 0.944                          | ( 0.406)             | 0.838 |
| 6                  | 0.50               | 6.40                  | 1.060                          | ( 0.456)             | 0.954 |
| 7                  | 0.58               | 7.90                  | 1.308                          | ( 0.563)             | 1.202 |
| 8                  | 0.67               | 9.10                  | 1.507                          | ( 0.648)             | 1.401 |
| 9                  | 0.75               | 12.80                 | 2.120                          | ( 0.911)             | 2.013 |
| 10                 | 0.83               | 25.60                 | 4.239                          | ( 1.823)             | 4.133 |
| 11                 | 0.92               | 7.90                  | 1.308                          | ( 0.563)             | 1.202 |
| 12                 | 1.00               | 4.90                  | 0.811                          | ( 0.349)             | 0.705 |

(Loss Rate Not Used)

Sum = 100.0                      Sum = 15.3

Flood volume = Effective rainfall 1.27(In)  
times area 8.4 (Ac.) / [(In) / (Ft.)] = 0.9 (Ac.Ft)

Total soil loss = 0.11 (In)

Total soil loss = 0.074 (Ac.Ft)

Total rainfall = 1.38 (In)

Flood volume = 38837.6 Cubic Feet

Total soil loss = 3238.1 Cubic Feet

-----  
Peak flow rate of this hydrograph = 26.344 (CFS)  
-----

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## 1 - H O U R   S T O R M R u n o f f   H y d r o g r a p h

-----  
Hydrograph in 5 Minute intervals ((CFS))  
-----

| Time (h+m) | Volume Ac.Ft | Q (CFS) | 0 | 7.5 | 15.0 | 22.5 | 30.0 |
|------------|--------------|---------|---|-----|------|------|------|
| 0+ 5       | 0.0191       | 2.78    | V | Q   |      |      |      |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|      |        |       |   |   |   |   |    |   |    |   |     |   |
|------|--------|-------|---|---|---|---|----|---|----|---|-----|---|
| 0+10 | 0.0547 | 5.17  |   | V | Q |   |    |   |    |   |     |   |
| 0+15 | 0.0966 | 6.07  |   |   | V | Q |    |   |    |   |     |   |
| 0+20 | 0.1422 | 6.63  |   |   |   | V | Q  |   |    |   |     |   |
| 0+25 | 0.1897 | 6.90  |   |   |   |   | VQ |   |    |   |     |   |
| 0+30 | 0.2420 | 7.60  |   |   |   |   |    | Q |    |   |     |   |
| 0+35 | 0.3051 | 9.15  |   |   |   |   |    |   | QV |   |     |   |
| 0+40 | 0.3808 | 11.00 |   |   |   |   |    |   |    | Q | V   |   |
| 0+45 | 0.4810 | 14.54 |   |   |   |   |    |   |    |   | Q V |   |
| 0+50 | 0.6624 | 26.34 |   |   |   |   |    |   |    |   |     | V |
| 0+55 | 0.8092 | 21.31 |   |   |   |   |    |   |    | Q |     | V |
| 1+ 0 | 0.8698 | 8.80  |   |   |   |   |    |   |    |   |     | V |
| 1+ 5 | 0.8902 | 2.97  |   | Q |   |   |    |   |    |   |     | V |
| 1+10 | 0.8916 | 0.20  | Q |   |   |   |    |   |    |   |     | V |

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# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

## U n i t   H y d r o g r a p h   A n a l y s i s

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Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

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Length along longest watercourse measured to centroid = 0.084 Mi.  
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Slope along watercourse = 176.8670 Ft./Mi.  
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Lag time = 0.032 Hr.  
Lag time = 1.91 Min.  
25% of lag time = 0.48 Min.  
40% of lag time = 0.76 Min.  
Unit time = 5.00 Min.  
Duration of storm = 3 Hour(s)  
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 8.40          | 0.88             | 7.39           |

100 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 8.40          | 2.22             | 18.65          |

STORM EVENT (YEAR) = 100.00  
Area Averaged 2-Year Rainfall = 0.880(In)  
Area Averaged 100-Year Rainfall = 2.220(In)

Point rain (area averaged) = 2.220(In)  
Areal adjustment factor = 100.00 %  
Adjusted average point rain = 2.220(In)

Sub-Area Data:  
Area(Ac.)                  Runoff Index          Impervious %  
0.800                      69.00                  0.050

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

7.600                      69.00                      0.550  
Total Area Entered =                      8.40 (Ac.)

| RI        | RI    | Infil. Rate | Impervious | Adj. Infil. Rate | Area%  | F       |
|-----------|-------|-------------|------------|------------------|--------|---------|
| AMC2      | AMC-3 | (In/Hr)     | (Dec.%)    | (In/Hr)          | (Dec.) | (In/Hr) |
| 69.0      | 84.4  | 0.194       | 0.050      | 0.185            | 0.095  | 0.018   |
| 69.0      | 84.4  | 0.194       | 0.550      | 0.098            | 0.905  | 0.089   |
| Sum (F) = |       |             |            |                  |        | 0.106   |

Area averaged mean soil loss (F) (In/Hr) = 0.106

Minimum soil loss rate ((In/Hr)) = 0.053

(for 24 hour storm duration)

Soil low loss rate (decimal) = 0.430

## Unit Hydrograph FOOTHILL S-Curve

### Unit Hydrograph Data

| Unit time period<br>(hrs) | Time % of lag | Distribution<br>Graph % | Unit Hydrograph<br>(CFS) |
|---------------------------|---------------|-------------------------|--------------------------|
| 1                         | 0.083         | 261.789                 | 52.730                   |
| 2                         | 0.167         | 523.577                 | 43.889                   |
| 3                         | 0.250         | 785.366                 | 3.381                    |
| Sum = 100.000             |               | Sum=                    | 8.466                    |

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

| Unit Time<br>(Hr.) | Pattern<br>Percent | Storm Rain<br>(In/Hr) | Loss rate(In./Hr)<br>Max   Low | Effective<br>(In/Hr) |
|--------------------|--------------------|-----------------------|--------------------------------|----------------------|
| 1                  | 0.08               | 1.30                  | 0.106 ( 0.149)                 | 0.240                |
| 2                  | 0.17               | 1.30                  | 0.106 ( 0.149)                 | 0.240                |
| 3                  | 0.25               | 1.10                  | 0.106 ( 0.126)                 | 0.187                |
| 4                  | 0.33               | 1.50                  | 0.106 ( 0.172)                 | 0.293                |
| 5                  | 0.42               | 1.50                  | 0.106 ( 0.172)                 | 0.293                |
| 6                  | 0.50               | 1.80                  | 0.106 ( 0.206)                 | 0.373                |
| 7                  | 0.58               | 1.50                  | 0.106 ( 0.172)                 | 0.293                |
| 8                  | 0.67               | 1.80                  | 0.106 ( 0.206)                 | 0.373                |
| 9                  | 0.75               | 1.80                  | 0.106 ( 0.206)                 | 0.373                |
| 10                 | 0.83               | 1.50                  | 0.106 ( 0.172)                 | 0.293                |
| 11                 | 0.92               | 1.60                  | 0.106 ( 0.183)                 | 0.320                |
| 12                 | 1.00               | 1.80                  | 0.106 ( 0.206)                 | 0.373                |
| 13                 | 1.08               | 2.20                  | 0.106 ( 0.252)                 | 0.480                |
| 14                 | 1.17               | 2.20                  | 0.106 ( 0.252)                 | 0.480                |
| 15                 | 1.25               | 2.20                  | 0.106 ( 0.252)                 | 0.480                |
| 16                 | 1.33               | 2.00                  | 0.106 ( 0.229)                 | 0.427                |
| 17                 | 1.42               | 2.60                  | 0.106 ( 0.298)                 | 0.586                |
| 18                 | 1.50               | 2.70                  | 0.106 ( 0.309)                 | 0.613                |
| 19                 | 1.58               | 2.40                  | 0.106 ( 0.275)                 | 0.533                |
| 20                 | 1.67               | 2.70                  | 0.106 ( 0.309)                 | 0.613                |
| 21                 | 1.75               | 3.30                  | 0.106 ( 0.378)                 | 0.773                |
| 22                 | 1.83               | 3.10                  | 0.106 ( 0.355)                 | 0.720                |
| 23                 | 1.92               | 2.90                  | 0.106 ( 0.332)                 | 0.666                |
| 24                 | 2.00               | 3.00                  | 0.106 ( 0.344)                 | 0.693                |
| 25                 | 2.08               | 3.10                  | 0.106 ( 0.355)                 | 0.720                |
| 26                 | 2.17               | 4.20                  | 0.106 ( 0.481)                 | 1.013                |
| 27                 | 2.25               | 5.00                  | 0.106 ( 0.573)                 | 1.226                |
| 28                 | 2.33               | 3.50                  | 0.106 ( 0.401)                 | 0.826                |
| 29                 | 2.42               | 6.80                  | 0.106 ( 0.779)                 | 1.705                |
| 30                 | 2.50               | 7.30                  | 0.106 ( 0.836)                 | 1.838                |
| 31                 | 2.58               | 8.20                  | 0.106 ( 0.939)                 | 2.078                |
| 32                 | 2.67               | 5.90                  | 0.106 ( 0.676)                 | 1.466                |
| 33                 | 2.75               | 2.00                  | 0.106 ( 0.229)                 | 0.427                |
| 34                 | 2.83               | 1.80                  | 0.106 ( 0.206)                 | 0.373                |
| 35                 | 2.92               | 1.80                  | 0.106 ( 0.206)                 | 0.373                |
| 36                 | 3.00               | 0.60                  | ( 0.106) 0.069                 | 0.091                |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

(Loss Rate Not Used)  
Sum = 100.0 Sum = 22.9  
Flood volume = Effective rainfall 1.90(In)  
times area 8.4(Ac.) / [(In) / (Ft.)] = 1.3(Ac.Ft)  
Total soil loss = 0.32(In)  
Total soil loss = 0.221(Ac.Ft)  
Total rainfall = 2.22(In)  
Flood volume = 58070.5 Cubic Feet  
Total soil loss = 9619.2 Cubic Feet

Peak flow rate of this hydrograph = 16.604 (CFS)

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3 - H O U R S T O R M  
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0    | 5.0 | 10.0 | 15.0 | 20.0 |
|-----------|--------------|--------|------|-----|------|------|------|
| 0+ 5      | 0.0074       | 1.07   | V Q  |     |      |      |      |
| 0+10      | 0.0209       | 1.96   | V Q  |     |      |      |      |
| 0+15      | 0.0333       | 1.80   | V Q  |     |      |      |      |
| 0+20      | 0.0476       | 2.07   | V Q  |     |      |      |      |
| 0+25      | 0.0645       | 2.45   | V Q  |     |      |      |      |
| 0+30      | 0.0840       | 2.84   | V Q  |     |      |      |      |
| 0+35      | 0.1032       | 2.78   | V Q  |     |      |      |      |
| 0+40      | 0.1229       | 2.86   | V Q  |     |      |      |      |
| 0+45      | 0.1446       | 3.14   | V Q  |     |      |      |      |
| 0+50      | 0.1639       | 2.80   | VQ   |     |      |      |      |
| 0+55      | 0.1820       | 2.63   | Q    |     |      |      |      |
| 1+ 0      | 0.2022       | 2.94   | QV   |     |      |      |      |
| 1+ 5      | 0.2272       | 3.62   | VQ   |     |      |      |      |
| 1+10      | 0.2549       | 4.03   | VQ   |     |      |      |      |
| 1+15      | 0.2829       | 4.06   | Q    |     |      |      |      |
| 1+20      | 0.3093       | 3.83   | Q V  |     |      |      |      |
| 1+25      | 0.3392       | 4.34   | Q V  |     |      |      |      |
| 1+30      | 0.3739       | 5.04   | QV   |     |      |      |      |
| 1+35      | 0.4072       | 4.83   | Q  V |     |      |      |      |
| 1+40      | 0.4409       | 4.90   | Q  V |     |      |      |      |
| 1+45      | 0.4814       | 5.88   | Q V  |     |      |      |      |
| 1+50      | 0.5245       | 6.26   | Q V  |     |      |      |      |
| 1+55      | 0.5650       | 5.87   | Q V  |     |      |      |      |
| 2+ 0      | 0.6048       | 5.78   | Q    | V   |      |      |      |
| 2+ 5      | 0.6460       | 5.98   | Q    | V   |      |      |      |
| 2+10      | 0.6969       | 7.40   | Q    | V   |      |      |      |
| 2+15      | 0.7619       | 9.44   | Q    | Q   | V    |      |      |
| 2+20      | 0.8207       | 8.54   | Q    | Q   | V    |      |      |
| 2+25      | 0.8968       | 11.04  | Q    | Q   | V    |      |      |
| 2+30      | 0.9986       | 14.79  | Q    | Q   | V    |      |      |
| 2+35      | 1.1129       | 16.60  | Q    | Q   | V    |      |      |
| 2+40      | 1.2149       | 14.80  | Q    | Q   | V    |      |      |
| 2+45      | 1.2696       | 7.95   | Q    | Q   | V    |      |      |
| 2+50      | 1.2949       | 3.67   | Q    | Q   | V    |      |      |
| 2+55      | 1.3168       | 3.18   | Q    | Q   | V    |      |      |
| 3+ 0      | 1.3299       | 1.90   | Q    |     |      |      |      |
| 3+ 5      | 1.3329       | 0.45   | Q    |     |      |      |      |
| 3+10      | 1.3331       | 0.03   | Q    |     |      |      |      |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT B – Inflow Hydrographs, Proposed Condition

### U n i t   H y d r o g r a p h   A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1  
Study date 01/08/18 File: nrareabpr6100.out

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Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

English (in-lb) Input Units Used  
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Nichols Road Project - Tract 37305  
Drainage Area B = 8.4 Ac  
Proposed Condition  
100-year 6-hour storm

Drainage Area = 8.40(Ac.) = 0.013 Sq. Mi.  
Drainage Area for Depth-Area Areal Adjustment = 8.40(Ac.) = 0.013 Sq. Mi.  
Length along longest watercourse = 1015.00(Ft.)  
Length along longest watercourse measured to centroid = 444.00(Ft.)  
Length along longest watercourse = 0.192 Mi.  
Length along longest watercourse measured to centroid = 0.084 Mi.  
Difference in elevation = 34.00(Ft.)  
Slope along watercourse = 176.8670 Ft./Mi.  
Average Manning's 'N' = 0.017  
Lag time = 0.032 Hr.  
Lag time = 1.91 Min.  
25% of lag time = 0.48 Min.  
40% of lag time = 0.76 Min.  
Unit time = 5.00 Min.  
Duration of storm = 6 Hour(s)  
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 8.40          | 1.26             | 10.58          |

100 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 8.40          | 3.12             | 26.21          |

STORM EVENT (YEAR) = 100.00  
Area Averaged 2-Year Rainfall = 1.260(In)  
Area Averaged 100-Year Rainfall = 3.120(In)

Point rain (area averaged) = 3.120(In)  
Areal adjustment factor = 100.00 %  
Adjusted average point rain = 3.120(In)

Sub-Area Data:  
Area(Ac.)                  Runoff Index      Impervious %  
0.800                      69.00              0.050

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

7.600                      69.00                      0.550  
Total Area Entered =                      8.40 (Ac.)

|           |       |             |            |                  |        |         |
|-----------|-------|-------------|------------|------------------|--------|---------|
| RI        | RI    | Infil. Rate | Impervious | Adj. Infil. Rate | Area%  | F       |
| AMC2      | AMC-3 | (In/Hr)     | (Dec.%)    | (In/Hr)          | (Dec.) | (In/Hr) |
| 69.0      | 84.4  | 0.194       | 0.050      | 0.185            | 0.095  | 0.018   |
| 69.0      | 84.4  | 0.194       | 0.550      | 0.098            | 0.905  | 0.089   |
| Sum (F) = |       |             |            |                  |        | 0.106   |

Area averaged mean soil loss (F) (In/Hr) = 0.106

Minimum soil loss rate ((In/Hr)) = 0.053

(for 24 hour storm duration)

Soil low loss rate (decimal) = 0.430

## U n i t   H y d r o g r a p h FOOTHILL S-Curve

### Unit Hydrograph Data

| Unit time period<br>(hrs) | Time % of lag | Distribution<br>Graph % | Unit Hydrograph<br>(CFS) |
|---------------------------|---------------|-------------------------|--------------------------|
| 1                         | 0.083         | 261.789                 | 52.730                   |
| 2                         | 0.167         | 523.577                 | 43.889                   |
| 3                         | 0.250         | 785.366                 | 3.381                    |
| Sum = 100.000             |               | Sum=                    | 8.466                    |

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

| Unit Time<br>(Hr.) | Pattern<br>Percent | Storm Rain<br>(In/Hr) | Loss rate(In./Hr)<br>Max   Low | Effective<br>(In/Hr) |
|--------------------|--------------------|-----------------------|--------------------------------|----------------------|
| 1                  | 0.08               | 0.50                  | ( 0.106) 0.187                 | 0.107                |
| 2                  | 0.17               | 0.60                  | ( 0.106) 0.225                 | 0.128                |
| 3                  | 0.25               | 0.60                  | ( 0.106) 0.225                 | 0.128                |
| 4                  | 0.33               | 0.60                  | ( 0.106) 0.225                 | 0.128                |
| 5                  | 0.42               | 0.60                  | ( 0.106) 0.225                 | 0.128                |
| 6                  | 0.50               | 0.70                  | 0.106 ( 0.113)                 | 0.156                |
| 7                  | 0.58               | 0.70                  | 0.106 ( 0.113)                 | 0.156                |
| 8                  | 0.67               | 0.70                  | 0.106 ( 0.113)                 | 0.156                |
| 9                  | 0.75               | 0.70                  | 0.106 ( 0.113)                 | 0.156                |
| 10                 | 0.83               | 0.70                  | 0.106 ( 0.113)                 | 0.156                |
| 11                 | 0.92               | 0.70                  | 0.106 ( 0.113)                 | 0.156                |
| 12                 | 1.00               | 0.80                  | 0.106 ( 0.129)                 | 0.193                |
| 13                 | 1.08               | 0.80                  | 0.106 ( 0.129)                 | 0.193                |
| 14                 | 1.17               | 0.80                  | 0.106 ( 0.129)                 | 0.193                |
| 15                 | 1.25               | 0.80                  | 0.106 ( 0.129)                 | 0.193                |
| 16                 | 1.33               | 0.80                  | 0.106 ( 0.129)                 | 0.193                |
| 17                 | 1.42               | 0.80                  | 0.106 ( 0.129)                 | 0.193                |
| 18                 | 1.50               | 0.80                  | 0.106 ( 0.129)                 | 0.193                |
| 19                 | 1.58               | 0.80                  | 0.106 ( 0.129)                 | 0.193                |
| 20                 | 1.67               | 0.80                  | 0.106 ( 0.129)                 | 0.193                |
| 21                 | 1.75               | 0.80                  | 0.106 ( 0.129)                 | 0.193                |
| 22                 | 1.83               | 0.80                  | 0.106 ( 0.129)                 | 0.193                |
| 23                 | 1.92               | 0.80                  | 0.106 ( 0.129)                 | 0.193                |
| 24                 | 2.00               | 0.90                  | 0.106 ( 0.145)                 | 0.231                |
| 25                 | 2.08               | 0.80                  | 0.106 ( 0.129)                 | 0.193                |
| 26                 | 2.17               | 0.90                  | 0.106 ( 0.145)                 | 0.231                |
| 27                 | 2.25               | 0.90                  | 0.106 ( 0.145)                 | 0.231                |
| 28                 | 2.33               | 0.90                  | 0.106 ( 0.145)                 | 0.231                |
| 29                 | 2.42               | 0.90                  | 0.106 ( 0.145)                 | 0.231                |
| 30                 | 2.50               | 0.90                  | 0.106 ( 0.145)                 | 0.231                |
| 31                 | 2.58               | 0.90                  | 0.106 ( 0.145)                 | 0.231                |
| 32                 | 2.67               | 0.90                  | 0.106 ( 0.145)                 | 0.231                |
| 33                 | 2.75               | 1.00                  | 0.106 ( 0.161)                 | 0.268                |
| 34                 | 2.83               | 1.00                  | 0.106 ( 0.161)                 | 0.268                |
| 35                 | 2.92               | 1.00                  | 0.106 ( 0.161)                 | 0.268                |
| 36                 | 3.00               | 1.00                  | 0.106 ( 0.161)                 | 0.268                |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

|    |      |      |       |          |          |       |
|----|------|------|-------|----------|----------|-------|
| 37 | 3.08 | 1.00 | 0.374 | 0.106    | ( 0.161) | 0.268 |
| 38 | 3.17 | 1.10 | 0.412 | 0.106    | ( 0.177) | 0.306 |
| 39 | 3.25 | 1.10 | 0.412 | 0.106    | ( 0.177) | 0.306 |
| 40 | 3.33 | 1.10 | 0.412 | 0.106    | ( 0.177) | 0.306 |
| 41 | 3.42 | 1.20 | 0.449 | 0.106    | ( 0.193) | 0.343 |
| 42 | 3.50 | 1.30 | 0.487 | 0.106    | ( 0.209) | 0.381 |
| 43 | 3.58 | 1.40 | 0.524 | 0.106    | ( 0.225) | 0.418 |
| 44 | 3.67 | 1.40 | 0.524 | 0.106    | ( 0.225) | 0.418 |
| 45 | 3.75 | 1.50 | 0.562 | 0.106    | ( 0.241) | 0.455 |
| 46 | 3.83 | 1.50 | 0.562 | 0.106    | ( 0.241) | 0.455 |
| 47 | 3.92 | 1.60 | 0.599 | 0.106    | ( 0.258) | 0.493 |
| 48 | 4.00 | 1.60 | 0.599 | 0.106    | ( 0.258) | 0.493 |
| 49 | 4.08 | 1.70 | 0.636 | 0.106    | ( 0.274) | 0.530 |
| 50 | 4.17 | 1.80 | 0.674 | 0.106    | ( 0.290) | 0.568 |
| 51 | 4.25 | 1.90 | 0.711 | 0.106    | ( 0.306) | 0.605 |
| 52 | 4.33 | 2.00 | 0.749 | 0.106    | ( 0.322) | 0.643 |
| 53 | 4.42 | 2.10 | 0.786 | 0.106    | ( 0.338) | 0.680 |
| 54 | 4.50 | 2.10 | 0.786 | 0.106    | ( 0.338) | 0.680 |
| 55 | 4.58 | 2.20 | 0.824 | 0.106    | ( 0.354) | 0.717 |
| 56 | 4.67 | 2.30 | 0.861 | 0.106    | ( 0.370) | 0.755 |
| 57 | 4.75 | 2.40 | 0.899 | 0.106    | ( 0.386) | 0.792 |
| 58 | 4.83 | 2.40 | 0.899 | 0.106    | ( 0.386) | 0.792 |
| 59 | 4.92 | 2.50 | 0.936 | 0.106    | ( 0.402) | 0.830 |
| 60 | 5.00 | 2.60 | 0.973 | 0.106    | ( 0.419) | 0.867 |
| 61 | 5.08 | 3.10 | 1.161 | 0.106    | ( 0.499) | 1.054 |
| 62 | 5.17 | 3.60 | 1.348 | 0.106    | ( 0.580) | 1.242 |
| 63 | 5.25 | 3.90 | 1.460 | 0.106    | ( 0.628) | 1.354 |
| 64 | 5.33 | 4.20 | 1.572 | 0.106    | ( 0.676) | 1.466 |
| 65 | 5.42 | 4.70 | 1.760 | 0.106    | ( 0.757) | 1.653 |
| 66 | 5.50 | 5.60 | 2.097 | 0.106    | ( 0.902) | 1.990 |
| 67 | 5.58 | 1.90 | 0.711 | 0.106    | ( 0.306) | 0.605 |
| 68 | 5.67 | 0.90 | 0.337 | 0.106    | ( 0.145) | 0.231 |
| 69 | 5.75 | 0.60 | 0.225 | ( 0.106) | 0.097    | 0.128 |
| 70 | 5.83 | 0.50 | 0.187 | ( 0.106) | 0.080    | 0.107 |
| 71 | 5.92 | 0.30 | 0.112 | ( 0.106) | 0.048    | 0.064 |
| 72 | 6.00 | 0.20 | 0.075 | ( 0.106) | 0.032    | 0.043 |

(Loss Rate Not Used)

Sum = 100.0 Sum = 30.0

Flood volume = Effective rainfall 2.50 (In)  
times area 8.4 (Ac.) / [(In) / (Ft.)] = 1.8 (Ac.Ft)  
Total soil loss = 0.62 (In)  
Total soil loss = 0.433 (Ac.Ft)  
Total rainfall = 3.12 (In)  
Flood volume = 76291.2 Cubic Feet  
Total soil loss = 18841.1 Cubic Feet

Peak flow rate of this hydrograph = 15.456 (CFS)

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6 - H O U R S T O R M  
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time (h+m) | Volume Ac.Ft | Q (CFS) | 0   | 5.0 | 10.0 | 15.0 | 20.0 |
|------------|--------------|---------|-----|-----|------|------|------|
| 0+ 5       | 0.0033       | 0.48    | Q   |     |      |      |      |
| 0+10       | 0.0100       | 0.97    | VQ  |     |      |      |      |
| 0+15       | 0.0174       | 1.08    | V Q |     |      |      |      |
| 0+20       | 0.0248       | 1.08    | V Q |     |      |      |      |
| 0+25       | 0.0323       | 1.08    | V Q |     |      |      |      |
| 0+30       | 0.0406       | 1.21    | V Q |     |      |      |      |
| 0+35       | 0.0497       | 1.31    | IVQ |     |      |      |      |
| 0+40       | 0.0588       | 1.32    | IVQ |     |      |      |      |
| 0+45       | 0.0679       | 1.32    | IVQ |     |      |      |      |
| 0+50       | 0.0770       | 1.32    | IVQ |     |      |      |      |
| 0+55       | 0.0861       | 1.32    | IVQ |     |      |      |      |
| 1+ 0       | 0.0963       | 1.49    | Q   |     |      |      |      |
| 1+ 5       | 0.1075       | 1.63    | VQ  |     |      |      |      |
| 1+10       | 0.1188       | 1.64    | VQ  |     |      |      |      |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|      |        |       |  |     |  |  |  |  |   |
|------|--------|-------|--|-----|--|--|--|--|---|
| 1+15 | 0.1301 | 1.64  |  | VQ  |  |  |  |  |   |
| 1+20 | 0.1413 | 1.64  |  | Q   |  |  |  |  |   |
| 1+25 | 0.1526 | 1.64  |  | Q   |  |  |  |  |   |
| 1+30 | 0.1639 | 1.64  |  | Q   |  |  |  |  |   |
| 1+35 | 0.1752 | 1.64  |  | QV  |  |  |  |  |   |
| 1+40 | 0.1864 | 1.64  |  | QV  |  |  |  |  |   |
| 1+45 | 0.1977 | 1.64  |  | QV  |  |  |  |  |   |
| 1+50 | 0.2090 | 1.64  |  | QV  |  |  |  |  |   |
| 1+55 | 0.2203 | 1.64  |  | Q V |  |  |  |  |   |
| 2+ 0 | 0.2327 | 1.80  |  | Q V |  |  |  |  |   |
| 2+ 5 | 0.2449 | 1.78  |  | Q V |  |  |  |  |   |
| 2+10 | 0.2574 | 1.82  |  | Q V |  |  |  |  |   |
| 2+15 | 0.2708 | 1.94  |  | Q V |  |  |  |  |   |
| 2+20 | 0.2843 | 1.95  |  | Q V |  |  |  |  |   |
| 2+25 | 0.2977 | 1.95  |  | Q V |  |  |  |  |   |
| 2+30 | 0.3112 | 1.95  |  | Q V |  |  |  |  |   |
| 2+35 | 0.3247 | 1.95  |  | Q V |  |  |  |  |   |
| 2+40 | 0.3381 | 1.95  |  | Q V |  |  |  |  |   |
| 2+45 | 0.3527 | 2.12  |  | Q V |  |  |  |  |   |
| 2+50 | 0.3683 | 2.26  |  | Q V |  |  |  |  |   |
| 2+55 | 0.3839 | 2.27  |  | Q V |  |  |  |  |   |
| 3+ 0 | 0.3996 | 2.27  |  | Q V |  |  |  |  |   |
| 3+ 5 | 0.4152 | 2.27  |  | Q V |  |  |  |  |   |
| 3+10 | 0.4320 | 2.44  |  | Q V |  |  |  |  |   |
| 3+15 | 0.4498 | 2.58  |  | Q V |  |  |  |  |   |
| 3+20 | 0.4676 | 2.59  |  | Q V |  |  |  |  |   |
| 3+25 | 0.4866 | 2.76  |  | Q V |  |  |  |  |   |
| 3+30 | 0.5077 | 3.06  |  | Q V |  |  |  |  |   |
| 3+35 | 0.5310 | 3.38  |  | Q V |  |  |  |  |   |
| 3+40 | 0.5553 | 3.53  |  | Q V |  |  |  |  |   |
| 3+45 | 0.5808 | 3.71  |  | Q V |  |  |  |  |   |
| 3+50 | 0.6073 | 3.85  |  | Q V |  |  |  |  |   |
| 3+55 | 0.6350 | 4.02  |  | Q V |  |  |  |  |   |
| 4+ 0 | 0.6637 | 4.16  |  | Q V |  |  |  |  |   |
| 4+ 5 | 0.6936 | 4.34  |  | Q V |  |  |  |  |   |
| 4+10 | 0.7256 | 4.65  |  | Q V |  |  |  |  |   |
| 4+15 | 0.7598 | 4.96  |  | Q V |  |  |  |  |   |
| 4+20 | 0.7962 | 5.28  |  | Q V |  |  |  |  |   |
| 4+25 | 0.8347 | 5.60  |  | Q V |  |  |  |  |   |
| 4+30 | 0.8743 | 5.75  |  | Q V |  |  |  |  |   |
| 4+35 | 0.9151 | 5.93  |  | Q V |  |  |  |  |   |
| 4+40 | 0.9581 | 6.23  |  | Q V |  |  |  |  |   |
| 4+45 | 1.0032 | 6.55  |  | Q V |  |  |  |  |   |
| 4+50 | 1.0493 | 6.70  |  | Q V |  |  |  |  |   |
| 4+55 | 1.0967 | 6.88  |  | Q V |  |  |  |  |   |
| 5+ 0 | 1.1462 | 7.18  |  | Q V |  |  |  |  |   |
| 5+ 5 | 1.2024 | 8.17  |  | Q V |  |  |  |  |   |
| 5+10 | 1.2693 | 9.71  |  | Q V |  |  |  |  |   |
| 5+15 | 1.3449 | 10.96 |  | Q V |  |  |  |  |   |
| 5+20 | 1.4271 | 11.94 |  | Q V |  |  |  |  |   |
| 5+25 | 1.5181 | 13.22 |  | Q V |  |  |  |  |   |
| 5+30 | 1.6246 | 15.46 |  | Q V |  |  |  |  |   |
| 5+35 | 1.6974 | 10.58 |  | Q V |  |  |  |  |   |
| 5+40 | 1.7239 | 3.85  |  | Q   |  |  |  |  | V |
| 5+45 | 1.7350 | 1.60  |  | Q   |  |  |  |  | V |
| 5+50 | 1.7420 | 1.02  |  | Q   |  |  |  |  | V |
| 5+55 | 1.7469 | 0.72  |  | Q   |  |  |  |  | V |
| 6+ 0 | 1.7501 | 0.46  |  | Q   |  |  |  |  | V |
| 6+ 5 | 1.7513 | 0.18  |  | Q   |  |  |  |  | V |
| 6+10 | 1.7514 | 0.01  |  | Q   |  |  |  |  | V |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

## U n i t   H y d r o g r a p h   A n a l y s i s

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Study date 01/08/18 File: nrareabpr24100.out

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Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

-----  
English (in-lb) Input Units Used  
English Rainfall Data (Inches) Input Values Used

English Units used in output format

-----  
Nichols Road Project - Tract 37305  
Drainage Area B = 8.4 Ac  
Proposed Condition  
100-year 24-hour storm

-----  
Drainage Area = 8.40(Ac.) = 0.013 Sq. Mi.  
Drainage Area for Depth-Area Areal Adjustment = 8.40(Ac.) = 0.013 Sq. Mi.  
Length along longest watercourse = 1015.00(Ft.)  
Length along longest watercourse measured to centroid = 444.00(Ft.)  
Length along longest watercourse = 0.192 Mi.  
Length along longest watercourse measured to centroid = 0.084 Mi.  
Difference in elevation = 34.00(Ft.)  
Slope along watercourse = 176.8670 Ft./Mi.  
Average Manning's 'N' = 0.017  
Lag time = 0.032 Hr.  
Lag time = 1.91 Min.  
25% of lag time = 0.48 Min.  
40% of lag time = 0.76 Min.  
Unit time = 5.00 Min.  
Duration of storm = 24 Hour(s)  
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

|               |                  |                |
|---------------|------------------|----------------|
| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
| 8.40          | 2.38             | 19.99          |

100 YEAR Area rainfall data:

|               |                  |                |
|---------------|------------------|----------------|
| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
| 8.40          | 6.35             | 53.34          |

STORM EVENT (YEAR) = 100.00  
Area Averaged 2-Year Rainfall = 2.380(In)  
Area Averaged 100-Year Rainfall = 6.350(In)

Point rain (area averaged) = 6.350(In)  
Areal adjustment factor = 100.00 %  
Adjusted average point rain = 6.350(In)

Sub-Area Data:  
Area(Ac.)                  Runoff Index      Impervious %  
0.800                      69.00              0.050

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

7.600                      69.00                      0.550  
Total Area Entered =                      8.40 (Ac.)

|           |       |             |            |                  |        |         |
|-----------|-------|-------------|------------|------------------|--------|---------|
| RI        | RI    | Infil. Rate | Impervious | Adj. Infil. Rate | Area%  | F       |
| AMC2      | AMC-3 | (In/Hr)     | (Dec.%)    | (In/Hr)          | (Dec.) | (In/Hr) |
| 69.0      | 84.4  | 0.194       | 0.050      | 0.185            | 0.095  | 0.018   |
| 69.0      | 84.4  | 0.194       | 0.550      | 0.098            | 0.905  | 0.089   |
| Sum (F) = |       |             |            |                  |        | 0.106   |

Area averaged mean soil loss (F) (In/Hr) = 0.106

Minimum soil loss rate ((In/Hr)) = 0.053

(for 24 hour storm duration)

Soil loss rate (decimal) = 0.430

## Unit Hydrograph FOOTHILL S-Curve

### Unit Hydrograph Data

| Unit time period<br>(hrs) | Time % of lag | Distribution<br>Graph % | Unit Hydrograph<br>(CFS) |
|---------------------------|---------------|-------------------------|--------------------------|
| 1                         | 0.083         | 261.789                 | 52.730                   |
| 2                         | 0.167         | 523.577                 | 43.889                   |
| 3                         | 0.250         | 785.366                 | 3.381                    |
| Sum =                     |               | 100.000                 | Sum= 8.466               |

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

| Unit Time<br>(Hr.) | Pattern<br>Percent | Storm Rain<br>(In/Hr) | Loss rate(In./Hr)<br>Max   Low | Effective<br>(In/Hr) |
|--------------------|--------------------|-----------------------|--------------------------------|----------------------|
| 1                  | 0.08               | 0.07                  | ( 0.188) 0.022                 | 0.029                |
| 2                  | 0.17               | 0.07                  | ( 0.188) 0.022                 | 0.029                |
| 3                  | 0.25               | 0.07                  | ( 0.187) 0.022                 | 0.029                |
| 4                  | 0.33               | 0.10                  | ( 0.186) 0.033                 | 0.043                |
| 5                  | 0.42               | 0.10                  | ( 0.185) 0.033                 | 0.043                |
| 6                  | 0.50               | 0.10                  | ( 0.185) 0.033                 | 0.043                |
| 7                  | 0.58               | 0.10                  | ( 0.184) 0.033                 | 0.043                |
| 8                  | 0.67               | 0.10                  | ( 0.183) 0.033                 | 0.043                |
| 9                  | 0.75               | 0.10                  | ( 0.182) 0.033                 | 0.043                |
| 10                 | 0.83               | 0.13                  | ( 0.182) 0.044                 | 0.058                |
| 11                 | 0.92               | 0.13                  | ( 0.181) 0.044                 | 0.058                |
| 12                 | 1.00               | 0.13                  | ( 0.180) 0.044                 | 0.058                |
| 13                 | 1.08               | 0.10                  | ( 0.180) 0.033                 | 0.043                |
| 14                 | 1.17               | 0.10                  | ( 0.179) 0.033                 | 0.043                |
| 15                 | 1.25               | 0.10                  | ( 0.178) 0.033                 | 0.043                |
| 16                 | 1.33               | 0.10                  | ( 0.177) 0.033                 | 0.043                |
| 17                 | 1.42               | 0.10                  | ( 0.177) 0.033                 | 0.043                |
| 18                 | 1.50               | 0.10                  | ( 0.176) 0.033                 | 0.043                |
| 19                 | 1.58               | 0.10                  | ( 0.175) 0.033                 | 0.043                |
| 20                 | 1.67               | 0.10                  | ( 0.175) 0.033                 | 0.043                |
| 21                 | 1.75               | 0.10                  | ( 0.174) 0.033                 | 0.043                |
| 22                 | 1.83               | 0.13                  | ( 0.173) 0.044                 | 0.058                |
| 23                 | 1.92               | 0.13                  | ( 0.173) 0.044                 | 0.058                |
| 24                 | 2.00               | 0.13                  | ( 0.172) 0.044                 | 0.058                |
| 25                 | 2.08               | 0.13                  | ( 0.171) 0.044                 | 0.058                |
| 26                 | 2.17               | 0.13                  | ( 0.170) 0.044                 | 0.058                |
| 27                 | 2.25               | 0.13                  | ( 0.170) 0.044                 | 0.058                |
| 28                 | 2.33               | 0.13                  | ( 0.169) 0.044                 | 0.058                |
| 29                 | 2.42               | 0.13                  | ( 0.168) 0.044                 | 0.058                |
| 30                 | 2.50               | 0.13                  | ( 0.168) 0.044                 | 0.058                |
| 31                 | 2.58               | 0.17                  | ( 0.167) 0.055                 | 0.072                |
| 32                 | 2.67               | 0.17                  | ( 0.166) 0.055                 | 0.072                |
| 33                 | 2.75               | 0.17                  | ( 0.166) 0.055                 | 0.072                |
| 34                 | 2.83               | 0.17                  | ( 0.165) 0.055                 | 0.072                |
| 35                 | 2.92               | 0.17                  | ( 0.164) 0.055                 | 0.072                |
| 36                 | 3.00               | 0.17                  | ( 0.164) 0.055                 | 0.072                |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|     |      |      |       |                |       |       |
|-----|------|------|-------|----------------|-------|-------|
| 37  | 3.08 | 0.17 | 0.127 | ( 0.163)       | 0.055 | 0.072 |
| 38  | 3.17 | 0.17 | 0.127 | ( 0.162)       | 0.055 | 0.072 |
| 39  | 3.25 | 0.17 | 0.127 | ( 0.162)       | 0.055 | 0.072 |
| 40  | 3.33 | 0.17 | 0.127 | ( 0.161)       | 0.055 | 0.072 |
| 41  | 3.42 | 0.17 | 0.127 | ( 0.160)       | 0.055 | 0.072 |
| 42  | 3.50 | 0.17 | 0.127 | ( 0.160)       | 0.055 | 0.072 |
| 43  | 3.58 | 0.17 | 0.127 | ( 0.159)       | 0.055 | 0.072 |
| 44  | 3.67 | 0.17 | 0.127 | ( 0.158)       | 0.055 | 0.072 |
| 45  | 3.75 | 0.17 | 0.127 | ( 0.158)       | 0.055 | 0.072 |
| 46  | 3.83 | 0.20 | 0.152 | ( 0.157)       | 0.066 | 0.087 |
| 47  | 3.92 | 0.20 | 0.152 | ( 0.156)       | 0.066 | 0.087 |
| 48  | 4.00 | 0.20 | 0.152 | ( 0.156)       | 0.066 | 0.087 |
| 49  | 4.08 | 0.20 | 0.152 | ( 0.155)       | 0.066 | 0.087 |
| 50  | 4.17 | 0.20 | 0.152 | ( 0.154)       | 0.066 | 0.087 |
| 51  | 4.25 | 0.20 | 0.152 | ( 0.154)       | 0.066 | 0.087 |
| 52  | 4.33 | 0.23 | 0.178 | ( 0.153)       | 0.076 | 0.101 |
| 53  | 4.42 | 0.23 | 0.178 | ( 0.152)       | 0.076 | 0.101 |
| 54  | 4.50 | 0.23 | 0.178 | ( 0.152)       | 0.076 | 0.101 |
| 55  | 4.58 | 0.23 | 0.178 | ( 0.151)       | 0.076 | 0.101 |
| 56  | 4.67 | 0.23 | 0.178 | ( 0.150)       | 0.076 | 0.101 |
| 57  | 4.75 | 0.23 | 0.178 | ( 0.150)       | 0.076 | 0.101 |
| 58  | 4.83 | 0.27 | 0.203 | ( 0.149)       | 0.087 | 0.116 |
| 59  | 4.92 | 0.27 | 0.203 | ( 0.148)       | 0.087 | 0.116 |
| 60  | 5.00 | 0.27 | 0.203 | ( 0.148)       | 0.087 | 0.116 |
| 61  | 5.08 | 0.20 | 0.152 | ( 0.147)       | 0.066 | 0.087 |
| 62  | 5.17 | 0.20 | 0.152 | ( 0.146)       | 0.066 | 0.087 |
| 63  | 5.25 | 0.20 | 0.152 | ( 0.146)       | 0.066 | 0.087 |
| 64  | 5.33 | 0.23 | 0.178 | ( 0.145)       | 0.076 | 0.101 |
| 65  | 5.42 | 0.23 | 0.178 | ( 0.145)       | 0.076 | 0.101 |
| 66  | 5.50 | 0.23 | 0.178 | ( 0.144)       | 0.076 | 0.101 |
| 67  | 5.58 | 0.27 | 0.203 | ( 0.143)       | 0.087 | 0.116 |
| 68  | 5.67 | 0.27 | 0.203 | ( 0.143)       | 0.087 | 0.116 |
| 69  | 5.75 | 0.27 | 0.203 | ( 0.142)       | 0.087 | 0.116 |
| 70  | 5.83 | 0.27 | 0.203 | ( 0.141)       | 0.087 | 0.116 |
| 71  | 5.92 | 0.27 | 0.203 | ( 0.141)       | 0.087 | 0.116 |
| 72  | 6.00 | 0.27 | 0.203 | ( 0.140)       | 0.087 | 0.116 |
| 73  | 6.08 | 0.30 | 0.229 | ( 0.140)       | 0.098 | 0.130 |
| 74  | 6.17 | 0.30 | 0.229 | ( 0.139)       | 0.098 | 0.130 |
| 75  | 6.25 | 0.30 | 0.229 | ( 0.138)       | 0.098 | 0.130 |
| 76  | 6.33 | 0.30 | 0.229 | ( 0.138)       | 0.098 | 0.130 |
| 77  | 6.42 | 0.30 | 0.229 | ( 0.137)       | 0.098 | 0.130 |
| 78  | 6.50 | 0.30 | 0.229 | ( 0.136)       | 0.098 | 0.130 |
| 79  | 6.58 | 0.33 | 0.254 | ( 0.136)       | 0.109 | 0.145 |
| 80  | 6.67 | 0.33 | 0.254 | ( 0.135)       | 0.109 | 0.145 |
| 81  | 6.75 | 0.33 | 0.254 | ( 0.135)       | 0.109 | 0.145 |
| 82  | 6.83 | 0.33 | 0.254 | ( 0.134)       | 0.109 | 0.145 |
| 83  | 6.92 | 0.33 | 0.254 | ( 0.133)       | 0.109 | 0.145 |
| 84  | 7.00 | 0.33 | 0.254 | ( 0.133)       | 0.109 | 0.145 |
| 85  | 7.08 | 0.33 | 0.254 | ( 0.132)       | 0.109 | 0.145 |
| 86  | 7.17 | 0.33 | 0.254 | ( 0.132)       | 0.109 | 0.145 |
| 87  | 7.25 | 0.33 | 0.254 | ( 0.131)       | 0.109 | 0.145 |
| 88  | 7.33 | 0.37 | 0.279 | ( 0.130)       | 0.120 | 0.159 |
| 89  | 7.42 | 0.37 | 0.279 | ( 0.130)       | 0.120 | 0.159 |
| 90  | 7.50 | 0.37 | 0.279 | ( 0.129)       | 0.120 | 0.159 |
| 91  | 7.58 | 0.40 | 0.305 | 0.129 ( 0.131) |       | 0.176 |
| 92  | 7.67 | 0.40 | 0.305 | 0.128 ( 0.131) |       | 0.177 |
| 93  | 7.75 | 0.40 | 0.305 | 0.127 ( 0.131) |       | 0.177 |
| 94  | 7.83 | 0.43 | 0.330 | 0.127 ( 0.142) |       | 0.203 |
| 95  | 7.92 | 0.43 | 0.330 | 0.126 ( 0.142) |       | 0.204 |
| 96  | 8.00 | 0.43 | 0.330 | 0.126 ( 0.142) |       | 0.205 |
| 97  | 8.08 | 0.50 | 0.381 | 0.125 ( 0.164) |       | 0.256 |
| 98  | 8.17 | 0.50 | 0.381 | 0.125 ( 0.164) |       | 0.256 |
| 99  | 8.25 | 0.50 | 0.381 | 0.124 ( 0.164) |       | 0.257 |
| 100 | 8.33 | 0.50 | 0.381 | 0.123 ( 0.164) |       | 0.258 |
| 101 | 8.42 | 0.50 | 0.381 | 0.123 ( 0.164) |       | 0.258 |
| 102 | 8.50 | 0.50 | 0.381 | 0.122 ( 0.164) |       | 0.259 |
| 103 | 8.58 | 0.53 | 0.406 | 0.122 ( 0.175) |       | 0.285 |
| 104 | 8.67 | 0.53 | 0.406 | 0.121 ( 0.175) |       | 0.285 |
| 105 | 8.75 | 0.53 | 0.406 | 0.120 ( 0.175) |       | 0.286 |
| 106 | 8.83 | 0.57 | 0.432 | 0.120 ( 0.186) |       | 0.312 |
| 107 | 8.92 | 0.57 | 0.432 | 0.119 ( 0.186) |       | 0.312 |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|     |       |      |       |       |          |       |
|-----|-------|------|-------|-------|----------|-------|
| 108 | 9.00  | 0.57 | 0.432 | 0.119 | ( 0.186) | 0.313 |
| 109 | 9.08  | 0.63 | 0.483 | 0.118 | ( 0.208) | 0.364 |
| 110 | 9.17  | 0.63 | 0.483 | 0.118 | ( 0.208) | 0.365 |
| 111 | 9.25  | 0.63 | 0.483 | 0.117 | ( 0.208) | 0.365 |
| 112 | 9.33  | 0.67 | 0.508 | 0.117 | ( 0.218) | 0.391 |
| 113 | 9.42  | 0.67 | 0.508 | 0.116 | ( 0.218) | 0.392 |
| 114 | 9.50  | 0.67 | 0.508 | 0.115 | ( 0.218) | 0.393 |
| 115 | 9.58  | 0.70 | 0.533 | 0.115 | ( 0.229) | 0.419 |
| 116 | 9.67  | 0.70 | 0.533 | 0.114 | ( 0.229) | 0.419 |
| 117 | 9.75  | 0.70 | 0.533 | 0.114 | ( 0.229) | 0.420 |
| 118 | 9.83  | 0.73 | 0.559 | 0.113 | ( 0.240) | 0.446 |
| 119 | 9.92  | 0.73 | 0.559 | 0.113 | ( 0.240) | 0.446 |
| 120 | 10.00 | 0.73 | 0.559 | 0.112 | ( 0.240) | 0.447 |
| 121 | 10.08 | 0.50 | 0.381 | 0.112 | ( 0.164) | 0.269 |
| 122 | 10.17 | 0.50 | 0.381 | 0.111 | ( 0.164) | 0.270 |
| 123 | 10.25 | 0.50 | 0.381 | 0.111 | ( 0.164) | 0.270 |
| 124 | 10.33 | 0.50 | 0.381 | 0.110 | ( 0.164) | 0.271 |
| 125 | 10.42 | 0.50 | 0.381 | 0.109 | ( 0.164) | 0.272 |
| 126 | 10.50 | 0.50 | 0.381 | 0.109 | ( 0.164) | 0.272 |
| 127 | 10.58 | 0.67 | 0.508 | 0.108 | ( 0.218) | 0.400 |
| 128 | 10.67 | 0.67 | 0.508 | 0.108 | ( 0.218) | 0.400 |
| 129 | 10.75 | 0.67 | 0.508 | 0.107 | ( 0.218) | 0.401 |
| 130 | 10.83 | 0.67 | 0.508 | 0.107 | ( 0.218) | 0.401 |
| 131 | 10.92 | 0.67 | 0.508 | 0.106 | ( 0.218) | 0.402 |
| 132 | 11.00 | 0.67 | 0.508 | 0.106 | ( 0.218) | 0.402 |
| 133 | 11.08 | 0.63 | 0.483 | 0.105 | ( 0.208) | 0.377 |
| 134 | 11.17 | 0.63 | 0.483 | 0.105 | ( 0.208) | 0.378 |
| 135 | 11.25 | 0.63 | 0.483 | 0.104 | ( 0.208) | 0.378 |
| 136 | 11.33 | 0.63 | 0.483 | 0.104 | ( 0.208) | 0.379 |
| 137 | 11.42 | 0.63 | 0.483 | 0.103 | ( 0.208) | 0.379 |
| 138 | 11.50 | 0.63 | 0.483 | 0.103 | ( 0.208) | 0.380 |
| 139 | 11.58 | 0.57 | 0.432 | 0.102 | ( 0.186) | 0.330 |
| 140 | 11.67 | 0.57 | 0.432 | 0.102 | ( 0.186) | 0.330 |
| 141 | 11.75 | 0.57 | 0.432 | 0.101 | ( 0.186) | 0.331 |
| 142 | 11.83 | 0.60 | 0.457 | 0.101 | ( 0.197) | 0.357 |
| 143 | 11.92 | 0.60 | 0.457 | 0.100 | ( 0.197) | 0.357 |
| 144 | 12.00 | 0.60 | 0.457 | 0.100 | ( 0.197) | 0.358 |
| 145 | 12.08 | 0.83 | 0.635 | 0.099 | ( 0.273) | 0.536 |
| 146 | 12.17 | 0.83 | 0.635 | 0.099 | ( 0.273) | 0.536 |
| 147 | 12.25 | 0.83 | 0.635 | 0.098 | ( 0.273) | 0.537 |
| 148 | 12.33 | 0.87 | 0.660 | 0.098 | ( 0.284) | 0.563 |
| 149 | 12.42 | 0.87 | 0.660 | 0.097 | ( 0.284) | 0.563 |
| 150 | 12.50 | 0.87 | 0.660 | 0.097 | ( 0.284) | 0.564 |
| 151 | 12.58 | 0.93 | 0.711 | 0.096 | ( 0.306) | 0.615 |
| 152 | 12.67 | 0.93 | 0.711 | 0.096 | ( 0.306) | 0.615 |
| 153 | 12.75 | 0.93 | 0.711 | 0.095 | ( 0.306) | 0.616 |
| 154 | 12.83 | 0.97 | 0.737 | 0.095 | ( 0.317) | 0.642 |
| 155 | 12.92 | 0.97 | 0.737 | 0.094 | ( 0.317) | 0.642 |
| 156 | 13.00 | 0.97 | 0.737 | 0.094 | ( 0.317) | 0.643 |
| 157 | 13.08 | 1.13 | 0.864 | 0.093 | ( 0.371) | 0.770 |
| 158 | 13.17 | 1.13 | 0.864 | 0.093 | ( 0.371) | 0.771 |
| 159 | 13.25 | 1.13 | 0.864 | 0.092 | ( 0.371) | 0.771 |
| 160 | 13.33 | 1.13 | 0.864 | 0.092 | ( 0.371) | 0.772 |
| 161 | 13.42 | 1.13 | 0.864 | 0.091 | ( 0.371) | 0.772 |
| 162 | 13.50 | 1.13 | 0.864 | 0.091 | ( 0.371) | 0.773 |
| 163 | 13.58 | 0.77 | 0.584 | 0.090 | ( 0.251) | 0.494 |
| 164 | 13.67 | 0.77 | 0.584 | 0.090 | ( 0.251) | 0.494 |
| 165 | 13.75 | 0.77 | 0.584 | 0.090 | ( 0.251) | 0.495 |
| 166 | 13.83 | 0.77 | 0.584 | 0.089 | ( 0.251) | 0.495 |
| 167 | 13.92 | 0.77 | 0.584 | 0.089 | ( 0.251) | 0.496 |
| 168 | 14.00 | 0.77 | 0.584 | 0.088 | ( 0.251) | 0.496 |
| 169 | 14.08 | 0.90 | 0.686 | 0.088 | ( 0.295) | 0.598 |
| 170 | 14.17 | 0.90 | 0.686 | 0.087 | ( 0.295) | 0.598 |
| 171 | 14.25 | 0.90 | 0.686 | 0.087 | ( 0.295) | 0.599 |
| 172 | 14.33 | 0.87 | 0.660 | 0.086 | ( 0.284) | 0.574 |
| 173 | 14.42 | 0.87 | 0.660 | 0.086 | ( 0.284) | 0.574 |
| 174 | 14.50 | 0.87 | 0.660 | 0.086 | ( 0.284) | 0.575 |
| 175 | 14.58 | 0.87 | 0.660 | 0.085 | ( 0.284) | 0.575 |
| 176 | 14.67 | 0.87 | 0.660 | 0.085 | ( 0.284) | 0.576 |
| 177 | 14.75 | 0.87 | 0.660 | 0.084 | ( 0.284) | 0.576 |
| 178 | 14.83 | 0.83 | 0.635 | 0.084 | ( 0.273) | 0.551 |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|     |       |      |       |          |          |       |
|-----|-------|------|-------|----------|----------|-------|
| 179 | 14.92 | 0.83 | 0.635 | 0.083    | ( 0.273) | 0.552 |
| 180 | 15.00 | 0.83 | 0.635 | 0.083    | ( 0.273) | 0.552 |
| 181 | 15.08 | 0.80 | 0.610 | 0.083    | ( 0.262) | 0.527 |
| 182 | 15.17 | 0.80 | 0.610 | 0.082    | ( 0.262) | 0.527 |
| 183 | 15.25 | 0.80 | 0.610 | 0.082    | ( 0.262) | 0.528 |
| 184 | 15.33 | 0.77 | 0.584 | 0.081    | ( 0.251) | 0.503 |
| 185 | 15.42 | 0.77 | 0.584 | 0.081    | ( 0.251) | 0.503 |
| 186 | 15.50 | 0.77 | 0.584 | 0.080    | ( 0.251) | 0.504 |
| 187 | 15.58 | 0.63 | 0.483 | 0.080    | ( 0.208) | 0.403 |
| 188 | 15.67 | 0.63 | 0.483 | 0.080    | ( 0.208) | 0.403 |
| 189 | 15.75 | 0.63 | 0.483 | 0.079    | ( 0.208) | 0.403 |
| 190 | 15.83 | 0.63 | 0.483 | 0.079    | ( 0.208) | 0.404 |
| 191 | 15.92 | 0.63 | 0.483 | 0.078    | ( 0.208) | 0.404 |
| 192 | 16.00 | 0.63 | 0.483 | 0.078    | ( 0.208) | 0.405 |
| 193 | 16.08 | 0.13 | 0.102 | ( 0.078) | 0.044    | 0.058 |
| 194 | 16.17 | 0.13 | 0.102 | ( 0.077) | 0.044    | 0.058 |
| 195 | 16.25 | 0.13 | 0.102 | ( 0.077) | 0.044    | 0.058 |
| 196 | 16.33 | 0.13 | 0.102 | ( 0.076) | 0.044    | 0.058 |
| 197 | 16.42 | 0.13 | 0.102 | ( 0.076) | 0.044    | 0.058 |
| 198 | 16.50 | 0.13 | 0.102 | ( 0.076) | 0.044    | 0.058 |
| 199 | 16.58 | 0.10 | 0.076 | ( 0.075) | 0.033    | 0.043 |
| 200 | 16.67 | 0.10 | 0.076 | ( 0.075) | 0.033    | 0.043 |
| 201 | 16.75 | 0.10 | 0.076 | ( 0.074) | 0.033    | 0.043 |
| 202 | 16.83 | 0.10 | 0.076 | ( 0.074) | 0.033    | 0.043 |
| 203 | 16.92 | 0.10 | 0.076 | ( 0.074) | 0.033    | 0.043 |
| 204 | 17.00 | 0.10 | 0.076 | ( 0.073) | 0.033    | 0.043 |
| 205 | 17.08 | 0.17 | 0.127 | ( 0.073) | 0.055    | 0.072 |
| 206 | 17.17 | 0.17 | 0.127 | ( 0.073) | 0.055    | 0.072 |
| 207 | 17.25 | 0.17 | 0.127 | ( 0.072) | 0.055    | 0.072 |
| 208 | 17.33 | 0.17 | 0.127 | ( 0.072) | 0.055    | 0.072 |
| 209 | 17.42 | 0.17 | 0.127 | ( 0.072) | 0.055    | 0.072 |
| 210 | 17.50 | 0.17 | 0.127 | ( 0.071) | 0.055    | 0.072 |
| 211 | 17.58 | 0.17 | 0.127 | ( 0.071) | 0.055    | 0.072 |
| 212 | 17.67 | 0.17 | 0.127 | ( 0.070) | 0.055    | 0.072 |
| 213 | 17.75 | 0.17 | 0.127 | ( 0.070) | 0.055    | 0.072 |
| 214 | 17.83 | 0.13 | 0.102 | ( 0.070) | 0.044    | 0.058 |
| 215 | 17.92 | 0.13 | 0.102 | ( 0.069) | 0.044    | 0.058 |
| 216 | 18.00 | 0.13 | 0.102 | ( 0.069) | 0.044    | 0.058 |
| 217 | 18.08 | 0.13 | 0.102 | ( 0.069) | 0.044    | 0.058 |
| 218 | 18.17 | 0.13 | 0.102 | ( 0.068) | 0.044    | 0.058 |
| 219 | 18.25 | 0.13 | 0.102 | ( 0.068) | 0.044    | 0.058 |
| 220 | 18.33 | 0.13 | 0.102 | ( 0.068) | 0.044    | 0.058 |
| 221 | 18.42 | 0.13 | 0.102 | ( 0.067) | 0.044    | 0.058 |
| 222 | 18.50 | 0.13 | 0.102 | ( 0.067) | 0.044    | 0.058 |
| 223 | 18.58 | 0.10 | 0.076 | ( 0.067) | 0.033    | 0.043 |
| 224 | 18.67 | 0.10 | 0.076 | ( 0.066) | 0.033    | 0.043 |
| 225 | 18.75 | 0.10 | 0.076 | ( 0.066) | 0.033    | 0.043 |
| 226 | 18.83 | 0.07 | 0.051 | ( 0.066) | 0.022    | 0.029 |
| 227 | 18.92 | 0.07 | 0.051 | ( 0.065) | 0.022    | 0.029 |
| 228 | 19.00 | 0.07 | 0.051 | ( 0.065) | 0.022    | 0.029 |
| 229 | 19.08 | 0.10 | 0.076 | ( 0.065) | 0.033    | 0.043 |
| 230 | 19.17 | 0.10 | 0.076 | ( 0.065) | 0.033    | 0.043 |
| 231 | 19.25 | 0.10 | 0.076 | ( 0.064) | 0.033    | 0.043 |
| 232 | 19.33 | 0.13 | 0.102 | ( 0.064) | 0.044    | 0.058 |
| 233 | 19.42 | 0.13 | 0.102 | ( 0.064) | 0.044    | 0.058 |
| 234 | 19.50 | 0.13 | 0.102 | ( 0.063) | 0.044    | 0.058 |
| 235 | 19.58 | 0.10 | 0.076 | ( 0.063) | 0.033    | 0.043 |
| 236 | 19.67 | 0.10 | 0.076 | ( 0.063) | 0.033    | 0.043 |
| 237 | 19.75 | 0.10 | 0.076 | ( 0.063) | 0.033    | 0.043 |
| 238 | 19.83 | 0.07 | 0.051 | ( 0.062) | 0.022    | 0.029 |
| 239 | 19.92 | 0.07 | 0.051 | ( 0.062) | 0.022    | 0.029 |
| 240 | 20.00 | 0.07 | 0.051 | ( 0.062) | 0.022    | 0.029 |
| 241 | 20.08 | 0.10 | 0.076 | ( 0.061) | 0.033    | 0.043 |
| 242 | 20.17 | 0.10 | 0.076 | ( 0.061) | 0.033    | 0.043 |
| 243 | 20.25 | 0.10 | 0.076 | ( 0.061) | 0.033    | 0.043 |
| 244 | 20.33 | 0.10 | 0.076 | ( 0.061) | 0.033    | 0.043 |
| 245 | 20.42 | 0.10 | 0.076 | ( 0.060) | 0.033    | 0.043 |
| 246 | 20.50 | 0.10 | 0.076 | ( 0.060) | 0.033    | 0.043 |
| 247 | 20.58 | 0.10 | 0.076 | ( 0.060) | 0.033    | 0.043 |
| 248 | 20.67 | 0.10 | 0.076 | ( 0.060) | 0.033    | 0.043 |
| 249 | 20.75 | 0.10 | 0.076 | ( 0.059) | 0.033    | 0.043 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

|     |       |      |       |          |       |       |
|-----|-------|------|-------|----------|-------|-------|
| 250 | 20.83 | 0.07 | 0.051 | ( 0.059) | 0.022 | 0.029 |
| 251 | 20.92 | 0.07 | 0.051 | ( 0.059) | 0.022 | 0.029 |
| 252 | 21.00 | 0.07 | 0.051 | ( 0.059) | 0.022 | 0.029 |
| 253 | 21.08 | 0.10 | 0.076 | ( 0.058) | 0.033 | 0.043 |
| 254 | 21.17 | 0.10 | 0.076 | ( 0.058) | 0.033 | 0.043 |
| 255 | 21.25 | 0.10 | 0.076 | ( 0.058) | 0.033 | 0.043 |
| 256 | 21.33 | 0.07 | 0.051 | ( 0.058) | 0.022 | 0.029 |
| 257 | 21.42 | 0.07 | 0.051 | ( 0.057) | 0.022 | 0.029 |
| 258 | 21.50 | 0.07 | 0.051 | ( 0.057) | 0.022 | 0.029 |
| 259 | 21.58 | 0.10 | 0.076 | ( 0.057) | 0.033 | 0.043 |
| 260 | 21.67 | 0.10 | 0.076 | ( 0.057) | 0.033 | 0.043 |
| 261 | 21.75 | 0.10 | 0.076 | ( 0.057) | 0.033 | 0.043 |
| 262 | 21.83 | 0.07 | 0.051 | ( 0.056) | 0.022 | 0.029 |
| 263 | 21.92 | 0.07 | 0.051 | ( 0.056) | 0.022 | 0.029 |
| 264 | 22.00 | 0.07 | 0.051 | ( 0.056) | 0.022 | 0.029 |
| 265 | 22.08 | 0.10 | 0.076 | ( 0.056) | 0.033 | 0.043 |
| 266 | 22.17 | 0.10 | 0.076 | ( 0.056) | 0.033 | 0.043 |
| 267 | 22.25 | 0.10 | 0.076 | ( 0.056) | 0.033 | 0.043 |
| 268 | 22.33 | 0.07 | 0.051 | ( 0.055) | 0.022 | 0.029 |
| 269 | 22.42 | 0.07 | 0.051 | ( 0.055) | 0.022 | 0.029 |
| 270 | 22.50 | 0.07 | 0.051 | ( 0.055) | 0.022 | 0.029 |
| 271 | 22.58 | 0.07 | 0.051 | ( 0.055) | 0.022 | 0.029 |
| 272 | 22.67 | 0.07 | 0.051 | ( 0.055) | 0.022 | 0.029 |
| 273 | 22.75 | 0.07 | 0.051 | ( 0.055) | 0.022 | 0.029 |
| 274 | 22.83 | 0.07 | 0.051 | ( 0.054) | 0.022 | 0.029 |
| 275 | 22.92 | 0.07 | 0.051 | ( 0.054) | 0.022 | 0.029 |
| 276 | 23.00 | 0.07 | 0.051 | ( 0.054) | 0.022 | 0.029 |
| 277 | 23.08 | 0.07 | 0.051 | ( 0.054) | 0.022 | 0.029 |
| 278 | 23.17 | 0.07 | 0.051 | ( 0.054) | 0.022 | 0.029 |
| 279 | 23.25 | 0.07 | 0.051 | ( 0.054) | 0.022 | 0.029 |
| 280 | 23.33 | 0.07 | 0.051 | ( 0.054) | 0.022 | 0.029 |
| 281 | 23.42 | 0.07 | 0.051 | ( 0.054) | 0.022 | 0.029 |
| 282 | 23.50 | 0.07 | 0.051 | ( 0.053) | 0.022 | 0.029 |
| 283 | 23.58 | 0.07 | 0.051 | ( 0.053) | 0.022 | 0.029 |
| 284 | 23.67 | 0.07 | 0.051 | ( 0.053) | 0.022 | 0.029 |
| 285 | 23.75 | 0.07 | 0.051 | ( 0.053) | 0.022 | 0.029 |
| 286 | 23.83 | 0.07 | 0.051 | ( 0.053) | 0.022 | 0.029 |
| 287 | 23.92 | 0.07 | 0.051 | ( 0.053) | 0.022 | 0.029 |
| 288 | 24.00 | 0.07 | 0.051 | ( 0.053) | 0.022 | 0.029 |

(Loss Rate Not Used)

Sum = 100.0 Sum = 56.8

Flood volume = Effective rainfall 4.73(In)  
times area 8.4(Ac.)/[(In)/(Ft.)] = 3.3(Ac.Ft)

Total soil loss = 1.62(In)  
Total soil loss = 1.133(Ac.Ft)  
Total rainfall = 6.35(In)  
Flood volume = 144282.1 Cubic Feet  
Total soil loss = 49338.9 Cubic Feet

Peak flow rate of this hydrograph = 6.542(CFS)

+++++

24 - H O U R S T O R M  
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0  | 2.5 | 5.0 | 7.5 | 10.0 |
|-----------|--------------|--------|----|-----|-----|-----|------|
| 0+ 5      | 0.0009       | 0.13   | Q  |     |     |     |      |
| 0+10      | 0.0025       | 0.24   | Q  |     |     |     |      |
| 0+15      | 0.0042       | 0.25   | Q  |     |     |     |      |
| 0+20      | 0.0063       | 0.31   | VQ |     |     |     |      |
| 0+25      | 0.0089       | 0.36   | VQ |     |     |     |      |
| 0+30      | 0.0114       | 0.37   | VQ |     |     |     |      |
| 0+35      | 0.0139       | 0.37   | VQ |     |     |     |      |
| 0+40      | 0.0165       | 0.37   | VQ |     |     |     |      |
| 0+45      | 0.0190       | 0.37   | VQ |     |     |     |      |
| 0+50      | 0.0220       | 0.43   | VQ |     |     |     |      |
| 0+55      | 0.0253       | 0.49   | VQ |     |     |     |      |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|      |        |      |     |  |  |  |  |
|------|--------|------|-----|--|--|--|--|
| 1+ 0 | 0.0287 | 0.49 | VQ  |  |  |  |  |
| 1+ 5 | 0.0316 | 0.43 | VQ  |  |  |  |  |
| 1+10 | 0.0342 | 0.37 | VQ  |  |  |  |  |
| 1+15 | 0.0367 | 0.37 | VQ  |  |  |  |  |
| 1+20 | 0.0393 | 0.37 | VQ  |  |  |  |  |
| 1+25 | 0.0418 | 0.37 | VQ  |  |  |  |  |
| 1+30 | 0.0443 | 0.37 | VQ  |  |  |  |  |
| 1+35 | 0.0469 | 0.37 | VQ  |  |  |  |  |
| 1+40 | 0.0494 | 0.37 | VQ  |  |  |  |  |
| 1+45 | 0.0519 | 0.37 | VQ  |  |  |  |  |
| 1+50 | 0.0549 | 0.43 | VQ  |  |  |  |  |
| 1+55 | 0.0583 | 0.49 | VQ  |  |  |  |  |
| 2+ 0 | 0.0616 | 0.49 | VQ  |  |  |  |  |
| 2+ 5 | 0.0650 | 0.49 | VQ  |  |  |  |  |
| 2+10 | 0.0684 | 0.49 | VQ  |  |  |  |  |
| 2+15 | 0.0718 | 0.49 | VQ  |  |  |  |  |
| 2+20 | 0.0751 | 0.49 | VQ  |  |  |  |  |
| 2+25 | 0.0785 | 0.49 | VQ  |  |  |  |  |
| 2+30 | 0.0819 | 0.49 | VQ  |  |  |  |  |
| 2+35 | 0.0857 | 0.56 | IVQ |  |  |  |  |
| 2+40 | 0.0899 | 0.61 | IVQ |  |  |  |  |
| 2+45 | 0.0941 | 0.61 | IVQ |  |  |  |  |
| 2+50 | 0.0984 | 0.61 | IVQ |  |  |  |  |
| 2+55 | 0.1026 | 0.61 | IVQ |  |  |  |  |
| 3+ 0 | 0.1068 | 0.61 | IVQ |  |  |  |  |
| 3+ 5 | 0.1110 | 0.61 | IVQ |  |  |  |  |
| 3+10 | 0.1153 | 0.61 | IVQ |  |  |  |  |
| 3+15 | 0.1195 | 0.61 | IVQ |  |  |  |  |
| 3+20 | 0.1237 | 0.61 | IVQ |  |  |  |  |
| 3+25 | 0.1279 | 0.61 | IVQ |  |  |  |  |
| 3+30 | 0.1321 | 0.61 | IVQ |  |  |  |  |
| 3+35 | 0.1364 | 0.61 | IVQ |  |  |  |  |
| 3+40 | 0.1406 | 0.61 | IVQ |  |  |  |  |
| 3+45 | 0.1448 | 0.61 | IVQ |  |  |  |  |
| 3+50 | 0.1495 | 0.68 | IVQ |  |  |  |  |
| 3+55 | 0.1545 | 0.73 | IVQ |  |  |  |  |
| 4+ 0 | 0.1596 | 0.74 | IVQ |  |  |  |  |
| 4+ 5 | 0.1647 | 0.74 | IVQ |  |  |  |  |
| 4+10 | 0.1697 | 0.74 | Q   |  |  |  |  |
| 4+15 | 0.1748 | 0.74 | Q   |  |  |  |  |
| 4+20 | 0.1803 | 0.80 | VQ  |  |  |  |  |
| 4+25 | 0.1862 | 0.85 | VQ  |  |  |  |  |
| 4+30 | 0.1921 | 0.86 | VQ  |  |  |  |  |
| 4+35 | 0.1980 | 0.86 | VQ  |  |  |  |  |
| 4+40 | 0.2039 | 0.86 | VQ  |  |  |  |  |
| 4+45 | 0.2098 | 0.86 | VQ  |  |  |  |  |
| 4+50 | 0.2162 | 0.92 | VQ  |  |  |  |  |
| 4+55 | 0.2229 | 0.98 | VQ  |  |  |  |  |
| 5+ 0 | 0.2297 | 0.98 | VQ  |  |  |  |  |
| 5+ 5 | 0.2355 | 0.85 | VQ  |  |  |  |  |
| 5+10 | 0.2407 | 0.74 | Q   |  |  |  |  |
| 5+15 | 0.2457 | 0.74 | Q   |  |  |  |  |
| 5+20 | 0.2512 | 0.80 | Q   |  |  |  |  |
| 5+25 | 0.2571 | 0.85 | Q   |  |  |  |  |
| 5+30 | 0.2630 | 0.86 | Q   |  |  |  |  |
| 5+35 | 0.2694 | 0.92 | Q   |  |  |  |  |
| 5+40 | 0.2761 | 0.98 | Q   |  |  |  |  |
| 5+45 | 0.2829 | 0.98 | Q   |  |  |  |  |
| 5+50 | 0.2896 | 0.98 | Q   |  |  |  |  |
| 5+55 | 0.2964 | 0.98 | Q   |  |  |  |  |
| 6+ 0 | 0.3031 | 0.98 | Q   |  |  |  |  |
| 6+ 5 | 0.3103 | 1.05 | VQ  |  |  |  |  |
| 6+10 | 0.3179 | 1.10 | VQ  |  |  |  |  |
| 6+15 | 0.3255 | 1.10 | VQ  |  |  |  |  |
| 6+20 | 0.3331 | 1.10 | Q   |  |  |  |  |
| 6+25 | 0.3407 | 1.10 | Q   |  |  |  |  |
| 6+30 | 0.3483 | 1.10 | Q   |  |  |  |  |
| 6+35 | 0.3564 | 1.17 | Q   |  |  |  |  |
| 6+40 | 0.3648 | 1.22 | Q   |  |  |  |  |
| 6+45 | 0.3732 | 1.23 | Q   |  |  |  |  |
| 6+50 | 0.3817 | 1.23 | Q   |  |  |  |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|       |        |      |  |       |  |  |  |  |  |  |  |
|-------|--------|------|--|-------|--|--|--|--|--|--|--|
| 6+55  | 0.3901 | 1.23 |  | Q     |  |  |  |  |  |  |  |
| 7+ 0  | 0.3986 | 1.23 |  | Q     |  |  |  |  |  |  |  |
| 7+ 5  | 0.4070 | 1.23 |  | Q     |  |  |  |  |  |  |  |
| 7+10  | 0.4155 | 1.23 |  | QV    |  |  |  |  |  |  |  |
| 7+15  | 0.4239 | 1.23 |  | QV    |  |  |  |  |  |  |  |
| 7+20  | 0.4328 | 1.29 |  | Q     |  |  |  |  |  |  |  |
| 7+25  | 0.4421 | 1.34 |  | Q     |  |  |  |  |  |  |  |
| 7+30  | 0.4513 | 1.35 |  | Q     |  |  |  |  |  |  |  |
| 7+35  | 0.4612 | 1.42 |  | Q     |  |  |  |  |  |  |  |
| 7+40  | 0.4714 | 1.49 |  | Q     |  |  |  |  |  |  |  |
| 7+45  | 0.4817 | 1.50 |  | Q     |  |  |  |  |  |  |  |
| 7+50  | 0.4929 | 1.62 |  | VQ    |  |  |  |  |  |  |  |
| 7+55  | 0.5047 | 1.72 |  | Q     |  |  |  |  |  |  |  |
| 8+ 0  | 0.5166 | 1.73 |  | Q     |  |  |  |  |  |  |  |
| 8+ 5  | 0.5301 | 1.96 |  | VQ    |  |  |  |  |  |  |  |
| 8+10  | 0.5450 | 2.16 |  | V Q   |  |  |  |  |  |  |  |
| 8+15  | 0.5600 | 2.17 |  | V Q   |  |  |  |  |  |  |  |
| 8+20  | 0.5750 | 2.18 |  | V Q   |  |  |  |  |  |  |  |
| 8+25  | 0.5900 | 2.18 |  | VQ    |  |  |  |  |  |  |  |
| 8+30  | 0.6051 | 2.19 |  | VQ    |  |  |  |  |  |  |  |
| 8+35  | 0.6210 | 2.31 |  | V Q   |  |  |  |  |  |  |  |
| 8+40  | 0.6376 | 2.41 |  | V Q   |  |  |  |  |  |  |  |
| 8+45  | 0.6542 | 2.42 |  | V Q   |  |  |  |  |  |  |  |
| 8+50  | 0.6717 | 2.54 |  | V Q   |  |  |  |  |  |  |  |
| 8+55  | 0.6899 | 2.64 |  | V Q   |  |  |  |  |  |  |  |
| 9+ 0  | 0.7081 | 2.65 |  | V Q   |  |  |  |  |  |  |  |
| 9+ 5  | 0.7279 | 2.88 |  | V   Q |  |  |  |  |  |  |  |
| 9+10  | 0.7491 | 3.07 |  | V   Q |  |  |  |  |  |  |  |
| 9+15  | 0.7704 | 3.09 |  | V   Q |  |  |  |  |  |  |  |
| 9+20  | 0.7925 | 3.21 |  | V   Q |  |  |  |  |  |  |  |
| 9+25  | 0.8153 | 3.31 |  | V   Q |  |  |  |  |  |  |  |
| 9+30  | 0.8382 | 3.32 |  | V Q   |  |  |  |  |  |  |  |
| 9+35  | 0.8619 | 3.44 |  | V Q   |  |  |  |  |  |  |  |
| 9+40  | 0.8863 | 3.54 |  | V Q   |  |  |  |  |  |  |  |
| 9+45  | 0.9108 | 3.55 |  | V Q   |  |  |  |  |  |  |  |
| 9+50  | 0.9360 | 3.67 |  | V Q   |  |  |  |  |  |  |  |
| 9+55  | 0.9620 | 3.77 |  | V Q   |  |  |  |  |  |  |  |
| 10+ 0 | 0.9880 | 3.78 |  | V Q   |  |  |  |  |  |  |  |
| 10+ 5 | 1.0086 | 2.99 |  | QV    |  |  |  |  |  |  |  |
| 10+10 | 1.0247 | 2.33 |  | Q   V |  |  |  |  |  |  |  |
| 10+15 | 1.0405 | 2.29 |  | Q   V |  |  |  |  |  |  |  |
| 10+20 | 1.0563 | 2.29 |  | Q   V |  |  |  |  |  |  |  |
| 10+25 | 1.0721 | 2.30 |  | Q   V |  |  |  |  |  |  |  |
| 10+30 | 1.0879 | 2.30 |  | Q   V |  |  |  |  |  |  |  |
| 10+35 | 1.1077 | 2.87 |  | Q V   |  |  |  |  |  |  |  |
| 10+40 | 1.1308 | 3.35 |  | Q     |  |  |  |  |  |  |  |
| 10+45 | 1.1542 | 3.39 |  | Q     |  |  |  |  |  |  |  |
| 10+50 | 1.1776 | 3.40 |  | QV    |  |  |  |  |  |  |  |
| 10+55 | 1.2010 | 3.40 |  | QV    |  |  |  |  |  |  |  |
| 11+ 0 | 1.2244 | 3.40 |  | QV    |  |  |  |  |  |  |  |
| 11+ 5 | 1.2471 | 3.30 |  | Q V   |  |  |  |  |  |  |  |
| 11+10 | 1.2692 | 3.21 |  | Q V   |  |  |  |  |  |  |  |
| 11+15 | 1.2913 | 3.20 |  | Q V   |  |  |  |  |  |  |  |
| 11+20 | 1.3133 | 3.21 |  | Q V   |  |  |  |  |  |  |  |
| 11+25 | 1.3355 | 3.21 |  | Q V   |  |  |  |  |  |  |  |
| 11+30 | 1.3576 | 3.22 |  | Q V   |  |  |  |  |  |  |  |
| 11+35 | 1.3782 | 2.99 |  | Q V   |  |  |  |  |  |  |  |
| 11+40 | 1.3976 | 2.81 |  | Q V   |  |  |  |  |  |  |  |
| 11+45 | 1.4168 | 2.80 |  | Q V   |  |  |  |  |  |  |  |
| 11+50 | 1.4369 | 2.92 |  | Q V   |  |  |  |  |  |  |  |
| 11+55 | 1.4577 | 3.01 |  | Q V   |  |  |  |  |  |  |  |
| 12+ 0 | 1.4785 | 3.03 |  | Q V   |  |  |  |  |  |  |  |
| 12+ 5 | 1.5049 | 3.82 |  | Q V   |  |  |  |  |  |  |  |
| 12+10 | 1.5358 | 4.49 |  | QV    |  |  |  |  |  |  |  |
| 12+15 | 1.5671 | 4.54 |  | Q     |  |  |  |  |  |  |  |
| 12+20 | 1.5992 | 4.66 |  | QV    |  |  |  |  |  |  |  |
| 12+25 | 1.6320 | 4.76 |  | Q     |  |  |  |  |  |  |  |
| 12+30 | 1.6649 | 4.77 |  | QV    |  |  |  |  |  |  |  |
| 12+35 | 1.6993 | 5.00 |  | Q     |  |  |  |  |  |  |  |
| 12+40 | 1.7351 | 5.20 |  | Q     |  |  |  |  |  |  |  |
| 12+45 | 1.7710 | 5.22 |  | QV    |  |  |  |  |  |  |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|       |        |      |   |   |   |    |     |  |  |
|-------|--------|------|---|---|---|----|-----|--|--|
| 12+50 | 1.8078 | 5.33 |   |   |   | Q  |     |  |  |
| 12+55 | 1.8452 | 5.43 |   |   |   | QV |     |  |  |
| 13+ 0 | 1.8826 | 5.44 |   |   |   | QV |     |  |  |
| 13+ 5 | 1.9241 | 6.01 |   |   |   |    | vQ  |  |  |
| 13+10 | 1.9688 | 6.49 |   |   |   |    | v Q |  |  |
| 13+15 | 2.0137 | 6.53 |   |   |   |    | v Q |  |  |
| 13+20 | 2.0587 | 6.53 |   |   |   |    | v Q |  |  |
| 13+25 | 2.1038 | 6.54 |   |   |   |    | vQ  |  |  |
| 13+30 | 2.1488 | 6.54 |   |   |   |    | vQ  |  |  |
| 13+35 | 2.1853 | 5.30 |   |   |   | Q  | v   |  |  |
| 13+40 | 2.2147 | 4.26 |   |   |   |    | v   |  |  |
| 13+45 | 2.2435 | 4.19 |   |   | Q |    | v   |  |  |
| 13+50 | 2.2724 | 4.19 |   |   | Q |    | v   |  |  |
| 13+55 | 2.3013 | 4.20 |   |   | Q |    | v   |  |  |
| 14+ 0 | 2.3302 | 4.20 |   |   | Q |    | v   |  |  |
| 14+ 5 | 2.3623 | 4.66 |   |   | Q |    | v   |  |  |
| 14+10 | 2.3970 | 5.04 |   |   | Q |    | v   |  |  |
| 14+15 | 2.4319 | 5.07 |   |   | Q |    | v   |  |  |
| 14+20 | 2.4660 | 4.96 |   |   | Q |    | v   |  |  |
| 14+25 | 2.4996 | 4.87 |   |   | Q |    | v   |  |  |
| 14+30 | 2.5331 | 4.87 |   |   | Q |    | v   |  |  |
| 14+35 | 2.5667 | 4.87 |   |   | Q |    | v   |  |  |
| 14+40 | 2.6002 | 4.87 |   |   | Q |    | v   |  |  |
| 14+45 | 2.6338 | 4.88 |   |   | Q |    | v   |  |  |
| 14+50 | 2.6667 | 4.77 |   |   | Q |    | v   |  |  |
| 14+55 | 2.6989 | 4.68 |   |   | Q |    | v   |  |  |
| 15+ 0 | 2.7311 | 4.67 |   |   | Q |    | v   |  |  |
| 15+ 5 | 2.7625 | 4.56 |   |   | Q |    | v   |  |  |
| 15+10 | 2.7933 | 4.47 |   |   | Q |    | v   |  |  |
| 15+15 | 2.8241 | 4.47 |   |   | Q |    | v   |  |  |
| 15+20 | 2.8541 | 4.36 |   |   | Q |    | v   |  |  |
| 15+25 | 2.8835 | 4.27 |   |   | Q |    | v   |  |  |
| 15+30 | 2.9129 | 4.27 |   |   | Q |    | v   |  |  |
| 15+35 | 2.9392 | 3.81 |   |   | Q |    | v   |  |  |
| 15+40 | 2.9629 | 3.44 |   |   | Q |    | v   |  |  |
| 15+45 | 2.9864 | 3.42 |   |   | Q |    | v   |  |  |
| 15+50 | 3.0099 | 3.42 |   |   | Q |    | v   |  |  |
| 15+55 | 3.0335 | 3.42 |   |   | Q |    | v   |  |  |
| 16+ 0 | 3.0571 | 3.43 |   |   | Q |    | v   |  |  |
| 16+ 5 | 3.0700 | 1.88 |   | Q |   |    | v   |  |  |
| 16+10 | 3.0741 | 0.59 | Q |   |   |    | v   |  |  |
| 16+15 | 3.0775 | 0.49 | Q |   |   |    | v   |  |  |
| 16+20 | 3.0808 | 0.49 | Q |   |   |    | v   |  |  |
| 16+25 | 3.0842 | 0.49 | Q |   |   |    | v   |  |  |
| 16+30 | 3.0876 | 0.49 | Q |   |   |    | v   |  |  |
| 16+35 | 3.0905 | 0.43 | Q |   |   |    | v   |  |  |
| 16+40 | 3.0931 | 0.37 | Q |   |   |    | v   |  |  |
| 16+45 | 3.0956 | 0.37 | Q |   |   |    | v   |  |  |
| 16+50 | 3.0982 | 0.37 | Q |   |   |    | v   |  |  |
| 16+55 | 3.1007 | 0.37 | Q |   |   |    | v   |  |  |
| 17+ 0 | 3.1032 | 0.37 | Q |   |   |    | v   |  |  |
| 17+ 5 | 3.1066 | 0.50 | Q |   |   |    | v   |  |  |
| 17+10 | 3.1108 | 0.60 | Q |   |   |    | v   |  |  |
| 17+15 | 3.1150 | 0.61 | Q |   |   |    | v   |  |  |
| 17+20 | 3.1193 | 0.61 | Q |   |   |    | v   |  |  |
| 17+25 | 3.1235 | 0.61 | Q |   |   |    | v   |  |  |
| 17+30 | 3.1277 | 0.61 | Q |   |   |    | v   |  |  |
| 17+35 | 3.1319 | 0.61 | Q |   |   |    | v   |  |  |
| 17+40 | 3.1361 | 0.61 | Q |   |   |    | v   |  |  |
| 17+45 | 3.1404 | 0.61 | Q |   |   |    | v   |  |  |
| 17+50 | 3.1441 | 0.55 | Q |   |   |    | v   |  |  |
| 17+55 | 3.1476 | 0.49 | Q |   |   |    | v   |  |  |
| 18+ 0 | 3.1509 | 0.49 | Q |   |   |    | v   |  |  |
| 18+ 5 | 3.1543 | 0.49 | Q |   |   |    | v   |  |  |
| 18+10 | 3.1577 | 0.49 | Q |   |   |    | v   |  |  |
| 18+15 | 3.1611 | 0.49 | Q |   |   |    | v   |  |  |
| 18+20 | 3.1644 | 0.49 | Q |   |   |    | v   |  |  |
| 18+25 | 3.1678 | 0.49 | Q |   |   |    | v   |  |  |
| 18+30 | 3.1712 | 0.49 | Q |   |   |    | v   |  |  |
| 18+35 | 3.1741 | 0.43 | Q |   |   |    | v   |  |  |
| 18+40 | 3.1767 | 0.37 | Q |   |   |    | v   |  |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|       |        |      |    |  |  |  |   |  |
|-------|--------|------|----|--|--|--|---|--|
| 18+45 | 3.1792 | 0.37 | IQ |  |  |  | V |  |
| 18+50 | 3.1813 | 0.30 | IQ |  |  |  | V |  |
| 18+55 | 3.1830 | 0.25 | Q  |  |  |  | V |  |
| 19+ 0 | 3.1847 | 0.25 | Q  |  |  |  | V |  |
| 19+ 5 | 3.1869 | 0.31 | IQ |  |  |  | V |  |
| 19+10 | 3.1894 | 0.36 | IQ |  |  |  | V |  |
| 19+15 | 3.1919 | 0.37 | IQ |  |  |  | V |  |
| 19+20 | 3.1949 | 0.43 | IQ |  |  |  | V |  |
| 19+25 | 3.1982 | 0.49 | IQ |  |  |  | V |  |
| 19+30 | 3.2016 | 0.49 | IQ |  |  |  | V |  |
| 19+35 | 3.2045 | 0.43 | IQ |  |  |  | V |  |
| 19+40 | 3.2071 | 0.37 | IQ |  |  |  | V |  |
| 19+45 | 3.2096 | 0.37 | IQ |  |  |  | V |  |
| 19+50 | 3.2117 | 0.30 | IQ |  |  |  | V |  |
| 19+55 | 3.2134 | 0.25 | Q  |  |  |  | V |  |
| 20+ 0 | 3.2151 | 0.25 | Q  |  |  |  | V |  |
| 20+ 5 | 3.2173 | 0.31 | IQ |  |  |  | V |  |
| 20+10 | 3.2198 | 0.36 | IQ |  |  |  | V |  |
| 20+15 | 3.2223 | 0.37 | IQ |  |  |  | V |  |
| 20+20 | 3.2248 | 0.37 | IQ |  |  |  | V |  |
| 20+25 | 3.2274 | 0.37 | IQ |  |  |  | V |  |
| 20+30 | 3.2299 | 0.37 | IQ |  |  |  | V |  |
| 20+35 | 3.2324 | 0.37 | IQ |  |  |  | V |  |
| 20+40 | 3.2350 | 0.37 | IQ |  |  |  | V |  |
| 20+45 | 3.2375 | 0.37 | IQ |  |  |  | V |  |
| 20+50 | 3.2396 | 0.30 | IQ |  |  |  | V |  |
| 20+55 | 3.2413 | 0.25 | Q  |  |  |  | V |  |
| 21+ 0 | 3.2430 | 0.25 | Q  |  |  |  | V |  |
| 21+ 5 | 3.2451 | 0.31 | IQ |  |  |  | V |  |
| 21+10 | 3.2476 | 0.36 | IQ |  |  |  | V |  |
| 21+15 | 3.2502 | 0.37 | IQ |  |  |  | V |  |
| 21+20 | 3.2523 | 0.30 | IQ |  |  |  | V |  |
| 21+25 | 3.2540 | 0.25 | Q  |  |  |  | V |  |
| 21+30 | 3.2557 | 0.25 | Q  |  |  |  | V |  |
| 21+35 | 3.2578 | 0.31 | IQ |  |  |  | V |  |
| 21+40 | 3.2603 | 0.36 | IQ |  |  |  | V |  |
| 21+45 | 3.2628 | 0.37 | IQ |  |  |  | V |  |
| 21+50 | 3.2649 | 0.30 | IQ |  |  |  | V |  |
| 21+55 | 3.2666 | 0.25 | Q  |  |  |  | V |  |
| 22+ 0 | 3.2683 | 0.25 | Q  |  |  |  | V |  |
| 22+ 5 | 3.2705 | 0.31 | IQ |  |  |  | V |  |
| 22+10 | 3.2730 | 0.36 | IQ |  |  |  | V |  |
| 22+15 | 3.2755 | 0.37 | IQ |  |  |  | V |  |
| 22+20 | 3.2776 | 0.30 | IQ |  |  |  | V |  |
| 22+25 | 3.2793 | 0.25 | Q  |  |  |  | V |  |
| 22+30 | 3.2810 | 0.25 | Q  |  |  |  | V |  |
| 22+35 | 3.2827 | 0.25 | Q  |  |  |  | V |  |
| 22+40 | 3.2844 | 0.25 | Q  |  |  |  | V |  |
| 22+45 | 3.2861 | 0.25 | Q  |  |  |  | V |  |
| 22+50 | 3.2878 | 0.25 | Q  |  |  |  | V |  |
| 22+55 | 3.2894 | 0.25 | Q  |  |  |  | V |  |
| 23+ 0 | 3.2911 | 0.25 | Q  |  |  |  | V |  |
| 23+ 5 | 3.2928 | 0.25 | Q  |  |  |  | V |  |
| 23+10 | 3.2945 | 0.25 | Q  |  |  |  | V |  |
| 23+15 | 3.2962 | 0.25 | Q  |  |  |  | V |  |
| 23+20 | 3.2979 | 0.25 | Q  |  |  |  | V |  |
| 23+25 | 3.2996 | 0.25 | Q  |  |  |  | V |  |
| 23+30 | 3.3013 | 0.25 | Q  |  |  |  | V |  |
| 23+35 | 3.3030 | 0.25 | Q  |  |  |  | V |  |
| 23+40 | 3.3046 | 0.25 | Q  |  |  |  | V |  |
| 23+45 | 3.3063 | 0.25 | Q  |  |  |  | V |  |
| 23+50 | 3.3080 | 0.25 | Q  |  |  |  | V |  |
| 23+55 | 3.3097 | 0.25 | Q  |  |  |  | V |  |
| 24+ 0 | 3.3114 | 0.25 | Q  |  |  |  | V |  |
| 24+ 5 | 3.3122 | 0.12 | Q  |  |  |  | V |  |
| 24+10 | 3.3123 | 0.01 | Q  |  |  |  | V |  |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

## U n i t   H y d r o g r a p h   A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1  
Study date 01/29/18 File: nrareabpr2242.out

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Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

-----  
English (in-lb) Input Units Used  
English Rainfall Data (Inches) Input Values Used

English Units used in output format

-----  
Nichols Road Project - Tract 37305  
Drainage Area B = 8.4 Ac  
Proposed Condition for HCOC mitigation  
2-year 24-hour storm

-----  
Drainage Area = 8.40(Ac.) = 0.013 Sq. Mi.  
Drainage Area for Depth-Area Areal Adjustment = 8.40(Ac.) = 0.013 Sq. Mi.  
Length along longest watercourse = 1015.00(Ft.)  
Length along longest watercourse measured to centroid = 444.00(Ft.)  
Length along longest watercourse = 0.192 Mi.  
Length along longest watercourse measured to centroid = 0.084 Mi.  
Difference in elevation = 34.00(Ft.)  
Slope along watercourse = 176.8670 Ft./Mi.  
Average Manning's 'N' = 0.017  
Lag time = 0.032 Hr.  
Lag time = 1.91 Min.  
25% of lag time = 0.48 Min.  
40% of lag time = 0.76 Min.  
Unit time = 5.00 Min.  
Duration of storm = 24 Hour(s)  
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

|               |                  |                |
|---------------|------------------|----------------|
| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
| 8.40          | 2.38             | 19.99          |

100 YEAR Area rainfall data:

|               |                  |                |
|---------------|------------------|----------------|
| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
| 8.40          | 6.35             | 53.34          |

STORM EVENT (YEAR) = 2.00  
Area Averaged 2-Year Rainfall = 2.380(In)  
Area Averaged 100-Year Rainfall = 6.350(In)

Point rain (area averaged) = 2.380(In)  
Areal adjustment factor = 100.00 %  
Adjusted average point rain = 2.380(In)

Sub-Area Data:  
Area(Ac.)                  Runoff Index      Impervious %  
0.800                      69.00              0.050

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

7.600                      69.00                      0.550  
Total Area Entered =                      8.40 (Ac.)

|           |       |             |            |                  |        |         |
|-----------|-------|-------------|------------|------------------|--------|---------|
| RI        | RI    | Infil. Rate | Impervious | Adj. Infil. Rate | Area%  | F       |
| AMC2      | AMC-3 | (In/Hr)     | (Dec.%)    | (In/Hr)          | (Dec.) | (In/Hr) |
| 69.0      | 84.4  | 0.194       | 0.050      | 0.185            | 0.095  | 0.018   |
| 69.0      | 84.4  | 0.194       | 0.550      | 0.098            | 0.905  | 0.089   |
| Sum (F) = |       |             |            |                  |        | 0.106   |

Area averaged mean soil loss (F) (In/Hr) = 0.106

Minimum soil loss rate ((In/Hr)) = 0.053

(for 24 hour storm duration)

Soil loss rate (decimal) = 0.430

## Unit Hydrograph FOOTHILL S-Curve

### Unit Hydrograph Data

| Unit time period<br>(hrs) | Time % of lag | Distribution<br>Graph % | Unit Hydrograph<br>(CFS) |
|---------------------------|---------------|-------------------------|--------------------------|
| 1                         | 0.083         | 261.789                 | 52.730                   |
| 2                         | 0.167         | 523.577                 | 43.889                   |
| 3                         | 0.250         | 785.366                 | 3.381                    |
| Sum = 100.000             |               | Sum=                    | 8.466                    |

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

| Unit Time<br>(Hr.) | Pattern<br>Percent | Storm Rain<br>(In/Hr) | Loss rate(In./Hr)<br>Max   Low | Effective<br>(In/Hr) |
|--------------------|--------------------|-----------------------|--------------------------------|----------------------|
| 1                  | 0.08               | 0.019                 | ( 0.188)                       | 0.008                |
| 2                  | 0.17               | 0.019                 | ( 0.188)                       | 0.008                |
| 3                  | 0.25               | 0.019                 | ( 0.187)                       | 0.008                |
| 4                  | 0.33               | 0.029                 | ( 0.186)                       | 0.012                |
| 5                  | 0.42               | 0.029                 | ( 0.185)                       | 0.012                |
| 6                  | 0.50               | 0.029                 | ( 0.185)                       | 0.012                |
| 7                  | 0.58               | 0.029                 | ( 0.184)                       | 0.012                |
| 8                  | 0.67               | 0.029                 | ( 0.183)                       | 0.012                |
| 9                  | 0.75               | 0.029                 | ( 0.182)                       | 0.012                |
| 10                 | 0.83               | 0.038                 | ( 0.182)                       | 0.016                |
| 11                 | 0.92               | 0.038                 | ( 0.181)                       | 0.016                |
| 12                 | 1.00               | 0.038                 | ( 0.180)                       | 0.016                |
| 13                 | 1.08               | 0.029                 | ( 0.180)                       | 0.012                |
| 14                 | 1.17               | 0.029                 | ( 0.179)                       | 0.012                |
| 15                 | 1.25               | 0.029                 | ( 0.178)                       | 0.012                |
| 16                 | 1.33               | 0.029                 | ( 0.177)                       | 0.012                |
| 17                 | 1.42               | 0.029                 | ( 0.177)                       | 0.012                |
| 18                 | 1.50               | 0.029                 | ( 0.176)                       | 0.012                |
| 19                 | 1.58               | 0.029                 | ( 0.175)                       | 0.012                |
| 20                 | 1.67               | 0.029                 | ( 0.175)                       | 0.012                |
| 21                 | 1.75               | 0.029                 | ( 0.174)                       | 0.012                |
| 22                 | 1.83               | 0.038                 | ( 0.173)                       | 0.016                |
| 23                 | 1.92               | 0.038                 | ( 0.173)                       | 0.016                |
| 24                 | 2.00               | 0.038                 | ( 0.172)                       | 0.016                |
| 25                 | 2.08               | 0.038                 | ( 0.171)                       | 0.016                |
| 26                 | 2.17               | 0.038                 | ( 0.170)                       | 0.016                |
| 27                 | 2.25               | 0.038                 | ( 0.170)                       | 0.016                |
| 28                 | 2.33               | 0.038                 | ( 0.169)                       | 0.016                |
| 29                 | 2.42               | 0.038                 | ( 0.168)                       | 0.016                |
| 30                 | 2.50               | 0.038                 | ( 0.168)                       | 0.016                |
| 31                 | 2.58               | 0.048                 | ( 0.167)                       | 0.020                |
| 32                 | 2.67               | 0.048                 | ( 0.166)                       | 0.020                |
| 33                 | 2.75               | 0.048                 | ( 0.166)                       | 0.020                |
| 34                 | 2.83               | 0.048                 | ( 0.165)                       | 0.020                |
| 35                 | 2.92               | 0.048                 | ( 0.164)                       | 0.020                |
| 36                 | 3.00               | 0.048                 | ( 0.164)                       | 0.020                |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|     |      |      |       |          |       |       |
|-----|------|------|-------|----------|-------|-------|
| 37  | 3.08 | 0.17 | 0.048 | ( 0.163) | 0.020 | 0.027 |
| 38  | 3.17 | 0.17 | 0.048 | ( 0.162) | 0.020 | 0.027 |
| 39  | 3.25 | 0.17 | 0.048 | ( 0.162) | 0.020 | 0.027 |
| 40  | 3.33 | 0.17 | 0.048 | ( 0.161) | 0.020 | 0.027 |
| 41  | 3.42 | 0.17 | 0.048 | ( 0.160) | 0.020 | 0.027 |
| 42  | 3.50 | 0.17 | 0.048 | ( 0.160) | 0.020 | 0.027 |
| 43  | 3.58 | 0.17 | 0.048 | ( 0.159) | 0.020 | 0.027 |
| 44  | 3.67 | 0.17 | 0.048 | ( 0.158) | 0.020 | 0.027 |
| 45  | 3.75 | 0.17 | 0.048 | ( 0.158) | 0.020 | 0.027 |
| 46  | 3.83 | 0.20 | 0.057 | ( 0.157) | 0.025 | 0.033 |
| 47  | 3.92 | 0.20 | 0.057 | ( 0.156) | 0.025 | 0.033 |
| 48  | 4.00 | 0.20 | 0.057 | ( 0.156) | 0.025 | 0.033 |
| 49  | 4.08 | 0.20 | 0.057 | ( 0.155) | 0.025 | 0.033 |
| 50  | 4.17 | 0.20 | 0.057 | ( 0.154) | 0.025 | 0.033 |
| 51  | 4.25 | 0.20 | 0.057 | ( 0.154) | 0.025 | 0.033 |
| 52  | 4.33 | 0.23 | 0.067 | ( 0.153) | 0.029 | 0.038 |
| 53  | 4.42 | 0.23 | 0.067 | ( 0.152) | 0.029 | 0.038 |
| 54  | 4.50 | 0.23 | 0.067 | ( 0.152) | 0.029 | 0.038 |
| 55  | 4.58 | 0.23 | 0.067 | ( 0.151) | 0.029 | 0.038 |
| 56  | 4.67 | 0.23 | 0.067 | ( 0.150) | 0.029 | 0.038 |
| 57  | 4.75 | 0.23 | 0.067 | ( 0.150) | 0.029 | 0.038 |
| 58  | 4.83 | 0.27 | 0.076 | ( 0.149) | 0.033 | 0.043 |
| 59  | 4.92 | 0.27 | 0.076 | ( 0.148) | 0.033 | 0.043 |
| 60  | 5.00 | 0.27 | 0.076 | ( 0.148) | 0.033 | 0.043 |
| 61  | 5.08 | 0.20 | 0.057 | ( 0.147) | 0.025 | 0.033 |
| 62  | 5.17 | 0.20 | 0.057 | ( 0.146) | 0.025 | 0.033 |
| 63  | 5.25 | 0.20 | 0.057 | ( 0.146) | 0.025 | 0.033 |
| 64  | 5.33 | 0.23 | 0.067 | ( 0.145) | 0.029 | 0.038 |
| 65  | 5.42 | 0.23 | 0.067 | ( 0.145) | 0.029 | 0.038 |
| 66  | 5.50 | 0.23 | 0.067 | ( 0.144) | 0.029 | 0.038 |
| 67  | 5.58 | 0.27 | 0.076 | ( 0.143) | 0.033 | 0.043 |
| 68  | 5.67 | 0.27 | 0.076 | ( 0.143) | 0.033 | 0.043 |
| 69  | 5.75 | 0.27 | 0.076 | ( 0.142) | 0.033 | 0.043 |
| 70  | 5.83 | 0.27 | 0.076 | ( 0.141) | 0.033 | 0.043 |
| 71  | 5.92 | 0.27 | 0.076 | ( 0.141) | 0.033 | 0.043 |
| 72  | 6.00 | 0.27 | 0.076 | ( 0.140) | 0.033 | 0.043 |
| 73  | 6.08 | 0.30 | 0.086 | ( 0.140) | 0.037 | 0.049 |
| 74  | 6.17 | 0.30 | 0.086 | ( 0.139) | 0.037 | 0.049 |
| 75  | 6.25 | 0.30 | 0.086 | ( 0.138) | 0.037 | 0.049 |
| 76  | 6.33 | 0.30 | 0.086 | ( 0.138) | 0.037 | 0.049 |
| 77  | 6.42 | 0.30 | 0.086 | ( 0.137) | 0.037 | 0.049 |
| 78  | 6.50 | 0.30 | 0.086 | ( 0.136) | 0.037 | 0.049 |
| 79  | 6.58 | 0.33 | 0.095 | ( 0.136) | 0.041 | 0.054 |
| 80  | 6.67 | 0.33 | 0.095 | ( 0.135) | 0.041 | 0.054 |
| 81  | 6.75 | 0.33 | 0.095 | ( 0.135) | 0.041 | 0.054 |
| 82  | 6.83 | 0.33 | 0.095 | ( 0.134) | 0.041 | 0.054 |
| 83  | 6.92 | 0.33 | 0.095 | ( 0.133) | 0.041 | 0.054 |
| 84  | 7.00 | 0.33 | 0.095 | ( 0.133) | 0.041 | 0.054 |
| 85  | 7.08 | 0.33 | 0.095 | ( 0.132) | 0.041 | 0.054 |
| 86  | 7.17 | 0.33 | 0.095 | ( 0.132) | 0.041 | 0.054 |
| 87  | 7.25 | 0.33 | 0.095 | ( 0.131) | 0.041 | 0.054 |
| 88  | 7.33 | 0.37 | 0.105 | ( 0.130) | 0.045 | 0.060 |
| 89  | 7.42 | 0.37 | 0.105 | ( 0.130) | 0.045 | 0.060 |
| 90  | 7.50 | 0.37 | 0.105 | ( 0.129) | 0.045 | 0.060 |
| 91  | 7.58 | 0.40 | 0.114 | ( 0.129) | 0.049 | 0.065 |
| 92  | 7.67 | 0.40 | 0.114 | ( 0.128) | 0.049 | 0.065 |
| 93  | 7.75 | 0.40 | 0.114 | ( 0.127) | 0.049 | 0.065 |
| 94  | 7.83 | 0.43 | 0.124 | ( 0.127) | 0.053 | 0.071 |
| 95  | 7.92 | 0.43 | 0.124 | ( 0.126) | 0.053 | 0.071 |
| 96  | 8.00 | 0.43 | 0.124 | ( 0.126) | 0.053 | 0.071 |
| 97  | 8.08 | 0.50 | 0.143 | ( 0.125) | 0.061 | 0.081 |
| 98  | 8.17 | 0.50 | 0.143 | ( 0.125) | 0.061 | 0.081 |
| 99  | 8.25 | 0.50 | 0.143 | ( 0.124) | 0.061 | 0.081 |
| 100 | 8.33 | 0.50 | 0.143 | ( 0.123) | 0.061 | 0.081 |
| 101 | 8.42 | 0.50 | 0.143 | ( 0.123) | 0.061 | 0.081 |
| 102 | 8.50 | 0.50 | 0.143 | ( 0.122) | 0.061 | 0.081 |
| 103 | 8.58 | 0.53 | 0.152 | ( 0.122) | 0.065 | 0.087 |
| 104 | 8.67 | 0.53 | 0.152 | ( 0.121) | 0.065 | 0.087 |
| 105 | 8.75 | 0.53 | 0.152 | ( 0.120) | 0.065 | 0.087 |
| 106 | 8.83 | 0.57 | 0.162 | ( 0.120) | 0.070 | 0.092 |
| 107 | 8.92 | 0.57 | 0.162 | ( 0.119) | 0.070 | 0.092 |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|     |       |      |       |                |       |       |
|-----|-------|------|-------|----------------|-------|-------|
| 108 | 9.00  | 0.57 | 0.162 | ( 0.119)       | 0.070 | 0.092 |
| 109 | 9.08  | 0.63 | 0.181 | ( 0.118)       | 0.078 | 0.103 |
| 110 | 9.17  | 0.63 | 0.181 | ( 0.118)       | 0.078 | 0.103 |
| 111 | 9.25  | 0.63 | 0.181 | ( 0.117)       | 0.078 | 0.103 |
| 112 | 9.33  | 0.67 | 0.190 | ( 0.117)       | 0.082 | 0.109 |
| 113 | 9.42  | 0.67 | 0.190 | ( 0.116)       | 0.082 | 0.109 |
| 114 | 9.50  | 0.67 | 0.190 | ( 0.115)       | 0.082 | 0.109 |
| 115 | 9.58  | 0.70 | 0.200 | ( 0.115)       | 0.086 | 0.114 |
| 116 | 9.67  | 0.70 | 0.200 | ( 0.114)       | 0.086 | 0.114 |
| 117 | 9.75  | 0.70 | 0.200 | ( 0.114)       | 0.086 | 0.114 |
| 118 | 9.83  | 0.73 | 0.209 | ( 0.113)       | 0.090 | 0.119 |
| 119 | 9.92  | 0.73 | 0.209 | ( 0.113)       | 0.090 | 0.119 |
| 120 | 10.00 | 0.73 | 0.209 | ( 0.112)       | 0.090 | 0.119 |
| 121 | 10.08 | 0.50 | 0.143 | ( 0.112)       | 0.061 | 0.081 |
| 122 | 10.17 | 0.50 | 0.143 | ( 0.111)       | 0.061 | 0.081 |
| 123 | 10.25 | 0.50 | 0.143 | ( 0.111)       | 0.061 | 0.081 |
| 124 | 10.33 | 0.50 | 0.143 | ( 0.110)       | 0.061 | 0.081 |
| 125 | 10.42 | 0.50 | 0.143 | ( 0.109)       | 0.061 | 0.081 |
| 126 | 10.50 | 0.50 | 0.143 | ( 0.109)       | 0.061 | 0.081 |
| 127 | 10.58 | 0.67 | 0.190 | ( 0.108)       | 0.082 | 0.109 |
| 128 | 10.67 | 0.67 | 0.190 | ( 0.108)       | 0.082 | 0.109 |
| 129 | 10.75 | 0.67 | 0.190 | ( 0.107)       | 0.082 | 0.109 |
| 130 | 10.83 | 0.67 | 0.190 | ( 0.107)       | 0.082 | 0.109 |
| 131 | 10.92 | 0.67 | 0.190 | ( 0.106)       | 0.082 | 0.109 |
| 132 | 11.00 | 0.67 | 0.190 | ( 0.106)       | 0.082 | 0.109 |
| 133 | 11.08 | 0.63 | 0.181 | ( 0.105)       | 0.078 | 0.103 |
| 134 | 11.17 | 0.63 | 0.181 | ( 0.105)       | 0.078 | 0.103 |
| 135 | 11.25 | 0.63 | 0.181 | ( 0.104)       | 0.078 | 0.103 |
| 136 | 11.33 | 0.63 | 0.181 | ( 0.104)       | 0.078 | 0.103 |
| 137 | 11.42 | 0.63 | 0.181 | ( 0.103)       | 0.078 | 0.103 |
| 138 | 11.50 | 0.63 | 0.181 | ( 0.103)       | 0.078 | 0.103 |
| 139 | 11.58 | 0.57 | 0.162 | ( 0.102)       | 0.070 | 0.092 |
| 140 | 11.67 | 0.57 | 0.162 | ( 0.102)       | 0.070 | 0.092 |
| 141 | 11.75 | 0.57 | 0.162 | ( 0.101)       | 0.070 | 0.092 |
| 142 | 11.83 | 0.60 | 0.171 | ( 0.101)       | 0.074 | 0.098 |
| 143 | 11.92 | 0.60 | 0.171 | ( 0.100)       | 0.074 | 0.098 |
| 144 | 12.00 | 0.60 | 0.171 | ( 0.100)       | 0.074 | 0.098 |
| 145 | 12.08 | 0.83 | 0.238 | 0.099 ( 0.102) |       | 0.139 |
| 146 | 12.17 | 0.83 | 0.238 | 0.099 ( 0.102) |       | 0.139 |
| 147 | 12.25 | 0.83 | 0.238 | 0.098 ( 0.102) |       | 0.140 |
| 148 | 12.33 | 0.87 | 0.248 | 0.098 ( 0.106) |       | 0.150 |
| 149 | 12.42 | 0.87 | 0.248 | 0.097 ( 0.106) |       | 0.150 |
| 150 | 12.50 | 0.87 | 0.248 | 0.097 ( 0.106) |       | 0.151 |
| 151 | 12.58 | 0.93 | 0.267 | 0.096 ( 0.115) |       | 0.170 |
| 152 | 12.67 | 0.93 | 0.267 | 0.096 ( 0.115) |       | 0.171 |
| 153 | 12.75 | 0.93 | 0.267 | 0.095 ( 0.115) |       | 0.171 |
| 154 | 12.83 | 0.97 | 0.276 | 0.095 ( 0.119) |       | 0.181 |
| 155 | 12.92 | 0.97 | 0.276 | 0.094 ( 0.119) |       | 0.182 |
| 156 | 13.00 | 0.97 | 0.276 | 0.094 ( 0.119) |       | 0.182 |
| 157 | 13.08 | 1.13 | 0.324 | 0.093 ( 0.139) |       | 0.230 |
| 158 | 13.17 | 1.13 | 0.324 | 0.093 ( 0.139) |       | 0.231 |
| 159 | 13.25 | 1.13 | 0.324 | 0.092 ( 0.139) |       | 0.231 |
| 160 | 13.33 | 1.13 | 0.324 | 0.092 ( 0.139) |       | 0.232 |
| 161 | 13.42 | 1.13 | 0.324 | 0.091 ( 0.139) |       | 0.232 |
| 162 | 13.50 | 1.13 | 0.324 | 0.091 ( 0.139) |       | 0.233 |
| 163 | 13.58 | 0.77 | 0.219 | 0.090 ( 0.094) |       | 0.128 |
| 164 | 13.67 | 0.77 | 0.219 | 0.090 ( 0.094) |       | 0.129 |
| 165 | 13.75 | 0.77 | 0.219 | 0.090 ( 0.094) |       | 0.129 |
| 166 | 13.83 | 0.77 | 0.219 | 0.089 ( 0.094) |       | 0.130 |
| 167 | 13.92 | 0.77 | 0.219 | 0.089 ( 0.094) |       | 0.130 |
| 168 | 14.00 | 0.77 | 0.219 | 0.088 ( 0.094) |       | 0.131 |
| 169 | 14.08 | 0.90 | 0.257 | 0.088 ( 0.111) |       | 0.169 |
| 170 | 14.17 | 0.90 | 0.257 | 0.087 ( 0.111) |       | 0.170 |
| 171 | 14.25 | 0.90 | 0.257 | 0.087 ( 0.111) |       | 0.170 |
| 172 | 14.33 | 0.87 | 0.248 | 0.086 ( 0.106) |       | 0.161 |
| 173 | 14.42 | 0.87 | 0.248 | 0.086 ( 0.106) |       | 0.162 |
| 174 | 14.50 | 0.87 | 0.248 | 0.086 ( 0.106) |       | 0.162 |
| 175 | 14.58 | 0.87 | 0.248 | 0.085 ( 0.106) |       | 0.162 |
| 176 | 14.67 | 0.87 | 0.248 | 0.085 ( 0.106) |       | 0.163 |
| 177 | 14.75 | 0.87 | 0.248 | 0.084 ( 0.106) |       | 0.163 |
| 178 | 14.83 | 0.83 | 0.238 | 0.084 ( 0.102) |       | 0.154 |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|     |       |      |       |          |          |       |
|-----|-------|------|-------|----------|----------|-------|
| 179 | 14.92 | 0.83 | 0.238 | 0.083    | ( 0.102) | 0.155 |
| 180 | 15.00 | 0.83 | 0.238 | 0.083    | ( 0.102) | 0.155 |
| 181 | 15.08 | 0.80 | 0.228 | 0.083    | ( 0.098) | 0.146 |
| 182 | 15.17 | 0.80 | 0.228 | 0.082    | ( 0.098) | 0.146 |
| 183 | 15.25 | 0.80 | 0.228 | 0.082    | ( 0.098) | 0.147 |
| 184 | 15.33 | 0.77 | 0.219 | 0.081    | ( 0.094) | 0.138 |
| 185 | 15.42 | 0.77 | 0.219 | 0.081    | ( 0.094) | 0.138 |
| 186 | 15.50 | 0.77 | 0.219 | 0.080    | ( 0.094) | 0.139 |
| 187 | 15.58 | 0.63 | 0.181 | ( 0.080) | 0.078    | 0.103 |
| 188 | 15.67 | 0.63 | 0.181 | ( 0.080) | 0.078    | 0.103 |
| 189 | 15.75 | 0.63 | 0.181 | ( 0.079) | 0.078    | 0.103 |
| 190 | 15.83 | 0.63 | 0.181 | ( 0.079) | 0.078    | 0.103 |
| 191 | 15.92 | 0.63 | 0.181 | ( 0.078) | 0.078    | 0.103 |
| 192 | 16.00 | 0.63 | 0.181 | ( 0.078) | 0.078    | 0.103 |
| 193 | 16.08 | 0.13 | 0.038 | ( 0.078) | 0.016    | 0.022 |
| 194 | 16.17 | 0.13 | 0.038 | ( 0.077) | 0.016    | 0.022 |
| 195 | 16.25 | 0.13 | 0.038 | ( 0.077) | 0.016    | 0.022 |
| 196 | 16.33 | 0.13 | 0.038 | ( 0.076) | 0.016    | 0.022 |
| 197 | 16.42 | 0.13 | 0.038 | ( 0.076) | 0.016    | 0.022 |
| 198 | 16.50 | 0.13 | 0.038 | ( 0.076) | 0.016    | 0.022 |
| 199 | 16.58 | 0.10 | 0.029 | ( 0.075) | 0.012    | 0.016 |
| 200 | 16.67 | 0.10 | 0.029 | ( 0.075) | 0.012    | 0.016 |
| 201 | 16.75 | 0.10 | 0.029 | ( 0.074) | 0.012    | 0.016 |
| 202 | 16.83 | 0.10 | 0.029 | ( 0.074) | 0.012    | 0.016 |
| 203 | 16.92 | 0.10 | 0.029 | ( 0.074) | 0.012    | 0.016 |
| 204 | 17.00 | 0.10 | 0.029 | ( 0.073) | 0.012    | 0.016 |
| 205 | 17.08 | 0.17 | 0.048 | ( 0.073) | 0.020    | 0.027 |
| 206 | 17.17 | 0.17 | 0.048 | ( 0.073) | 0.020    | 0.027 |
| 207 | 17.25 | 0.17 | 0.048 | ( 0.072) | 0.020    | 0.027 |
| 208 | 17.33 | 0.17 | 0.048 | ( 0.072) | 0.020    | 0.027 |
| 209 | 17.42 | 0.17 | 0.048 | ( 0.072) | 0.020    | 0.027 |
| 210 | 17.50 | 0.17 | 0.048 | ( 0.071) | 0.020    | 0.027 |
| 211 | 17.58 | 0.17 | 0.048 | ( 0.071) | 0.020    | 0.027 |
| 212 | 17.67 | 0.17 | 0.048 | ( 0.070) | 0.020    | 0.027 |
| 213 | 17.75 | 0.17 | 0.048 | ( 0.070) | 0.020    | 0.027 |
| 214 | 17.83 | 0.13 | 0.038 | ( 0.070) | 0.016    | 0.022 |
| 215 | 17.92 | 0.13 | 0.038 | ( 0.069) | 0.016    | 0.022 |
| 216 | 18.00 | 0.13 | 0.038 | ( 0.069) | 0.016    | 0.022 |
| 217 | 18.08 | 0.13 | 0.038 | ( 0.069) | 0.016    | 0.022 |
| 218 | 18.17 | 0.13 | 0.038 | ( 0.068) | 0.016    | 0.022 |
| 219 | 18.25 | 0.13 | 0.038 | ( 0.068) | 0.016    | 0.022 |
| 220 | 18.33 | 0.13 | 0.038 | ( 0.068) | 0.016    | 0.022 |
| 221 | 18.42 | 0.13 | 0.038 | ( 0.067) | 0.016    | 0.022 |
| 222 | 18.50 | 0.13 | 0.038 | ( 0.067) | 0.016    | 0.022 |
| 223 | 18.58 | 0.10 | 0.029 | ( 0.067) | 0.012    | 0.016 |
| 224 | 18.67 | 0.10 | 0.029 | ( 0.066) | 0.012    | 0.016 |
| 225 | 18.75 | 0.10 | 0.029 | ( 0.066) | 0.012    | 0.016 |
| 226 | 18.83 | 0.07 | 0.019 | ( 0.066) | 0.008    | 0.011 |
| 227 | 18.92 | 0.07 | 0.019 | ( 0.065) | 0.008    | 0.011 |
| 228 | 19.00 | 0.07 | 0.019 | ( 0.065) | 0.008    | 0.011 |
| 229 | 19.08 | 0.10 | 0.029 | ( 0.065) | 0.012    | 0.016 |
| 230 | 19.17 | 0.10 | 0.029 | ( 0.065) | 0.012    | 0.016 |
| 231 | 19.25 | 0.10 | 0.029 | ( 0.064) | 0.012    | 0.016 |
| 232 | 19.33 | 0.13 | 0.038 | ( 0.064) | 0.016    | 0.022 |
| 233 | 19.42 | 0.13 | 0.038 | ( 0.064) | 0.016    | 0.022 |
| 234 | 19.50 | 0.13 | 0.038 | ( 0.063) | 0.016    | 0.022 |
| 235 | 19.58 | 0.10 | 0.029 | ( 0.063) | 0.012    | 0.016 |
| 236 | 19.67 | 0.10 | 0.029 | ( 0.063) | 0.012    | 0.016 |
| 237 | 19.75 | 0.10 | 0.029 | ( 0.063) | 0.012    | 0.016 |
| 238 | 19.83 | 0.07 | 0.019 | ( 0.062) | 0.008    | 0.011 |
| 239 | 19.92 | 0.07 | 0.019 | ( 0.062) | 0.008    | 0.011 |
| 240 | 20.00 | 0.07 | 0.019 | ( 0.062) | 0.008    | 0.011 |
| 241 | 20.08 | 0.10 | 0.029 | ( 0.061) | 0.012    | 0.016 |
| 242 | 20.17 | 0.10 | 0.029 | ( 0.061) | 0.012    | 0.016 |
| 243 | 20.25 | 0.10 | 0.029 | ( 0.061) | 0.012    | 0.016 |
| 244 | 20.33 | 0.10 | 0.029 | ( 0.061) | 0.012    | 0.016 |
| 245 | 20.42 | 0.10 | 0.029 | ( 0.060) | 0.012    | 0.016 |
| 246 | 20.50 | 0.10 | 0.029 | ( 0.060) | 0.012    | 0.016 |
| 247 | 20.58 | 0.10 | 0.029 | ( 0.060) | 0.012    | 0.016 |
| 248 | 20.67 | 0.10 | 0.029 | ( 0.060) | 0.012    | 0.016 |
| 249 | 20.75 | 0.10 | 0.029 | ( 0.059) | 0.012    | 0.016 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT B – Inflow Hydrographs, Proposed Condition

|     |       |      |       |          |       |       |
|-----|-------|------|-------|----------|-------|-------|
| 250 | 20.83 | 0.07 | 0.019 | ( 0.059) | 0.008 | 0.011 |
| 251 | 20.92 | 0.07 | 0.019 | ( 0.059) | 0.008 | 0.011 |
| 252 | 21.00 | 0.07 | 0.019 | ( 0.059) | 0.008 | 0.011 |
| 253 | 21.08 | 0.10 | 0.029 | ( 0.058) | 0.012 | 0.016 |
| 254 | 21.17 | 0.10 | 0.029 | ( 0.058) | 0.012 | 0.016 |
| 255 | 21.25 | 0.10 | 0.029 | ( 0.058) | 0.012 | 0.016 |
| 256 | 21.33 | 0.07 | 0.019 | ( 0.058) | 0.008 | 0.011 |
| 257 | 21.42 | 0.07 | 0.019 | ( 0.057) | 0.008 | 0.011 |
| 258 | 21.50 | 0.07 | 0.019 | ( 0.057) | 0.008 | 0.011 |
| 259 | 21.58 | 0.10 | 0.029 | ( 0.057) | 0.012 | 0.016 |
| 260 | 21.67 | 0.10 | 0.029 | ( 0.057) | 0.012 | 0.016 |
| 261 | 21.75 | 0.10 | 0.029 | ( 0.057) | 0.012 | 0.016 |
| 262 | 21.83 | 0.07 | 0.019 | ( 0.056) | 0.008 | 0.011 |
| 263 | 21.92 | 0.07 | 0.019 | ( 0.056) | 0.008 | 0.011 |
| 264 | 22.00 | 0.07 | 0.019 | ( 0.056) | 0.008 | 0.011 |
| 265 | 22.08 | 0.10 | 0.029 | ( 0.056) | 0.012 | 0.016 |
| 266 | 22.17 | 0.10 | 0.029 | ( 0.056) | 0.012 | 0.016 |
| 267 | 22.25 | 0.10 | 0.029 | ( 0.056) | 0.012 | 0.016 |
| 268 | 22.33 | 0.07 | 0.019 | ( 0.055) | 0.008 | 0.011 |
| 269 | 22.42 | 0.07 | 0.019 | ( 0.055) | 0.008 | 0.011 |
| 270 | 22.50 | 0.07 | 0.019 | ( 0.055) | 0.008 | 0.011 |
| 271 | 22.58 | 0.07 | 0.019 | ( 0.055) | 0.008 | 0.011 |
| 272 | 22.67 | 0.07 | 0.019 | ( 0.055) | 0.008 | 0.011 |
| 273 | 22.75 | 0.07 | 0.019 | ( 0.055) | 0.008 | 0.011 |
| 274 | 22.83 | 0.07 | 0.019 | ( 0.054) | 0.008 | 0.011 |
| 275 | 22.92 | 0.07 | 0.019 | ( 0.054) | 0.008 | 0.011 |
| 276 | 23.00 | 0.07 | 0.019 | ( 0.054) | 0.008 | 0.011 |
| 277 | 23.08 | 0.07 | 0.019 | ( 0.054) | 0.008 | 0.011 |
| 278 | 23.17 | 0.07 | 0.019 | ( 0.054) | 0.008 | 0.011 |
| 279 | 23.25 | 0.07 | 0.019 | ( 0.054) | 0.008 | 0.011 |
| 280 | 23.33 | 0.07 | 0.019 | ( 0.054) | 0.008 | 0.011 |
| 281 | 23.42 | 0.07 | 0.019 | ( 0.054) | 0.008 | 0.011 |
| 282 | 23.50 | 0.07 | 0.019 | ( 0.053) | 0.008 | 0.011 |
| 283 | 23.58 | 0.07 | 0.019 | ( 0.053) | 0.008 | 0.011 |
| 284 | 23.67 | 0.07 | 0.019 | ( 0.053) | 0.008 | 0.011 |
| 285 | 23.75 | 0.07 | 0.019 | ( 0.053) | 0.008 | 0.011 |
| 286 | 23.83 | 0.07 | 0.019 | ( 0.053) | 0.008 | 0.011 |
| 287 | 23.92 | 0.07 | 0.019 | ( 0.053) | 0.008 | 0.011 |
| 288 | 24.00 | 0.07 | 0.019 | ( 0.053) | 0.008 | 0.011 |

(Loss Rate Not Used)

Sum = 100.0 Sum = 17.1

Flood volume = Effective rainfall 1.43(In)  
times area 8.4(Ac.)/[(In)/(Ft.)] = 1.0(Ac.Ft)

Total soil loss = 0.95(In)

Total soil loss = 0.668(Ac.Ft)

Total rainfall = 2.38(In)

Flood volume = 43452.8 Cubic Feet

Total soil loss = 29117.0 Cubic Feet

Peak flow rate of this hydrograph = 1.969(CFS)

+++++

24 - H O U R S T O R M  
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 2.5 | 5.0 | 7.5 | 10.0 |
|-----------|--------------|--------|---|-----|-----|-----|------|
| 0+ 5      | 0.0003       | 0.05 Q |   |     |     |     |      |
| 0+10      | 0.0009       | 0.09 Q |   |     |     |     |      |
| 0+15      | 0.0016       | 0.09 Q |   |     |     |     |      |
| 0+20      | 0.0024       | 0.12 Q |   |     |     |     |      |
| 0+25      | 0.0033       | 0.14 Q |   |     |     |     |      |
| 0+30      | 0.0043       | 0.14 Q |   |     |     |     |      |
| 0+35      | 0.0052       | 0.14 Q |   |     |     |     |      |
| 0+40      | 0.0062       | 0.14 Q |   |     |     |     |      |
| 0+45      | 0.0071       | 0.14 Q |   |     |     |     |      |
| 0+50      | 0.0082       | 0.16 Q |   |     |     |     |      |
| 0+55      | 0.0095       | 0.18 Q |   |     |     |     |      |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|      |        |      |      |  |  |  |  |
|------|--------|------|------|--|--|--|--|
| 1+ 0 | 0.0108 | 0.18 | Q    |  |  |  |  |
| 1+ 5 | 0.0119 | 0.16 | Q    |  |  |  |  |
| 1+10 | 0.0128 | 0.14 | Q    |  |  |  |  |
| 1+15 | 0.0138 | 0.14 | Q    |  |  |  |  |
| 1+20 | 0.0147 | 0.14 | Q    |  |  |  |  |
| 1+25 | 0.0157 | 0.14 | Q    |  |  |  |  |
| 1+30 | 0.0166 | 0.14 | Q    |  |  |  |  |
| 1+35 | 0.0176 | 0.14 | Q    |  |  |  |  |
| 1+40 | 0.0185 | 0.14 | Q    |  |  |  |  |
| 1+45 | 0.0195 | 0.14 | Q    |  |  |  |  |
| 1+50 | 0.0206 | 0.16 | Q    |  |  |  |  |
| 1+55 | 0.0218 | 0.18 | Q    |  |  |  |  |
| 2+ 0 | 0.0231 | 0.18 | Q    |  |  |  |  |
| 2+ 5 | 0.0244 | 0.18 | Q    |  |  |  |  |
| 2+10 | 0.0256 | 0.18 | QV   |  |  |  |  |
| 2+15 | 0.0269 | 0.18 | QV   |  |  |  |  |
| 2+20 | 0.0282 | 0.18 | QV   |  |  |  |  |
| 2+25 | 0.0294 | 0.18 | QV   |  |  |  |  |
| 2+30 | 0.0307 | 0.18 | QV   |  |  |  |  |
| 2+35 | 0.0321 | 0.21 | QV   |  |  |  |  |
| 2+40 | 0.0337 | 0.23 | QV   |  |  |  |  |
| 2+45 | 0.0353 | 0.23 | QV   |  |  |  |  |
| 2+50 | 0.0369 | 0.23 | QV   |  |  |  |  |
| 2+55 | 0.0384 | 0.23 | QV   |  |  |  |  |
| 3+ 0 | 0.0400 | 0.23 | QV   |  |  |  |  |
| 3+ 5 | 0.0416 | 0.23 | QV   |  |  |  |  |
| 3+10 | 0.0432 | 0.23 | QV   |  |  |  |  |
| 3+15 | 0.0448 | 0.23 | QV   |  |  |  |  |
| 3+20 | 0.0464 | 0.23 | QV   |  |  |  |  |
| 3+25 | 0.0479 | 0.23 | QV   |  |  |  |  |
| 3+30 | 0.0495 | 0.23 | QV   |  |  |  |  |
| 3+35 | 0.0511 | 0.23 | Q V  |  |  |  |  |
| 3+40 | 0.0527 | 0.23 | Q V  |  |  |  |  |
| 3+45 | 0.0543 | 0.23 | Q V  |  |  |  |  |
| 3+50 | 0.0560 | 0.25 | IQV  |  |  |  |  |
| 3+55 | 0.0579 | 0.27 | IQV  |  |  |  |  |
| 4+ 0 | 0.0598 | 0.28 | IQV  |  |  |  |  |
| 4+ 5 | 0.0617 | 0.28 | IQV  |  |  |  |  |
| 4+10 | 0.0636 | 0.28 | IQV  |  |  |  |  |
| 4+15 | 0.0655 | 0.28 | IQV  |  |  |  |  |
| 4+20 | 0.0676 | 0.30 | IQV  |  |  |  |  |
| 4+25 | 0.0698 | 0.32 | IQV  |  |  |  |  |
| 4+30 | 0.0720 | 0.32 | IQV  |  |  |  |  |
| 4+35 | 0.0742 | 0.32 | IQV  |  |  |  |  |
| 4+40 | 0.0764 | 0.32 | IQ V |  |  |  |  |
| 4+45 | 0.0786 | 0.32 | IQ V |  |  |  |  |
| 4+50 | 0.0810 | 0.35 | IQ V |  |  |  |  |
| 4+55 | 0.0835 | 0.37 | IQ V |  |  |  |  |
| 5+ 0 | 0.0861 | 0.37 | IQ V |  |  |  |  |
| 5+ 5 | 0.0883 | 0.32 | IQ V |  |  |  |  |
| 5+10 | 0.0902 | 0.28 | IQ V |  |  |  |  |
| 5+15 | 0.0921 | 0.28 | IQ V |  |  |  |  |
| 5+20 | 0.0942 | 0.30 | IQ V |  |  |  |  |
| 5+25 | 0.0964 | 0.32 | IQ V |  |  |  |  |
| 5+30 | 0.0986 | 0.32 | IQ V |  |  |  |  |
| 5+35 | 0.1010 | 0.35 | IQ V |  |  |  |  |
| 5+40 | 0.1035 | 0.37 | IQ V |  |  |  |  |
| 5+45 | 0.1060 | 0.37 | IQ V |  |  |  |  |
| 5+50 | 0.1086 | 0.37 | IQ V |  |  |  |  |
| 5+55 | 0.1111 | 0.37 | IQ V |  |  |  |  |
| 6+ 0 | 0.1136 | 0.37 | IQ V |  |  |  |  |
| 6+ 5 | 0.1163 | 0.39 | IQ V |  |  |  |  |
| 6+10 | 0.1192 | 0.41 | IQ V |  |  |  |  |
| 6+15 | 0.1220 | 0.41 | IQ V |  |  |  |  |
| 6+20 | 0.1249 | 0.41 | IQ V |  |  |  |  |
| 6+25 | 0.1277 | 0.41 | IQ V |  |  |  |  |
| 6+30 | 0.1306 | 0.41 | IQ V |  |  |  |  |
| 6+35 | 0.1336 | 0.44 | IQ V |  |  |  |  |
| 6+40 | 0.1367 | 0.46 | IQ V |  |  |  |  |
| 6+45 | 0.1399 | 0.46 | IQ V |  |  |  |  |
| 6+50 | 0.1431 | 0.46 | IQ V |  |  |  |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|       |        |      |   |   |  |  |  |  |
|-------|--------|------|---|---|--|--|--|--|
| 6+55  | 0.1462 | 0.46 | Q | V |  |  |  |  |
| 7+ 0  | 0.1494 | 0.46 | Q | V |  |  |  |  |
| 7+ 5  | 0.1525 | 0.46 | Q | V |  |  |  |  |
| 7+10  | 0.1557 | 0.46 | Q | V |  |  |  |  |
| 7+15  | 0.1589 | 0.46 | Q | V |  |  |  |  |
| 7+20  | 0.1622 | 0.48 | Q | V |  |  |  |  |
| 7+25  | 0.1657 | 0.50 | Q | V |  |  |  |  |
| 7+30  | 0.1692 | 0.51 | Q | V |  |  |  |  |
| 7+35  | 0.1728 | 0.53 | Q | V |  |  |  |  |
| 7+40  | 0.1766 | 0.55 | Q | V |  |  |  |  |
| 7+45  | 0.1804 | 0.55 | Q | V |  |  |  |  |
| 7+50  | 0.1844 | 0.58 | Q | V |  |  |  |  |
| 7+55  | 0.1885 | 0.60 | Q | V |  |  |  |  |
| 8+ 0  | 0.1926 | 0.60 | Q | V |  |  |  |  |
| 8+ 5  | 0.1970 | 0.65 | Q | V |  |  |  |  |
| 8+10  | 0.2018 | 0.69 | Q | V |  |  |  |  |
| 8+15  | 0.2065 | 0.69 | Q | V |  |  |  |  |
| 8+20  | 0.2113 | 0.69 | Q | V |  |  |  |  |
| 8+25  | 0.2160 | 0.69 | Q | V |  |  |  |  |
| 8+30  | 0.2208 | 0.69 | Q | V |  |  |  |  |
| 8+35  | 0.2257 | 0.71 | Q | V |  |  |  |  |
| 8+40  | 0.2307 | 0.73 | Q | V |  |  |  |  |
| 8+45  | 0.2358 | 0.74 | Q | V |  |  |  |  |
| 8+50  | 0.2410 | 0.76 | Q | V |  |  |  |  |
| 8+55  | 0.2464 | 0.78 | Q | V |  |  |  |  |
| 9+ 0  | 0.2518 | 0.78 | Q | V |  |  |  |  |
| 9+ 5  | 0.2575 | 0.83 | Q | V |  |  |  |  |
| 9+10  | 0.2635 | 0.87 | Q | V |  |  |  |  |
| 9+15  | 0.2695 | 0.87 | Q | V |  |  |  |  |
| 9+20  | 0.2757 | 0.90 | Q | V |  |  |  |  |
| 9+25  | 0.2820 | 0.92 | Q | V |  |  |  |  |
| 9+30  | 0.2883 | 0.92 | Q | V |  |  |  |  |
| 9+35  | 0.2948 | 0.94 | Q | V |  |  |  |  |
| 9+40  | 0.3015 | 0.96 | Q | V |  |  |  |  |
| 9+45  | 0.3081 | 0.97 | Q | V |  |  |  |  |
| 9+50  | 0.3149 | 0.99 | Q | V |  |  |  |  |
| 9+55  | 0.3219 | 1.01 | Q | V |  |  |  |  |
| 10+ 0 | 0.3288 | 1.01 | Q | V |  |  |  |  |
| 10+ 5 | 0.3346 | 0.84 | Q | V |  |  |  |  |
| 10+10 | 0.3395 | 0.70 | Q | V |  |  |  |  |
| 10+15 | 0.3442 | 0.69 | Q | V |  |  |  |  |
| 10+20 | 0.3489 | 0.69 | Q | V |  |  |  |  |
| 10+25 | 0.3537 | 0.69 | Q | V |  |  |  |  |
| 10+30 | 0.3584 | 0.69 | Q | V |  |  |  |  |
| 10+35 | 0.3640 | 0.81 | Q | V |  |  |  |  |
| 10+40 | 0.3703 | 0.91 | Q | V |  |  |  |  |
| 10+45 | 0.3766 | 0.92 | Q | V |  |  |  |  |
| 10+50 | 0.3830 | 0.92 | Q | V |  |  |  |  |
| 10+55 | 0.3893 | 0.92 | Q | V |  |  |  |  |
| 11+ 0 | 0.3956 | 0.92 | Q | V |  |  |  |  |
| 11+ 5 | 0.4018 | 0.89 | Q | V |  |  |  |  |
| 11+10 | 0.4078 | 0.87 | Q | V |  |  |  |  |
| 11+15 | 0.4138 | 0.87 | Q | V |  |  |  |  |
| 11+20 | 0.4198 | 0.87 | Q | V |  |  |  |  |
| 11+25 | 0.4259 | 0.87 | Q | V |  |  |  |  |
| 11+30 | 0.4319 | 0.87 | Q | V |  |  |  |  |
| 11+35 | 0.4376 | 0.82 | Q | V |  |  |  |  |
| 11+40 | 0.4430 | 0.78 | Q | V |  |  |  |  |
| 11+45 | 0.4483 | 0.78 | Q | V |  |  |  |  |
| 11+50 | 0.4539 | 0.81 | Q | V |  |  |  |  |
| 11+55 | 0.4596 | 0.83 | Q | V |  |  |  |  |
| 12+ 0 | 0.4653 | 0.83 | Q | V |  |  |  |  |
| 12+ 5 | 0.4722 | 1.01 | Q | V |  |  |  |  |
| 12+10 | 0.4803 | 1.17 | Q | V |  |  |  |  |
| 12+15 | 0.4884 | 1.18 | Q | V |  |  |  |  |
| 12+20 | 0.4969 | 1.23 | Q | V |  |  |  |  |
| 12+25 | 0.5056 | 1.27 | Q | V |  |  |  |  |
| 12+30 | 0.5144 | 1.28 | Q | V |  |  |  |  |
| 12+35 | 0.5238 | 1.36 | Q | V |  |  |  |  |
| 12+40 | 0.5337 | 1.44 | Q | V |  |  |  |  |
| 12+45 | 0.5437 | 1.45 | Q | V |  |  |  |  |

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**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|       |        |      |   |   |  |  |  |   |  |  |  |
|-------|--------|------|---|---|--|--|--|---|--|--|--|
| 12+50 | 0.5540 | 1.50 |   | Q |  |  |  | V |  |  |  |
| 12+55 | 0.5646 | 1.54 |   | Q |  |  |  | V |  |  |  |
| 13+ 0 | 0.5752 | 1.54 |   | Q |  |  |  | V |  |  |  |
| 13+ 5 | 0.5873 | 1.76 |   | Q |  |  |  | V |  |  |  |
| 13+10 | 0.6007 | 1.94 |   | Q |  |  |  | V |  |  |  |
| 13+15 | 0.6141 | 1.96 |   | Q |  |  |  | V |  |  |  |
| 13+20 | 0.6276 | 1.96 |   | Q |  |  |  | V |  |  |  |
| 13+25 | 0.6412 | 1.97 |   | Q |  |  |  | V |  |  |  |
| 13+30 | 0.6547 | 1.97 |   | Q |  |  |  | V |  |  |  |
| 13+35 | 0.6651 | 1.51 |   | Q |  |  |  | V |  |  |  |
| 13+40 | 0.6728 | 1.12 |   | Q |  |  |  | V |  |  |  |
| 13+45 | 0.6804 | 1.09 |   | Q |  |  |  | V |  |  |  |
| 13+50 | 0.6879 | 1.10 |   | Q |  |  |  | V |  |  |  |
| 13+55 | 0.6955 | 1.10 |   | Q |  |  |  | V |  |  |  |
| 14+ 0 | 0.7031 | 1.11 |   | Q |  |  |  | V |  |  |  |
| 14+ 5 | 0.7119 | 1.28 |   | Q |  |  |  | V |  |  |  |
| 14+10 | 0.7217 | 1.42 |   | Q |  |  |  | V |  |  |  |
| 14+15 | 0.7317 | 1.44 |   | Q |  |  |  | V |  |  |  |
| 14+20 | 0.7413 | 1.40 |   | Q |  |  |  | V |  |  |  |
| 14+25 | 0.7507 | 1.37 |   | Q |  |  |  | V |  |  |  |
| 14+30 | 0.7602 | 1.37 |   | Q |  |  |  | V |  |  |  |
| 14+35 | 0.7696 | 1.37 |   | Q |  |  |  | V |  |  |  |
| 14+40 | 0.7791 | 1.38 |   | Q |  |  |  | V |  |  |  |
| 14+45 | 0.7886 | 1.38 |   | Q |  |  |  | V |  |  |  |
| 14+50 | 0.7979 | 1.34 |   | Q |  |  |  | V |  |  |  |
| 14+55 | 0.8069 | 1.31 |   | Q |  |  |  | V |  |  |  |
| 15+ 0 | 0.8159 | 1.31 |   | Q |  |  |  | V |  |  |  |
| 15+ 5 | 0.8247 | 1.27 |   | Q |  |  |  | V |  |  |  |
| 15+10 | 0.8332 | 1.24 |   | Q |  |  |  | V |  |  |  |
| 15+15 | 0.8418 | 1.24 |   | Q |  |  |  | V |  |  |  |
| 15+20 | 0.8501 | 1.20 |   | Q |  |  |  | V |  |  |  |
| 15+25 | 0.8581 | 1.17 |   | Q |  |  |  | V |  |  |  |
| 15+30 | 0.8662 | 1.17 |   | Q |  |  |  | V |  |  |  |
| 15+35 | 0.8732 | 1.01 |   | Q |  |  |  | V |  |  |  |
| 15+40 | 0.8793 | 0.88 |   | Q |  |  |  | V |  |  |  |
| 15+45 | 0.8853 | 0.87 |   | Q |  |  |  | V |  |  |  |
| 15+50 | 0.8913 | 0.87 |   | Q |  |  |  | V |  |  |  |
| 15+55 | 0.8973 | 0.87 |   | Q |  |  |  | V |  |  |  |
| 16+ 0 | 0.9033 | 0.87 |   | Q |  |  |  | V |  |  |  |
| 16+ 5 | 0.9068 | 0.51 |   | Q |  |  |  | V |  |  |  |
| 16+10 | 0.9083 | 0.21 | Q |   |  |  |  | V |  |  |  |
| 16+15 | 0.9095 | 0.18 | Q |   |  |  |  | V |  |  |  |
| 16+20 | 0.9108 | 0.18 | Q |   |  |  |  | V |  |  |  |
| 16+25 | 0.9121 | 0.18 | Q |   |  |  |  | V |  |  |  |
| 16+30 | 0.9133 | 0.18 | Q |   |  |  |  | V |  |  |  |
| 16+35 | 0.9144 | 0.16 | Q |   |  |  |  | V |  |  |  |
| 16+40 | 0.9154 | 0.14 | Q |   |  |  |  | V |  |  |  |
| 16+45 | 0.9163 | 0.14 | Q |   |  |  |  | V |  |  |  |
| 16+50 | 0.9173 | 0.14 | Q |   |  |  |  | V |  |  |  |
| 16+55 | 0.9182 | 0.14 | Q |   |  |  |  | V |  |  |  |
| 17+ 0 | 0.9192 | 0.14 | Q |   |  |  |  | V |  |  |  |
| 17+ 5 | 0.9205 | 0.19 | Q |   |  |  |  | V |  |  |  |
| 17+10 | 0.9220 | 0.23 | Q |   |  |  |  | V |  |  |  |
| 17+15 | 0.9236 | 0.23 | Q |   |  |  |  | V |  |  |  |
| 17+20 | 0.9252 | 0.23 | Q |   |  |  |  | V |  |  |  |
| 17+25 | 0.9268 | 0.23 | Q |   |  |  |  | V |  |  |  |
| 17+30 | 0.9284 | 0.23 | Q |   |  |  |  | V |  |  |  |
| 17+35 | 0.9299 | 0.23 | Q |   |  |  |  | V |  |  |  |
| 17+40 | 0.9315 | 0.23 | Q |   |  |  |  | V |  |  |  |
| 17+45 | 0.9331 | 0.23 | Q |   |  |  |  | V |  |  |  |
| 17+50 | 0.9345 | 0.21 | Q |   |  |  |  | V |  |  |  |
| 17+55 | 0.9358 | 0.19 | Q |   |  |  |  | V |  |  |  |
| 18+ 0 | 0.9371 | 0.18 | Q |   |  |  |  | V |  |  |  |
| 18+ 5 | 0.9383 | 0.18 | Q |   |  |  |  | V |  |  |  |
| 18+10 | 0.9396 | 0.18 | Q |   |  |  |  | V |  |  |  |
| 18+15 | 0.9409 | 0.18 | Q |   |  |  |  | V |  |  |  |
| 18+20 | 0.9421 | 0.18 | Q |   |  |  |  | V |  |  |  |
| 18+25 | 0.9434 | 0.18 | Q |   |  |  |  | V |  |  |  |
| 18+30 | 0.9447 | 0.18 | Q |   |  |  |  | V |  |  |  |
| 18+35 | 0.9458 | 0.16 | Q |   |  |  |  | V |  |  |  |
| 18+40 | 0.9467 | 0.14 | Q |   |  |  |  | V |  |  |  |

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**ATTACHMENT B – Inflow Hydrographs, Proposed Condition**

|       |        |      |   |  |  |  |   |  |
|-------|--------|------|---|--|--|--|---|--|
| 18+45 | 0.9477 | 0.14 | Q |  |  |  | V |  |
| 18+50 | 0.9485 | 0.11 | Q |  |  |  | V |  |
| 18+55 | 0.9491 | 0.09 | Q |  |  |  | V |  |
| 19+ 0 | 0.9497 | 0.09 | Q |  |  |  | V |  |
| 19+ 5 | 0.9505 | 0.12 | Q |  |  |  | V |  |
| 19+10 | 0.9515 | 0.14 | Q |  |  |  | V |  |
| 19+15 | 0.9524 | 0.14 | Q |  |  |  | V |  |
| 19+20 | 0.9535 | 0.16 | Q |  |  |  | V |  |
| 19+25 | 0.9548 | 0.18 | Q |  |  |  | V |  |
| 19+30 | 0.9561 | 0.18 | Q |  |  |  | V |  |
| 19+35 | 0.9572 | 0.16 | Q |  |  |  | V |  |
| 19+40 | 0.9581 | 0.14 | Q |  |  |  | V |  |
| 19+45 | 0.9591 | 0.14 | Q |  |  |  | V |  |
| 19+50 | 0.9599 | 0.11 | Q |  |  |  | V |  |
| 19+55 | 0.9605 | 0.09 | Q |  |  |  | V |  |
| 20+ 0 | 0.9611 | 0.09 | Q |  |  |  | V |  |
| 20+ 5 | 0.9619 | 0.12 | Q |  |  |  | V |  |
| 20+10 | 0.9629 | 0.14 | Q |  |  |  | V |  |
| 20+15 | 0.9638 | 0.14 | Q |  |  |  | V |  |
| 20+20 | 0.9648 | 0.14 | Q |  |  |  | V |  |
| 20+25 | 0.9657 | 0.14 | Q |  |  |  | V |  |
| 20+30 | 0.9667 | 0.14 | Q |  |  |  | V |  |
| 20+35 | 0.9676 | 0.14 | Q |  |  |  | V |  |
| 20+40 | 0.9686 | 0.14 | Q |  |  |  | V |  |
| 20+45 | 0.9695 | 0.14 | Q |  |  |  | V |  |
| 20+50 | 0.9703 | 0.11 | Q |  |  |  | V |  |
| 20+55 | 0.9709 | 0.09 | Q |  |  |  | V |  |
| 21+ 0 | 0.9716 | 0.09 | Q |  |  |  | V |  |
| 21+ 5 | 0.9724 | 0.12 | Q |  |  |  | V |  |
| 21+10 | 0.9733 | 0.14 | Q |  |  |  | V |  |
| 21+15 | 0.9743 | 0.14 | Q |  |  |  | V |  |
| 21+20 | 0.9750 | 0.11 | Q |  |  |  | V |  |
| 21+25 | 0.9757 | 0.09 | Q |  |  |  | V |  |
| 21+30 | 0.9763 | 0.09 | Q |  |  |  | V |  |
| 21+35 | 0.9771 | 0.12 | Q |  |  |  | V |  |
| 21+40 | 0.9781 | 0.14 | Q |  |  |  | V |  |
| 21+45 | 0.9790 | 0.14 | Q |  |  |  | V |  |
| 21+50 | 0.9798 | 0.11 | Q |  |  |  | V |  |
| 21+55 | 0.9804 | 0.09 | Q |  |  |  | V |  |
| 22+ 0 | 0.9811 | 0.09 | Q |  |  |  | V |  |
| 22+ 5 | 0.9819 | 0.12 | Q |  |  |  | V |  |
| 22+10 | 0.9828 | 0.14 | Q |  |  |  | V |  |
| 22+15 | 0.9838 | 0.14 | Q |  |  |  | V |  |
| 22+20 | 0.9845 | 0.11 | Q |  |  |  | V |  |
| 22+25 | 0.9852 | 0.09 | Q |  |  |  | V |  |
| 22+30 | 0.9858 | 0.09 | Q |  |  |  | V |  |
| 22+35 | 0.9865 | 0.09 | Q |  |  |  | V |  |
| 22+40 | 0.9871 | 0.09 | Q |  |  |  | V |  |
| 22+45 | 0.9877 | 0.09 | Q |  |  |  | V |  |
| 22+50 | 0.9884 | 0.09 | Q |  |  |  | V |  |
| 22+55 | 0.9890 | 0.09 | Q |  |  |  | V |  |
| 23+ 0 | 0.9896 | 0.09 | Q |  |  |  | V |  |
| 23+ 5 | 0.9903 | 0.09 | Q |  |  |  | V |  |
| 23+10 | 0.9909 | 0.09 | Q |  |  |  | V |  |
| 23+15 | 0.9915 | 0.09 | Q |  |  |  | V |  |
| 23+20 | 0.9922 | 0.09 | Q |  |  |  | V |  |
| 23+25 | 0.9928 | 0.09 | Q |  |  |  | V |  |
| 23+30 | 0.9934 | 0.09 | Q |  |  |  | V |  |
| 23+35 | 0.9941 | 0.09 | Q |  |  |  | V |  |
| 23+40 | 0.9947 | 0.09 | Q |  |  |  | V |  |
| 23+45 | 0.9953 | 0.09 | Q |  |  |  | V |  |
| 23+50 | 0.9960 | 0.09 | Q |  |  |  | V |  |
| 23+55 | 0.9966 | 0.09 | Q |  |  |  | V |  |
| 24+ 0 | 0.9972 | 0.09 | Q |  |  |  | V |  |
| 24+ 5 | 0.9975 | 0.04 | Q |  |  |  | V |  |
| 24+10 | 0.9975 | 0.00 | Q |  |  |  | V |  |

**ATTACHMENT C**  
**Drainage Areas A and B**  
**Existing Condition (for comparison)**  
**100-Year 1-hr, 3-hr, 6-hr, 24-hr storm and 2-year 24-hr storm**

# **Inflow Hydrographs**

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

| <b>Soil Low Loss Rate Worksheet</b>         |              |                        |                            |                                   |                                      |                                 |
|---------------------------------------------|--------------|------------------------|----------------------------|-----------------------------------|--------------------------------------|---------------------------------|
| <b>Drainage Area A (existing) - 40.1 Ac</b> |              |                        |                            |                                   |                                      |                                 |
| [1]                                         | [2]          | [3]                    | [4]                        | [5]                               | [6]                                  | [7]                             |
| Subarea                                     | Area in (Ac) | Land Use (Plate D-5.6) | % Impervious (Plate D-5.6) | Soil Low Loss Rate 0.9-(0.8)* [4] | Decimal portion of Area [2] / SUM[2] | Average Low Loss Rate [5] * [6] |
|                                             | 37.1         | Natural                | 0                          | 0.90                              | 0.93                                 | 0.83                            |
|                                             |              | Res 1 Ac               | 20                         | 0.74                              | 0.00                                 | 0.00                            |
|                                             |              | Res 1/2 Ac             | 40                         | 0.58                              | 0.00                                 | 0.00                            |
|                                             |              | Res 1/4 Ac             | 50                         | 0.50                              | 0.00                                 | 0.00                            |
|                                             |              | Res < 1/4 Ac           | 65                         | 0.38                              | 0.00                                 | 0.00                            |
|                                             |              | Apartment              | 80                         | 0.26                              | 0.00                                 | 0.00                            |
|                                             |              | Mobil Home             | 75                         | 0.30                              | 0.00                                 | 0.00                            |
|                                             | 3            | Streets                | 75                         | 0.30                              | 0.07                                 | 0.02                            |
|                                             |              | Commercial             | 90                         | 0.18                              | 0.00                                 | 0.00                            |
| Sum =                                       | 40.1         |                        |                            |                                   | 1.00                                 | <b>0.86</b>                     |

| <b>Runoff Index (RI) Worksheet</b>          |              |            |              |                        |          |                                      |                            |
|---------------------------------------------|--------------|------------|--------------|------------------------|----------|--------------------------------------|----------------------------|
| <b>Drainage Area A (existing) - 40.1 Ac</b> |              |            |              |                        |          |                                      |                            |
| [1]                                         | [2]          | [3]        | [4]          | [5]                    | [6]      | [7]                                  | [8]                        |
| Subarea                                     | Area in (Ac) | Soil Group | Cover Type   | RI Number (Plate E6-1) | Land Use | Decimal portion of Area [2] / SUM[2] | Average RI Value [5] * [7] |
| Natural                                     |              | A          | grass (poor) | 67                     | Natural  | 0.00                                 | 0.0                        |
|                                             |              | B          | grass (poor) | 78                     | Natural  | 0.00                                 | 0.0                        |
|                                             | 37.1         | C          | grass (poor) | 86                     | Natural  | 1.00                                 | 86.0                       |
|                                             |              | D          | grass (poor) | 89                     | Natural  | 0.00                                 | 0.0                        |
| Sum =                                       | <b>37.1</b>  |            |              |                        |          | 1.00                                 | <b>86.0</b>                |
| Street                                      |              | B          | Landscape    | 56                     | Street   | 0.00                                 | 0.0                        |
|                                             | 3            | C          | Landscape    | 69                     | Street   | 1.00                                 | 69.0                       |
|                                             |              | D          | Landscape    | 75                     | Street   | 0.00                                 | 0.0                        |
| Sum =                                       | <b>3</b>     |            |              |                        |          | 1.00                                 | <b>69.0</b>                |

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

| <b>Manning "n" Value Worksheet</b>          |              |                        |           |                                      |                             |
|---------------------------------------------|--------------|------------------------|-----------|--------------------------------------|-----------------------------|
| <b>Drainage Area A (existing) - 40.1 Ac</b> |              |                        |           |                                      |                             |
| [1]                                         | [2]          | [3]                    | [4]       | [5]                                  | [7]                         |
| Subarea                                     | Area in (Ac) | Land Use (Plate D-5.6) | "n" Value | Decimal portion of Area [2] / SUM[2] | Average "n" Value [4] * [5] |
|                                             | 37.1         | Natural                | 0.035     | 0.93                                 | 0.032                       |
|                                             |              | Res 1 Ac               | 0.015     | 0.00                                 | 0.000                       |
|                                             |              | Res 1/2 Ac             | 0.015     | 0.00                                 | 0.000                       |
|                                             |              | Res 1/4 Ac             | 0.015     | 0.00                                 | 0.000                       |
|                                             |              | Res < 1/4 Ac           | 0.015     | 0.00                                 | 0.000                       |
|                                             |              | Apartment              | 0.015     | 0.00                                 | 0.000                       |
|                                             |              | Mobil Home             | 0.015     | 0.00                                 | 0.000                       |
|                                             | 3            | Streets                | 0.015     | 0.07                                 | 0.001                       |
|                                             |              | Commercial             | 0.015     | 0.00                                 | 0.000                       |
|                                             |              |                        |           |                                      |                             |
| Sum =                                       | <b>40.1</b>  |                        |           | <b>1.00</b>                          | <b>0.034</b>                |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

U n i t   H y d r o g r a p h   A n a l y s i s

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Study date 02/05/18 File: nrareaaex1100.out

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Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

-----  
English (in-lb) Input Units Used  
English Rainfall Data (Inches) Input Values Used

English Units used in output format

-----  
Nichols Road Project - Tract 37305  
Drainage Area A = 40.1 Ac  
Existing Condition for comparison to Detention Basin A  
100-year 1-hour storm

-----  
Drainage Area = 40.10(Ac.) = 0.063 Sq. Mi.  
Drainage Area for Depth-Area Areal Adjustment = 40.10(Ac.) = 0.063 Sq. Mi.  
Length along longest watercourse = 3463.00(Ft.)  
Length along longest watercourse measured to centroid = 840.00(Ft.)  
Length along longest watercourse = 0.656 Mi.  
Length along longest watercourse measured to centroid = 0.159 Mi.  
Difference in elevation = 77.00(Ft.)  
Slope along watercourse = 117.4011 Ft./Mi.  
Average Manning's 'N' = 0.034  
Lag time = 0.140 Hr.  
Lag time = 8.39 Min.  
25% of lag time = 2.10 Min.  
40% of lag time = 3.35 Min.  
Unit time = 5.00 Min.  
Duration of storm = 1 Hour(s)  
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 40.10         | 0.49             | 19.65          |

100 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 40.10         | 1.38             | 55.34          |

STORM EVENT (YEAR) = 100.00  
Area Averaged 2-Year Rainfall = 0.490(In)  
Area Averaged 100-Year Rainfall = 1.380(In)

Point rain (area averaged) = 1.380(In)  
Areal adjustment factor = 99.96 %  
Adjusted average point rain = 1.379(In)



# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

Peak flow rate of this hydrograph = 94.274 (CFS)

1 - H O U R S T O R M  
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0   | 25.0 | 50.0 | 75.0 | 100.0 |
|-----------|--------------|--------|-----|------|------|------|-------|
| 0+ 5      | 0.0088       | 1.27   | Q   |      |      |      |       |
| 0+10      | 0.0671       | 8.48   | V Q |      |      |      |       |
| 0+15      | 0.1834       | 16.88  | V Q |      |      |      |       |
| 0+20      | 0.3339       | 21.85  | V Q |      |      |      |       |
| 0+25      | 0.5114       | 25.76  | V Q |      |      |      |       |
| 0+30      | 0.7073       | 28.46  | V Q |      |      |      |       |
| 0+35      | 0.9290       | 32.19  | V Q |      |      |      |       |
| 0+40      | 1.1916       | 38.12  | V Q |      |      |      |       |
| 0+45      | 1.5115       | 46.45  | V Q |      |      |      |       |
| 0+50      | 1.9489       | 63.51  | V Q |      |      |      |       |
| 0+55      | 2.5982       | 94.27  | V Q |      |      |      |       |
| 1+ 0      | 3.2169       | 89.84  | V Q |      |      |      |       |
| 1+ 5      | 3.5934       | 54.67  | V Q |      |      |      |       |
| 1+10      | 3.8166       | 32.41  | V Q |      |      |      |       |
| 1+15      | 3.9329       | 16.89  | V Q |      |      |      |       |
| 1+20      | 3.9978       | 9.42   | V Q |      |      |      |       |
| 1+25      | 4.0310       | 4.81   | V Q |      |      |      |       |
| 1+30      | 4.0492       | 2.65   | V Q |      |      |      |       |
| 1+35      | 4.0602       | 1.60   | V Q |      |      |      |       |
| 1+40      | 4.0678       | 1.11   | V Q |      |      |      |       |
| 1+45      | 4.0720       | 0.60   | V Q |      |      |      |       |
| 1+50      | 4.0733       | 0.19   | V Q |      |      |      |       |
| 1+55      | 4.0736       | 0.05   | V Q |      |      |      |       |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

### Unit Hydrograph Analysis

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Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

English (in-lb) Input Units Used  
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Nichols Road Project - Tract 37305  
Drainage Area A = 40.1 Ac  
Existing Condition for comparison to Detention Basin A  
100-year 3-hour storm

Drainage Area = 40.10(Ac.) = 0.063 Sq. Mi.  
Drainage Area for Depth-Area Areal Adjustment = 40.10(Ac.) = 0.063 Sq. Mi.  
Length along longest watercourse = 3463.00(Ft.)  
Length along longest watercourse measured to centroid = 840.00(Ft.)  
Length along longest watercourse = 0.656 Mi.  
Length along longest watercourse measured to centroid = 0.159 Mi.  
Difference in elevation = 77.00(Ft.)  
Slope along watercourse = 117.4011 Ft./Mi.  
Average Manning's 'N' = 0.034  
Lag time = 0.140 Hr.  
Lag time = 8.39 Min.  
25% of lag time = 2.10 Min.  
40% of lag time = 3.35 Min.  
Unit time = 5.00 Min.  
Duration of storm = 3 Hour(s)  
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

|               |                  |                |
|---------------|------------------|----------------|
| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
| 40.10         | 0.88             | 35.29          |

100 YEAR Area rainfall data:

|               |                  |                |
|---------------|------------------|----------------|
| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
| 40.10         | 2.22             | 89.02          |

STORM EVENT (YEAR) = 100.00  
Area Averaged 2-Year Rainfall = 0.880(In)  
Area Averaged 100-Year Rainfall = 2.220(In)

Point rain (area averaged) = 2.220(In)  
Areal adjustment factor = 99.98 %  
Adjusted average point rain = 2.220(In)

Sub-Area Data:  
Area(Ac.)                  Runoff Index          Impervious %  
37.100                      86.00                      0.050

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

3.000                      69.00                      0.900  
Total Area Entered =                      40.10 (Ac.)

|           |       |             |            |                  |        |         |
|-----------|-------|-------------|------------|------------------|--------|---------|
| RI        | RI    | Infil. Rate | Impervious | Adj. Infil. Rate | Area%  | F       |
| AMC2      | AMC-2 | (In/Hr)     | (Dec.%)    | (In/Hr)          | (Dec.) | (In/Hr) |
| 86.0      | 86.0  | 0.176       | 0.050      | 0.168            | 0.925  | 0.155   |
| 69.0      | 69.0  | 0.373       | 0.900      | 0.071            | 0.075  | 0.005   |
| Sum (F) = |       |             |            |                  |        | 0.160   |

Area averaged mean soil loss (F) (In/Hr) = 0.160

Minimum soil loss rate ((In/Hr)) = 0.080

(for 24 hour storm duration)

Soil loss rate (decimal) = 0.860

## U n i t   H y d r o g r a p h FOOTHILL S-Curve

### Unit Hydrograph Data

| Unit time period<br>(hrs) | Time % of lag | Distribution<br>Graph % | Unit Hydrograph<br>(CFS) |
|---------------------------|---------------|-------------------------|--------------------------|
| 1                         | 0.083         | 59.614                  | 5.538                    |
| 2                         | 0.167         | 119.228                 | 31.212                   |
| 3                         | 0.250         | 178.843                 | 34.251                   |
| 4                         | 0.333         | 238.457                 | 12.459                   |
| 5                         | 0.417         | 298.071                 | 7.196                    |
| 6                         | 0.500         | 357.685                 | 4.381                    |
| 7                         | 0.583         | 417.300                 | 2.443                    |
| 8                         | 0.667         | 476.914                 | 0.974                    |
| 9                         | 0.750         | 536.528                 | 0.569                    |
| 10                        | 0.833         | 596.142                 | 0.411                    |
| 11                        | 0.917         | 655.757                 | 0.369                    |
| 12                        | 1.000         | 715.371                 | 0.197                    |
|                           |               | Sum = 100.000           | Sum= 40.413              |

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

| Unit Time<br>(Hr.) | Pattern<br>Percent | Storm Rain<br>(In/Hr) | Loss rate(In./Hr) |          | Effective<br>(In/Hr) |
|--------------------|--------------------|-----------------------|-------------------|----------|----------------------|
|                    |                    |                       | Max               | Low      |                      |
| 1                  | 0.08               | 1.30                  | 0.346             | ( 0.298) | 0.186                |
| 2                  | 0.17               | 1.30                  | 0.346             | ( 0.298) | 0.186                |
| 3                  | 0.25               | 1.10                  | 0.293             | ( 0.252) | 0.133                |
| 4                  | 0.33               | 1.50                  | 0.400             | ( 0.344) | 0.239                |
| 5                  | 0.42               | 1.50                  | 0.400             | ( 0.344) | 0.239                |
| 6                  | 0.50               | 1.80                  | 0.479             | ( 0.412) | 0.319                |
| 7                  | 0.58               | 1.50                  | 0.400             | ( 0.344) | 0.239                |
| 8                  | 0.67               | 1.80                  | 0.479             | ( 0.412) | 0.319                |
| 9                  | 0.75               | 1.80                  | 0.479             | ( 0.412) | 0.319                |
| 10                 | 0.83               | 1.50                  | 0.400             | ( 0.344) | 0.239                |
| 11                 | 0.92               | 1.60                  | 0.426             | ( 0.367) | 0.266                |
| 12                 | 1.00               | 1.80                  | 0.479             | ( 0.412) | 0.319                |
| 13                 | 1.08               | 2.20                  | 0.586             | ( 0.504) | 0.426                |
| 14                 | 1.17               | 2.20                  | 0.586             | ( 0.504) | 0.426                |
| 15                 | 1.25               | 2.20                  | 0.586             | ( 0.504) | 0.426                |
| 16                 | 1.33               | 2.00                  | 0.533             | ( 0.458) | 0.372                |
| 17                 | 1.42               | 2.60                  | 0.693             | ( 0.596) | 0.532                |
| 18                 | 1.50               | 2.70                  | 0.719             | ( 0.618) | 0.559                |
| 19                 | 1.58               | 2.40                  | 0.639             | ( 0.550) | 0.479                |
| 20                 | 1.67               | 2.70                  | 0.719             | ( 0.618) | 0.559                |
| 21                 | 1.75               | 3.30                  | 0.879             | ( 0.756) | 0.719                |
| 22                 | 1.83               | 3.10                  | 0.826             | ( 0.710) | 0.665                |
| 23                 | 1.92               | 2.90                  | 0.772             | ( 0.664) | 0.612                |
| 24                 | 2.00               | 3.00                  | 0.799             | ( 0.687) | 0.639                |
| 25                 | 2.08               | 3.10                  | 0.826             | ( 0.710) | 0.665                |
| 26                 | 2.17               | 4.20                  | 1.119             | ( 0.962) | 0.958                |
| 27                 | 2.25               | 5.00                  | 1.332             | ( 1.145) | 1.171                |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

|    |      |      |       |          |          |       |
|----|------|------|-------|----------|----------|-------|
| 28 | 2.33 | 3.50 | 0.932 | 0.160    | ( 0.802) | 0.772 |
| 29 | 2.42 | 6.80 | 1.811 | 0.160    | ( 1.558) | 1.651 |
| 30 | 2.50 | 7.30 | 1.944 | 0.160    | ( 1.672) | 1.784 |
| 31 | 2.58 | 8.20 | 2.184 | 0.160    | ( 1.878) | 2.024 |
| 32 | 2.67 | 5.90 | 1.571 | 0.160    | ( 1.351) | 1.411 |
| 33 | 2.75 | 2.00 | 0.533 | 0.160    | ( 0.458) | 0.372 |
| 34 | 2.83 | 1.80 | 0.479 | 0.160    | ( 0.412) | 0.319 |
| 35 | 2.92 | 1.80 | 0.479 | 0.160    | ( 0.412) | 0.319 |
| 36 | 3.00 | 0.60 | 0.160 | ( 0.160) | 0.137    | 0.022 |

(Loss Rate Not Used)

Sum = 100.0 Sum = 20.9

Flood volume = Effective rainfall 1.74 (In)  
times area 40.1 (Ac.) / [(In) / (Ft.)] = 5.8 (Ac.Ft)

Total soil loss = 0.48 (In)

Total soil loss = 1.602 (Ac.Ft)

Total rainfall = 2.22 (In)

Flood volume = 253305.1 Cubic Feet

Total soil loss = 69788.1 Cubic Feet

-----  
Peak flow rate of this hydrograph = 67.654 (CFS)  
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3 - H O U R S T O R M  
R u n o f f H y d r o g r a p h

-----  
Hydrograph in 5 Minute intervals ((CFS))  
-----

| Time(h+m) | Volume | Ac.Ft | Q(CFS) | 0 | 17.5 | 35.0 | 52.5 | 70.0 |
|-----------|--------|-------|--------|---|------|------|------|------|
| 0+ 5      | 0.0029 | 0.42  | Q      |   |      |      |      |      |
| 0+10      | 0.0219 | 2.76  | VQ     |   |      |      |      |      |
| 0+15      | 0.0578 | 5.21  | V Q    |   |      |      |      |      |
| 0+20      | 0.0972 | 5.72  | V Q    |   |      |      |      |      |
| 0+25      | 0.1444 | 6.86  | V Q    |   |      |      |      |      |
| 0+30      | 0.2035 | 8.58  | V Q    |   |      |      |      |      |
| 0+35      | 0.2722 | 9.97  | V Q    |   |      |      |      |      |
| 0+40      | 0.3448 | 10.54 | V Q    |   |      |      |      |      |
| 0+45      | 0.4208 | 11.02 | V Q    |   |      |      |      |      |
| 0+50      | 0.5027 | 11.90 | V Q    |   |      |      |      |      |
| 0+55      | 0.5806 | 11.32 | V Q    |   |      |      |      |      |
| 1+ 0      | 0.6555 | 10.87 | V Q    |   |      |      |      |      |
| 1+ 5      | 0.7371 | 11.85 | VQ     |   |      |      |      |      |
| 1+10      | 0.8328 | 13.91 | V Q    |   |      |      |      |      |
| 1+15      | 0.9404 | 15.62 | V Q    |   |      |      |      |      |
| 1+20      | 1.0519 | 16.18 | V Q    |   |      |      |      |      |
| 1+25      | 1.1640 | 16.27 | VQ     |   |      |      |      |      |
| 1+30      | 1.2869 | 17.85 | V Q    |   |      |      |      |      |
| 1+35      | 1.4252 | 20.08 | V Q    |   |      |      |      |      |
| 1+40      | 1.5651 | 20.31 | VQ     |   |      |      |      |      |
| 1+45      | 1.7105 | 21.11 | VQ     |   |      |      |      |      |
| 1+50      | 1.8761 | 24.05 | VQ     |   |      |      |      |      |
| 1+55      | 2.0541 | 25.84 | Q      |   |      |      |      |      |
| 2+ 0      | 2.2295 | 25.47 | QV     |   |      |      |      |      |
| 2+ 5      | 2.4047 | 25.43 | Q V    |   |      |      |      |      |
| 2+10      | 2.5887 | 26.72 | Q V    |   |      |      |      |      |
| 2+15      | 2.8046 | 31.35 | Q V    |   |      |      |      |      |
| 2+20      | 3.0618 | 37.35 | Q      |   |      |      |      |      |
| 2+25      | 3.3290 | 38.79 | Q      |   |      |      |      |      |
| 2+30      | 3.6503 | 46.65 | VQ     |   |      |      |      |      |
| 2+35      | 4.0650 | 60.21 | V      |   |      |      |      |      |
| 2+40      | 4.5309 | 67.65 | V      |   |      |      |      |      |
| 2+45      | 4.9700 | 63.76 | V Q    |   |      |      |      |      |
| 2+50      | 5.2797 | 44.96 | V      |   |      |      |      |      |
| 2+55      | 5.4764 | 28.57 | Q      |   |      |      |      |      |
| 3+ 0      | 5.6213 | 21.04 | Q      |   |      |      |      |      |
| 3+ 5      | 5.7133 | 13.35 | Q      |   |      |      |      |      |
| 3+10      | 5.7586 | 6.59  | Q      |   |      |      |      |      |
| 3+15      | 5.7834 | 3.60  | Q      |   |      |      |      |      |
| 3+20      | 5.7982 | 2.15  | Q      |   |      |      |      |      |
| 3+25      | 5.8068 | 1.24  | Q      |   |      |      |      |      |

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

|      |        |      |   |  |  |  |   |
|------|--------|------|---|--|--|--|---|
| 3+30 | 5.8113 | 0.65 | Q |  |  |  | V |
| 3+35 | 5.8134 | 0.30 | Q |  |  |  | V |
| 3+40 | 5.8143 | 0.14 | Q |  |  |  | V |
| 3+45 | 5.8149 | 0.08 | Q |  |  |  | V |
| 3+50 | 5.8151 | 0.03 | Q |  |  |  | V |
| 3+55 | 5.8151 | 0.00 | Q |  |  |  | V |

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# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

## Unit Hydrograph Analysis

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Study date 02/05/18 File: nrareaaex6100.out

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Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

English (in-lb) Input Units Used  
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Nichols Road Project - Tract 37305  
Drainage Area A = 40.1 Ac  
Existing Condition for comparison to Detention Basin A  
100-year 6-hour storm

Drainage Area = 40.10(Ac.) = 0.063 Sq. Mi.  
Drainage Area for Depth-Area Areal Adjustment = 40.10(Ac.) = 0.063 Sq. Mi.  
Length along longest watercourse = 3463.00(Ft.)  
Length along longest watercourse measured to centroid = 840.00(Ft.)  
Length along longest watercourse = 0.656 Mi.  
Length along longest watercourse measured to centroid = 0.159 Mi.  
Difference in elevation = 77.00(Ft.)  
Slope along watercourse = 117.4011 Ft./Mi.  
Average Manning's 'N' = 0.034  
Lag time = 0.140 Hr.  
Lag time = 8.39 Min.  
25% of lag time = 2.10 Min.  
40% of lag time = 3.35 Min.  
Unit time = 5.00 Min.  
Duration of storm = 6 Hour(s)  
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

|               |                  |                |
|---------------|------------------|----------------|
| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
| 40.10         | 1.26             | 50.53          |

100 YEAR Area rainfall data:

|               |                  |                |
|---------------|------------------|----------------|
| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
| 40.10         | 3.12             | 125.11         |

STORM EVENT (YEAR) = 100.00  
Area Averaged 2-Year Rainfall = 1.260(In)  
Area Averaged 100-Year Rainfall = 3.120(In)

Point rain (area averaged) = 3.120(In)  
Areal adjustment factor = 99.99 %  
Adjusted average point rain = 3.120(In)

Sub-Area Data:  
Area(Ac.)                  Runoff Index          Impervious %  
37.100                      86.00                      0.050

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

3.000                      69.00                      0.900  
Total Area Entered =                      40.10 (Ac.)

|           |       |             |            |                  |        |         |
|-----------|-------|-------------|------------|------------------|--------|---------|
| RI        | RI    | Infil. Rate | Impervious | Adj. Infil. Rate | Area%  | F       |
| AMC2      | AMC-2 | (In/Hr)     | (Dec.%)    | (In/Hr)          | (Dec.) | (In/Hr) |
| 86.0      | 86.0  | 0.176       | 0.050      | 0.168            | 0.925  | 0.155   |
| 69.0      | 69.0  | 0.373       | 0.900      | 0.071            | 0.075  | 0.005   |
| Sum (F) = |       |             |            |                  |        | 0.160   |

Area averaged mean soil loss (F) (In/Hr) = 0.160

Minimum soil loss rate ((In/Hr)) = 0.080

(for 24 hour storm duration)

Soil loss rate (decimal) = 0.860

## U n i t   H y d r o g r a p h FOOTHILL S-Curve

### Unit Hydrograph Data

| Unit time period<br>(hrs) | Time % of lag | Distribution<br>Graph % | Unit Hydrograph<br>(CFS) |
|---------------------------|---------------|-------------------------|--------------------------|
| 1                         | 0.083         | 59.614                  | 5.538                    |
| 2                         | 0.167         | 119.228                 | 31.212                   |
| 3                         | 0.250         | 178.843                 | 34.251                   |
| 4                         | 0.333         | 238.457                 | 12.459                   |
| 5                         | 0.417         | 298.071                 | 7.196                    |
| 6                         | 0.500         | 357.685                 | 4.381                    |
| 7                         | 0.583         | 417.300                 | 2.443                    |
| 8                         | 0.667         | 476.914                 | 0.974                    |
| 9                         | 0.750         | 536.528                 | 0.569                    |
| 10                        | 0.833         | 596.142                 | 0.411                    |
| 11                        | 0.917         | 655.757                 | 0.369                    |
| 12                        | 1.000         | 715.371                 | 0.197                    |
|                           |               | Sum = 100.000           | Sum= 40.413              |

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

| Unit Time<br>(Hr.) | Pattern<br>Percent | Storm Rain<br>(In/Hr) | Loss rate(In./Hr) |          | Effective<br>(In/Hr) |
|--------------------|--------------------|-----------------------|-------------------|----------|----------------------|
|                    |                    |                       | Max               | Low      |                      |
| 1                  | 0.08               | 0.50                  | 0.187             | ( 0.161) | 0.027                |
| 2                  | 0.17               | 0.60                  | 0.225             | ( 0.193) | 0.064                |
| 3                  | 0.25               | 0.60                  | 0.225             | ( 0.193) | 0.064                |
| 4                  | 0.33               | 0.60                  | 0.225             | ( 0.193) | 0.064                |
| 5                  | 0.42               | 0.60                  | 0.225             | ( 0.193) | 0.064                |
| 6                  | 0.50               | 0.70                  | 0.262             | ( 0.225) | 0.102                |
| 7                  | 0.58               | 0.70                  | 0.262             | ( 0.225) | 0.102                |
| 8                  | 0.67               | 0.70                  | 0.262             | ( 0.225) | 0.102                |
| 9                  | 0.75               | 0.70                  | 0.262             | ( 0.225) | 0.102                |
| 10                 | 0.83               | 0.70                  | 0.262             | ( 0.225) | 0.102                |
| 11                 | 0.92               | 0.70                  | 0.262             | ( 0.225) | 0.102                |
| 12                 | 1.00               | 0.80                  | 0.299             | ( 0.258) | 0.139                |
| 13                 | 1.08               | 0.80                  | 0.299             | ( 0.258) | 0.139                |
| 14                 | 1.17               | 0.80                  | 0.299             | ( 0.258) | 0.139                |
| 15                 | 1.25               | 0.80                  | 0.299             | ( 0.258) | 0.139                |
| 16                 | 1.33               | 0.80                  | 0.299             | ( 0.258) | 0.139                |
| 17                 | 1.42               | 0.80                  | 0.299             | ( 0.258) | 0.139                |
| 18                 | 1.50               | 0.80                  | 0.299             | ( 0.258) | 0.139                |
| 19                 | 1.58               | 0.80                  | 0.299             | ( 0.258) | 0.139                |
| 20                 | 1.67               | 0.80                  | 0.299             | ( 0.258) | 0.139                |
| 21                 | 1.75               | 0.80                  | 0.299             | ( 0.258) | 0.139                |
| 22                 | 1.83               | 0.80                  | 0.299             | ( 0.258) | 0.139                |
| 23                 | 1.92               | 0.80                  | 0.299             | ( 0.258) | 0.139                |
| 24                 | 2.00               | 0.90                  | 0.337             | ( 0.290) | 0.176                |
| 25                 | 2.08               | 0.80                  | 0.299             | ( 0.258) | 0.139                |
| 26                 | 2.17               | 0.90                  | 0.337             | ( 0.290) | 0.176                |
| 27                 | 2.25               | 0.90                  | 0.337             | ( 0.290) | 0.176                |



**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|      |        |       |      |  |  |  |  |
|------|--------|-------|------|--|--|--|--|
| 0+30 | 0.0590 | 2.48  | VQ   |  |  |  |  |
| 0+35 | 0.0800 | 3.05  | VQ   |  |  |  |  |
| 0+40 | 0.1049 | 3.61  | V Q  |  |  |  |  |
| 0+45 | 0.1312 | 3.82  | V Q  |  |  |  |  |
| 0+50 | 0.1584 | 3.95  | V Q  |  |  |  |  |
| 0+55 | 0.1861 | 4.02  | VQ   |  |  |  |  |
| 1+ 0 | 0.2147 | 4.15  | VQ   |  |  |  |  |
| 1+ 5 | 0.2466 | 4.64  | VQ   |  |  |  |  |
| 1+10 | 0.2822 | 5.17  | VQ   |  |  |  |  |
| 1+15 | 0.3192 | 5.36  | V Q  |  |  |  |  |
| 1+20 | 0.3569 | 5.48  | V Q  |  |  |  |  |
| 1+25 | 0.3951 | 5.55  | VQ   |  |  |  |  |
| 1+30 | 0.4335 | 5.58  | VQ   |  |  |  |  |
| 1+35 | 0.4721 | 5.60  | VQ   |  |  |  |  |
| 1+40 | 0.5107 | 5.61  | VQ   |  |  |  |  |
| 1+45 | 0.5493 | 5.61  | Q    |  |  |  |  |
| 1+50 | 0.5880 | 5.62  | Q    |  |  |  |  |
| 1+55 | 0.6268 | 5.62  | Q    |  |  |  |  |
| 2+ 0 | 0.6660 | 5.71  | Q    |  |  |  |  |
| 2+ 5 | 0.7080 | 6.09  | Q    |  |  |  |  |
| 2+10 | 0.7509 | 6.22  | QV   |  |  |  |  |
| 2+15 | 0.7947 | 6.37  | QV   |  |  |  |  |
| 2+20 | 0.8416 | 6.81  | QV   |  |  |  |  |
| 2+25 | 0.8895 | 6.95  | QV   |  |  |  |  |
| 2+30 | 0.9379 | 7.03  | QV   |  |  |  |  |
| 2+35 | 0.9866 | 7.07  | QV   |  |  |  |  |
| 2+40 | 1.0355 | 7.11  | QV   |  |  |  |  |
| 2+45 | 1.0851 | 7.20  | QV   |  |  |  |  |
| 2+50 | 1.1381 | 7.68  | Q V  |  |  |  |  |
| 2+55 | 1.1946 | 8.20  | Q V  |  |  |  |  |
| 3+ 0 | 1.2524 | 8.40  | Q V  |  |  |  |  |
| 3+ 5 | 1.3110 | 8.51  | Q V  |  |  |  |  |
| 3+10 | 1.3706 | 8.66  | Q V  |  |  |  |  |
| 3+15 | 1.4337 | 9.17  | Q V  |  |  |  |  |
| 3+20 | 1.5005 | 9.70  | Q V  |  |  |  |  |
| 3+25 | 1.5693 | 9.98  | Q V  |  |  |  |  |
| 3+30 | 1.6426 | 10.65 | Q V  |  |  |  |  |
| 3+35 | 1.7239 | 11.80 | Q V  |  |  |  |  |
| 3+40 | 1.8136 | 13.02 | Q V  |  |  |  |  |
| 3+45 | 1.9095 | 13.93 | Q V  |  |  |  |  |
| 3+50 | 2.0113 | 14.78 | Q  V |  |  |  |  |
| 3+55 | 2.1187 | 15.60 | Q  V |  |  |  |  |
| 4+ 0 | 2.2315 | 16.38 | Q  V |  |  |  |  |
| 4+ 5 | 2.3497 | 17.16 | Q  V |  |  |  |  |
| 4+10 | 2.4737 | 18.00 | Q V  |  |  |  |  |
| 4+15 | 2.6062 | 19.24 | Q V  |  |  |  |  |
| 4+20 | 2.7480 | 20.60 | Q V  |  |  |  |  |
| 4+25 | 2.8997 | 22.02 | Q V  |  |  |  |  |
| 4+30 | 3.0609 | 23.40 | Q V  |  |  |  |  |
| 4+35 | 3.2291 | 24.42 | Q V  |  |  |  |  |
| 4+40 | 3.4040 | 25.40 | Q V  |  |  |  |  |
| 4+45 | 3.5880 | 26.72 | Q V  |  |  |  |  |
| 4+50 | 3.7811 | 28.03 | Q V  |  |  |  |  |
| 4+55 | 3.9809 | 29.00 | Q  V |  |  |  |  |
| 5+ 0 | 4.1872 | 29.96 | Q V  |  |  |  |  |
| 5+ 5 | 4.4049 | 31.61 | Q V  |  |  |  |  |
| 5+10 | 4.6475 | 35.23 | Q V  |  |  |  |  |
| 5+15 | 4.9285 | 40.80 | Q V  |  |  |  |  |
| 5+20 | 5.2468 | 46.21 | Q V  |  |  |  |  |
| 5+25 | 5.5996 | 51.22 | QV   |  |  |  |  |
| 5+30 | 5.9949 | 57.40 | QV   |  |  |  |  |
| 5+35 | 6.4259 | 62.58 | Q V  |  |  |  |  |
| 5+40 | 6.7748 | 50.67 | Q    |  |  |  |  |
| 5+45 | 6.9759 | 29.20 | Q    |  |  |  |  |
| 5+50 | 7.0936 | 17.08 | Q    |  |  |  |  |
| 5+55 | 7.1626 | 10.03 | Q    |  |  |  |  |
| 6+ 0 | 7.2022 | 5.74  | Q    |  |  |  |  |
| 6+ 5 | 7.2241 | 3.18  | Q    |  |  |  |  |
| 6+10 | 7.2367 | 1.83  | Q    |  |  |  |  |
| 6+15 | 7.2442 | 1.08  | Q    |  |  |  |  |
| 6+20 | 7.2487 | 0.66  | Q    |  |  |  |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|      |        |      |   |  |  |  |   |
|------|--------|------|---|--|--|--|---|
| 6+25 | 7.2509 | 0.33 | Q |  |  |  | V |
| 6+30 | 7.2516 | 0.10 | Q |  |  |  | V |
| 6+35 | 7.2519 | 0.04 | Q |  |  |  | V |
| 6+40 | 7.2520 | 0.01 | Q |  |  |  | V |
| 6+45 | 7.2520 | 0.01 | Q |  |  |  | V |
| 6+50 | 7.2520 | 0.00 | Q |  |  |  | V |
| 6+55 | 7.2521 | 0.00 | Q |  |  |  | V |

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# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

### Unit Hydrograph Analysis

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Study date 02/05/18 File: nrareaaex24100.out

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Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

English (in-lb) Input Units Used  
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Nichols Road Project - Tract 37305  
Drainage Area A = 40.1 Ac  
Existing Condition for comparison to Detention Basin A  
100-year 24-hour storm

Drainage Area = 40.10(Ac.) = 0.063 Sq. Mi.  
Drainage Area for Depth-Area Areal Adjustment = 40.10(Ac.) = 0.063 Sq. Mi.  
Length along longest watercourse = 3463.00(Ft.)  
Length along longest watercourse measured to centroid = 840.00(Ft.)  
Length along longest watercourse = 0.656 Mi.  
Length along longest watercourse measured to centroid = 0.159 Mi.  
Difference in elevation = 77.00(Ft.)  
Slope along watercourse = 117.4011 Ft./Mi.  
Average Manning's 'N' = 0.034  
Lag time = 0.140 Hr.  
Lag time = 8.39 Min.  
25% of lag time = 2.10 Min.  
40% of lag time = 3.35 Min.  
Unit time = 5.00 Min.  
Duration of storm = 24 Hour(s)  
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 40.10         | 2.38             | 95.44          |

100 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 40.10         | 6.35             | 254.63         |

STORM EVENT (YEAR) = 100.00  
Area Averaged 2-Year Rainfall = 2.380(In)  
Area Averaged 100-Year Rainfall = 6.350(In)

Point rain (area averaged) = 6.350(In)  
Areal adjustment factor = 99.99 %  
Adjusted average point rain = 6.350(In)

Sub-Area Data:  
Area(Ac.)                      Runoff Index                      Impervious %  
37.100                                      86.00                                      0.050

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

3.000                      69.00                      0.900  
Total Area Entered =                      40.10 (Ac.)

|      |       |             |            |                  |        |                 |
|------|-------|-------------|------------|------------------|--------|-----------------|
| RI   | RI    | Infil. Rate | Impervious | Adj. Infil. Rate | Area%  | F               |
| AMC2 | AMC-2 | (In/Hr)     | (Dec.%)    | (In/Hr)          | (Dec.) | (In/Hr)         |
| 86.0 | 86.0  | 0.176       | 0.050      | 0.168            | 0.925  | 0.155           |
| 69.0 | 69.0  | 0.373       | 0.900      | 0.071            | 0.075  | 0.005           |
|      |       |             |            |                  |        | Sum (F) = 0.160 |

Area averaged mean soil loss (F) (In/Hr) = 0.160

Minimum soil loss rate ((In/Hr)) = 0.080

(for 24 hour storm duration)

Soil loss rate (decimal) = 0.860

## U n i t   H y d r o g r a p h FOOTHILL S-Curve

### Unit Hydrograph Data

| Unit time period<br>(hrs) | Time % of lag | Distribution<br>Graph % | Unit Hydrograph<br>(CFS) |
|---------------------------|---------------|-------------------------|--------------------------|
| 1                         | 0.083         | 59.614                  | 5.538                    |
| 2                         | 0.167         | 119.228                 | 31.212                   |
| 3                         | 0.250         | 178.843                 | 34.251                   |
| 4                         | 0.333         | 238.457                 | 12.459                   |
| 5                         | 0.417         | 298.071                 | 7.196                    |
| 6                         | 0.500         | 357.685                 | 4.381                    |
| 7                         | 0.583         | 417.300                 | 2.443                    |
| 8                         | 0.667         | 476.914                 | 0.974                    |
| 9                         | 0.750         | 536.528                 | 0.569                    |
| 10                        | 0.833         | 596.142                 | 0.411                    |
| 11                        | 0.917         | 655.757                 | 0.369                    |
| 12                        | 1.000         | 715.371                 | 0.197                    |
|                           |               | Sum = 100.000           | Sum= 40.413              |

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

| Unit Time<br>(Hr.) | Pattern<br>Percent | Storm Rain<br>(In/Hr) | Loss rate(In./Hr) |       | Effective<br>(In/Hr) |
|--------------------|--------------------|-----------------------|-------------------|-------|----------------------|
|                    |                    |                       | Max               | Low   |                      |
| 1                  | 0.08               | 0.07                  | ( 0.284)          | 0.044 | 0.007                |
| 2                  | 0.17               | 0.07                  | ( 0.283)          | 0.044 | 0.007                |
| 3                  | 0.25               | 0.07                  | ( 0.282)          | 0.044 | 0.007                |
| 4                  | 0.33               | 0.10                  | ( 0.281)          | 0.066 | 0.011                |
| 5                  | 0.42               | 0.10                  | ( 0.280)          | 0.066 | 0.011                |
| 6                  | 0.50               | 0.10                  | ( 0.279)          | 0.066 | 0.011                |
| 7                  | 0.58               | 0.10                  | ( 0.278)          | 0.066 | 0.011                |
| 8                  | 0.67               | 0.10                  | ( 0.277)          | 0.066 | 0.011                |
| 9                  | 0.75               | 0.10                  | ( 0.276)          | 0.066 | 0.011                |
| 10                 | 0.83               | 0.13                  | ( 0.275)          | 0.087 | 0.014                |
| 11                 | 0.92               | 0.13                  | ( 0.274)          | 0.087 | 0.014                |
| 12                 | 1.00               | 0.13                  | ( 0.272)          | 0.087 | 0.014                |
| 13                 | 1.08               | 0.10                  | ( 0.271)          | 0.066 | 0.011                |
| 14                 | 1.17               | 0.10                  | ( 0.270)          | 0.066 | 0.011                |
| 15                 | 1.25               | 0.10                  | ( 0.269)          | 0.066 | 0.011                |
| 16                 | 1.33               | 0.10                  | ( 0.268)          | 0.066 | 0.011                |
| 17                 | 1.42               | 0.10                  | ( 0.267)          | 0.066 | 0.011                |
| 18                 | 1.50               | 0.10                  | ( 0.266)          | 0.066 | 0.011                |
| 19                 | 1.58               | 0.10                  | ( 0.265)          | 0.066 | 0.011                |
| 20                 | 1.67               | 0.10                  | ( 0.264)          | 0.066 | 0.011                |
| 21                 | 1.75               | 0.10                  | ( 0.263)          | 0.066 | 0.011                |
| 22                 | 1.83               | 0.13                  | ( 0.262)          | 0.087 | 0.014                |
| 23                 | 1.92               | 0.13                  | ( 0.261)          | 0.087 | 0.014                |
| 24                 | 2.00               | 0.13                  | ( 0.260)          | 0.087 | 0.014                |
| 25                 | 2.08               | 0.13                  | ( 0.259)          | 0.087 | 0.014                |
| 26                 | 2.17               | 0.13                  | ( 0.258)          | 0.087 | 0.014                |
| 27                 | 2.25               | 0.13                  | ( 0.257)          | 0.087 | 0.014                |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|    |      |      |       |          |          |       |
|----|------|------|-------|----------|----------|-------|
| 28 | 2.33 | 0.13 | 0.102 | ( 0.255) | 0.087    | 0.014 |
| 29 | 2.42 | 0.13 | 0.102 | ( 0.254) | 0.087    | 0.014 |
| 30 | 2.50 | 0.13 | 0.102 | ( 0.253) | 0.087    | 0.014 |
| 31 | 2.58 | 0.17 | 0.127 | ( 0.252) | 0.109    | 0.018 |
| 32 | 2.67 | 0.17 | 0.127 | ( 0.251) | 0.109    | 0.018 |
| 33 | 2.75 | 0.17 | 0.127 | ( 0.250) | 0.109    | 0.018 |
| 34 | 2.83 | 0.17 | 0.127 | ( 0.249) | 0.109    | 0.018 |
| 35 | 2.92 | 0.17 | 0.127 | ( 0.248) | 0.109    | 0.018 |
| 36 | 3.00 | 0.17 | 0.127 | ( 0.247) | 0.109    | 0.018 |
| 37 | 3.08 | 0.17 | 0.127 | ( 0.246) | 0.109    | 0.018 |
| 38 | 3.17 | 0.17 | 0.127 | ( 0.245) | 0.109    | 0.018 |
| 39 | 3.25 | 0.17 | 0.127 | ( 0.244) | 0.109    | 0.018 |
| 40 | 3.33 | 0.17 | 0.127 | ( 0.243) | 0.109    | 0.018 |
| 41 | 3.42 | 0.17 | 0.127 | ( 0.242) | 0.109    | 0.018 |
| 42 | 3.50 | 0.17 | 0.127 | ( 0.241) | 0.109    | 0.018 |
| 43 | 3.58 | 0.17 | 0.127 | ( 0.240) | 0.109    | 0.018 |
| 44 | 3.67 | 0.17 | 0.127 | ( 0.239) | 0.109    | 0.018 |
| 45 | 3.75 | 0.17 | 0.127 | ( 0.238) | 0.109    | 0.018 |
| 46 | 3.83 | 0.20 | 0.152 | ( 0.237) | 0.131    | 0.021 |
| 47 | 3.92 | 0.20 | 0.152 | ( 0.236) | 0.131    | 0.021 |
| 48 | 4.00 | 0.20 | 0.152 | ( 0.235) | 0.131    | 0.021 |
| 49 | 4.08 | 0.20 | 0.152 | ( 0.234) | 0.131    | 0.021 |
| 50 | 4.17 | 0.20 | 0.152 | ( 0.233) | 0.131    | 0.021 |
| 51 | 4.25 | 0.20 | 0.152 | ( 0.232) | 0.131    | 0.021 |
| 52 | 4.33 | 0.23 | 0.178 | ( 0.231) | 0.153    | 0.025 |
| 53 | 4.42 | 0.23 | 0.178 | ( 0.230) | 0.153    | 0.025 |
| 54 | 4.50 | 0.23 | 0.178 | ( 0.229) | 0.153    | 0.025 |
| 55 | 4.58 | 0.23 | 0.178 | ( 0.228) | 0.153    | 0.025 |
| 56 | 4.67 | 0.23 | 0.178 | ( 0.227) | 0.153    | 0.025 |
| 57 | 4.75 | 0.23 | 0.178 | ( 0.226) | 0.153    | 0.025 |
| 58 | 4.83 | 0.27 | 0.203 | ( 0.225) | 0.175    | 0.028 |
| 59 | 4.92 | 0.27 | 0.203 | ( 0.224) | 0.175    | 0.028 |
| 60 | 5.00 | 0.27 | 0.203 | ( 0.223) | 0.175    | 0.028 |
| 61 | 5.08 | 0.20 | 0.152 | ( 0.222) | 0.131    | 0.021 |
| 62 | 5.17 | 0.20 | 0.152 | ( 0.221) | 0.131    | 0.021 |
| 63 | 5.25 | 0.20 | 0.152 | ( 0.220) | 0.131    | 0.021 |
| 64 | 5.33 | 0.23 | 0.178 | ( 0.219) | 0.153    | 0.025 |
| 65 | 5.42 | 0.23 | 0.178 | ( 0.218) | 0.153    | 0.025 |
| 66 | 5.50 | 0.23 | 0.178 | ( 0.217) | 0.153    | 0.025 |
| 67 | 5.58 | 0.27 | 0.203 | ( 0.217) | 0.175    | 0.028 |
| 68 | 5.67 | 0.27 | 0.203 | ( 0.216) | 0.175    | 0.028 |
| 69 | 5.75 | 0.27 | 0.203 | ( 0.215) | 0.175    | 0.028 |
| 70 | 5.83 | 0.27 | 0.203 | ( 0.214) | 0.175    | 0.028 |
| 71 | 5.92 | 0.27 | 0.203 | ( 0.213) | 0.175    | 0.028 |
| 72 | 6.00 | 0.27 | 0.203 | ( 0.212) | 0.175    | 0.028 |
| 73 | 6.08 | 0.30 | 0.229 | ( 0.211) | 0.197    | 0.032 |
| 74 | 6.17 | 0.30 | 0.229 | ( 0.210) | 0.197    | 0.032 |
| 75 | 6.25 | 0.30 | 0.229 | ( 0.209) | 0.197    | 0.032 |
| 76 | 6.33 | 0.30 | 0.229 | ( 0.208) | 0.197    | 0.032 |
| 77 | 6.42 | 0.30 | 0.229 | ( 0.207) | 0.197    | 0.032 |
| 78 | 6.50 | 0.30 | 0.229 | ( 0.206) | 0.197    | 0.032 |
| 79 | 6.58 | 0.33 | 0.254 | 0.205    | ( 0.218) | 0.049 |
| 80 | 6.67 | 0.33 | 0.254 | 0.204    | ( 0.218) | 0.050 |
| 81 | 6.75 | 0.33 | 0.254 | 0.203    | ( 0.218) | 0.051 |
| 82 | 6.83 | 0.33 | 0.254 | 0.202    | ( 0.218) | 0.051 |
| 83 | 6.92 | 0.33 | 0.254 | 0.202    | ( 0.218) | 0.052 |
| 84 | 7.00 | 0.33 | 0.254 | 0.201    | ( 0.218) | 0.053 |
| 85 | 7.08 | 0.33 | 0.254 | 0.200    | ( 0.218) | 0.054 |
| 86 | 7.17 | 0.33 | 0.254 | 0.199    | ( 0.218) | 0.055 |
| 87 | 7.25 | 0.33 | 0.254 | 0.198    | ( 0.218) | 0.056 |
| 88 | 7.33 | 0.37 | 0.279 | 0.197    | ( 0.240) | 0.082 |
| 89 | 7.42 | 0.37 | 0.279 | 0.196    | ( 0.240) | 0.083 |
| 90 | 7.50 | 0.37 | 0.279 | 0.195    | ( 0.240) | 0.084 |
| 91 | 7.58 | 0.40 | 0.305 | 0.194    | ( 0.262) | 0.110 |
| 92 | 7.67 | 0.40 | 0.305 | 0.193    | ( 0.262) | 0.111 |
| 93 | 7.75 | 0.40 | 0.305 | 0.193    | ( 0.262) | 0.112 |
| 94 | 7.83 | 0.43 | 0.330 | 0.192    | ( 0.284) | 0.139 |
| 95 | 7.92 | 0.43 | 0.330 | 0.191    | ( 0.284) | 0.139 |
| 96 | 8.00 | 0.43 | 0.330 | 0.190    | ( 0.284) | 0.140 |
| 97 | 8.08 | 0.50 | 0.381 | 0.189    | ( 0.328) | 0.192 |
| 98 | 8.17 | 0.50 | 0.381 | 0.188    | ( 0.328) | 0.193 |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|     |       |      |       |       |          |       |
|-----|-------|------|-------|-------|----------|-------|
| 99  | 8.25  | 0.50 | 0.381 | 0.187 | ( 0.328) | 0.194 |
| 100 | 8.33  | 0.50 | 0.381 | 0.186 | ( 0.328) | 0.195 |
| 101 | 8.42  | 0.50 | 0.381 | 0.186 | ( 0.328) | 0.195 |
| 102 | 8.50  | 0.50 | 0.381 | 0.185 | ( 0.328) | 0.196 |
| 103 | 8.58  | 0.53 | 0.406 | 0.184 | ( 0.349) | 0.223 |
| 104 | 8.67  | 0.53 | 0.406 | 0.183 | ( 0.349) | 0.223 |
| 105 | 8.75  | 0.53 | 0.406 | 0.182 | ( 0.349) | 0.224 |
| 106 | 8.83  | 0.57 | 0.432 | 0.181 | ( 0.371) | 0.251 |
| 107 | 8.92  | 0.57 | 0.432 | 0.180 | ( 0.371) | 0.251 |
| 108 | 9.00  | 0.57 | 0.432 | 0.179 | ( 0.371) | 0.252 |
| 109 | 9.08  | 0.63 | 0.483 | 0.179 | ( 0.415) | 0.304 |
| 110 | 9.17  | 0.63 | 0.483 | 0.178 | ( 0.415) | 0.305 |
| 111 | 9.25  | 0.63 | 0.483 | 0.177 | ( 0.415) | 0.306 |
| 112 | 9.33  | 0.67 | 0.508 | 0.176 | ( 0.437) | 0.332 |
| 113 | 9.42  | 0.67 | 0.508 | 0.175 | ( 0.437) | 0.333 |
| 114 | 9.50  | 0.67 | 0.508 | 0.174 | ( 0.437) | 0.334 |
| 115 | 9.58  | 0.70 | 0.533 | 0.174 | ( 0.459) | 0.360 |
| 116 | 9.67  | 0.70 | 0.533 | 0.173 | ( 0.459) | 0.361 |
| 117 | 9.75  | 0.70 | 0.533 | 0.172 | ( 0.459) | 0.361 |
| 118 | 9.83  | 0.73 | 0.559 | 0.171 | ( 0.481) | 0.388 |
| 119 | 9.92  | 0.73 | 0.559 | 0.170 | ( 0.481) | 0.388 |
| 120 | 10.00 | 0.73 | 0.559 | 0.169 | ( 0.481) | 0.389 |
| 121 | 10.08 | 0.50 | 0.381 | 0.169 | ( 0.328) | 0.212 |
| 122 | 10.17 | 0.50 | 0.381 | 0.168 | ( 0.328) | 0.213 |
| 123 | 10.25 | 0.50 | 0.381 | 0.167 | ( 0.328) | 0.214 |
| 124 | 10.33 | 0.50 | 0.381 | 0.166 | ( 0.328) | 0.215 |
| 125 | 10.42 | 0.50 | 0.381 | 0.165 | ( 0.328) | 0.216 |
| 126 | 10.50 | 0.50 | 0.381 | 0.165 | ( 0.328) | 0.216 |
| 127 | 10.58 | 0.67 | 0.508 | 0.164 | ( 0.437) | 0.344 |
| 128 | 10.67 | 0.67 | 0.508 | 0.163 | ( 0.437) | 0.345 |
| 129 | 10.75 | 0.67 | 0.508 | 0.162 | ( 0.437) | 0.346 |
| 130 | 10.83 | 0.67 | 0.508 | 0.161 | ( 0.437) | 0.347 |
| 131 | 10.92 | 0.67 | 0.508 | 0.161 | ( 0.437) | 0.347 |
| 132 | 11.00 | 0.67 | 0.508 | 0.160 | ( 0.437) | 0.348 |
| 133 | 11.08 | 0.63 | 0.483 | 0.159 | ( 0.415) | 0.324 |
| 134 | 11.17 | 0.63 | 0.483 | 0.158 | ( 0.415) | 0.324 |
| 135 | 11.25 | 0.63 | 0.483 | 0.157 | ( 0.415) | 0.325 |
| 136 | 11.33 | 0.63 | 0.483 | 0.157 | ( 0.415) | 0.326 |
| 137 | 11.42 | 0.63 | 0.483 | 0.156 | ( 0.415) | 0.327 |
| 138 | 11.50 | 0.63 | 0.483 | 0.155 | ( 0.415) | 0.327 |
| 139 | 11.58 | 0.57 | 0.432 | 0.154 | ( 0.371) | 0.277 |
| 140 | 11.67 | 0.57 | 0.432 | 0.154 | ( 0.371) | 0.278 |
| 141 | 11.75 | 0.57 | 0.432 | 0.153 | ( 0.371) | 0.279 |
| 142 | 11.83 | 0.60 | 0.457 | 0.152 | ( 0.393) | 0.305 |
| 143 | 11.92 | 0.60 | 0.457 | 0.151 | ( 0.393) | 0.306 |
| 144 | 12.00 | 0.60 | 0.457 | 0.151 | ( 0.393) | 0.307 |
| 145 | 12.08 | 0.83 | 0.635 | 0.150 | ( 0.546) | 0.485 |
| 146 | 12.17 | 0.83 | 0.635 | 0.149 | ( 0.546) | 0.486 |
| 147 | 12.25 | 0.83 | 0.635 | 0.148 | ( 0.546) | 0.487 |
| 148 | 12.33 | 0.87 | 0.660 | 0.148 | ( 0.568) | 0.513 |
| 149 | 12.42 | 0.87 | 0.660 | 0.147 | ( 0.568) | 0.514 |
| 150 | 12.50 | 0.87 | 0.660 | 0.146 | ( 0.568) | 0.514 |
| 151 | 12.58 | 0.93 | 0.711 | 0.145 | ( 0.612) | 0.566 |
| 152 | 12.67 | 0.93 | 0.711 | 0.145 | ( 0.612) | 0.567 |
| 153 | 12.75 | 0.93 | 0.711 | 0.144 | ( 0.612) | 0.567 |
| 154 | 12.83 | 0.97 | 0.737 | 0.143 | ( 0.633) | 0.593 |
| 155 | 12.92 | 0.97 | 0.737 | 0.142 | ( 0.633) | 0.594 |
| 156 | 13.00 | 0.97 | 0.737 | 0.142 | ( 0.633) | 0.595 |
| 157 | 13.08 | 1.13 | 0.864 | 0.141 | ( 0.743) | 0.723 |
| 158 | 13.17 | 1.13 | 0.864 | 0.140 | ( 0.743) | 0.723 |
| 159 | 13.25 | 1.13 | 0.864 | 0.140 | ( 0.743) | 0.724 |
| 160 | 13.33 | 1.13 | 0.864 | 0.139 | ( 0.743) | 0.725 |
| 161 | 13.42 | 1.13 | 0.864 | 0.138 | ( 0.743) | 0.725 |
| 162 | 13.50 | 1.13 | 0.864 | 0.137 | ( 0.743) | 0.726 |
| 163 | 13.58 | 0.77 | 0.584 | 0.137 | ( 0.502) | 0.447 |
| 164 | 13.67 | 0.77 | 0.584 | 0.136 | ( 0.502) | 0.448 |
| 165 | 13.75 | 0.77 | 0.584 | 0.135 | ( 0.502) | 0.449 |
| 166 | 13.83 | 0.77 | 0.584 | 0.135 | ( 0.502) | 0.450 |
| 167 | 13.92 | 0.77 | 0.584 | 0.134 | ( 0.502) | 0.450 |
| 168 | 14.00 | 0.77 | 0.584 | 0.133 | ( 0.502) | 0.451 |
| 169 | 14.08 | 0.90 | 0.686 | 0.133 | ( 0.590) | 0.553 |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|     |       |      |       |          |          |       |
|-----|-------|------|-------|----------|----------|-------|
| 170 | 14.17 | 0.90 | 0.686 | 0.132    | ( 0.590) | 0.554 |
| 171 | 14.25 | 0.90 | 0.686 | 0.131    | ( 0.590) | 0.554 |
| 172 | 14.33 | 0.87 | 0.660 | 0.131    | ( 0.568) | 0.530 |
| 173 | 14.42 | 0.87 | 0.660 | 0.130    | ( 0.568) | 0.530 |
| 174 | 14.50 | 0.87 | 0.660 | 0.129    | ( 0.568) | 0.531 |
| 175 | 14.58 | 0.87 | 0.660 | 0.129    | ( 0.568) | 0.532 |
| 176 | 14.67 | 0.87 | 0.660 | 0.128    | ( 0.568) | 0.532 |
| 177 | 14.75 | 0.87 | 0.660 | 0.127    | ( 0.568) | 0.533 |
| 178 | 14.83 | 0.83 | 0.635 | 0.127    | ( 0.546) | 0.508 |
| 179 | 14.92 | 0.83 | 0.635 | 0.126    | ( 0.546) | 0.509 |
| 180 | 15.00 | 0.83 | 0.635 | 0.125    | ( 0.546) | 0.510 |
| 181 | 15.08 | 0.80 | 0.610 | 0.125    | ( 0.524) | 0.485 |
| 182 | 15.17 | 0.80 | 0.610 | 0.124    | ( 0.524) | 0.486 |
| 183 | 15.25 | 0.80 | 0.610 | 0.123    | ( 0.524) | 0.486 |
| 184 | 15.33 | 0.77 | 0.584 | 0.123    | ( 0.502) | 0.461 |
| 185 | 15.42 | 0.77 | 0.584 | 0.122    | ( 0.502) | 0.462 |
| 186 | 15.50 | 0.77 | 0.584 | 0.122    | ( 0.502) | 0.463 |
| 187 | 15.58 | 0.63 | 0.483 | 0.121    | ( 0.415) | 0.362 |
| 188 | 15.67 | 0.63 | 0.483 | 0.120    | ( 0.415) | 0.362 |
| 189 | 15.75 | 0.63 | 0.483 | 0.120    | ( 0.415) | 0.363 |
| 190 | 15.83 | 0.63 | 0.483 | 0.119    | ( 0.415) | 0.364 |
| 191 | 15.92 | 0.63 | 0.483 | 0.118    | ( 0.415) | 0.364 |
| 192 | 16.00 | 0.63 | 0.483 | 0.118    | ( 0.415) | 0.365 |
| 193 | 16.08 | 0.13 | 0.102 | ( 0.117) | 0.087    | 0.014 |
| 194 | 16.17 | 0.13 | 0.102 | ( 0.117) | 0.087    | 0.014 |
| 195 | 16.25 | 0.13 | 0.102 | ( 0.116) | 0.087    | 0.014 |
| 196 | 16.33 | 0.13 | 0.102 | ( 0.115) | 0.087    | 0.014 |
| 197 | 16.42 | 0.13 | 0.102 | ( 0.115) | 0.087    | 0.014 |
| 198 | 16.50 | 0.13 | 0.102 | ( 0.114) | 0.087    | 0.014 |
| 199 | 16.58 | 0.10 | 0.076 | ( 0.114) | 0.066    | 0.011 |
| 200 | 16.67 | 0.10 | 0.076 | ( 0.113) | 0.066    | 0.011 |
| 201 | 16.75 | 0.10 | 0.076 | ( 0.113) | 0.066    | 0.011 |
| 202 | 16.83 | 0.10 | 0.076 | ( 0.112) | 0.066    | 0.011 |
| 203 | 16.92 | 0.10 | 0.076 | ( 0.111) | 0.066    | 0.011 |
| 204 | 17.00 | 0.10 | 0.076 | ( 0.111) | 0.066    | 0.011 |
| 205 | 17.08 | 0.17 | 0.127 | ( 0.110) | 0.109    | 0.018 |
| 206 | 17.17 | 0.17 | 0.127 | ( 0.110) | 0.109    | 0.018 |
| 207 | 17.25 | 0.17 | 0.127 | 0.109    | ( 0.109) | 0.018 |
| 208 | 17.33 | 0.17 | 0.127 | 0.109    | ( 0.109) | 0.018 |
| 209 | 17.42 | 0.17 | 0.127 | 0.108    | ( 0.109) | 0.019 |
| 210 | 17.50 | 0.17 | 0.127 | 0.108    | ( 0.109) | 0.019 |
| 211 | 17.58 | 0.17 | 0.127 | 0.107    | ( 0.109) | 0.020 |
| 212 | 17.67 | 0.17 | 0.127 | 0.106    | ( 0.109) | 0.021 |
| 213 | 17.75 | 0.17 | 0.127 | 0.106    | ( 0.109) | 0.021 |
| 214 | 17.83 | 0.13 | 0.102 | ( 0.105) | 0.087    | 0.014 |
| 215 | 17.92 | 0.13 | 0.102 | ( 0.105) | 0.087    | 0.014 |
| 216 | 18.00 | 0.13 | 0.102 | ( 0.104) | 0.087    | 0.014 |
| 217 | 18.08 | 0.13 | 0.102 | ( 0.104) | 0.087    | 0.014 |
| 218 | 18.17 | 0.13 | 0.102 | ( 0.103) | 0.087    | 0.014 |
| 219 | 18.25 | 0.13 | 0.102 | ( 0.103) | 0.087    | 0.014 |
| 220 | 18.33 | 0.13 | 0.102 | ( 0.102) | 0.087    | 0.014 |
| 221 | 18.42 | 0.13 | 0.102 | ( 0.102) | 0.087    | 0.014 |
| 222 | 18.50 | 0.13 | 0.102 | ( 0.101) | 0.087    | 0.014 |
| 223 | 18.58 | 0.10 | 0.076 | ( 0.101) | 0.066    | 0.011 |
| 224 | 18.67 | 0.10 | 0.076 | ( 0.100) | 0.066    | 0.011 |
| 225 | 18.75 | 0.10 | 0.076 | ( 0.100) | 0.066    | 0.011 |
| 226 | 18.83 | 0.07 | 0.051 | ( 0.099) | 0.044    | 0.007 |
| 227 | 18.92 | 0.07 | 0.051 | ( 0.099) | 0.044    | 0.007 |
| 228 | 19.00 | 0.07 | 0.051 | ( 0.098) | 0.044    | 0.007 |
| 229 | 19.08 | 0.10 | 0.076 | ( 0.098) | 0.066    | 0.011 |
| 230 | 19.17 | 0.10 | 0.076 | ( 0.098) | 0.066    | 0.011 |
| 231 | 19.25 | 0.10 | 0.076 | ( 0.097) | 0.066    | 0.011 |
| 232 | 19.33 | 0.13 | 0.102 | ( 0.097) | 0.087    | 0.014 |
| 233 | 19.42 | 0.13 | 0.102 | ( 0.096) | 0.087    | 0.014 |
| 234 | 19.50 | 0.13 | 0.102 | ( 0.096) | 0.087    | 0.014 |
| 235 | 19.58 | 0.10 | 0.076 | ( 0.095) | 0.066    | 0.011 |
| 236 | 19.67 | 0.10 | 0.076 | ( 0.095) | 0.066    | 0.011 |
| 237 | 19.75 | 0.10 | 0.076 | ( 0.094) | 0.066    | 0.011 |
| 238 | 19.83 | 0.07 | 0.051 | ( 0.094) | 0.044    | 0.007 |
| 239 | 19.92 | 0.07 | 0.051 | ( 0.094) | 0.044    | 0.007 |
| 240 | 20.00 | 0.07 | 0.051 | ( 0.093) | 0.044    | 0.007 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

|     |       |      |       |          |       |       |
|-----|-------|------|-------|----------|-------|-------|
| 241 | 20.08 | 0.10 | 0.076 | ( 0.093) | 0.066 | 0.011 |
| 242 | 20.17 | 0.10 | 0.076 | ( 0.092) | 0.066 | 0.011 |
| 243 | 20.25 | 0.10 | 0.076 | ( 0.092) | 0.066 | 0.011 |
| 244 | 20.33 | 0.10 | 0.076 | ( 0.092) | 0.066 | 0.011 |
| 245 | 20.42 | 0.10 | 0.076 | ( 0.091) | 0.066 | 0.011 |
| 246 | 20.50 | 0.10 | 0.076 | ( 0.091) | 0.066 | 0.011 |
| 247 | 20.58 | 0.10 | 0.076 | ( 0.090) | 0.066 | 0.011 |
| 248 | 20.67 | 0.10 | 0.076 | ( 0.090) | 0.066 | 0.011 |
| 249 | 20.75 | 0.10 | 0.076 | ( 0.090) | 0.066 | 0.011 |
| 250 | 20.83 | 0.07 | 0.051 | ( 0.089) | 0.044 | 0.007 |
| 251 | 20.92 | 0.07 | 0.051 | ( 0.089) | 0.044 | 0.007 |
| 252 | 21.00 | 0.07 | 0.051 | ( 0.089) | 0.044 | 0.007 |
| 253 | 21.08 | 0.10 | 0.076 | ( 0.088) | 0.066 | 0.011 |
| 254 | 21.17 | 0.10 | 0.076 | ( 0.088) | 0.066 | 0.011 |
| 255 | 21.25 | 0.10 | 0.076 | ( 0.088) | 0.066 | 0.011 |
| 256 | 21.33 | 0.07 | 0.051 | ( 0.087) | 0.044 | 0.007 |
| 257 | 21.42 | 0.07 | 0.051 | ( 0.087) | 0.044 | 0.007 |
| 258 | 21.50 | 0.07 | 0.051 | ( 0.087) | 0.044 | 0.007 |
| 259 | 21.58 | 0.10 | 0.076 | ( 0.086) | 0.066 | 0.011 |
| 260 | 21.67 | 0.10 | 0.076 | ( 0.086) | 0.066 | 0.011 |
| 261 | 21.75 | 0.10 | 0.076 | ( 0.086) | 0.066 | 0.011 |
| 262 | 21.83 | 0.07 | 0.051 | ( 0.085) | 0.044 | 0.007 |
| 263 | 21.92 | 0.07 | 0.051 | ( 0.085) | 0.044 | 0.007 |
| 264 | 22.00 | 0.07 | 0.051 | ( 0.085) | 0.044 | 0.007 |
| 265 | 22.08 | 0.10 | 0.076 | ( 0.084) | 0.066 | 0.011 |
| 266 | 22.17 | 0.10 | 0.076 | ( 0.084) | 0.066 | 0.011 |
| 267 | 22.25 | 0.10 | 0.076 | ( 0.084) | 0.066 | 0.011 |
| 268 | 22.33 | 0.07 | 0.051 | ( 0.084) | 0.044 | 0.007 |
| 269 | 22.42 | 0.07 | 0.051 | ( 0.083) | 0.044 | 0.007 |
| 270 | 22.50 | 0.07 | 0.051 | ( 0.083) | 0.044 | 0.007 |
| 271 | 22.58 | 0.07 | 0.051 | ( 0.083) | 0.044 | 0.007 |
| 272 | 22.67 | 0.07 | 0.051 | ( 0.083) | 0.044 | 0.007 |
| 273 | 22.75 | 0.07 | 0.051 | ( 0.082) | 0.044 | 0.007 |
| 274 | 22.83 | 0.07 | 0.051 | ( 0.082) | 0.044 | 0.007 |
| 275 | 22.92 | 0.07 | 0.051 | ( 0.082) | 0.044 | 0.007 |
| 276 | 23.00 | 0.07 | 0.051 | ( 0.082) | 0.044 | 0.007 |
| 277 | 23.08 | 0.07 | 0.051 | ( 0.082) | 0.044 | 0.007 |
| 278 | 23.17 | 0.07 | 0.051 | ( 0.081) | 0.044 | 0.007 |
| 279 | 23.25 | 0.07 | 0.051 | ( 0.081) | 0.044 | 0.007 |
| 280 | 23.33 | 0.07 | 0.051 | ( 0.081) | 0.044 | 0.007 |
| 281 | 23.42 | 0.07 | 0.051 | ( 0.081) | 0.044 | 0.007 |
| 282 | 23.50 | 0.07 | 0.051 | ( 0.081) | 0.044 | 0.007 |
| 283 | 23.58 | 0.07 | 0.051 | ( 0.081) | 0.044 | 0.007 |
| 284 | 23.67 | 0.07 | 0.051 | ( 0.081) | 0.044 | 0.007 |
| 285 | 23.75 | 0.07 | 0.051 | ( 0.080) | 0.044 | 0.007 |
| 286 | 23.83 | 0.07 | 0.051 | ( 0.080) | 0.044 | 0.007 |
| 287 | 23.92 | 0.07 | 0.051 | ( 0.080) | 0.044 | 0.007 |
| 288 | 24.00 | 0.07 | 0.051 | ( 0.080) | 0.044 | 0.007 |

(Loss Rate Not Used)

Sum = 100.0 Sum = 42.7

Flood volume = Effective rainfall 3.56(In)  
times area 40.1(Ac.)/[ (In)/(Ft.) ] = 11.9(Ac.Ft)  
Total soil loss = 2.79(In)  
Total soil loss = 9.319(Ac.Ft)  
Total rainfall = 6.35(In)  
Flood volume = 518332.2 Cubic Feet  
Total soil loss = 405920.5 Cubic Feet

-----  
Peak flow rate of this hydrograph = 29.031(CFS)  
-----

+++++

24 - H O U R S T O R M  
R u n o f f H y d r o g r a p h

-----  
Hydrograph in 5 Minute intervals ((CFS))  
-----

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 7.5 | 15.0 | 22.5 | 30.0 |
|-----------|--------------|--------|---|-----|------|------|------|
| 0+ 5      | 0.0001       | 0.02 Q |   |     |      |      |      |
| 0+10      | 0.0008       | 0.11 Q |   |     |      |      |      |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|      |        |      |    |  |  |  |  |
|------|--------|------|----|--|--|--|--|
| 0+15 | 0.0022 | 0.20 | Q  |  |  |  |  |
| 0+20 | 0.0040 | 0.25 | Q  |  |  |  |  |
| 0+25 | 0.0061 | 0.31 | Q  |  |  |  |  |
| 0+30 | 0.0087 | 0.38 | Q  |  |  |  |  |
| 0+35 | 0.0115 | 0.40 | Q  |  |  |  |  |
| 0+40 | 0.0143 | 0.41 | Q  |  |  |  |  |
| 0+45 | 0.0172 | 0.42 | Q  |  |  |  |  |
| 0+50 | 0.0202 | 0.43 | Q  |  |  |  |  |
| 0+55 | 0.0235 | 0.48 | Q  |  |  |  |  |
| 1+ 0 | 0.0272 | 0.53 | Q  |  |  |  |  |
| 1+ 5 | 0.0309 | 0.54 | Q  |  |  |  |  |
| 1+10 | 0.0344 | 0.51 | Q  |  |  |  |  |
| 1+15 | 0.0376 | 0.47 | Q  |  |  |  |  |
| 1+20 | 0.0407 | 0.45 | Q  |  |  |  |  |
| 1+25 | 0.0438 | 0.44 | Q  |  |  |  |  |
| 1+30 | 0.0468 | 0.44 | Q  |  |  |  |  |
| 1+35 | 0.0498 | 0.43 | Q  |  |  |  |  |
| 1+40 | 0.0528 | 0.43 | Q  |  |  |  |  |
| 1+45 | 0.0557 | 0.43 | Q  |  |  |  |  |
| 1+50 | 0.0588 | 0.44 | Q  |  |  |  |  |
| 1+55 | 0.0621 | 0.48 | Q  |  |  |  |  |
| 2+ 0 | 0.0658 | 0.53 | Q  |  |  |  |  |
| 2+ 5 | 0.0696 | 0.55 | Q  |  |  |  |  |
| 2+10 | 0.0734 | 0.56 | Q  |  |  |  |  |
| 2+15 | 0.0774 | 0.57 | Q  |  |  |  |  |
| 2+20 | 0.0813 | 0.57 | Q  |  |  |  |  |
| 2+25 | 0.0852 | 0.57 | Q  |  |  |  |  |
| 2+30 | 0.0892 | 0.57 | Q  |  |  |  |  |
| 2+35 | 0.0932 | 0.58 | Q  |  |  |  |  |
| 2+40 | 0.0975 | 0.63 | Q  |  |  |  |  |
| 2+45 | 0.1022 | 0.68 | Q  |  |  |  |  |
| 2+50 | 0.1070 | 0.70 | Q  |  |  |  |  |
| 2+55 | 0.1118 | 0.71 | Q  |  |  |  |  |
| 3+ 0 | 0.1167 | 0.71 | Q  |  |  |  |  |
| 3+ 5 | 0.1217 | 0.72 | Q  |  |  |  |  |
| 3+10 | 0.1266 | 0.72 | Q  |  |  |  |  |
| 3+15 | 0.1315 | 0.72 | Q  |  |  |  |  |
| 3+20 | 0.1365 | 0.72 | Q  |  |  |  |  |
| 3+25 | 0.1414 | 0.72 | Q  |  |  |  |  |
| 3+30 | 0.1464 | 0.72 | Q  |  |  |  |  |
| 3+35 | 0.1513 | 0.72 | Q  |  |  |  |  |
| 3+40 | 0.1563 | 0.72 | Q  |  |  |  |  |
| 3+45 | 0.1612 | 0.72 | Q  |  |  |  |  |
| 3+50 | 0.1662 | 0.73 | Q  |  |  |  |  |
| 3+55 | 0.1716 | 0.77 | VQ |  |  |  |  |
| 4+ 0 | 0.1772 | 0.82 | VQ |  |  |  |  |
| 4+ 5 | 0.1830 | 0.84 | VQ |  |  |  |  |
| 4+10 | 0.1888 | 0.85 | VQ |  |  |  |  |
| 4+15 | 0.1947 | 0.86 | VQ |  |  |  |  |
| 4+20 | 0.2007 | 0.87 | VQ |  |  |  |  |
| 4+25 | 0.2070 | 0.91 | VQ |  |  |  |  |
| 4+30 | 0.2136 | 0.96 | VQ |  |  |  |  |
| 4+35 | 0.2204 | 0.98 | VQ |  |  |  |  |
| 4+40 | 0.2272 | 0.99 | VQ |  |  |  |  |
| 4+45 | 0.2341 | 1.00 | VQ |  |  |  |  |
| 4+50 | 0.2411 | 1.01 | VQ |  |  |  |  |
| 4+55 | 0.2483 | 1.06 | VQ |  |  |  |  |
| 5+ 0 | 0.2560 | 1.11 | VQ |  |  |  |  |
| 5+ 5 | 0.2636 | 1.11 | VQ |  |  |  |  |
| 5+10 | 0.2707 | 1.03 | VQ |  |  |  |  |
| 5+15 | 0.2772 | 0.94 | VQ |  |  |  |  |
| 5+20 | 0.2835 | 0.91 | VQ |  |  |  |  |
| 5+25 | 0.2899 | 0.94 | VQ |  |  |  |  |
| 5+30 | 0.2967 | 0.98 | VQ |  |  |  |  |
| 5+35 | 0.3035 | 1.00 | IQ |  |  |  |  |
| 5+40 | 0.3108 | 1.05 | IQ |  |  |  |  |
| 5+45 | 0.3184 | 1.10 | IQ |  |  |  |  |
| 5+50 | 0.3261 | 1.12 | IQ |  |  |  |  |
| 5+55 | 0.3339 | 1.14 | IQ |  |  |  |  |
| 6+ 0 | 0.3418 | 1.14 | IQ |  |  |  |  |
| 6+ 5 | 0.3497 | 1.15 | IQ |  |  |  |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|       |        |       |     |  |  |  |  |  |
|-------|--------|-------|-----|--|--|--|--|--|
| 6+10  | 0.3580 | 1.20  | Q   |  |  |  |  |  |
| 6+15  | 0.3666 | 1.25  | Q   |  |  |  |  |  |
| 6+20  | 0.3754 | 1.27  | Q   |  |  |  |  |  |
| 6+25  | 0.3842 | 1.28  | Q   |  |  |  |  |  |
| 6+30  | 0.3931 | 1.29  | Q   |  |  |  |  |  |
| 6+35  | 0.4022 | 1.33  | Q   |  |  |  |  |  |
| 6+40  | 0.4128 | 1.54  | VQ  |  |  |  |  |  |
| 6+45  | 0.4251 | 1.79  | VQ  |  |  |  |  |  |
| 6+50  | 0.4382 | 1.90  | VQ  |  |  |  |  |  |
| 6+55  | 0.4519 | 1.98  | VQ  |  |  |  |  |  |
| 7+ 0  | 0.4659 | 2.04  | VQ  |  |  |  |  |  |
| 7+ 5  | 0.4804 | 2.10  | VQ  |  |  |  |  |  |
| 7+10  | 0.4951 | 2.14  | VQ  |  |  |  |  |  |
| 7+15  | 0.5101 | 2.18  | VQ  |  |  |  |  |  |
| 7+20  | 0.5257 | 2.27  | V Q |  |  |  |  |  |
| 7+25  | 0.5439 | 2.63  | V Q |  |  |  |  |  |
| 7+30  | 0.5647 | 3.02  | V Q |  |  |  |  |  |
| 7+35  | 0.5870 | 3.24  | V Q |  |  |  |  |  |
| 7+40  | 0.6124 | 3.68  | V Q |  |  |  |  |  |
| 7+45  | 0.6406 | 4.11  | V Q |  |  |  |  |  |
| 7+50  | 0.6706 | 4.35  | V Q |  |  |  |  |  |
| 7+55  | 0.7037 | 4.79  | V Q |  |  |  |  |  |
| 8+ 0  | 0.7397 | 5.23  | V Q |  |  |  |  |  |
| 8+ 5  | 0.7779 | 5.54  | V Q |  |  |  |  |  |
| 8+10  | 0.8213 | 6.30  | V Q |  |  |  |  |  |
| 8+15  | 0.8702 | 7.10  | V Q |  |  |  |  |  |
| 8+20  | 0.9212 | 7.42  | V Q |  |  |  |  |  |
| 8+25  | 0.9737 | 7.61  | V Q |  |  |  |  |  |
| 8+30  | 1.0270 | 7.75  | V Q |  |  |  |  |  |
| 8+35  | 1.0814 | 7.89  | V Q |  |  |  |  |  |
| 8+40  | 1.1384 | 8.27  | V Q |  |  |  |  |  |
| 8+45  | 1.1981 | 8.67  | V Q |  |  |  |  |  |
| 8+50  | 1.2595 | 8.90  | V Q |  |  |  |  |  |
| 8+55  | 1.3238 | 9.34  | V Q |  |  |  |  |  |
| 9+ 0  | 1.3911 | 9.78  | V Q |  |  |  |  |  |
| 9+ 5  | 1.4605 | 10.08 | V Q |  |  |  |  |  |
| 9+10  | 1.5351 | 10.84 | V Q |  |  |  |  |  |
| 9+15  | 1.6152 | 11.62 | V Q |  |  |  |  |  |
| 9+20  | 1.6978 | 12.00 | V Q |  |  |  |  |  |
| 9+25  | 1.7840 | 12.52 | V Q |  |  |  |  |  |
| 9+30  | 1.8736 | 13.00 | V Q |  |  |  |  |  |
| 9+35  | 1.9650 | 13.27 | V Q |  |  |  |  |  |
| 9+40  | 2.0595 | 13.73 | V Q |  |  |  |  |  |
| 9+45  | 2.1571 | 14.17 | V Q |  |  |  |  |  |
| 9+50  | 2.2565 | 14.42 | V Q |  |  |  |  |  |
| 9+55  | 2.3589 | 14.87 | V Q |  |  |  |  |  |
| 10+ 0 | 2.4643 | 15.31 | V Q |  |  |  |  |  |
| 10+ 5 | 2.5683 | 15.10 | V Q |  |  |  |  |  |
| 10+10 | 2.6577 | 12.98 | V Q |  |  |  |  |  |
| 10+15 | 2.7307 | 10.60 | V Q |  |  |  |  |  |
| 10+20 | 2.7980 | 9.77  | V Q |  |  |  |  |  |
| 10+25 | 2.8620 | 9.30  | V Q |  |  |  |  |  |
| 10+30 | 2.9242 | 9.02  | V Q |  |  |  |  |  |
| 10+35 | 2.9873 | 9.17  | V Q |  |  |  |  |  |
| 10+40 | 3.0613 | 10.74 | V Q |  |  |  |  |  |
| 10+45 | 3.1473 | 12.49 | V Q |  |  |  |  |  |
| 10+50 | 3.2377 | 13.13 | V Q |  |  |  |  |  |
| 10+55 | 3.3308 | 13.51 | V Q |  |  |  |  |  |
| 11+ 0 | 3.4255 | 13.75 | V Q |  |  |  |  |  |
| 11+ 5 | 3.5209 | 13.85 | V Q |  |  |  |  |  |
| 11+10 | 3.6146 | 13.61 | V Q |  |  |  |  |  |
| 11+15 | 3.7064 | 13.32 | V Q |  |  |  |  |  |
| 11+20 | 3.7976 | 13.25 | V Q |  |  |  |  |  |
| 11+25 | 3.8887 | 13.22 | V Q |  |  |  |  |  |
| 11+30 | 3.9798 | 13.22 | V Q |  |  |  |  |  |
| 11+35 | 4.0701 | 13.11 | V Q |  |  |  |  |  |
| 11+40 | 4.1561 | 12.49 | V Q |  |  |  |  |  |
| 11+45 | 4.2375 | 11.82 | VQ  |  |  |  |  |  |
| 11+50 | 4.3177 | 11.64 | VQ  |  |  |  |  |  |
| 11+55 | 4.3993 | 11.84 | VQ  |  |  |  |  |  |
| 12+ 0 | 4.4828 | 12.13 | VQ  |  |  |  |  |  |

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

[illegible]

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|       |         |      |   |  |  |  |   |
|-------|---------|------|---|--|--|--|---|
| 18+ 0 | 11.7026 | 0.65 | Q |  |  |  | V |
| 18+ 5 | 11.7069 | 0.62 | Q |  |  |  | V |
| 18+10 | 11.7110 | 0.60 | Q |  |  |  | V |
| 18+15 | 11.7151 | 0.59 | Q |  |  |  | V |
| 18+20 | 11.7191 | 0.58 | Q |  |  |  | V |
| 18+25 | 11.7231 | 0.58 | Q |  |  |  | V |
| 18+30 | 11.7270 | 0.58 | Q |  |  |  | V |
| 18+35 | 11.7309 | 0.57 | Q |  |  |  | V |
| 18+40 | 11.7345 | 0.52 | Q |  |  |  | V |
| 18+45 | 11.7378 | 0.47 | Q |  |  |  | V |
| 18+50 | 11.7409 | 0.45 | Q |  |  |  | V |
| 18+55 | 11.7436 | 0.39 | Q |  |  |  | V |
| 19+ 0 | 11.7459 | 0.34 | Q |  |  |  | V |
| 19+ 5 | 11.7481 | 0.32 | Q |  |  |  | V |
| 19+10 | 11.7506 | 0.36 | Q |  |  |  | V |
| 19+15 | 11.7533 | 0.40 | Q |  |  |  | V |
| 19+20 | 11.7562 | 0.42 | Q |  |  |  | V |
| 19+25 | 11.7595 | 0.47 | Q |  |  |  | V |
| 19+30 | 11.7631 | 0.53 | Q |  |  |  | V |
| 19+35 | 11.7668 | 0.54 | Q |  |  |  | V |
| 19+40 | 11.7703 | 0.51 | Q |  |  |  | V |
| 19+45 | 11.7735 | 0.46 | Q |  |  |  | V |
| 19+50 | 11.7766 | 0.44 | Q |  |  |  | V |
| 19+55 | 11.7792 | 0.39 | Q |  |  |  | V |
| 20+ 0 | 11.7816 | 0.33 | Q |  |  |  | V |
| 20+ 5 | 11.7838 | 0.32 | Q |  |  |  | V |
| 20+10 | 11.7862 | 0.36 | Q |  |  |  | V |
| 20+15 | 11.7890 | 0.40 | Q |  |  |  | V |
| 20+20 | 11.7918 | 0.41 | Q |  |  |  | V |
| 20+25 | 11.7947 | 0.42 | Q |  |  |  | V |
| 20+30 | 11.7976 | 0.43 | Q |  |  |  | V |
| 20+35 | 11.8006 | 0.43 | Q |  |  |  | V |
| 20+40 | 11.8035 | 0.43 | Q |  |  |  | V |
| 20+45 | 11.8065 | 0.43 | Q |  |  |  | V |
| 20+50 | 11.8094 | 0.42 | Q |  |  |  | V |
| 20+55 | 11.8120 | 0.38 | Q |  |  |  | V |
| 21+ 0 | 11.8143 | 0.33 | Q |  |  |  | V |
| 21+ 5 | 11.8165 | 0.32 | Q |  |  |  | V |
| 21+10 | 11.8189 | 0.35 | Q |  |  |  | V |
| 21+15 | 11.8216 | 0.40 | Q |  |  |  | V |
| 21+20 | 11.8244 | 0.40 | Q |  |  |  | V |
| 21+25 | 11.8270 | 0.37 | Q |  |  |  | V |
| 21+30 | 11.8292 | 0.32 | Q |  |  |  | V |
| 21+35 | 11.8314 | 0.32 | Q |  |  |  | V |
| 21+40 | 11.8338 | 0.35 | Q |  |  |  | V |
| 21+45 | 11.8365 | 0.40 | Q |  |  |  | V |
| 21+50 | 11.8393 | 0.40 | Q |  |  |  | V |
| 21+55 | 11.8418 | 0.37 | Q |  |  |  | V |
| 22+ 0 | 11.8440 | 0.32 | Q |  |  |  | V |
| 22+ 5 | 11.8462 | 0.32 | Q |  |  |  | V |
| 22+10 | 11.8486 | 0.35 | Q |  |  |  | V |
| 22+15 | 11.8514 | 0.40 | Q |  |  |  | V |
| 22+20 | 11.8541 | 0.40 | Q |  |  |  | V |
| 22+25 | 11.8567 | 0.37 | Q |  |  |  | V |
| 22+30 | 11.8589 | 0.32 | Q |  |  |  | V |
| 22+35 | 11.8610 | 0.31 | Q |  |  |  | V |
| 22+40 | 11.8631 | 0.30 | Q |  |  |  | V |
| 22+45 | 11.8651 | 0.29 | Q |  |  |  | V |
| 22+50 | 11.8671 | 0.29 | Q |  |  |  | V |
| 22+55 | 11.8691 | 0.29 | Q |  |  |  | V |
| 23+ 0 | 11.8711 | 0.29 | Q |  |  |  | V |
| 23+ 5 | 11.8731 | 0.29 | Q |  |  |  | V |
| 23+10 | 11.8750 | 0.29 | Q |  |  |  | V |
| 23+15 | 11.8770 | 0.29 | Q |  |  |  | V |
| 23+20 | 11.8790 | 0.29 | Q |  |  |  | V |
| 23+25 | 11.8810 | 0.29 | Q |  |  |  | V |
| 23+30 | 11.8830 | 0.29 | Q |  |  |  | V |
| 23+35 | 11.8849 | 0.29 | Q |  |  |  | V |
| 23+40 | 11.8869 | 0.29 | Q |  |  |  | V |
| 23+45 | 11.8889 | 0.29 | Q |  |  |  | V |
| 23+50 | 11.8909 | 0.29 | Q |  |  |  | V |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|       |         |      |   |  |  |  |   |
|-------|---------|------|---|--|--|--|---|
| 23+55 | 11.8929 | 0.29 | Q |  |  |  | V |
| 24+ 0 | 11.8948 | 0.29 | Q |  |  |  | V |
| 24+ 5 | 11.8967 | 0.27 | Q |  |  |  | V |
| 24+10 | 11.8980 | 0.18 | Q |  |  |  | V |
| 24+15 | 11.8985 | 0.08 | Q |  |  |  | V |
| 24+20 | 11.8989 | 0.05 | Q |  |  |  | V |
| 24+25 | 11.8991 | 0.03 | Q |  |  |  | V |
| 24+30 | 11.8992 | 0.01 | Q |  |  |  | V |
| 24+35 | 11.8992 | 0.01 | Q |  |  |  | V |
| 24+40 | 11.8992 | 0.00 | Q |  |  |  | V |
| 24+45 | 11.8993 | 0.00 | Q |  |  |  | V |
| 24+50 | 11.8993 | 0.00 | Q |  |  |  | V |
| 24+55 | 11.8993 | 0.00 | Q |  |  |  | V |

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Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

| <b>Soil Low Loss Rate Worksheet</b>         |              |                        |                            |                                   |                                      |                                 |
|---------------------------------------------|--------------|------------------------|----------------------------|-----------------------------------|--------------------------------------|---------------------------------|
| <b>Drainage Area A (existing) - 51.4 Ac</b> |              |                        |                            |                                   |                                      |                                 |
| [1]                                         | [2]          | [3]                    | [4]                        | [5]                               | [6]                                  | [7]                             |
| Subarea                                     | Area in (Ac) | Land Use (Plate D-5.6) | % Impervious (Plate D-5.6) | Soil Low Loss Rate 0.9-(0.8)* [4] | Decimal portion of Area [2] / SUM[2] | Average Low Loss Rate [5] * [6] |
|                                             | 48.4         | Natural                | 0                          | 0.90                              | 0.94                                 | 0.85                            |
|                                             |              | Res 1 Ac               | 20                         | 0.74                              | 0.00                                 | 0.00                            |
|                                             |              | Res 1/2 Ac             | 40                         | 0.58                              | 0.00                                 | 0.00                            |
|                                             |              | Res 1/4 Ac             | 50                         | 0.50                              | 0.00                                 | 0.00                            |
|                                             |              | Res < 1/4 Ac           | 65                         | 0.38                              | 0.00                                 | 0.00                            |
|                                             |              | Apartment              | 80                         | 0.26                              | 0.00                                 | 0.00                            |
|                                             |              | Mobil Home             | 75                         | 0.30                              | 0.00                                 | 0.00                            |
|                                             | 3            | Streets                | 75                         | 0.30                              | 0.06                                 | 0.02                            |
|                                             |              | Commercial             | 90                         | 0.18                              | 0.00                                 | 0.00                            |
| Sum =                                       | 51.4         |                        |                            |                                   | 1.00                                 | <b>0.86</b>                     |

| <b>Runoff Index (RI) Worksheet</b>          |              |            |              |                        |          |                                      |                            |
|---------------------------------------------|--------------|------------|--------------|------------------------|----------|--------------------------------------|----------------------------|
| <b>Drainage Area A (existing) - 51.4 Ac</b> |              |            |              |                        |          |                                      |                            |
| [1]                                         | [2]          | [3]        | [4]          | [5]                    | [6]      | [7]                                  | [8]                        |
| Subarea                                     | Area in (Ac) | Soil Group | Cover Type   | RI Number (Plate E6-1) | Land Use | Decimal portion of Area [2] / SUM[2] | Average RI Value [5] * [7] |
| Natural                                     |              | A          | grass (poor) | 67                     | Natural  | 0.00                                 | 0.0                        |
|                                             |              | B          | grass (poor) | 78                     | Natural  | 0.00                                 | 0.0                        |
|                                             | 48.4         | C          | grass (poor) | 86                     | Natural  | 1.00                                 | 86.0                       |
|                                             |              | D          | grass (poor) | 89                     | Natural  | 0.00                                 | 0.0                        |
| Sum =                                       | <b>48.4</b>  |            |              |                        |          | 1.00                                 | <b>86.0</b>                |
| Street                                      |              | B          | Landscape    | 56                     | Street   | 0.00                                 | 0.0                        |
|                                             | 3            | C          | Landscape    | 69                     | Street   | 1.00                                 | 69.0                       |
|                                             |              | D          | Landscape    | 75                     | Street   | 0.00                                 | 0.0                        |
| Sum =                                       | <b>3</b>     |            |              |                        |          | 1.00                                 | <b>69.0</b>                |

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

| <b>Manning "n" Value Worksheet</b>          |              |                        |           |                                      |                             |
|---------------------------------------------|--------------|------------------------|-----------|--------------------------------------|-----------------------------|
| <b>Drainage Area A (existing) - 51.4 Ac</b> |              |                        |           |                                      |                             |
| [1]                                         | [2]          | [3]                    | [4]       | [5]                                  | [7]                         |
| Subarea                                     | Area in (Ac) | Land Use (Plate D-5.6) | "n" Value | Decimal portion of Area [2] / SUM[2] | Average "n" Value [4] * [5] |
|                                             | 48.4         | Natural                | 0.035     | 0.94                                 | 0.033                       |
|                                             |              | Res 1 Ac               | 0.015     | 0.00                                 | 0.000                       |
|                                             |              | Res 1/2 Ac             | 0.015     | 0.00                                 | 0.000                       |
|                                             |              | Res 1/4 Ac             | 0.015     | 0.00                                 | 0.000                       |
|                                             |              | Res < 1/4 Ac           | 0.015     | 0.00                                 | 0.000                       |
|                                             |              | Apartment              | 0.015     | 0.00                                 | 0.000                       |
|                                             |              | Mobil Home             | 0.015     | 0.00                                 | 0.000                       |
|                                             | 3            | Streets                | 0.015     | 0.06                                 | 0.001                       |
|                                             |              | Commercial             | 0.015     | 0.00                                 | 0.000                       |
| Sum =                                       | <b>51.4</b>  |                        |           | 1.00                                 | <b>0.034</b>                |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

### U n i t   H y d r o g r a p h   A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1  
Study date 01/29/18 File: nrareaaex2242.out

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Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

-----  
English (in-lb) Input Units Used  
English Rainfall Data (Inches) Input Values Used

English Units used in output format

-----  
Nichols Road Project - Tract 37305  
Drainage Area A = 51.4 Ac  
Existing Condition for comparison HCOC Mitigation  
2-year 24-hour storm

-----  
Drainage Area = 51.40(Ac.) = 0.080 Sq. Mi.  
Drainage Area for Depth-Area Areal Adjustment = 51.40(Ac.) = 0.080 Sq. Mi.  
Length along longest watercourse = 3463.00(Ft.)  
Length along longest watercourse measured to centroid = 834.00(Ft.)  
Length along longest watercourse = 0.656 Mi.  
Length along longest watercourse measured to centroid = 0.158 Mi.  
Difference in elevation = 77.00(Ft.)  
Slope along watercourse = 117.4011 Ft./Mi.  
Average Manning's 'N' = 0.034  
Lag time = 0.139 Hr.  
Lag time = 8.36 Min.  
25% of lag time = 2.09 Min.  
40% of lag time = 3.35 Min.  
Unit time = 5.00 Min.  
Duration of storm = 24 Hour(s)  
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 51.40         | 2.38             | 122.33         |

100 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 51.40         | 6.35             | 326.39         |

STORM EVENT (YEAR) = 2.00  
Area Averaged 2-Year Rainfall = 2.380(In)  
Area Averaged 100-Year Rainfall = 6.350(In)

Point rain (area averaged) = 2.380(In)  
Areal adjustment factor = 99.99 %  
Adjusted average point rain = 2.380(In)

Sub-Area Data:  
Area(Ac.)                  Runoff Index      Impervious %  
48.400                      86.00              0.050

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

3.000                      69.00                      0.900  
Total Area Entered =                      51.40 (Ac.)

|      |       |             |            |                  |        |                 |
|------|-------|-------------|------------|------------------|--------|-----------------|
| RI   | RI    | Infil. Rate | Impervious | Adj. Infil. Rate | Area%  | F               |
| AMC2 | AMC-2 | (In/Hr)     | (Dec.%)    | (In/Hr)          | (Dec.) | (In/Hr)         |
| 86.0 | 86.0  | 0.176       | 0.050      | 0.168            | 0.942  | 0.158           |
| 69.0 | 69.0  | 0.373       | 0.900      | 0.071            | 0.058  | 0.004           |
|      |       |             |            |                  |        | Sum (F) = 0.162 |

Area averaged mean soil loss (F) (In/Hr) = 0.162

Minimum soil loss rate ((In/Hr)) = 0.081

(for 24 hour storm duration)

Soil loss rate (decimal) = 0.860

## U n i t   H y d r o g r a p h FOOTHILL S-Curve

### Unit Hydrograph Data

| Unit time period<br>(hrs) | Time % of lag | Distribution<br>Graph % | Unit Hydrograph<br>(CFS) |
|---------------------------|---------------|-------------------------|--------------------------|
| 1                         | 0.083         | 59.777                  | 5.560                    |
| 2                         | 0.167         | 119.554                 | 31.385                   |
| 3                         | 0.250         | 179.331                 | 34.170                   |
| 4                         | 0.333         | 239.107                 | 12.429                   |
| 5                         | 0.417         | 298.884                 | 7.179                    |
| 6                         | 0.500         | 358.661                 | 4.361                    |
| 7                         | 0.583         | 418.438                 | 2.422                    |
| 8                         | 0.667         | 478.215                 | 0.960                    |
| 9                         | 0.750         | 537.992                 | 0.566                    |
| 10                        | 0.833         | 597.769                 | 0.413                    |
| 11                        | 0.917         | 657.545                 | 0.364                    |
| 12                        | 1.000         | 717.322                 | 0.190                    |
|                           |               | Sum = 100.000           | Sum= 51.802              |

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

| Unit Time<br>(Hr.) | Pattern<br>Percent | Storm Rain<br>(In/Hr) | Loss rate(In./Hr)<br>Max   Low | Effective<br>(In/Hr) |
|--------------------|--------------------|-----------------------|--------------------------------|----------------------|
| 1                  | 0.08               | 0.019                 | ( 0.287) 0.016                 | 0.003                |
| 2                  | 0.17               | 0.019                 | ( 0.286) 0.016                 | 0.003                |
| 3                  | 0.25               | 0.019                 | ( 0.285) 0.016                 | 0.003                |
| 4                  | 0.33               | 0.029                 | ( 0.284) 0.025                 | 0.004                |
| 5                  | 0.42               | 0.029                 | ( 0.283) 0.025                 | 0.004                |
| 6                  | 0.50               | 0.029                 | ( 0.282) 0.025                 | 0.004                |
| 7                  | 0.58               | 0.029                 | ( 0.281) 0.025                 | 0.004                |
| 8                  | 0.67               | 0.029                 | ( 0.280) 0.025                 | 0.004                |
| 9                  | 0.75               | 0.029                 | ( 0.278) 0.025                 | 0.004                |
| 10                 | 0.83               | 0.038                 | ( 0.277) 0.033                 | 0.005                |
| 11                 | 0.92               | 0.038                 | ( 0.276) 0.033                 | 0.005                |
| 12                 | 1.00               | 0.038                 | ( 0.275) 0.033                 | 0.005                |
| 13                 | 1.08               | 0.029                 | ( 0.274) 0.025                 | 0.004                |
| 14                 | 1.17               | 0.029                 | ( 0.273) 0.025                 | 0.004                |
| 15                 | 1.25               | 0.029                 | ( 0.272) 0.025                 | 0.004                |
| 16                 | 1.33               | 0.029                 | ( 0.271) 0.025                 | 0.004                |
| 17                 | 1.42               | 0.029                 | ( 0.270) 0.025                 | 0.004                |
| 18                 | 1.50               | 0.029                 | ( 0.269) 0.025                 | 0.004                |
| 19                 | 1.58               | 0.029                 | ( 0.268) 0.025                 | 0.004                |
| 20                 | 1.67               | 0.029                 | ( 0.267) 0.025                 | 0.004                |
| 21                 | 1.75               | 0.029                 | ( 0.265) 0.025                 | 0.004                |
| 22                 | 1.83               | 0.038                 | ( 0.264) 0.033                 | 0.005                |
| 23                 | 1.92               | 0.038                 | ( 0.263) 0.033                 | 0.005                |
| 24                 | 2.00               | 0.038                 | ( 0.262) 0.033                 | 0.005                |
| 25                 | 2.08               | 0.038                 | ( 0.261) 0.033                 | 0.005                |
| 26                 | 2.17               | 0.038                 | ( 0.260) 0.033                 | 0.005                |
| 27                 | 2.25               | 0.038                 | ( 0.259) 0.033                 | 0.005                |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|    |      |      |       |          |       |       |
|----|------|------|-------|----------|-------|-------|
| 28 | 2.33 | 0.13 | 0.038 | ( 0.258) | 0.033 | 0.005 |
| 29 | 2.42 | 0.13 | 0.038 | ( 0.257) | 0.033 | 0.005 |
| 30 | 2.50 | 0.13 | 0.038 | ( 0.256) | 0.033 | 0.005 |
| 31 | 2.58 | 0.17 | 0.048 | ( 0.255) | 0.041 | 0.007 |
| 32 | 2.67 | 0.17 | 0.048 | ( 0.254) | 0.041 | 0.007 |
| 33 | 2.75 | 0.17 | 0.048 | ( 0.253) | 0.041 | 0.007 |
| 34 | 2.83 | 0.17 | 0.048 | ( 0.252) | 0.041 | 0.007 |
| 35 | 2.92 | 0.17 | 0.048 | ( 0.251) | 0.041 | 0.007 |
| 36 | 3.00 | 0.17 | 0.048 | ( 0.250) | 0.041 | 0.007 |
| 37 | 3.08 | 0.17 | 0.048 | ( 0.249) | 0.041 | 0.007 |
| 38 | 3.17 | 0.17 | 0.048 | ( 0.248) | 0.041 | 0.007 |
| 39 | 3.25 | 0.17 | 0.048 | ( 0.247) | 0.041 | 0.007 |
| 40 | 3.33 | 0.17 | 0.048 | ( 0.246) | 0.041 | 0.007 |
| 41 | 3.42 | 0.17 | 0.048 | ( 0.245) | 0.041 | 0.007 |
| 42 | 3.50 | 0.17 | 0.048 | ( 0.244) | 0.041 | 0.007 |
| 43 | 3.58 | 0.17 | 0.048 | ( 0.242) | 0.041 | 0.007 |
| 44 | 3.67 | 0.17 | 0.048 | ( 0.241) | 0.041 | 0.007 |
| 45 | 3.75 | 0.17 | 0.048 | ( 0.240) | 0.041 | 0.007 |
| 46 | 3.83 | 0.20 | 0.057 | ( 0.239) | 0.049 | 0.008 |
| 47 | 3.92 | 0.20 | 0.057 | ( 0.238) | 0.049 | 0.008 |
| 48 | 4.00 | 0.20 | 0.057 | ( 0.237) | 0.049 | 0.008 |
| 49 | 4.08 | 0.20 | 0.057 | ( 0.236) | 0.049 | 0.008 |
| 50 | 4.17 | 0.20 | 0.057 | ( 0.235) | 0.049 | 0.008 |
| 51 | 4.25 | 0.20 | 0.057 | ( 0.234) | 0.049 | 0.008 |
| 52 | 4.33 | 0.23 | 0.067 | ( 0.233) | 0.057 | 0.009 |
| 53 | 4.42 | 0.23 | 0.067 | ( 0.232) | 0.057 | 0.009 |
| 54 | 4.50 | 0.23 | 0.067 | ( 0.231) | 0.057 | 0.009 |
| 55 | 4.58 | 0.23 | 0.067 | ( 0.230) | 0.057 | 0.009 |
| 56 | 4.67 | 0.23 | 0.067 | ( 0.229) | 0.057 | 0.009 |
| 57 | 4.75 | 0.23 | 0.067 | ( 0.228) | 0.057 | 0.009 |
| 58 | 4.83 | 0.27 | 0.076 | ( 0.227) | 0.065 | 0.011 |
| 59 | 4.92 | 0.27 | 0.076 | ( 0.226) | 0.065 | 0.011 |
| 60 | 5.00 | 0.27 | 0.076 | ( 0.225) | 0.065 | 0.011 |
| 61 | 5.08 | 0.20 | 0.057 | ( 0.225) | 0.049 | 0.008 |
| 62 | 5.17 | 0.20 | 0.057 | ( 0.224) | 0.049 | 0.008 |
| 63 | 5.25 | 0.20 | 0.057 | ( 0.223) | 0.049 | 0.008 |
| 64 | 5.33 | 0.23 | 0.067 | ( 0.222) | 0.057 | 0.009 |
| 65 | 5.42 | 0.23 | 0.067 | ( 0.221) | 0.057 | 0.009 |
| 66 | 5.50 | 0.23 | 0.067 | ( 0.220) | 0.057 | 0.009 |
| 67 | 5.58 | 0.27 | 0.076 | ( 0.219) | 0.065 | 0.011 |
| 68 | 5.67 | 0.27 | 0.076 | ( 0.218) | 0.065 | 0.011 |
| 69 | 5.75 | 0.27 | 0.076 | ( 0.217) | 0.065 | 0.011 |
| 70 | 5.83 | 0.27 | 0.076 | ( 0.216) | 0.065 | 0.011 |
| 71 | 5.92 | 0.27 | 0.076 | ( 0.215) | 0.065 | 0.011 |
| 72 | 6.00 | 0.27 | 0.076 | ( 0.214) | 0.065 | 0.011 |
| 73 | 6.08 | 0.30 | 0.086 | ( 0.213) | 0.074 | 0.012 |
| 74 | 6.17 | 0.30 | 0.086 | ( 0.212) | 0.074 | 0.012 |
| 75 | 6.25 | 0.30 | 0.086 | ( 0.211) | 0.074 | 0.012 |
| 76 | 6.33 | 0.30 | 0.086 | ( 0.210) | 0.074 | 0.012 |
| 77 | 6.42 | 0.30 | 0.086 | ( 0.209) | 0.074 | 0.012 |
| 78 | 6.50 | 0.30 | 0.086 | ( 0.208) | 0.074 | 0.012 |
| 79 | 6.58 | 0.33 | 0.095 | ( 0.207) | 0.082 | 0.013 |
| 80 | 6.67 | 0.33 | 0.095 | ( 0.206) | 0.082 | 0.013 |
| 81 | 6.75 | 0.33 | 0.095 | ( 0.205) | 0.082 | 0.013 |
| 82 | 6.83 | 0.33 | 0.095 | ( 0.205) | 0.082 | 0.013 |
| 83 | 6.92 | 0.33 | 0.095 | ( 0.204) | 0.082 | 0.013 |
| 84 | 7.00 | 0.33 | 0.095 | ( 0.203) | 0.082 | 0.013 |
| 85 | 7.08 | 0.33 | 0.095 | ( 0.202) | 0.082 | 0.013 |
| 86 | 7.17 | 0.33 | 0.095 | ( 0.201) | 0.082 | 0.013 |
| 87 | 7.25 | 0.33 | 0.095 | ( 0.200) | 0.082 | 0.013 |
| 88 | 7.33 | 0.37 | 0.105 | ( 0.199) | 0.090 | 0.015 |
| 89 | 7.42 | 0.37 | 0.105 | ( 0.198) | 0.090 | 0.015 |
| 90 | 7.50 | 0.37 | 0.105 | ( 0.197) | 0.090 | 0.015 |
| 91 | 7.58 | 0.40 | 0.114 | ( 0.196) | 0.098 | 0.016 |
| 92 | 7.67 | 0.40 | 0.114 | ( 0.195) | 0.098 | 0.016 |
| 93 | 7.75 | 0.40 | 0.114 | ( 0.194) | 0.098 | 0.016 |
| 94 | 7.83 | 0.43 | 0.124 | ( 0.194) | 0.106 | 0.017 |
| 95 | 7.92 | 0.43 | 0.124 | ( 0.193) | 0.106 | 0.017 |
| 96 | 8.00 | 0.43 | 0.124 | ( 0.192) | 0.106 | 0.017 |
| 97 | 8.08 | 0.50 | 0.143 | ( 0.191) | 0.123 | 0.020 |
| 98 | 8.17 | 0.50 | 0.143 | ( 0.190) | 0.123 | 0.020 |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|     |       |      |       |          |          |       |
|-----|-------|------|-------|----------|----------|-------|
| 99  | 8.25  | 0.50 | 0.143 | ( 0.189) | 0.123    | 0.020 |
| 100 | 8.33  | 0.50 | 0.143 | ( 0.188) | 0.123    | 0.020 |
| 101 | 8.42  | 0.50 | 0.143 | ( 0.187) | 0.123    | 0.020 |
| 102 | 8.50  | 0.50 | 0.143 | ( 0.186) | 0.123    | 0.020 |
| 103 | 8.58  | 0.53 | 0.152 | ( 0.186) | 0.131    | 0.021 |
| 104 | 8.67  | 0.53 | 0.152 | ( 0.185) | 0.131    | 0.021 |
| 105 | 8.75  | 0.53 | 0.152 | ( 0.184) | 0.131    | 0.021 |
| 106 | 8.83  | 0.57 | 0.162 | ( 0.183) | 0.139    | 0.023 |
| 107 | 8.92  | 0.57 | 0.162 | ( 0.182) | 0.139    | 0.023 |
| 108 | 9.00  | 0.57 | 0.162 | ( 0.181) | 0.139    | 0.023 |
| 109 | 9.08  | 0.63 | 0.181 | ( 0.180) | 0.156    | 0.025 |
| 110 | 9.17  | 0.63 | 0.181 | ( 0.180) | 0.156    | 0.025 |
| 111 | 9.25  | 0.63 | 0.181 | ( 0.179) | 0.156    | 0.025 |
| 112 | 9.33  | 0.67 | 0.190 | ( 0.178) | 0.164    | 0.027 |
| 113 | 9.42  | 0.67 | 0.190 | ( 0.177) | 0.164    | 0.027 |
| 114 | 9.50  | 0.67 | 0.190 | ( 0.176) | 0.164    | 0.027 |
| 115 | 9.58  | 0.70 | 0.200 | ( 0.175) | 0.172    | 0.028 |
| 116 | 9.67  | 0.70 | 0.200 | ( 0.174) | 0.172    | 0.028 |
| 117 | 9.75  | 0.70 | 0.200 | ( 0.174) | 0.172    | 0.028 |
| 118 | 9.83  | 0.73 | 0.209 | 0.173    | ( 0.180) | 0.037 |
| 119 | 9.92  | 0.73 | 0.209 | 0.172    | ( 0.180) | 0.037 |
| 120 | 10.00 | 0.73 | 0.209 | 0.171    | ( 0.180) | 0.038 |
| 121 | 10.08 | 0.50 | 0.143 | ( 0.170) | 0.123    | 0.020 |
| 122 | 10.17 | 0.50 | 0.143 | ( 0.169) | 0.123    | 0.020 |
| 123 | 10.25 | 0.50 | 0.143 | ( 0.169) | 0.123    | 0.020 |
| 124 | 10.33 | 0.50 | 0.143 | ( 0.168) | 0.123    | 0.020 |
| 125 | 10.42 | 0.50 | 0.143 | ( 0.167) | 0.123    | 0.020 |
| 126 | 10.50 | 0.50 | 0.143 | ( 0.166) | 0.123    | 0.020 |
| 127 | 10.58 | 0.67 | 0.190 | ( 0.165) | 0.164    | 0.027 |
| 128 | 10.67 | 0.67 | 0.190 | ( 0.165) | 0.164    | 0.027 |
| 129 | 10.75 | 0.67 | 0.190 | ( 0.164) | 0.164    | 0.027 |
| 130 | 10.83 | 0.67 | 0.190 | 0.163    | ( 0.164) | 0.027 |
| 131 | 10.92 | 0.67 | 0.190 | 0.162    | ( 0.164) | 0.028 |
| 132 | 11.00 | 0.67 | 0.190 | 0.161    | ( 0.164) | 0.029 |
| 133 | 11.08 | 0.63 | 0.181 | ( 0.161) | 0.156    | 0.025 |
| 134 | 11.17 | 0.63 | 0.181 | ( 0.160) | 0.156    | 0.025 |
| 135 | 11.25 | 0.63 | 0.181 | ( 0.159) | 0.156    | 0.025 |
| 136 | 11.33 | 0.63 | 0.181 | ( 0.158) | 0.156    | 0.025 |
| 137 | 11.42 | 0.63 | 0.181 | ( 0.157) | 0.156    | 0.025 |
| 138 | 11.50 | 0.63 | 0.181 | ( 0.157) | 0.156    | 0.025 |
| 139 | 11.58 | 0.57 | 0.162 | ( 0.156) | 0.139    | 0.023 |
| 140 | 11.67 | 0.57 | 0.162 | ( 0.155) | 0.139    | 0.023 |
| 141 | 11.75 | 0.57 | 0.162 | ( 0.154) | 0.139    | 0.023 |
| 142 | 11.83 | 0.60 | 0.171 | ( 0.154) | 0.147    | 0.024 |
| 143 | 11.92 | 0.60 | 0.171 | ( 0.153) | 0.147    | 0.024 |
| 144 | 12.00 | 0.60 | 0.171 | ( 0.152) | 0.147    | 0.024 |
| 145 | 12.08 | 0.83 | 0.238 | 0.151    | ( 0.205) | 0.087 |
| 146 | 12.17 | 0.83 | 0.238 | 0.151    | ( 0.205) | 0.087 |
| 147 | 12.25 | 0.83 | 0.238 | 0.150    | ( 0.205) | 0.088 |
| 148 | 12.33 | 0.87 | 0.247 | 0.149    | ( 0.213) | 0.098 |
| 149 | 12.42 | 0.87 | 0.247 | 0.148    | ( 0.213) | 0.099 |
| 150 | 12.50 | 0.87 | 0.247 | 0.148    | ( 0.213) | 0.100 |
| 151 | 12.58 | 0.93 | 0.267 | 0.147    | ( 0.229) | 0.120 |
| 152 | 12.67 | 0.93 | 0.267 | 0.146    | ( 0.229) | 0.121 |
| 153 | 12.75 | 0.93 | 0.267 | 0.145    | ( 0.229) | 0.121 |
| 154 | 12.83 | 0.97 | 0.276 | 0.145    | ( 0.237) | 0.131 |
| 155 | 12.92 | 0.97 | 0.276 | 0.144    | ( 0.237) | 0.132 |
| 156 | 13.00 | 0.97 | 0.276 | 0.143    | ( 0.237) | 0.133 |
| 157 | 13.08 | 1.13 | 0.324 | 0.142    | ( 0.278) | 0.181 |
| 158 | 13.17 | 1.13 | 0.324 | 0.142    | ( 0.278) | 0.182 |
| 159 | 13.25 | 1.13 | 0.324 | 0.141    | ( 0.278) | 0.183 |
| 160 | 13.33 | 1.13 | 0.324 | 0.140    | ( 0.278) | 0.183 |
| 161 | 13.42 | 1.13 | 0.324 | 0.140    | ( 0.278) | 0.184 |
| 162 | 13.50 | 1.13 | 0.324 | 0.139    | ( 0.278) | 0.185 |
| 163 | 13.58 | 0.77 | 0.219 | 0.138    | ( 0.188) | 0.081 |
| 164 | 13.67 | 0.77 | 0.219 | 0.137    | ( 0.188) | 0.082 |
| 165 | 13.75 | 0.77 | 0.219 | 0.137    | ( 0.188) | 0.082 |
| 166 | 13.83 | 0.77 | 0.219 | 0.136    | ( 0.188) | 0.083 |
| 167 | 13.92 | 0.77 | 0.219 | 0.135    | ( 0.188) | 0.084 |
| 168 | 14.00 | 0.77 | 0.219 | 0.135    | ( 0.188) | 0.084 |
| 169 | 14.08 | 0.90 | 0.257 | 0.134    | ( 0.221) | 0.123 |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|     |       |      |       |          |          |       |
|-----|-------|------|-------|----------|----------|-------|
| 170 | 14.17 | 0.90 | 0.257 | 0.133    | ( 0.221) | 0.124 |
| 171 | 14.25 | 0.90 | 0.257 | 0.133    | ( 0.221) | 0.124 |
| 172 | 14.33 | 0.87 | 0.247 | 0.132    | ( 0.213) | 0.116 |
| 173 | 14.42 | 0.87 | 0.247 | 0.131    | ( 0.213) | 0.116 |
| 174 | 14.50 | 0.87 | 0.247 | 0.131    | ( 0.213) | 0.117 |
| 175 | 14.58 | 0.87 | 0.247 | 0.130    | ( 0.213) | 0.118 |
| 176 | 14.67 | 0.87 | 0.247 | 0.129    | ( 0.213) | 0.118 |
| 177 | 14.75 | 0.87 | 0.247 | 0.129    | ( 0.213) | 0.119 |
| 178 | 14.83 | 0.83 | 0.238 | 0.128    | ( 0.205) | 0.110 |
| 179 | 14.92 | 0.83 | 0.238 | 0.127    | ( 0.205) | 0.111 |
| 180 | 15.00 | 0.83 | 0.238 | 0.127    | ( 0.205) | 0.111 |
| 181 | 15.08 | 0.80 | 0.228 | 0.126    | ( 0.196) | 0.103 |
| 182 | 15.17 | 0.80 | 0.228 | 0.125    | ( 0.196) | 0.103 |
| 183 | 15.25 | 0.80 | 0.228 | 0.125    | ( 0.196) | 0.104 |
| 184 | 15.33 | 0.77 | 0.219 | 0.124    | ( 0.188) | 0.095 |
| 185 | 15.42 | 0.77 | 0.219 | 0.123    | ( 0.188) | 0.096 |
| 186 | 15.50 | 0.77 | 0.219 | 0.123    | ( 0.188) | 0.096 |
| 187 | 15.58 | 0.63 | 0.181 | 0.122    | ( 0.156) | 0.059 |
| 188 | 15.67 | 0.63 | 0.181 | 0.121    | ( 0.156) | 0.059 |
| 189 | 15.75 | 0.63 | 0.181 | 0.121    | ( 0.156) | 0.060 |
| 190 | 15.83 | 0.63 | 0.181 | 0.120    | ( 0.156) | 0.061 |
| 191 | 15.92 | 0.63 | 0.181 | 0.120    | ( 0.156) | 0.061 |
| 192 | 16.00 | 0.63 | 0.181 | 0.119    | ( 0.156) | 0.062 |
| 193 | 16.08 | 0.13 | 0.038 | ( 0.118) | 0.033    | 0.005 |
| 194 | 16.17 | 0.13 | 0.038 | ( 0.118) | 0.033    | 0.005 |
| 195 | 16.25 | 0.13 | 0.038 | ( 0.117) | 0.033    | 0.005 |
| 196 | 16.33 | 0.13 | 0.038 | ( 0.117) | 0.033    | 0.005 |
| 197 | 16.42 | 0.13 | 0.038 | ( 0.116) | 0.033    | 0.005 |
| 198 | 16.50 | 0.13 | 0.038 | ( 0.115) | 0.033    | 0.005 |
| 199 | 16.58 | 0.10 | 0.029 | ( 0.115) | 0.025    | 0.004 |
| 200 | 16.67 | 0.10 | 0.029 | ( 0.114) | 0.025    | 0.004 |
| 201 | 16.75 | 0.10 | 0.029 | ( 0.114) | 0.025    | 0.004 |
| 202 | 16.83 | 0.10 | 0.029 | ( 0.113) | 0.025    | 0.004 |
| 203 | 16.92 | 0.10 | 0.029 | ( 0.113) | 0.025    | 0.004 |
| 204 | 17.00 | 0.10 | 0.029 | ( 0.112) | 0.025    | 0.004 |
| 205 | 17.08 | 0.17 | 0.048 | ( 0.111) | 0.041    | 0.007 |
| 206 | 17.17 | 0.17 | 0.048 | ( 0.111) | 0.041    | 0.007 |
| 207 | 17.25 | 0.17 | 0.048 | ( 0.110) | 0.041    | 0.007 |
| 208 | 17.33 | 0.17 | 0.048 | ( 0.110) | 0.041    | 0.007 |
| 209 | 17.42 | 0.17 | 0.048 | ( 0.109) | 0.041    | 0.007 |
| 210 | 17.50 | 0.17 | 0.048 | ( 0.109) | 0.041    | 0.007 |
| 211 | 17.58 | 0.17 | 0.048 | ( 0.108) | 0.041    | 0.007 |
| 212 | 17.67 | 0.17 | 0.048 | ( 0.108) | 0.041    | 0.007 |
| 213 | 17.75 | 0.17 | 0.048 | ( 0.107) | 0.041    | 0.007 |
| 214 | 17.83 | 0.13 | 0.038 | ( 0.106) | 0.033    | 0.005 |
| 215 | 17.92 | 0.13 | 0.038 | ( 0.106) | 0.033    | 0.005 |
| 216 | 18.00 | 0.13 | 0.038 | ( 0.105) | 0.033    | 0.005 |
| 217 | 18.08 | 0.13 | 0.038 | ( 0.105) | 0.033    | 0.005 |
| 218 | 18.17 | 0.13 | 0.038 | ( 0.104) | 0.033    | 0.005 |
| 219 | 18.25 | 0.13 | 0.038 | ( 0.104) | 0.033    | 0.005 |
| 220 | 18.33 | 0.13 | 0.038 | ( 0.103) | 0.033    | 0.005 |
| 221 | 18.42 | 0.13 | 0.038 | ( 0.103) | 0.033    | 0.005 |
| 222 | 18.50 | 0.13 | 0.038 | ( 0.102) | 0.033    | 0.005 |
| 223 | 18.58 | 0.10 | 0.029 | ( 0.102) | 0.025    | 0.004 |
| 224 | 18.67 | 0.10 | 0.029 | ( 0.101) | 0.025    | 0.004 |
| 225 | 18.75 | 0.10 | 0.029 | ( 0.101) | 0.025    | 0.004 |
| 226 | 18.83 | 0.07 | 0.019 | ( 0.100) | 0.016    | 0.003 |
| 227 | 18.92 | 0.07 | 0.019 | ( 0.100) | 0.016    | 0.003 |
| 228 | 19.00 | 0.07 | 0.019 | ( 0.099) | 0.016    | 0.003 |
| 229 | 19.08 | 0.10 | 0.029 | ( 0.099) | 0.025    | 0.004 |
| 230 | 19.17 | 0.10 | 0.029 | ( 0.099) | 0.025    | 0.004 |
| 231 | 19.25 | 0.10 | 0.029 | ( 0.098) | 0.025    | 0.004 |
| 232 | 19.33 | 0.13 | 0.038 | ( 0.098) | 0.033    | 0.005 |
| 233 | 19.42 | 0.13 | 0.038 | ( 0.097) | 0.033    | 0.005 |
| 234 | 19.50 | 0.13 | 0.038 | ( 0.097) | 0.033    | 0.005 |
| 235 | 19.58 | 0.10 | 0.029 | ( 0.096) | 0.025    | 0.004 |
| 236 | 19.67 | 0.10 | 0.029 | ( 0.096) | 0.025    | 0.004 |
| 237 | 19.75 | 0.10 | 0.029 | ( 0.095) | 0.025    | 0.004 |
| 238 | 19.83 | 0.07 | 0.019 | ( 0.095) | 0.016    | 0.003 |
| 239 | 19.92 | 0.07 | 0.019 | ( 0.095) | 0.016    | 0.003 |
| 240 | 20.00 | 0.07 | 0.019 | ( 0.094) | 0.016    | 0.003 |



**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|      |        |      |     |  |  |  |  |
|------|--------|------|-----|--|--|--|--|
| 0+15 | 0.0011 | 0.10 | Q   |  |  |  |  |
| 0+20 | 0.0019 | 0.12 | Q   |  |  |  |  |
| 0+25 | 0.0029 | 0.15 | Q   |  |  |  |  |
| 0+30 | 0.0042 | 0.18 | Q   |  |  |  |  |
| 0+35 | 0.0055 | 0.19 | Q   |  |  |  |  |
| 0+40 | 0.0069 | 0.20 | Q   |  |  |  |  |
| 0+45 | 0.0083 | 0.20 | Q   |  |  |  |  |
| 0+50 | 0.0097 | 0.21 | Q   |  |  |  |  |
| 0+55 | 0.0113 | 0.23 | Q   |  |  |  |  |
| 1+ 0 | 0.0131 | 0.26 | VQ  |  |  |  |  |
| 1+ 5 | 0.0149 | 0.26 | VQ  |  |  |  |  |
| 1+10 | 0.0165 | 0.24 | Q   |  |  |  |  |
| 1+15 | 0.0181 | 0.22 | Q   |  |  |  |  |
| 1+20 | 0.0196 | 0.22 | Q   |  |  |  |  |
| 1+25 | 0.0210 | 0.21 | Q   |  |  |  |  |
| 1+30 | 0.0225 | 0.21 | Q   |  |  |  |  |
| 1+35 | 0.0239 | 0.21 | Q   |  |  |  |  |
| 1+40 | 0.0254 | 0.21 | Q   |  |  |  |  |
| 1+45 | 0.0268 | 0.21 | Q   |  |  |  |  |
| 1+50 | 0.0282 | 0.21 | Q   |  |  |  |  |
| 1+55 | 0.0298 | 0.23 | Q   |  |  |  |  |
| 2+ 0 | 0.0316 | 0.26 | VQ  |  |  |  |  |
| 2+ 5 | 0.0334 | 0.26 | VQ  |  |  |  |  |
| 2+10 | 0.0353 | 0.27 | VQ  |  |  |  |  |
| 2+15 | 0.0372 | 0.27 | VQ  |  |  |  |  |
| 2+20 | 0.0391 | 0.27 | VQ  |  |  |  |  |
| 2+25 | 0.0410 | 0.28 | VQ  |  |  |  |  |
| 2+30 | 0.0429 | 0.28 | VQ  |  |  |  |  |
| 2+35 | 0.0448 | 0.28 | VQ  |  |  |  |  |
| 2+40 | 0.0469 | 0.30 | VQ  |  |  |  |  |
| 2+45 | 0.0491 | 0.33 | VQ  |  |  |  |  |
| 2+50 | 0.0514 | 0.33 | VQ  |  |  |  |  |
| 2+55 | 0.0537 | 0.34 | VQ  |  |  |  |  |
| 3+ 0 | 0.0561 | 0.34 | VQ  |  |  |  |  |
| 3+ 5 | 0.0585 | 0.34 | VQ  |  |  |  |  |
| 3+10 | 0.0608 | 0.34 | VQ  |  |  |  |  |
| 3+15 | 0.0632 | 0.34 | VQ  |  |  |  |  |
| 3+20 | 0.0656 | 0.34 | VQ  |  |  |  |  |
| 3+25 | 0.0680 | 0.35 | VQ  |  |  |  |  |
| 3+30 | 0.0703 | 0.35 | IQ  |  |  |  |  |
| 3+35 | 0.0727 | 0.35 | IQ  |  |  |  |  |
| 3+40 | 0.0751 | 0.35 | IQ  |  |  |  |  |
| 3+45 | 0.0775 | 0.35 | IQ  |  |  |  |  |
| 3+50 | 0.0799 | 0.35 | IQ  |  |  |  |  |
| 3+55 | 0.0824 | 0.37 | IQ  |  |  |  |  |
| 4+ 0 | 0.0851 | 0.39 | IQ  |  |  |  |  |
| 4+ 5 | 0.0879 | 0.40 | IQ  |  |  |  |  |
| 4+10 | 0.0907 | 0.41 | IQ  |  |  |  |  |
| 4+15 | 0.0936 | 0.41 | IQ  |  |  |  |  |
| 4+20 | 0.0964 | 0.42 | IQ  |  |  |  |  |
| 4+25 | 0.0995 | 0.44 | IQ  |  |  |  |  |
| 4+30 | 0.1026 | 0.46 | IQ  |  |  |  |  |
| 4+35 | 0.1059 | 0.47 | IQ  |  |  |  |  |
| 4+40 | 0.1092 | 0.48 | IQ  |  |  |  |  |
| 4+45 | 0.1125 | 0.48 | IQ  |  |  |  |  |
| 4+50 | 0.1158 | 0.49 | IQ  |  |  |  |  |
| 4+55 | 0.1193 | 0.51 | IVQ |  |  |  |  |
| 5+ 0 | 0.1230 | 0.53 | IVQ |  |  |  |  |
| 5+ 5 | 0.1267 | 0.53 | IVQ |  |  |  |  |
| 5+10 | 0.1301 | 0.49 | IQ  |  |  |  |  |
| 5+15 | 0.1332 | 0.45 | IQ  |  |  |  |  |
| 5+20 | 0.1362 | 0.44 | IQ  |  |  |  |  |
| 5+25 | 0.1393 | 0.45 | IQV |  |  |  |  |
| 5+30 | 0.1425 | 0.47 | IQV |  |  |  |  |
| 5+35 | 0.1458 | 0.48 | IQV |  |  |  |  |
| 5+40 | 0.1493 | 0.50 | I Q |  |  |  |  |
| 5+45 | 0.1530 | 0.53 | I Q |  |  |  |  |
| 5+50 | 0.1567 | 0.54 | I Q |  |  |  |  |
| 5+55 | 0.1605 | 0.55 | I Q |  |  |  |  |
| 6+ 0 | 0.1642 | 0.55 | I Q |  |  |  |  |
| 6+ 5 | 0.1680 | 0.55 | I Q |  |  |  |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|       |        |      |     |  |  |  |  |
|-------|--------|------|-----|--|--|--|--|
| 6+10  | 0.1720 | 0.58 | Q   |  |  |  |  |
| 6+15  | 0.1762 | 0.60 | Q   |  |  |  |  |
| 6+20  | 0.1804 | 0.61 | Q   |  |  |  |  |
| 6+25  | 0.1846 | 0.62 | Q   |  |  |  |  |
| 6+30  | 0.1889 | 0.62 | Q   |  |  |  |  |
| 6+35  | 0.1931 | 0.62 | Q   |  |  |  |  |
| 6+40  | 0.1976 | 0.65 | Q   |  |  |  |  |
| 6+45  | 0.2022 | 0.67 | Q   |  |  |  |  |
| 6+50  | 0.2069 | 0.68 | QV  |  |  |  |  |
| 6+55  | 0.2116 | 0.68 | QV  |  |  |  |  |
| 7+ 0  | 0.2163 | 0.69 | QV  |  |  |  |  |
| 7+ 5  | 0.2211 | 0.69 | QV  |  |  |  |  |
| 7+10  | 0.2258 | 0.69 | QV  |  |  |  |  |
| 7+15  | 0.2306 | 0.69 | QV  |  |  |  |  |
| 7+20  | 0.2354 | 0.69 | QV  |  |  |  |  |
| 7+25  | 0.2403 | 0.72 | QV  |  |  |  |  |
| 7+30  | 0.2454 | 0.74 | QV  |  |  |  |  |
| 7+35  | 0.2506 | 0.75 | Q   |  |  |  |  |
| 7+40  | 0.2559 | 0.78 | Q   |  |  |  |  |
| 7+45  | 0.2615 | 0.81 | Q   |  |  |  |  |
| 7+50  | 0.2671 | 0.82 | Q   |  |  |  |  |
| 7+55  | 0.2730 | 0.85 | Q   |  |  |  |  |
| 8+ 0  | 0.2790 | 0.87 | QV  |  |  |  |  |
| 8+ 5  | 0.2851 | 0.89 | QV  |  |  |  |  |
| 8+10  | 0.2916 | 0.94 | QV  |  |  |  |  |
| 8+15  | 0.2984 | 0.99 | QV  |  |  |  |  |
| 8+20  | 0.3054 | 1.01 | Q   |  |  |  |  |
| 8+25  | 0.3124 | 1.02 | Q   |  |  |  |  |
| 8+30  | 0.3195 | 1.03 | Q   |  |  |  |  |
| 8+35  | 0.3267 | 1.04 | Q   |  |  |  |  |
| 8+40  | 0.3340 | 1.06 | Q   |  |  |  |  |
| 8+45  | 0.3414 | 1.08 | Q   |  |  |  |  |
| 8+50  | 0.3490 | 1.10 | QV  |  |  |  |  |
| 8+55  | 0.3567 | 1.12 | QV  |  |  |  |  |
| 9+ 0  | 0.3646 | 1.15 | QV  |  |  |  |  |
| 9+ 5  | 0.3727 | 1.17 | QV  |  |  |  |  |
| 9+10  | 0.3811 | 1.22 | QV  |  |  |  |  |
| 9+15  | 0.3898 | 1.27 | Q   |  |  |  |  |
| 9+20  | 0.3987 | 1.29 | Q   |  |  |  |  |
| 9+25  | 0.4078 | 1.32 | Q   |  |  |  |  |
| 9+30  | 0.4171 | 1.35 | QV  |  |  |  |  |
| 9+35  | 0.4266 | 1.37 | QV  |  |  |  |  |
| 9+40  | 0.4362 | 1.40 | QV  |  |  |  |  |
| 9+45  | 0.4460 | 1.43 | QV  |  |  |  |  |
| 9+50  | 0.4561 | 1.46 | QV  |  |  |  |  |
| 9+55  | 0.4672 | 1.61 | Q   |  |  |  |  |
| 10+ 0 | 0.4795 | 1.78 | Q   |  |  |  |  |
| 10+ 5 | 0.4920 | 1.82 | Q   |  |  |  |  |
| 10+10 | 0.5028 | 1.57 | QV  |  |  |  |  |
| 10+15 | 0.5116 | 1.28 | Q V |  |  |  |  |
| 10+20 | 0.5197 | 1.17 | Q V |  |  |  |  |
| 10+25 | 0.5274 | 1.11 | Q V |  |  |  |  |
| 10+30 | 0.5348 | 1.08 | Q V |  |  |  |  |
| 10+35 | 0.5422 | 1.08 | Q V |  |  |  |  |
| 10+40 | 0.5503 | 1.18 | Q V |  |  |  |  |
| 10+45 | 0.5592 | 1.29 | Q V |  |  |  |  |
| 10+50 | 0.5684 | 1.33 | Q V |  |  |  |  |
| 10+55 | 0.5778 | 1.37 | Q V |  |  |  |  |
| 11+ 0 | 0.5875 | 1.41 | Q V |  |  |  |  |
| 11+ 5 | 0.5974 | 1.44 | Q V |  |  |  |  |
| 11+10 | 0.6071 | 1.41 | Q V |  |  |  |  |
| 11+15 | 0.6164 | 1.35 | Q V |  |  |  |  |
| 11+20 | 0.6256 | 1.34 | Q V |  |  |  |  |
| 11+25 | 0.6347 | 1.33 | Q V |  |  |  |  |
| 11+30 | 0.6438 | 1.32 | Q V |  |  |  |  |
| 11+35 | 0.6528 | 1.31 | Q V |  |  |  |  |
| 11+40 | 0.6615 | 1.26 | Q V |  |  |  |  |
| 11+45 | 0.6699 | 1.22 | Q V |  |  |  |  |
| 11+50 | 0.6782 | 1.20 | Q V |  |  |  |  |
| 11+55 | 0.6865 | 1.21 | Q V |  |  |  |  |
| 12+ 0 | 0.6950 | 1.23 | Q V |  |  |  |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|       |        |      |  |   |    |   |  |   |  |
|-------|--------|------|--|---|----|---|--|---|--|
| 12+ 5 | 0.7047 | 1.42 |  | Q | V  |   |  |   |  |
| 12+10 | 0.7216 | 2.44 |  |   | QV |   |  |   |  |
| 12+15 | 0.7461 | 3.57 |  |   | V  |   |  |   |  |
| 12+20 | 0.7739 | 4.03 |  |   | V  | Q |  |   |  |
| 12+25 | 0.8046 | 4.45 |  |   | V  | Q |  |   |  |
| 12+30 | 0.8376 | 4.80 |  |   | V  | Q |  |   |  |
| 12+35 | 0.8722 | 5.03 |  |   | V  | Q |  |   |  |
| 12+40 | 0.9097 | 5.44 |  |   | V  | Q |  |   |  |
| 12+45 | 0.9501 | 5.86 |  |   | V  | Q |  |   |  |
| 12+50 | 0.9919 | 6.07 |  |   | V  | Q |  |   |  |
| 12+55 | 1.0356 | 6.35 |  |   | V  | Q |  |   |  |
| 13+ 0 | 1.0812 | 6.61 |  |   | V  | Q |  |   |  |
| 13+ 5 | 1.1285 | 6.87 |  |   | V  | Q |  |   |  |
| 13+10 | 1.1817 | 7.73 |  |   | V  | Q |  |   |  |
| 13+15 | 1.2412 | 8.64 |  |   | V  | Q |  | Q |  |
| 13+20 | 1.3032 | 9.00 |  |   | V  |   |  | Q |  |
| 13+25 | 1.3667 | 9.22 |  |   | V  |   |  | Q |  |
| 13+30 | 1.4313 | 9.37 |  |   | V  |   |  | Q |  |
| 13+35 | 1.4944 | 9.17 |  |   | V  |   |  | Q |  |
| 13+40 | 1.5463 | 7.53 |  |   | V  | Q |  |   |  |
| 13+45 | 1.5857 | 5.73 |  |   | QV |   |  |   |  |
| 13+50 | 1.6208 | 5.10 |  |   | Q  | V |  |   |  |
| 13+55 | 1.6536 | 4.75 |  |   | Q  | V |  |   |  |
| 14+ 0 | 1.6850 | 4.56 |  |   | Q  | V |  |   |  |
| 14+ 5 | 1.7164 | 4.57 |  |   | Q  | V |  |   |  |
| 14+10 | 1.7521 | 5.17 |  |   | Q  | V |  |   |  |
| 14+15 | 1.7924 | 5.85 |  |   | Q  | V |  |   |  |
| 14+20 | 1.8343 | 6.09 |  |   | Q  | V |  |   |  |
| 14+25 | 1.8762 | 6.09 |  |   | Q  | V |  |   |  |
| 14+30 | 1.9178 | 6.03 |  |   | Q  | V |  |   |  |
| 14+35 | 1.9594 | 6.05 |  |   | Q  | V |  |   |  |
| 14+40 | 2.0012 | 6.07 |  |   | Q  | V |  |   |  |
| 14+45 | 2.0432 | 6.09 |  |   | Q  | V |  |   |  |
| 14+50 | 2.0852 | 6.10 |  |   | Q  | V |  |   |  |
| 14+55 | 2.1264 | 5.98 |  |   | Q  | V |  |   |  |
| 15+ 0 | 2.1666 | 5.85 |  |   | Q  | V |  |   |  |
| 15+ 5 | 2.2065 | 5.79 |  |   | Q  | V |  |   |  |
| 15+10 | 2.2453 | 5.63 |  |   | Q  | V |  |   |  |
| 15+15 | 2.2830 | 5.47 |  |   | Q  | V |  |   |  |
| 15+20 | 2.3202 | 5.41 |  |   | Q  | V |  |   |  |
| 15+25 | 2.3563 | 5.24 |  |   | Q  | V |  |   |  |
| 15+30 | 2.3914 | 5.08 |  |   | Q  | V |  |   |  |
| 15+35 | 2.4253 | 4.93 |  |   | Q  | V |  |   |  |
| 15+40 | 2.4550 | 4.30 |  |   | Q  | V |  |   |  |
| 15+45 | 2.4800 | 3.64 |  |   | Q  | V |  |   |  |
| 15+50 | 2.5035 | 3.41 |  |   | Q  | V |  |   |  |
| 15+55 | 2.5262 | 3.29 |  |   | Q  | V |  |   |  |
| 16+ 0 | 2.5485 | 3.24 |  |   | Q  | V |  |   |  |
| 16+ 5 | 2.5695 | 3.05 |  |   | Q  | V |  |   |  |
| 16+10 | 2.5842 | 2.13 |  | Q |    |   |  | V |  |
| 16+15 | 2.5920 | 1.13 |  | Q |    |   |  | V |  |
| 16+20 | 2.5973 | 0.76 |  | Q |    |   |  | V |  |
| 16+25 | 2.6011 | 0.55 |  | Q |    |   |  | V |  |
| 16+30 | 2.6039 | 0.42 |  | Q |    |   |  | V |  |
| 16+35 | 2.6063 | 0.34 |  | Q |    |   |  | V |  |
| 16+40 | 2.6083 | 0.30 |  | Q |    |   |  | V |  |
| 16+45 | 2.6101 | 0.26 |  | Q |    |   |  | V |  |
| 16+50 | 2.6117 | 0.23 |  | Q |    |   |  | V |  |
| 16+55 | 2.6132 | 0.22 |  | Q |    |   |  | V |  |
| 17+ 0 | 2.6147 | 0.21 |  | Q |    |   |  | V |  |
| 17+ 5 | 2.6162 | 0.22 |  | Q |    |   |  | V |  |
| 17+10 | 2.6180 | 0.26 |  | Q |    |   |  | V |  |
| 17+15 | 2.6201 | 0.31 |  | Q |    |   |  | V |  |
| 17+20 | 2.6223 | 0.32 |  | Q |    |   |  | V |  |
| 17+25 | 2.6246 | 0.33 |  | Q |    |   |  | V |  |
| 17+30 | 2.6269 | 0.34 |  | Q |    |   |  | V |  |
| 17+35 | 2.6293 | 0.34 |  | Q |    |   |  | V |  |
| 17+40 | 2.6316 | 0.34 |  | Q |    |   |  | V |  |
| 17+45 | 2.6340 | 0.34 |  | Q |    |   |  | V |  |
| 17+50 | 2.6363 | 0.34 |  | Q |    |   |  | V |  |
| 17+55 | 2.6385 | 0.32 |  | Q |    |   |  | V |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|       |        |      |    |  |  |  |   |  |
|-------|--------|------|----|--|--|--|---|--|
| 18+ 0 | 2.6406 | 0.30 | IQ |  |  |  | V |  |
| 18+ 5 | 2.6426 | 0.29 | IQ |  |  |  | V |  |
| 18+10 | 2.6445 | 0.28 | IQ |  |  |  | V |  |
| 18+15 | 2.6464 | 0.28 | IQ |  |  |  | V |  |
| 18+20 | 2.6484 | 0.28 | IQ |  |  |  | V |  |
| 18+25 | 2.6503 | 0.28 | IQ |  |  |  | V |  |
| 18+30 | 2.6522 | 0.28 | IQ |  |  |  | V |  |
| 18+35 | 2.6540 | 0.27 | IQ |  |  |  | V |  |
| 18+40 | 2.6558 | 0.25 | IQ |  |  |  | V |  |
| 18+45 | 2.6573 | 0.23 | Q  |  |  |  | V |  |
| 18+50 | 2.6588 | 0.21 | Q  |  |  |  | V |  |
| 18+55 | 2.6601 | 0.19 | Q  |  |  |  | V |  |
| 19+ 0 | 2.6612 | 0.16 | Q  |  |  |  | V |  |
| 19+ 5 | 2.6623 | 0.16 | Q  |  |  |  | V |  |
| 19+10 | 2.6635 | 0.17 | Q  |  |  |  | V |  |
| 19+15 | 2.6648 | 0.19 | Q  |  |  |  | V |  |
| 19+20 | 2.6662 | 0.20 | Q  |  |  |  | V |  |
| 19+25 | 2.6677 | 0.23 | Q  |  |  |  | V |  |
| 19+30 | 2.6695 | 0.25 | IQ |  |  |  | V |  |
| 19+35 | 2.6713 | 0.26 | IQ |  |  |  | V |  |
| 19+40 | 2.6730 | 0.24 | Q  |  |  |  | V |  |
| 19+45 | 2.6745 | 0.22 | Q  |  |  |  | V |  |
| 19+50 | 2.6760 | 0.21 | Q  |  |  |  | V |  |
| 19+55 | 2.6772 | 0.19 | Q  |  |  |  | V |  |
| 20+ 0 | 2.6784 | 0.16 | Q  |  |  |  | V |  |
| 20+ 5 | 2.6794 | 0.15 | Q  |  |  |  | V |  |
| 20+10 | 2.6806 | 0.17 | Q  |  |  |  | V |  |
| 20+15 | 2.6819 | 0.19 | Q  |  |  |  | V |  |
| 20+20 | 2.6833 | 0.20 | Q  |  |  |  | V |  |
| 20+25 | 2.6847 | 0.20 | Q  |  |  |  | V |  |
| 20+30 | 2.6861 | 0.20 | Q  |  |  |  | V |  |
| 20+35 | 2.6875 | 0.21 | Q  |  |  |  | V |  |
| 20+40 | 2.6889 | 0.21 | Q  |  |  |  | V |  |
| 20+45 | 2.6903 | 0.21 | Q  |  |  |  | V |  |
| 20+50 | 2.6917 | 0.20 | Q  |  |  |  | V |  |
| 20+55 | 2.6930 | 0.18 | Q  |  |  |  | V |  |
| 21+ 0 | 2.6941 | 0.16 | Q  |  |  |  | V |  |
| 21+ 5 | 2.6951 | 0.15 | Q  |  |  |  | V |  |
| 21+10 | 2.6963 | 0.17 | Q  |  |  |  | V |  |
| 21+15 | 2.6976 | 0.19 | Q  |  |  |  | V |  |
| 21+20 | 2.6990 | 0.19 | Q  |  |  |  | V |  |
| 21+25 | 2.7002 | 0.18 | Q  |  |  |  | V |  |
| 21+30 | 2.7012 | 0.16 | Q  |  |  |  | V |  |
| 21+35 | 2.7023 | 0.15 | Q  |  |  |  | V |  |
| 21+40 | 2.7034 | 0.17 | Q  |  |  |  | V |  |
| 21+45 | 2.7048 | 0.19 | Q  |  |  |  | V |  |
| 21+50 | 2.7061 | 0.19 | Q  |  |  |  | V |  |
| 21+55 | 2.7073 | 0.18 | Q  |  |  |  | V |  |
| 22+ 0 | 2.7084 | 0.16 | Q  |  |  |  | V |  |
| 22+ 5 | 2.7094 | 0.15 | Q  |  |  |  | V |  |
| 22+10 | 2.7106 | 0.17 | Q  |  |  |  | V |  |
| 22+15 | 2.7119 | 0.19 | Q  |  |  |  | V |  |
| 22+20 | 2.7132 | 0.19 | Q  |  |  |  | V |  |
| 22+25 | 2.7144 | 0.18 | Q  |  |  |  | V |  |
| 22+30 | 2.7155 | 0.16 | Q  |  |  |  | V |  |
| 22+35 | 2.7165 | 0.15 | Q  |  |  |  | V |  |
| 22+40 | 2.7175 | 0.14 | Q  |  |  |  | V |  |
| 22+45 | 2.7185 | 0.14 | Q  |  |  |  | V |  |
| 22+50 | 2.7194 | 0.14 | Q  |  |  |  | V |  |
| 22+55 | 2.7204 | 0.14 | Q  |  |  |  | V |  |
| 23+ 0 | 2.7214 | 0.14 | Q  |  |  |  | V |  |
| 23+ 5 | 2.7223 | 0.14 | Q  |  |  |  | V |  |
| 23+10 | 2.7233 | 0.14 | Q  |  |  |  | V |  |
| 23+15 | 2.7242 | 0.14 | Q  |  |  |  | V |  |
| 23+20 | 2.7252 | 0.14 | Q  |  |  |  | V |  |
| 23+25 | 2.7261 | 0.14 | Q  |  |  |  | V |  |
| 23+30 | 2.7271 | 0.14 | Q  |  |  |  | V |  |
| 23+35 | 2.7280 | 0.14 | Q  |  |  |  | V |  |
| 23+40 | 2.7290 | 0.14 | Q  |  |  |  | V |  |
| 23+45 | 2.7299 | 0.14 | Q  |  |  |  | V |  |
| 23+50 | 2.7309 | 0.14 | Q  |  |  |  | V |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|       |        |      |   |  |  |  |   |
|-------|--------|------|---|--|--|--|---|
| 23+55 | 2.7318 | 0.14 | Q |  |  |  | V |
| 24+ 0 | 2.7328 | 0.14 | Q |  |  |  | V |
| 24+ 5 | 2.7337 | 0.13 | Q |  |  |  | V |
| 24+10 | 2.7343 | 0.09 | Q |  |  |  | V |
| 24+15 | 2.7346 | 0.04 | Q |  |  |  | V |
| 24+20 | 2.7347 | 0.02 | Q |  |  |  | V |
| 24+25 | 2.7348 | 0.01 | Q |  |  |  | V |
| 24+30 | 2.7348 | 0.01 | Q |  |  |  | V |
| 24+35 | 2.7349 | 0.00 | Q |  |  |  | V |
| 24+40 | 2.7349 | 0.00 | Q |  |  |  | V |
| 24+45 | 2.7349 | 0.00 | Q |  |  |  | V |
| 24+50 | 2.7349 | 0.00 | Q |  |  |  | V |
| 24+55 | 2.7349 | 0.00 | Q |  |  |  | V |

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Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

| <b>Runoff Index (RI) Worksheet</b>         |              |            |              |                        |          |                                      |                            |
|--------------------------------------------|--------------|------------|--------------|------------------------|----------|--------------------------------------|----------------------------|
| <b>Drainage Area B (existing) - 8.4 Ac</b> |              |            |              |                        |          |                                      |                            |
| [1]                                        | [2]          | [3]        | [4]          | [5]                    | [6]      | [7]                                  | [8]                        |
| Subarea                                    | Area in (Ac) | Soil Group | Cover Type   | RI Number (Plate E6-1) | Land Use | Decimal portion of Area [2] / SUM[2] | Average RI Value [5] * [7] |
| Natural                                    |              | A          | grass (poor) | 67                     | Natural  | 0.00                                 | 0.0                        |
|                                            |              | B          | grass (poor) | 78                     | Natural  | 0.00                                 | 0.0                        |
|                                            | 8.4          | C          | grass (poor) | 86                     | Natural  | 1.00                                 | 86.0                       |
|                                            |              | D          | grass (poor) | 89                     | Natural  | 0.00                                 | 0.0                        |
| Sum =                                      | <b>8.4</b>   |            |              |                        |          | 1.00                                 | <b>86.0</b>                |
|                                            |              |            |              |                        |          |                                      |                            |
| Res                                        |              | B          | Landscape    | 56                     | Res      | 0.00                                 | 0.0                        |
|                                            | 0            | C          | Landscape    | 69                     | Res      | 0.00                                 | 0.0                        |
|                                            |              | D          | Landscape    | 75                     | Res      | 0.00                                 | 0.0                        |
| Sum =                                      | <b>0</b>     |            |              |                        |          | 0.00                                 | <b>0.0</b>                 |

| <b>Soil Low Loss Rate Worksheet</b>        |              |                        |                            |                                   |                                      |                                 |
|--------------------------------------------|--------------|------------------------|----------------------------|-----------------------------------|--------------------------------------|---------------------------------|
| <b>Drainage Area B (existing) - 8.4 Ac</b> |              |                        |                            |                                   |                                      |                                 |
| [1]                                        | [2]          | [3]                    | [4]                        | [5]                               | [6]                                  | [7]                             |
| Subarea                                    | Area in (Ac) | Land Use (Plate D-5.6) | % Impervious (Plate D-5.6) | Soil Low Loss Rate 0.9-(0.8)* [4] | Decimal portion of Area [2] / SUM[2] | Average Low Loss Rate [5] * [6] |
|                                            | 8.4          | Natural                | 0                          | 0.90                              | 1.00                                 | 0.90                            |
|                                            |              | Res 1 Ac               | 20                         | 0.74                              | 0.00                                 | 0.00                            |
|                                            |              | Res 1/2 Ac             | 40                         | 0.58                              | 0.00                                 | 0.00                            |
|                                            |              | Res 1/4 Ac             | 50                         | 0.50                              | 0.00                                 | 0.00                            |
|                                            |              | Res < 1/4 Ac           | 65                         | 0.38                              | 0.00                                 | 0.00                            |
|                                            |              | Apartment              | 80                         | 0.26                              | 0.00                                 | 0.00                            |
|                                            |              | Mobil Home             | 75                         | 0.30                              | 0.00                                 | 0.00                            |
|                                            |              | Hospital               | 75                         | 0.30                              | 0.00                                 | 0.00                            |
|                                            |              | Commercial             | 90                         | 0.18                              | 0.00                                 | 0.00                            |
| Sum =                                      | 8.4          |                        |                            |                                   | 1.00                                 | <b>0.90</b>                     |

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

| <b>Manning "n" Value Worksheet</b>         |              |                        |           |                                      |                             |
|--------------------------------------------|--------------|------------------------|-----------|--------------------------------------|-----------------------------|
| <b>Drainage Area B (existing) - 8.4 Ac</b> |              |                        |           |                                      |                             |
| [1]                                        | [2]          | [3]                    | [4]       | [5]                                  | [7]                         |
| Subarea                                    | Area in (Ac) | Land Use (Plate D-5.6) | "n" Value | Decimal portion of Area [2] / SUM[2] | Average "n" Value [4] * [5] |
|                                            | 8.4          | Natural                | 0.035     | 1.00                                 | 0.035                       |
|                                            |              | Res 1 Ac               | 0.015     | 0.00                                 | 0.000                       |
|                                            |              | Res 1/2 Ac             | 0.015     | 0.00                                 | 0.000                       |
|                                            |              | Res 1/4 Ac             | 0.015     | 0.00                                 | 0.000                       |
|                                            |              | Res < 1/4 Ac           | 0.015     | 0.00                                 | 0.000                       |
|                                            |              | Apartment              | 0.015     | 0.00                                 | 0.000                       |
|                                            |              | Mobil Home             | 0.015     | 0.00                                 | 0.000                       |
|                                            |              | Streets                | 0.015     | 0.00                                 | 0.000                       |
|                                            |              | Commercial             | 0.015     | 0.00                                 | 0.000                       |
| Sum =                                      | <b>8.4</b>   |                        |           | 1.00                                 | <b>0.035</b>                |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

### U n i t   H y d r o g r a p h   A n a l y s i s

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Study date 01/08/18 File: nrareabex1100.out

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Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

-----  
English (in-lb) Input Units Used  
English Rainfall Data (Inches) Input Values Used

English Units used in output format

-----  
Nichols Road Project - Tract 37305  
Drainage Area B = 8.4 Ac  
Existing Condition for comparison  
100-year 1-hour storm

-----  
Drainage Area = 8.40 (Ac.) = 0.013 Sq. Mi.  
Drainage Area for Depth-Area Areal Adjustment = 8.40 (Ac.) = 0.013 Sq. Mi.  
Length along longest watercourse = 1015.00 (Ft.)  
Length along longest watercourse measured to centroid = 444.00 (Ft.)  
Length along longest watercourse = 0.192 Mi.  
Length along longest watercourse measured to centroid = 0.084 Mi.  
Difference in elevation = 34.00 (Ft.)  
Slope along watercourse = 176.8670 Ft./Mi.  
Average Manning's 'N' = 0.035  
Lag time = 0.066 Hr.  
Lag time = 3.93 Min.  
25% of lag time = 0.98 Min.  
40% of lag time = 1.57 Min.  
Unit time = 5.00 Min.  
Duration of storm = 1 Hour(s)  
User Entered Base Flow = 0.00 (CFS)

2 YEAR Area rainfall data:

| Area (Ac.) [1] | Rainfall (In) [2] | Weighting [1*2] |
|----------------|-------------------|-----------------|
| 8.40           | 0.49              | 4.12            |

100 YEAR Area rainfall data:

| Area (Ac.) [1] | Rainfall (In) [2] | Weighting [1*2] |
|----------------|-------------------|-----------------|
| 8.40           | 1.38              | 11.59           |

STORM EVENT (YEAR) = 100.00  
Area Averaged 2-Year Rainfall = 0.490 (In)  
Area Averaged 100-Year Rainfall = 1.380 (In)

Point rain (area averaged) = 1.380 (In)  
Areal adjustment factor = 99.99 %  
Adjusted average point rain = 1.380 (In)

Sub-Area Data:  
Area (Ac.)          Runoff Index      Impervious %

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

8.400                      86.00                      0.050  
Total Area Entered =                      8.40 (Ac.)

|      |       |             |            |                  |        |                 |
|------|-------|-------------|------------|------------------|--------|-----------------|
| RI   | RI    | Infil. Rate | Impervious | Adj. Infil. Rate | Area%  | F               |
| AMC2 | AMC-2 | (In/Hr)     | (Dec.%)    | (In/Hr)          | (Dec.) | (In/Hr)         |
| 86.0 | 86.0  | 0.176       | 0.050      | 0.168            | 1.000  | 0.168           |
|      |       |             |            |                  |        | Sum (F) = 0.168 |

Area averaged mean soil loss (F) (In/Hr) = 0.168

Minimum soil loss rate ((In/Hr)) = 0.084

(for 24 hour storm duration)

Soil low loss rate (decimal) = 0.900

-----  
Slope of intensity-duration curve for a 1 hour storm =0.4800  
-----

## U n i t   H y d r o g r a p h FOOTHILL S-Curve

### ----- Unit Hydrograph Data

| Unit time period<br>(hrs) | Time % of lag | Distribution<br>Graph % | Unit Hydrograph<br>(CFS) |
|---------------------------|---------------|-------------------------|--------------------------|
| 1                         | 0.083         | 127.154                 | 23.749                   |
| 2                         | 0.167         | 254.309                 | 55.783                   |
| 3                         | 0.250         | 381.463                 | 14.621                   |
| 4                         | 0.333         | 508.618                 | 4.238                    |
| 5                         | 0.417         | 635.772                 | 1.080                    |
| 6                         | 0.500         | 762.927                 | 0.529                    |
| Sum = 100.000             |               |                         | Sum= 8.466               |

-----

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

| Unit Time<br>(Hr.) | Pattern<br>Percent | Storm Rain<br>(In/Hr) | Loss rate(In./Hr) |          | Effective<br>(In/Hr) |
|--------------------|--------------------|-----------------------|-------------------|----------|----------------------|
|                    |                    |                       | Max               | Low      |                      |
| 1                  | 0.08               | 4.40                  | 0.168             | ( 0.656) | 0.561                |
| 2                  | 0.17               | 4.50                  | 0.168             | ( 0.671) | 0.577                |
| 3                  | 0.25               | 5.40                  | 0.168             | ( 0.805) | 0.726                |
| 4                  | 0.33               | 5.40                  | 0.168             | ( 0.805) | 0.726                |
| 5                  | 0.42               | 5.70                  | 0.168             | ( 0.849) | 0.776                |
| 6                  | 0.50               | 6.40                  | 0.168             | ( 0.954) | 0.892                |
| 7                  | 0.58               | 7.90                  | 0.168             | ( 1.177) | 1.140                |
| 8                  | 0.67               | 9.10                  | 0.168             | ( 1.356) | 1.339                |
| 9                  | 0.75               | 12.80                 | 0.168             | ( 1.908) | 1.952                |
| 10                 | 0.83               | 25.60                 | 0.168             | ( 3.815) | 4.071                |
| 11                 | 0.92               | 7.90                  | 0.168             | ( 1.177) | 1.140                |
| 12                 | 1.00               | 4.90                  | 0.168             | ( 0.730) | 0.644                |

(Loss Rate Not Used)

Sum = 100.0

Sum = 14.5

Flood volume = Effective rainfall 1.21(In)

times area 8.4 (Ac.) / [(In) / (Ft.)] = 0.8 (Ac.Ft)

Total soil loss = 0.17 (In)

Total soil loss = 0.117 (Ac.Ft)

Total rainfall = 1.38 (In)

Flood volume = 36962.3 Cubic Feet

Total soil loss = 5113.4 Cubic Feet

-----  
Peak flow rate of this hydrograph = 24.573 (CFS)  
-----

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## 1 - H O U R       S T O R M R u n o f f       H y d r o g r a p h

-----  
Hydrograph in 5 Minute intervals ((CFS))  
-----

|            |              |         |   |     |      |      |      |
|------------|--------------|---------|---|-----|------|------|------|
| Time (h+m) | Volume Ac.Ft | Q (CFS) | 0 | 7.5 | 15.0 | 22.5 | 30.0 |
|------------|--------------|---------|---|-----|------|------|------|

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|      |        |       |     |  |  |  |   |
|------|--------|-------|-----|--|--|--|---|
| 0+ 5 | 0.0078 | 1.13  | vQ  |  |  |  |   |
| 0+10 | 0.0340 | 3.81  | v Q |  |  |  |   |
| 0+15 | 0.0677 | 4.88  | v Q |  |  |  |   |
| 0+20 | 0.1077 | 5.81  | v Q |  |  |  |   |
| 0+25 | 0.1500 | 6.15  | vQ  |  |  |  |   |
| 0+30 | 0.1962 | 6.70  | Qv  |  |  |  |   |
| 0+35 | 0.2501 | 7.82  | Qv  |  |  |  |   |
| 0+40 | 0.3159 | 9.56  | Q v |  |  |  |   |
| 0+45 | 0.3992 | 12.09 | Q v |  |  |  |   |
| 0+50 | 0.5342 | 19.60 | vQ  |  |  |  |   |
| 0+55 | 0.7034 | 24.57 | Qv  |  |  |  |   |
| 1+ 0 | 0.7902 | 12.60 | Q   |  |  |  | v |
| 1+ 5 | 0.8325 | 6.15  | Q   |  |  |  | v |
| 1+10 | 0.8440 | 1.67  | Q   |  |  |  | v |
| 1+15 | 0.8476 | 0.52  | Q   |  |  |  | v |
| 1+20 | 0.8483 | 0.11  | Q   |  |  |  | v |
| 1+25 | 0.8485 | 0.03  | Q   |  |  |  | v |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

### U n i t   H y d r o g r a p h   A n a l y s i s

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Study date 01/08/18 File: nrareabex3100.out

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Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

English (in-lb) Input Units Used  
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Nichols Road Project - Tract 37305  
Drainage Area B = 8.4 Ac  
Existing Condition for comparison  
100-year 3-hour storm

Drainage Area = 8.40(Ac.) = 0.013 Sq. Mi.  
Drainage Area for Depth-Area Areal Adjustment = 8.40(Ac.) = 0.013 Sq. Mi.  
Length along longest watercourse = 1015.00(Ft.)  
Length along longest watercourse measured to centroid = 444.00(Ft.)  
Length along longest watercourse = 0.192 Mi.  
Length along longest watercourse measured to centroid = 0.084 Mi.  
Difference in elevation = 34.00(Ft.)  
Slope along watercourse = 176.8670 Ft./Mi.  
Average Manning's 'N' = 0.035  
Lag time = 0.066 Hr.  
Lag time = 3.93 Min.  
25% of lag time = 0.98 Min.  
40% of lag time = 1.57 Min.  
Unit time = 5.00 Min.  
Duration of storm = 3 Hour(s)  
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 8.40          | 0.88             | 7.39           |

100 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 8.40          | 2.22             | 18.65          |

STORM EVENT (YEAR) = 100.00  
Area Averaged 2-Year Rainfall = 0.880(In)  
Area Averaged 100-Year Rainfall = 2.220(In)

Point rain (area averaged) = 2.220(In)  
Areal adjustment factor = 100.00 %  
Adjusted average point rain = 2.220(In)

Sub-Area Data:  
Area(Ac.)      Runoff Index      Impervious %  
8.400            86.00            0.050  
Total Area Entered = 8.40(Ac.)

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

|      |       |             |            |                  |           |         |
|------|-------|-------------|------------|------------------|-----------|---------|
| RI   | RI    | Infil. Rate | Impervious | Adj. Infil. Rate | Area%     | F       |
| AMC2 | AMC-2 | (In/Hr)     | (Dec.%)    | (In/Hr)          | (Dec.)    | (In/Hr) |
| 86.0 | 86.0  | 0.176       | 0.050      | 0.168            | 1.000     | 0.168   |
|      |       |             |            |                  | Sum (F) = | 0.168   |

Area averaged mean soil loss (F) (In/Hr) = 0.168

Minimum soil loss rate ((In/Hr)) = 0.084

(for 24 hour storm duration)

Soil low loss rate (decimal) = 0.900

## Unit Hydrograph FOOTHILL S-Curve

### Unit Hydrograph Data

| Unit time period<br>(hrs) | Time % of lag | Distribution<br>Graph % | Unit Hydrograph<br>(CFS) |
|---------------------------|---------------|-------------------------|--------------------------|
| 1                         | 0.083         | 127.154                 | 23.749                   |
| 2                         | 0.167         | 254.309                 | 55.783                   |
| 3                         | 0.250         | 381.463                 | 14.621                   |
| 4                         | 0.333         | 508.618                 | 4.238                    |
| 5                         | 0.417         | 635.772                 | 1.080                    |
| 6                         | 0.500         | 762.927                 | 0.529                    |
|                           |               | Sum = 100.000           | Sum= 8.466               |

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

| Unit Time<br>(Hr.) | Pattern<br>Percent | Storm Rain<br>(In/Hr) | Loss rate(In./Hr)<br>Max   Low | Effective<br>(In/Hr) |
|--------------------|--------------------|-----------------------|--------------------------------|----------------------|
| 1                  | 0.08               | 1.30                  | 0.168 ( 0.312)                 | 0.179                |
| 2                  | 0.17               | 1.30                  | 0.168 ( 0.312)                 | 0.179                |
| 3                  | 0.25               | 1.10                  | 0.168 ( 0.264)                 | 0.125                |
| 4                  | 0.33               | 1.50                  | 0.168 ( 0.360)                 | 0.232                |
| 5                  | 0.42               | 1.50                  | 0.168 ( 0.360)                 | 0.232                |
| 6                  | 0.50               | 1.80                  | 0.168 ( 0.432)                 | 0.312                |
| 7                  | 0.58               | 1.50                  | 0.168 ( 0.360)                 | 0.232                |
| 8                  | 0.67               | 1.80                  | 0.168 ( 0.432)                 | 0.312                |
| 9                  | 0.75               | 1.80                  | 0.168 ( 0.432)                 | 0.312                |
| 10                 | 0.83               | 1.50                  | 0.168 ( 0.360)                 | 0.232                |
| 11                 | 0.92               | 1.60                  | 0.168 ( 0.384)                 | 0.259                |
| 12                 | 1.00               | 1.80                  | 0.168 ( 0.432)                 | 0.312                |
| 13                 | 1.08               | 2.20                  | 0.168 ( 0.527)                 | 0.418                |
| 14                 | 1.17               | 2.20                  | 0.168 ( 0.527)                 | 0.418                |
| 15                 | 1.25               | 2.20                  | 0.168 ( 0.527)                 | 0.418                |
| 16                 | 1.33               | 2.00                  | 0.168 ( 0.480)                 | 0.365                |
| 17                 | 1.42               | 2.60                  | 0.168 ( 0.623)                 | 0.525                |
| 18                 | 1.50               | 2.70                  | 0.168 ( 0.647)                 | 0.552                |
| 19                 | 1.58               | 2.40                  | 0.168 ( 0.575)                 | 0.472                |
| 20                 | 1.67               | 2.70                  | 0.168 ( 0.647)                 | 0.552                |
| 21                 | 1.75               | 3.30                  | 0.168 ( 0.791)                 | 0.711                |
| 22                 | 1.83               | 3.10                  | 0.168 ( 0.743)                 | 0.658                |
| 23                 | 1.92               | 2.90                  | 0.168 ( 0.695)                 | 0.605                |
| 24                 | 2.00               | 3.00                  | 0.168 ( 0.719)                 | 0.631                |
| 25                 | 2.08               | 3.10                  | 0.168 ( 0.743)                 | 0.658                |
| 26                 | 2.17               | 4.20                  | 0.168 ( 1.007)                 | 0.951                |
| 27                 | 2.25               | 5.00                  | 0.168 ( 1.199)                 | 1.164                |
| 28                 | 2.33               | 3.50                  | 0.168 ( 0.839)                 | 0.765                |
| 29                 | 2.42               | 6.80                  | 0.168 ( 1.630)                 | 1.644                |
| 30                 | 2.50               | 7.30                  | 0.168 ( 1.750)                 | 1.777                |
| 31                 | 2.58               | 8.20                  | 0.168 ( 1.966)                 | 2.017                |
| 32                 | 2.67               | 5.90                  | 0.168 ( 1.415)                 | 1.404                |
| 33                 | 2.75               | 2.00                  | 0.168 ( 0.480)                 | 0.365                |
| 34                 | 2.83               | 1.80                  | 0.168 ( 0.432)                 | 0.312                |
| 35                 | 2.92               | 1.80                  | 0.168 ( 0.432)                 | 0.312                |
| 36                 | 3.00               | 0.60                  | ( 0.168) 0.144                 | 0.016                |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

(Loss Rate Not Used)  
Sum = 100.0 Sum = 20.6  
Flood volume = Effective rainfall 1.72(In)  
times area 8.4(Ac.) / [(In) / (Ft.)] = 1.2 (Ac.Ft)  
Total soil loss = 0.50(In)  
Total soil loss = 0.351(Ac.Ft)  
Total rainfall = 2.22(In)  
Flood volume = 52410.0 Cubic Feet  
Total soil loss = 15279.7 Cubic Feet

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Peak flow rate of this hydrograph = 15.265 (CFS)  
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3 - H O U R S T O R M  
R u n o f f H y d r o g r a p h

-----  
Hydrograph in 5 Minute intervals ((CFS))  
-----

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0     | 5.0 | 10.0 | 15.0 | 20.0 |
|-----------|--------------|--------|-------|-----|------|------|------|
| 0+ 5      | 0.0025       | 0.36   | Q     |     |      |      |      |
| 0+10      | 0.0108       | 1.20   | V Q   |     |      |      |      |
| 0+15      | 0.0198       | 1.32   | V Q   |     |      |      |      |
| 0+20      | 0.0291       | 1.34   | V Q   |     |      |      |      |
| 0+25      | 0.0415       | 1.80   | V Q   |     |      |      |      |
| 0+30      | 0.0558       | 2.08   | V Q   |     |      |      |      |
| 0+35      | 0.0718       | 2.33   | V Q   |     |      |      |      |
| 0+40      | 0.0871       | 2.22   | V Q   |     |      |      |      |
| 0+45      | 0.1045       | 2.53   | V Q   |     |      |      |      |
| 0+50      | 0.1214       | 2.45   | Q     |     |      |      |      |
| 0+55      | 0.1362       | 2.15   | Q     |     |      |      |      |
| 1+ 0      | 0.1520       | 2.29   | QV    |     |      |      |      |
| 1+ 5      | 0.1710       | 2.76   | Q     |     |      |      |      |
| 1+10      | 0.1939       | 3.33   | Q     |     |      |      |      |
| 1+15      | 0.2179       | 3.48   | QV    |     |      |      |      |
| 1+20      | 0.2415       | 3.42   | Q V   |     |      |      |      |
| 1+25      | 0.2656       | 3.50   | QV    |     |      |      |      |
| 1+30      | 0.2948       | 4.25   | QV    |     |      |      |      |
| 1+35      | 0.3251       | 4.39   | Q V   |     |      |      |      |
| 1+40      | 0.3544       | 4.26   | Q  V  |     |      |      |      |
| 1+45      | 0.3881       | 4.88   | Q   V |     |      |      |      |
| 1+50      | 0.4267       | 5.61   | Q V   |     |      |      |      |
| 1+55      | 0.4644       | 5.47   | Q V   |     |      |      |      |
| 2+ 0      | 0.5007       | 5.27   | Q V   |     |      |      |      |
| 2+ 5      | 0.5378       | 5.38   | Q V   |     |      |      |      |
| 2+10      | 0.5799       | 6.11   | Q V   |     |      |      |      |
| 2+15      | 0.6347       | 7.96   | Q V   |     |      |      |      |
| 2+20      | 0.6935       | 8.54   | Q V   |     |      |      |      |
| 2+25      | 0.7541       | 8.79   | Q V   |     |      |      |      |
| 2+30      | 0.8424       | 12.82  | Q V   |     |      |      |      |
| 2+35      | 0.9451       | 14.91  | Q V   |     |      |      |      |
| 2+40      | 1.0502       | 15.27  | Q V   |     |      |      |      |
| 2+45      | 1.1238       | 10.69  | Q V   |     |      |      |      |
| 2+50      | 1.1586       | 5.05   | Q V   |     |      |      |      |
| 2+55      | 1.1815       | 3.32   | Q V   |     |      |      |      |
| 3+ 0      | 1.1969       | 2.24   | Q V   |     |      |      |      |
| 3+ 5      | 1.2015       | 0.67   | Q V   |     |      |      |      |
| 3+10      | 1.2027       | 0.18   | Q V   |     |      |      |      |
| 3+15      | 1.2031       | 0.05   | Q V   |     |      |      |      |
| 3+20      | 1.2032       | 0.02   | Q V   |     |      |      |      |
| 3+25      | 1.2032       | 0.00   | Q V   |     |      |      |      |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

### U n i t   H y d r o g r a p h   A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1  
Study date 01/08/18 File: nrareabex6100.out

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Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

English (in-lb) Input Units Used  
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Nichols Road Project - Tract 37305  
Drainage Area B = 8.4 Ac  
Existing Condition for comparison  
100-year 6-hour storm

Drainage Area = 8.40(Ac.) = 0.013 Sq. Mi.  
Drainage Area for Depth-Area Areal Adjustment = 8.40(Ac.) = 0.013 Sq. Mi.  
Length along longest watercourse = 1015.00(Ft.)  
Length along longest watercourse measured to centroid = 444.00(Ft.)  
Length along longest watercourse = 0.192 Mi.  
Length along longest watercourse measured to centroid = 0.084 Mi.  
Difference in elevation = 34.00(Ft.)  
Slope along watercourse = 176.8670 Ft./Mi.  
Average Manning's 'N' = 0.035  
Lag time = 0.066 Hr.  
Lag time = 3.93 Min.  
25% of lag time = 0.98 Min.  
40% of lag time = 1.57 Min.  
Unit time = 5.00 Min.  
Duration of storm = 6 Hour(s)  
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 8.40          | 1.26             | 10.58          |

100 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 8.40          | 3.12             | 26.21          |

STORM EVENT (YEAR) = 100.00  
Area Averaged 2-Year Rainfall = 1.260(In)  
Area Averaged 100-Year Rainfall = 3.120(In)

Point rain (area averaged) = 3.120(In)  
Areal adjustment factor = 100.00 %  
Adjusted average point rain = 3.120(In)

Sub-Area Data:  
Area(Ac.)                  Runoff Index      Impervious %  
8.400                      86.00              0.050

# **Tract 37305, Nichols South Specific Plan – Lake Elsinore** **ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

Total Area Entered = 8.40 (Ac.)

|      |       |             |            |                  |        |                 |
|------|-------|-------------|------------|------------------|--------|-----------------|
| RI   | RI    | Infil. Rate | Impervious | Adj. Infil. Rate | Area%  | F               |
| AMC2 | AMC-2 | (In/Hr)     | (Dec.%)    | (In/Hr)          | (Dec.) | (In/Hr)         |
| 86.0 | 86.0  | 0.176       | 0.050      | 0.168            | 1.000  | 0.168           |
|      |       |             |            |                  |        | Sum (F) = 0.168 |

Area averaged mean soil loss (F) (In/Hr) = 0.168  
 Minimum soil loss rate ((In/Hr)) = 0.084  
 (for 24 hour storm duration)  
 Soil low loss rate (decimal) = 0.900

## U n i t   H y d r o g r a p h FOOTHILL S-Curve

### Unit Hydrograph Data

| Unit time period<br>(hrs) | Time % of lag | Distribution<br>Graph % | Unit Hydrograph<br>(CFS) |
|---------------------------|---------------|-------------------------|--------------------------|
| 1                         | 0.083         | 127.154                 | 2.010                    |
| 2                         | 0.167         | 254.309                 | 4.722                    |
| 3                         | 0.250         | 381.463                 | 1.238                    |
| 4                         | 0.333         | 508.618                 | 0.359                    |
| 5                         | 0.417         | 635.772                 | 0.091                    |
| 6                         | 0.500         | 762.927                 | 0.045                    |
|                           |               | Sum = 100.000           | Sum= 8.466               |

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

| Unit Time<br>(Hr.) | Pattern<br>Percent | Storm Rain<br>(In/Hr) | Loss rate(In./Hr) |          | Effective<br>(In/Hr) |
|--------------------|--------------------|-----------------------|-------------------|----------|----------------------|
|                    |                    |                       | Max               | Low      |                      |
| 1                  | 0.08               | 0.187                 | 0.168             | ( 0.168) | 0.019                |
| 2                  | 0.17               | 0.225                 | 0.168             | ( 0.202) | 0.057                |
| 3                  | 0.25               | 0.225                 | 0.168             | ( 0.202) | 0.057                |
| 4                  | 0.33               | 0.225                 | 0.168             | ( 0.202) | 0.057                |
| 5                  | 0.42               | 0.225                 | 0.168             | ( 0.202) | 0.057                |
| 6                  | 0.50               | 0.262                 | 0.168             | ( 0.236) | 0.094                |
| 7                  | 0.58               | 0.262                 | 0.168             | ( 0.236) | 0.094                |
| 8                  | 0.67               | 0.262                 | 0.168             | ( 0.236) | 0.094                |
| 9                  | 0.75               | 0.262                 | 0.168             | ( 0.236) | 0.094                |
| 10                 | 0.83               | 0.262                 | 0.168             | ( 0.236) | 0.094                |
| 11                 | 0.92               | 0.262                 | 0.168             | ( 0.236) | 0.094                |
| 12                 | 1.00               | 0.300                 | 0.168             | ( 0.270) | 0.132                |
| 13                 | 1.08               | 0.300                 | 0.168             | ( 0.270) | 0.132                |
| 14                 | 1.17               | 0.300                 | 0.168             | ( 0.270) | 0.132                |
| 15                 | 1.25               | 0.300                 | 0.168             | ( 0.270) | 0.132                |
| 16                 | 1.33               | 0.300                 | 0.168             | ( 0.270) | 0.132                |
| 17                 | 1.42               | 0.300                 | 0.168             | ( 0.270) | 0.132                |
| 18                 | 1.50               | 0.300                 | 0.168             | ( 0.270) | 0.132                |
| 19                 | 1.58               | 0.300                 | 0.168             | ( 0.270) | 0.132                |
| 20                 | 1.67               | 0.300                 | 0.168             | ( 0.270) | 0.132                |
| 21                 | 1.75               | 0.300                 | 0.168             | ( 0.270) | 0.132                |
| 22                 | 1.83               | 0.300                 | 0.168             | ( 0.270) | 0.132                |
| 23                 | 1.92               | 0.300                 | 0.168             | ( 0.270) | 0.132                |
| 24                 | 2.00               | 0.337                 | 0.168             | ( 0.303) | 0.169                |
| 25                 | 2.08               | 0.300                 | 0.168             | ( 0.270) | 0.132                |
| 26                 | 2.17               | 0.337                 | 0.168             | ( 0.303) | 0.169                |
| 27                 | 2.25               | 0.337                 | 0.168             | ( 0.303) | 0.169                |
| 28                 | 2.33               | 0.337                 | 0.168             | ( 0.303) | 0.169                |
| 29                 | 2.42               | 0.337                 | 0.168             | ( 0.303) | 0.169                |
| 30                 | 2.50               | 0.337                 | 0.168             | ( 0.303) | 0.169                |
| 31                 | 2.58               | 0.337                 | 0.168             | ( 0.303) | 0.169                |
| 32                 | 2.67               | 0.337                 | 0.168             | ( 0.303) | 0.169                |
| 33                 | 2.75               | 1.00                  | 0.374             | ( 0.337) | 0.207                |
| 34                 | 2.83               | 1.00                  | 0.374             | ( 0.337) | 0.207                |
| 35                 | 2.92               | 1.00                  | 0.374             | ( 0.337) | 0.207                |

|   |      |      |       |          |          |       |
|---|------|------|-------|----------|----------|-------|
| 6 | 3.00 | 1.00 | 0.374 | 0.168    | ( 0.337) | 0.207 |
| 7 | 3.08 | 1.00 | 0.374 | 0.168    | ( 0.337) | 0.207 |
| 8 | 3.17 | 1.10 | 0.412 | 0.168    | ( 0.371) | 0.244 |
| 9 | 3.25 | 1.10 | 0.412 | 0.168    | ( 0.371) | 0.244 |
| 0 | 3.33 | 1.10 | 0.412 | 0.168    | ( 0.371) | 0.244 |
| 1 | 3.42 | 1.20 | 0.449 | 0.168    | ( 0.404) | 0.282 |
| 2 | 3.50 | 1.30 | 0.487 | 0.168    | ( 0.438) | 0.319 |
| 3 | 3.58 | 1.40 | 0.524 | 0.168    | ( 0.472) | 0.356 |
| 4 | 3.67 | 1.40 | 0.524 | 0.168    | ( 0.472) | 0.356 |
| 5 | 3.75 | 1.50 | 0.562 | 0.168    | ( 0.505) | 0.394 |
| 6 | 3.83 | 1.50 | 0.562 | 0.168    | ( 0.505) | 0.394 |
| 7 | 3.92 | 1.60 | 0.599 | 0.168    | ( 0.539) | 0.431 |
| 8 | 4.00 | 1.60 | 0.599 | 0.168    | ( 0.539) | 0.431 |
| 9 | 4.08 | 1.70 | 0.636 | 0.168    | ( 0.573) | 0.469 |
| 0 | 4.17 | 1.80 | 0.674 | 0.168    | ( 0.607) | 0.506 |
| 1 | 4.25 | 1.90 | 0.711 | 0.168    | ( 0.640) | 0.544 |
| 2 | 4.33 | 2.00 | 0.749 | 0.168    | ( 0.674) | 0.581 |
| 3 | 4.42 | 2.10 | 0.786 | 0.168    | ( 0.708) | 0.619 |
| 4 | 4.50 | 2.10 | 0.786 | 0.168    | ( 0.708) | 0.619 |
| 5 | 4.58 | 2.20 | 0.824 | 0.168    | ( 0.741) | 0.656 |
| 6 | 4.67 | 2.30 | 0.861 | 0.168    | ( 0.775) | 0.693 |
| 7 | 4.75 | 2.40 | 0.899 | 0.168    | ( 0.809) | 0.731 |
| 8 | 4.83 | 2.40 | 0.899 | 0.168    | ( 0.809) | 0.731 |
| 9 | 4.92 | 2.50 | 0.936 | 0.168    | ( 0.842) | 0.768 |
| 0 | 5.00 | 2.60 | 0.973 | 0.168    | ( 0.876) | 0.806 |
| 1 | 5.08 | 3.10 | 1.161 | 0.168    | ( 1.045) | 0.993 |
| 2 | 5.17 | 3.60 | 1.348 | 0.168    | ( 1.213) | 1.180 |
| 3 | 5.25 | 3.90 | 1.460 | 0.168    | ( 1.314) | 1.292 |
| 4 | 5.33 | 4.20 | 1.572 | 0.168    | ( 1.415) | 1.405 |
| 5 | 5.42 | 4.70 | 1.760 | 0.168    | ( 1.584) | 1.592 |
| 6 | 5.50 | 5.60 | 2.097 | 0.168    | ( 1.887) | 1.929 |
| 7 | 5.58 | 1.90 | 0.711 | 0.168    | ( 0.640) | 0.544 |
| 8 | 5.67 | 0.90 | 0.337 | 0.168    | ( 0.303) | 0.169 |
| 9 | 5.75 | 0.60 | 0.225 | 0.168    | ( 0.202) | 0.057 |
| 0 | 5.83 | 0.50 | 0.187 | 0.168    | ( 0.168) | 0.019 |
| 1 | 5.92 | 0.30 | 0.112 | ( 0.168) | 0.101    | 0.011 |
| 2 | 6.00 | 0.20 | 0.075 | ( 0.168) | 0.067    | 0.007 |

|                                   |                                                    |
|-----------------------------------|----------------------------------------------------|
| Flood volume = Effective rainfall | 2.13(In)                                           |
| times area                        | $8.4(\text{Ac.}) / [(\text{In}) / (\text{Ft.})] =$ |
|                                   | 1.5(Ac.Ft)                                         |
| Total soil loss =                 | 0.99(In)                                           |
| Total soil loss =                 | 0.695(Ac.Ft)                                       |
| Total rainfall =                  | 3.12(In)                                           |
| Flood volume =                    | 64875.8 Cubic Feet                                 |
| Total soil loss =                 | 30256.5 Cubic Feet                                 |

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Hydrograph in 5 Minute intervals ((CFS))

| Time (h+m) | Volume | Ac.Ft | Q (CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|------------|--------|-------|---------|---|-----|------|------|------|
| 0+ 5       | 0.0003 | 0.04  | Q       |   |     |      |      |      |
| 0+10       | 0.0017 | 0.21  | Q       |   |     |      |      |      |
| 0+15       | 0.0045 | 0.41  | Q       |   |     |      |      |      |
| 0+20       | 0.0077 | 0.46  | Q       |   |     |      |      |      |
| 0+25       | 0.0110 | 0.48  | Q       |   |     |      |      |      |
| 0+30       | 0.0148 | 0.56  | VQ      |   |     |      |      |      |
| 0+35       | 0.0198 | 0.73  | VQ      |   |     |      |      |      |
| 0+40       | 0.0252 | 0.78  | VQ      |   |     |      |      |      |
| 0+45       | 0.0307 | 0.79  | VQ      |   |     |      |      |      |
| 0+50       | 0.0362 | 0.80  | VQ      |   |     |      |      |      |
| 0+55       | 0.0417 | 0.80  | IQ      |   |     |      |      |      |
| 1+ 0       | 0.0477 | 0.87  | IQ      |   |     |      |      |      |
| 1+ 5       | 0.0550 | 1.05  | IQ      |   |     |      |      |      |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|      |        |       |     |  |  |  |  |
|------|--------|-------|-----|--|--|--|--|
| 1+10 | 0.0625 | 1.10  | VQ  |  |  |  |  |
| 1+15 | 0.0702 | 1.11  | VQ  |  |  |  |  |
| 1+20 | 0.0778 | 1.11  | Q   |  |  |  |  |
| 1+25 | 0.0855 | 1.12  | Q   |  |  |  |  |
| 1+30 | 0.0932 | 1.12  | Q   |  |  |  |  |
| 1+35 | 0.1009 | 1.12  | Q   |  |  |  |  |
| 1+40 | 0.1086 | 1.12  | Q   |  |  |  |  |
| 1+45 | 0.1163 | 1.12  | QV  |  |  |  |  |
| 1+50 | 0.1240 | 1.12  | QV  |  |  |  |  |
| 1+55 | 0.1317 | 1.12  | QV  |  |  |  |  |
| 2+ 0 | 0.1399 | 1.19  | QV  |  |  |  |  |
| 2+ 5 | 0.1488 | 1.29  | QV  |  |  |  |  |
| 2+10 | 0.1573 | 1.24  | Q V |  |  |  |  |
| 2+15 | 0.1668 | 1.38  | Q V |  |  |  |  |
| 2+20 | 0.1766 | 1.42  | Q V |  |  |  |  |
| 2+25 | 0.1865 | 1.43  | Q V |  |  |  |  |
| 2+30 | 0.1963 | 1.43  | Q V |  |  |  |  |
| 2+35 | 0.2062 | 1.43  | Q V |  |  |  |  |
| 2+40 | 0.2161 | 1.43  | Q V |  |  |  |  |
| 2+45 | 0.2265 | 1.51  | Q V |  |  |  |  |
| 2+50 | 0.2381 | 1.69  | Q V |  |  |  |  |
| 2+55 | 0.2500 | 1.73  | Q V |  |  |  |  |
| 3+ 0 | 0.2620 | 1.75  | Q V |  |  |  |  |
| 3+ 5 | 0.2741 | 1.75  | Q V |  |  |  |  |
| 3+10 | 0.2866 | 1.83  | Q V |  |  |  |  |
| 3+15 | 0.3004 | 2.00  | Q V |  |  |  |  |
| 3+20 | 0.3145 | 2.05  | Q V |  |  |  |  |
| 3+25 | 0.3293 | 2.14  | Q V |  |  |  |  |
| 3+30 | 0.3457 | 2.39  | Q V |  |  |  |  |
| 3+35 | 0.3643 | 2.69  | Q V |  |  |  |  |
| 3+40 | 0.3845 | 2.93  | Q V |  |  |  |  |
| 3+45 | 0.4056 | 3.07  | Q V |  |  |  |  |
| 3+50 | 0.4281 | 3.26  | Q V |  |  |  |  |
| 3+55 | 0.4515 | 3.39  | Q V |  |  |  |  |
| 4+ 0 | 0.4761 | 3.58  | Q V |  |  |  |  |
| 4+ 5 | 0.5017 | 3.71  | Q V |  |  |  |  |
| 4+10 | 0.5291 | 3.98  | Q V |  |  |  |  |
| 4+15 | 0.5585 | 4.28  | Q V |  |  |  |  |
| 4+20 | 0.5901 | 4.59  | Q V |  |  |  |  |
| 4+25 | 0.6239 | 4.91  | Q V |  |  |  |  |
| 4+30 | 0.6594 | 5.15  | Q V |  |  |  |  |
| 4+35 | 0.6958 | 5.29  | Q V |  |  |  |  |
| 4+40 | 0.7341 | 5.56  | Q V |  |  |  |  |
| 4+45 | 0.7745 | 5.86  | Q V |  |  |  |  |
| 4+50 | 0.8165 | 6.10  | Q V |  |  |  |  |
| 4+55 | 0.8595 | 6.24  | Q V |  |  |  |  |
| 5+ 0 | 0.9043 | 6.51  | Q V |  |  |  |  |
| 5+ 5 | 0.9533 | 7.12  | Q V |  |  |  |  |
| 5+10 | 1.0115 | 8.44  | Q V |  |  |  |  |
| 5+15 | 1.0789 | 9.80  | Q V |  |  |  |  |
| 5+20 | 1.1537 | 10.86 | Q V |  |  |  |  |
| 5+25 | 1.2363 | 11.99 | Q V |  |  |  |  |
| 5+30 | 1.3310 | 13.76 | Q V |  |  |  |  |
| 5+35 | 1.4196 | 12.85 | Q V |  |  |  |  |
| 5+40 | 1.4613 | 6.06  | Q   |  |  |  |  |
| 5+45 | 1.4784 | 2.49  | Q   |  |  |  |  |
| 5+50 | 1.4850 | 0.96  | Q   |  |  |  |  |
| 5+55 | 1.4877 | 0.38  | Q   |  |  |  |  |
| 6+ 0 | 1.4887 | 0.15  | Q   |  |  |  |  |
| 6+ 5 | 1.4892 | 0.07  | Q   |  |  |  |  |
| 6+10 | 1.4893 | 0.02  | Q   |  |  |  |  |
| 6+15 | 1.4893 | 0.00  | Q   |  |  |  |  |
| 6+20 | 1.4893 | 0.00  | Q   |  |  |  |  |
| 6+25 | 1.4893 | 0.00  | Q   |  |  |  |  |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

### U n i t   H y d r o g r a p h   A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1  
Study date 01/08/18 File: nrareabex24100.out

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Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

English (in-lb) Input Units Used  
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Nichols Road Project - Tract 37305  
Drainage Area B = 8.4 Ac  
Existing Condition for comparison  
100-year 24-hour storm

-----  
Drainage Area = 8.40(Ac.) = 0.013 Sq. Mi.  
Drainage Area for Depth-Area Areal Adjustment = 8.40(Ac.) = 0.013 Sq. Mi.  
Length along longest watercourse = 1015.00(Ft.)  
Length along longest watercourse measured to centroid = 444.00(Ft.)  
Length along longest watercourse = 0.192 Mi.  
Length along longest watercourse measured to centroid = 0.084 Mi.  
Difference in elevation = 34.00(Ft.)  
Slope along watercourse = 176.8670 Ft./Mi.  
Average Manning's 'N' = 0.035  
Lag time = 0.066 Hr.  
Lag time = 3.93 Min.  
25% of lag time = 0.98 Min.  
40% of lag time = 1.57 Min.  
Unit time = 5.00 Min.  
Duration of storm = 24 Hour(s)  
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 8.40          | 2.38             | 19.99          |

100 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 8.40          | 6.35             | 53.34          |

STORM EVENT (YEAR) = 100.00  
Area Averaged 2-Year Rainfall = 2.380(In)  
Area Averaged 100-Year Rainfall = 6.350(In)

Point rain (area averaged) = 6.350(In)  
Areal adjustment factor = 100.00 %  
Adjusted average point rain = 6.350(In)

Sub-Area Data:  
Area(Ac.)                  Runoff Index      Impervious %  
8.400                      86.00              0.050

# **Tract 37305, Nichols South Specific Plan – Lake Elsinore** **ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

Total Area Entered = 8.40 (Ac.)

|      |       |             |            |                  |        |                 |
|------|-------|-------------|------------|------------------|--------|-----------------|
| RI   | RI    | Infil. Rate | Impervious | Adj. Infil. Rate | Area%  | F               |
| AMC2 | AMC-2 | (In/Hr)     | (Dec.%)    | (In/Hr)          | (Dec.) | (In/Hr)         |
| 86.0 | 86.0  | 0.176       | 0.050      | 0.168            | 1.000  | 0.168           |
|      |       |             |            |                  |        | Sum (F) = 0.168 |

Area averaged mean soil loss (F) (In/Hr) = 0.168

Minimum soil loss rate ((In/Hr)) = 0.084

(for 24 hour storm duration)

Soil low loss rate (decimal) = 0.900

## U n i t   H y d r o g r a p h FOOTHILL S-Curve

### Unit Hydrograph Data

| Unit time period<br>(hrs) | Time % of lag | Distribution<br>Graph % | Unit Hydrograph<br>(CFS) |
|---------------------------|---------------|-------------------------|--------------------------|
| 1                         | 0.083         | 127.154                 | 23.749                   |
| 2                         | 0.167         | 254.309                 | 55.783                   |
| 3                         | 0.250         | 381.463                 | 14.621                   |
| 4                         | 0.333         | 508.618                 | 4.238                    |
| 5                         | 0.417         | 635.772                 | 1.080                    |
| 6                         | 0.500         | 762.927                 | 0.529                    |
|                           |               | Sum = 100.000           | Sum= 8.466               |

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

| Unit | Time<br>(Hr.) | Pattern<br>Percent | Storm Rain<br>(In/Hr) | Loss rate(In./Hr)<br>Max   Low | Effective<br>(In/Hr) |
|------|---------------|--------------------|-----------------------|--------------------------------|----------------------|
| 1    | 0.08          | 0.07               | 0.051                 | ( 0.297)                       | 0.046                |
| 2    | 0.17          | 0.07               | 0.051                 | ( 0.296)                       | 0.046                |
| 3    | 0.25          | 0.07               | 0.051                 | ( 0.295)                       | 0.046                |
| 4    | 0.33          | 0.10               | 0.076                 | ( 0.294)                       | 0.069                |
| 5    | 0.42          | 0.10               | 0.076                 | ( 0.293)                       | 0.069                |
| 6    | 0.50          | 0.10               | 0.076                 | ( 0.292)                       | 0.069                |
| 7    | 0.58          | 0.10               | 0.076                 | ( 0.290)                       | 0.069                |
| 8    | 0.67          | 0.10               | 0.076                 | ( 0.289)                       | 0.069                |
| 9    | 0.75          | 0.10               | 0.076                 | ( 0.288)                       | 0.069                |
| 10   | 0.83          | 0.13               | 0.102                 | ( 0.287)                       | 0.091                |
| 11   | 0.92          | 0.13               | 0.102                 | ( 0.286)                       | 0.091                |
| 12   | 1.00          | 0.13               | 0.102                 | ( 0.285)                       | 0.091                |
| 13   | 1.08          | 0.10               | 0.076                 | ( 0.284)                       | 0.069                |
| 14   | 1.17          | 0.10               | 0.076                 | ( 0.283)                       | 0.069                |
| 15   | 1.25          | 0.10               | 0.076                 | ( 0.281)                       | 0.069                |
| 16   | 1.33          | 0.10               | 0.076                 | ( 0.280)                       | 0.069                |
| 17   | 1.42          | 0.10               | 0.076                 | ( 0.279)                       | 0.069                |
| 18   | 1.50          | 0.10               | 0.076                 | ( 0.278)                       | 0.069                |
| 19   | 1.58          | 0.10               | 0.076                 | ( 0.277)                       | 0.069                |
| 20   | 1.67          | 0.10               | 0.076                 | ( 0.276)                       | 0.069                |
| 21   | 1.75          | 0.10               | 0.076                 | ( 0.275)                       | 0.069                |
| 22   | 1.83          | 0.13               | 0.102                 | ( 0.274)                       | 0.091                |
| 23   | 1.92          | 0.13               | 0.102                 | ( 0.273)                       | 0.091                |
| 24   | 2.00          | 0.13               | 0.102                 | ( 0.271)                       | 0.091                |
| 25   | 2.08          | 0.13               | 0.102                 | ( 0.270)                       | 0.091                |
| 26   | 2.17          | 0.13               | 0.102                 | ( 0.269)                       | 0.091                |
| 27   | 2.25          | 0.13               | 0.102                 | ( 0.268)                       | 0.091                |
| 28   | 2.33          | 0.13               | 0.102                 | ( 0.267)                       | 0.091                |
| 29   | 2.42          | 0.13               | 0.102                 | ( 0.266)                       | 0.091                |
| 30   | 2.50          | 0.13               | 0.102                 | ( 0.265)                       | 0.091                |
| 31   | 2.58          | 0.17               | 0.127                 | ( 0.264)                       | 0.114                |
| 32   | 2.67          | 0.17               | 0.127                 | ( 0.263)                       | 0.114                |
| 33   | 2.75          | 0.17               | 0.127                 | ( 0.262)                       | 0.114                |
| 34   | 2.83          | 0.17               | 0.127                 | ( 0.261)                       | 0.114                |
| 35   | 2.92          | 0.17               | 0.127                 | ( 0.259)                       | 0.114                |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|     |      |      |       |          |          |       |
|-----|------|------|-------|----------|----------|-------|
| 36  | 3.00 | 0.17 | 0.127 | ( 0.258) | 0.114    | 0.013 |
| 37  | 3.08 | 0.17 | 0.127 | ( 0.257) | 0.114    | 0.013 |
| 38  | 3.17 | 0.17 | 0.127 | ( 0.256) | 0.114    | 0.013 |
| 39  | 3.25 | 0.17 | 0.127 | ( 0.255) | 0.114    | 0.013 |
| 40  | 3.33 | 0.17 | 0.127 | ( 0.254) | 0.114    | 0.013 |
| 41  | 3.42 | 0.17 | 0.127 | ( 0.253) | 0.114    | 0.013 |
| 42  | 3.50 | 0.17 | 0.127 | ( 0.252) | 0.114    | 0.013 |
| 43  | 3.58 | 0.17 | 0.127 | ( 0.251) | 0.114    | 0.013 |
| 44  | 3.67 | 0.17 | 0.127 | ( 0.250) | 0.114    | 0.013 |
| 45  | 3.75 | 0.17 | 0.127 | ( 0.249) | 0.114    | 0.013 |
| 46  | 3.83 | 0.20 | 0.152 | ( 0.248) | 0.137    | 0.015 |
| 47  | 3.92 | 0.20 | 0.152 | ( 0.247) | 0.137    | 0.015 |
| 48  | 4.00 | 0.20 | 0.152 | ( 0.246) | 0.137    | 0.015 |
| 49  | 4.08 | 0.20 | 0.152 | ( 0.245) | 0.137    | 0.015 |
| 50  | 4.17 | 0.20 | 0.152 | ( 0.244) | 0.137    | 0.015 |
| 51  | 4.25 | 0.20 | 0.152 | ( 0.243) | 0.137    | 0.015 |
| 52  | 4.33 | 0.23 | 0.178 | ( 0.242) | 0.160    | 0.018 |
| 53  | 4.42 | 0.23 | 0.178 | ( 0.241) | 0.160    | 0.018 |
| 54  | 4.50 | 0.23 | 0.178 | ( 0.239) | 0.160    | 0.018 |
| 55  | 4.58 | 0.23 | 0.178 | ( 0.238) | 0.160    | 0.018 |
| 56  | 4.67 | 0.23 | 0.178 | ( 0.237) | 0.160    | 0.018 |
| 57  | 4.75 | 0.23 | 0.178 | ( 0.236) | 0.160    | 0.018 |
| 58  | 4.83 | 0.27 | 0.203 | ( 0.235) | 0.183    | 0.020 |
| 59  | 4.92 | 0.27 | 0.203 | ( 0.234) | 0.183    | 0.020 |
| 60  | 5.00 | 0.27 | 0.203 | ( 0.233) | 0.183    | 0.020 |
| 61  | 5.08 | 0.20 | 0.152 | ( 0.232) | 0.137    | 0.015 |
| 62  | 5.17 | 0.20 | 0.152 | ( 0.231) | 0.137    | 0.015 |
| 63  | 5.25 | 0.20 | 0.152 | ( 0.230) | 0.137    | 0.015 |
| 64  | 5.33 | 0.23 | 0.178 | ( 0.229) | 0.160    | 0.018 |
| 65  | 5.42 | 0.23 | 0.178 | ( 0.228) | 0.160    | 0.018 |
| 66  | 5.50 | 0.23 | 0.178 | ( 0.227) | 0.160    | 0.018 |
| 67  | 5.58 | 0.27 | 0.203 | ( 0.226) | 0.183    | 0.020 |
| 68  | 5.67 | 0.27 | 0.203 | ( 0.225) | 0.183    | 0.020 |
| 69  | 5.75 | 0.27 | 0.203 | ( 0.224) | 0.183    | 0.020 |
| 70  | 5.83 | 0.27 | 0.203 | ( 0.223) | 0.183    | 0.020 |
| 71  | 5.92 | 0.27 | 0.203 | ( 0.222) | 0.183    | 0.020 |
| 72  | 6.00 | 0.27 | 0.203 | ( 0.221) | 0.183    | 0.020 |
| 73  | 6.08 | 0.30 | 0.229 | ( 0.220) | 0.206    | 0.023 |
| 74  | 6.17 | 0.30 | 0.229 | ( 0.219) | 0.206    | 0.023 |
| 75  | 6.25 | 0.30 | 0.229 | ( 0.218) | 0.206    | 0.023 |
| 76  | 6.33 | 0.30 | 0.229 | ( 0.217) | 0.206    | 0.023 |
| 77  | 6.42 | 0.30 | 0.229 | ( 0.216) | 0.206    | 0.023 |
| 78  | 6.50 | 0.30 | 0.229 | ( 0.215) | 0.206    | 0.023 |
| 79  | 6.58 | 0.33 | 0.254 | 0.215    | ( 0.229) | 0.039 |
| 80  | 6.67 | 0.33 | 0.254 | 0.214    | ( 0.229) | 0.040 |
| 81  | 6.75 | 0.33 | 0.254 | 0.213    | ( 0.229) | 0.041 |
| 82  | 6.83 | 0.33 | 0.254 | 0.212    | ( 0.229) | 0.042 |
| 83  | 6.92 | 0.33 | 0.254 | 0.211    | ( 0.229) | 0.043 |
| 84  | 7.00 | 0.33 | 0.254 | 0.210    | ( 0.229) | 0.044 |
| 85  | 7.08 | 0.33 | 0.254 | 0.209    | ( 0.229) | 0.045 |
| 86  | 7.17 | 0.33 | 0.254 | 0.208    | ( 0.229) | 0.046 |
| 87  | 7.25 | 0.33 | 0.254 | 0.207    | ( 0.229) | 0.047 |
| 88  | 7.33 | 0.37 | 0.279 | 0.206    | ( 0.251) | 0.073 |
| 89  | 7.42 | 0.37 | 0.279 | 0.205    | ( 0.251) | 0.074 |
| 90  | 7.50 | 0.37 | 0.279 | 0.204    | ( 0.251) | 0.075 |
| 91  | 7.58 | 0.40 | 0.305 | 0.203    | ( 0.274) | 0.102 |
| 92  | 7.67 | 0.40 | 0.305 | 0.202    | ( 0.274) | 0.103 |
| 93  | 7.75 | 0.40 | 0.305 | 0.201    | ( 0.274) | 0.104 |
| 94  | 7.83 | 0.43 | 0.330 | 0.200    | ( 0.297) | 0.130 |
| 95  | 7.92 | 0.43 | 0.330 | 0.199    | ( 0.297) | 0.131 |
| 96  | 8.00 | 0.43 | 0.330 | 0.198    | ( 0.297) | 0.132 |
| 97  | 8.08 | 0.50 | 0.381 | 0.198    | ( 0.343) | 0.183 |
| 98  | 8.17 | 0.50 | 0.381 | 0.197    | ( 0.343) | 0.184 |
| 99  | 8.25 | 0.50 | 0.381 | 0.196    | ( 0.343) | 0.185 |
| 100 | 8.33 | 0.50 | 0.381 | 0.195    | ( 0.343) | 0.186 |
| 101 | 8.42 | 0.50 | 0.381 | 0.194    | ( 0.343) | 0.187 |
| 102 | 8.50 | 0.50 | 0.381 | 0.193    | ( 0.343) | 0.188 |
| 103 | 8.58 | 0.53 | 0.406 | 0.192    | ( 0.366) | 0.214 |
| 104 | 8.67 | 0.53 | 0.406 | 0.191    | ( 0.366) | 0.215 |
| 105 | 8.75 | 0.53 | 0.406 | 0.190    | ( 0.366) | 0.216 |
| 106 | 8.83 | 0.57 | 0.432 | 0.189    | ( 0.389) | 0.242 |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|     |       |      |       |       |          |       |
|-----|-------|------|-------|-------|----------|-------|
| 107 | 8.92  | 0.57 | 0.432 | 0.188 | ( 0.389) | 0.243 |
| 108 | 9.00  | 0.57 | 0.432 | 0.188 | ( 0.389) | 0.244 |
| 109 | 9.08  | 0.63 | 0.483 | 0.187 | ( 0.434) | 0.296 |
| 110 | 9.17  | 0.63 | 0.483 | 0.186 | ( 0.434) | 0.297 |
| 111 | 9.25  | 0.63 | 0.483 | 0.185 | ( 0.434) | 0.298 |
| 112 | 9.33  | 0.67 | 0.508 | 0.184 | ( 0.457) | 0.324 |
| 113 | 9.42  | 0.67 | 0.508 | 0.183 | ( 0.457) | 0.325 |
| 114 | 9.50  | 0.67 | 0.508 | 0.182 | ( 0.457) | 0.326 |
| 115 | 9.58  | 0.70 | 0.533 | 0.181 | ( 0.480) | 0.352 |
| 116 | 9.67  | 0.70 | 0.533 | 0.181 | ( 0.480) | 0.353 |
| 117 | 9.75  | 0.70 | 0.533 | 0.180 | ( 0.480) | 0.354 |
| 118 | 9.83  | 0.73 | 0.559 | 0.179 | ( 0.503) | 0.380 |
| 119 | 9.92  | 0.73 | 0.559 | 0.178 | ( 0.503) | 0.381 |
| 120 | 10.00 | 0.73 | 0.559 | 0.177 | ( 0.503) | 0.382 |
| 121 | 10.08 | 0.50 | 0.381 | 0.176 | ( 0.343) | 0.205 |
| 122 | 10.17 | 0.50 | 0.381 | 0.175 | ( 0.343) | 0.206 |
| 123 | 10.25 | 0.50 | 0.381 | 0.175 | ( 0.343) | 0.206 |
| 124 | 10.33 | 0.50 | 0.381 | 0.174 | ( 0.343) | 0.207 |
| 125 | 10.42 | 0.50 | 0.381 | 0.173 | ( 0.343) | 0.208 |
| 126 | 10.50 | 0.50 | 0.381 | 0.172 | ( 0.343) | 0.209 |
| 127 | 10.58 | 0.67 | 0.508 | 0.171 | ( 0.457) | 0.337 |
| 128 | 10.67 | 0.67 | 0.508 | 0.170 | ( 0.457) | 0.338 |
| 129 | 10.75 | 0.67 | 0.508 | 0.169 | ( 0.457) | 0.339 |
| 130 | 10.83 | 0.67 | 0.508 | 0.169 | ( 0.457) | 0.339 |
| 131 | 10.92 | 0.67 | 0.508 | 0.168 | ( 0.457) | 0.340 |
| 132 | 11.00 | 0.67 | 0.508 | 0.167 | ( 0.457) | 0.341 |
| 133 | 11.08 | 0.63 | 0.483 | 0.166 | ( 0.434) | 0.316 |
| 134 | 11.17 | 0.63 | 0.483 | 0.165 | ( 0.434) | 0.317 |
| 135 | 11.25 | 0.63 | 0.483 | 0.165 | ( 0.434) | 0.318 |
| 136 | 11.33 | 0.63 | 0.483 | 0.164 | ( 0.434) | 0.319 |
| 137 | 11.42 | 0.63 | 0.483 | 0.163 | ( 0.434) | 0.320 |
| 138 | 11.50 | 0.63 | 0.483 | 0.162 | ( 0.434) | 0.320 |
| 139 | 11.58 | 0.57 | 0.432 | 0.161 | ( 0.389) | 0.270 |
| 140 | 11.67 | 0.57 | 0.432 | 0.161 | ( 0.389) | 0.271 |
| 141 | 11.75 | 0.57 | 0.432 | 0.160 | ( 0.389) | 0.272 |
| 142 | 11.83 | 0.60 | 0.457 | 0.159 | ( 0.411) | 0.298 |
| 143 | 11.92 | 0.60 | 0.457 | 0.158 | ( 0.411) | 0.299 |
| 144 | 12.00 | 0.60 | 0.457 | 0.157 | ( 0.411) | 0.300 |
| 145 | 12.08 | 0.83 | 0.635 | 0.157 | ( 0.571) | 0.478 |
| 146 | 12.17 | 0.83 | 0.635 | 0.156 | ( 0.571) | 0.479 |
| 147 | 12.25 | 0.83 | 0.635 | 0.155 | ( 0.571) | 0.480 |
| 148 | 12.33 | 0.87 | 0.660 | 0.154 | ( 0.594) | 0.506 |
| 149 | 12.42 | 0.87 | 0.660 | 0.153 | ( 0.594) | 0.507 |
| 150 | 12.50 | 0.87 | 0.660 | 0.153 | ( 0.594) | 0.508 |
| 151 | 12.58 | 0.93 | 0.711 | 0.152 | ( 0.640) | 0.559 |
| 152 | 12.67 | 0.93 | 0.711 | 0.151 | ( 0.640) | 0.560 |
| 153 | 12.75 | 0.93 | 0.711 | 0.150 | ( 0.640) | 0.561 |
| 154 | 12.83 | 0.97 | 0.737 | 0.150 | ( 0.663) | 0.587 |
| 155 | 12.92 | 0.97 | 0.737 | 0.149 | ( 0.663) | 0.588 |
| 156 | 13.00 | 0.97 | 0.737 | 0.148 | ( 0.663) | 0.588 |
| 157 | 13.08 | 1.13 | 0.864 | 0.147 | ( 0.777) | 0.716 |
| 158 | 13.17 | 1.13 | 0.864 | 0.147 | ( 0.777) | 0.717 |
| 159 | 13.25 | 1.13 | 0.864 | 0.146 | ( 0.777) | 0.718 |
| 160 | 13.33 | 1.13 | 0.864 | 0.145 | ( 0.777) | 0.718 |
| 161 | 13.42 | 1.13 | 0.864 | 0.144 | ( 0.777) | 0.719 |
| 162 | 13.50 | 1.13 | 0.864 | 0.144 | ( 0.777) | 0.720 |
| 163 | 13.58 | 0.77 | 0.584 | 0.143 | ( 0.526) | 0.441 |
| 164 | 13.67 | 0.77 | 0.584 | 0.142 | ( 0.526) | 0.442 |
| 165 | 13.75 | 0.77 | 0.584 | 0.141 | ( 0.526) | 0.443 |
| 166 | 13.83 | 0.77 | 0.584 | 0.141 | ( 0.526) | 0.443 |
| 167 | 13.92 | 0.77 | 0.584 | 0.140 | ( 0.526) | 0.444 |
| 168 | 14.00 | 0.77 | 0.584 | 0.139 | ( 0.526) | 0.445 |
| 169 | 14.08 | 0.90 | 0.686 | 0.139 | ( 0.617) | 0.547 |
| 170 | 14.17 | 0.90 | 0.686 | 0.138 | ( 0.617) | 0.548 |
| 171 | 14.25 | 0.90 | 0.686 | 0.137 | ( 0.617) | 0.549 |
| 172 | 14.33 | 0.87 | 0.660 | 0.136 | ( 0.594) | 0.524 |
| 173 | 14.42 | 0.87 | 0.660 | 0.136 | ( 0.594) | 0.525 |
| 174 | 14.50 | 0.87 | 0.660 | 0.135 | ( 0.594) | 0.525 |
| 175 | 14.58 | 0.87 | 0.660 | 0.134 | ( 0.594) | 0.526 |
| 176 | 14.67 | 0.87 | 0.660 | 0.134 | ( 0.594) | 0.527 |
| 177 | 14.75 | 0.87 | 0.660 | 0.133 | ( 0.594) | 0.527 |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|     |       |      |       |          |          |       |
|-----|-------|------|-------|----------|----------|-------|
| 178 | 14.83 | 0.83 | 0.635 | 0.132    | ( 0.571) | 0.503 |
| 179 | 14.92 | 0.83 | 0.635 | 0.132    | ( 0.571) | 0.503 |
| 180 | 15.00 | 0.83 | 0.635 | 0.131    | ( 0.571) | 0.504 |
| 181 | 15.08 | 0.80 | 0.610 | 0.130    | ( 0.549) | 0.479 |
| 182 | 15.17 | 0.80 | 0.610 | 0.130    | ( 0.549) | 0.480 |
| 183 | 15.25 | 0.80 | 0.610 | 0.129    | ( 0.549) | 0.481 |
| 184 | 15.33 | 0.77 | 0.584 | 0.128    | ( 0.526) | 0.456 |
| 185 | 15.42 | 0.77 | 0.584 | 0.128    | ( 0.526) | 0.457 |
| 186 | 15.50 | 0.77 | 0.584 | 0.127    | ( 0.526) | 0.457 |
| 187 | 15.58 | 0.63 | 0.483 | 0.126    | ( 0.434) | 0.356 |
| 188 | 15.67 | 0.63 | 0.483 | 0.126    | ( 0.434) | 0.357 |
| 189 | 15.75 | 0.63 | 0.483 | 0.125    | ( 0.434) | 0.358 |
| 190 | 15.83 | 0.63 | 0.483 | 0.124    | ( 0.434) | 0.358 |
| 191 | 15.92 | 0.63 | 0.483 | 0.124    | ( 0.434) | 0.359 |
| 192 | 16.00 | 0.63 | 0.483 | 0.123    | ( 0.434) | 0.359 |
| 193 | 16.08 | 0.13 | 0.102 | ( 0.123) | 0.091    | 0.010 |
| 194 | 16.17 | 0.13 | 0.102 | ( 0.122) | 0.091    | 0.010 |
| 195 | 16.25 | 0.13 | 0.102 | ( 0.121) | 0.091    | 0.010 |
| 196 | 16.33 | 0.13 | 0.102 | ( 0.121) | 0.091    | 0.010 |
| 197 | 16.42 | 0.13 | 0.102 | ( 0.120) | 0.091    | 0.010 |
| 198 | 16.50 | 0.13 | 0.102 | ( 0.119) | 0.091    | 0.010 |
| 199 | 16.58 | 0.10 | 0.076 | ( 0.119) | 0.069    | 0.008 |
| 200 | 16.67 | 0.10 | 0.076 | ( 0.118) | 0.069    | 0.008 |
| 201 | 16.75 | 0.10 | 0.076 | ( 0.118) | 0.069    | 0.008 |
| 202 | 16.83 | 0.10 | 0.076 | ( 0.117) | 0.069    | 0.008 |
| 203 | 16.92 | 0.10 | 0.076 | ( 0.116) | 0.069    | 0.008 |
| 204 | 17.00 | 0.10 | 0.076 | ( 0.116) | 0.069    | 0.008 |
| 205 | 17.08 | 0.17 | 0.127 | ( 0.115) | 0.114    | 0.013 |
| 206 | 17.17 | 0.17 | 0.127 | ( 0.115) | 0.114    | 0.013 |
| 207 | 17.25 | 0.17 | 0.127 | 0.114    | ( 0.114) | 0.013 |
| 208 | 17.33 | 0.17 | 0.127 | 0.114    | ( 0.114) | 0.013 |
| 209 | 17.42 | 0.17 | 0.127 | 0.113    | ( 0.114) | 0.014 |
| 210 | 17.50 | 0.17 | 0.127 | 0.112    | ( 0.114) | 0.015 |
| 211 | 17.58 | 0.17 | 0.127 | 0.112    | ( 0.114) | 0.015 |
| 212 | 17.67 | 0.17 | 0.127 | 0.111    | ( 0.114) | 0.016 |
| 213 | 17.75 | 0.17 | 0.127 | 0.111    | ( 0.114) | 0.016 |
| 214 | 17.83 | 0.13 | 0.102 | ( 0.110) | 0.091    | 0.010 |
| 215 | 17.92 | 0.13 | 0.102 | ( 0.110) | 0.091    | 0.010 |
| 216 | 18.00 | 0.13 | 0.102 | ( 0.109) | 0.091    | 0.010 |
| 217 | 18.08 | 0.13 | 0.102 | ( 0.109) | 0.091    | 0.010 |
| 218 | 18.17 | 0.13 | 0.102 | ( 0.108) | 0.091    | 0.010 |
| 219 | 18.25 | 0.13 | 0.102 | ( 0.107) | 0.091    | 0.010 |
| 220 | 18.33 | 0.13 | 0.102 | ( 0.107) | 0.091    | 0.010 |
| 221 | 18.42 | 0.13 | 0.102 | ( 0.106) | 0.091    | 0.010 |
| 222 | 18.50 | 0.13 | 0.102 | ( 0.106) | 0.091    | 0.010 |
| 223 | 18.58 | 0.10 | 0.076 | ( 0.105) | 0.069    | 0.008 |
| 224 | 18.67 | 0.10 | 0.076 | ( 0.105) | 0.069    | 0.008 |
| 225 | 18.75 | 0.10 | 0.076 | ( 0.104) | 0.069    | 0.008 |
| 226 | 18.83 | 0.07 | 0.051 | ( 0.104) | 0.046    | 0.005 |
| 227 | 18.92 | 0.07 | 0.051 | ( 0.103) | 0.046    | 0.005 |
| 228 | 19.00 | 0.07 | 0.051 | ( 0.103) | 0.046    | 0.005 |
| 229 | 19.08 | 0.10 | 0.076 | ( 0.102) | 0.069    | 0.008 |
| 230 | 19.17 | 0.10 | 0.076 | ( 0.102) | 0.069    | 0.008 |
| 231 | 19.25 | 0.10 | 0.076 | ( 0.101) | 0.069    | 0.008 |
| 232 | 19.33 | 0.13 | 0.102 | ( 0.101) | 0.091    | 0.010 |
| 233 | 19.42 | 0.13 | 0.102 | ( 0.101) | 0.091    | 0.010 |
| 234 | 19.50 | 0.13 | 0.102 | ( 0.100) | 0.091    | 0.010 |
| 235 | 19.58 | 0.10 | 0.076 | ( 0.100) | 0.069    | 0.008 |
| 236 | 19.67 | 0.10 | 0.076 | ( 0.099) | 0.069    | 0.008 |
| 237 | 19.75 | 0.10 | 0.076 | ( 0.099) | 0.069    | 0.008 |
| 238 | 19.83 | 0.07 | 0.051 | ( 0.098) | 0.046    | 0.005 |
| 239 | 19.92 | 0.07 | 0.051 | ( 0.098) | 0.046    | 0.005 |
| 240 | 20.00 | 0.07 | 0.051 | ( 0.097) | 0.046    | 0.005 |
| 241 | 20.08 | 0.10 | 0.076 | ( 0.097) | 0.069    | 0.008 |
| 242 | 20.17 | 0.10 | 0.076 | ( 0.097) | 0.069    | 0.008 |
| 243 | 20.25 | 0.10 | 0.076 | ( 0.096) | 0.069    | 0.008 |
| 244 | 20.33 | 0.10 | 0.076 | ( 0.096) | 0.069    | 0.008 |
| 245 | 20.42 | 0.10 | 0.076 | ( 0.095) | 0.069    | 0.008 |
| 246 | 20.50 | 0.10 | 0.076 | ( 0.095) | 0.069    | 0.008 |
| 247 | 20.58 | 0.10 | 0.076 | ( 0.094) | 0.069    | 0.008 |
| 248 | 20.67 | 0.10 | 0.076 | ( 0.094) | 0.069    | 0.008 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

|     |       |      |       |          |       |       |
|-----|-------|------|-------|----------|-------|-------|
| 249 | 20.75 | 0.10 | 0.076 | ( 0.094) | 0.069 | 0.008 |
| 250 | 20.83 | 0.07 | 0.051 | ( 0.093) | 0.046 | 0.005 |
| 251 | 20.92 | 0.07 | 0.051 | ( 0.093) | 0.046 | 0.005 |
| 252 | 21.00 | 0.07 | 0.051 | ( 0.093) | 0.046 | 0.005 |
| 253 | 21.08 | 0.10 | 0.076 | ( 0.092) | 0.069 | 0.008 |
| 254 | 21.17 | 0.10 | 0.076 | ( 0.092) | 0.069 | 0.008 |
| 255 | 21.25 | 0.10 | 0.076 | ( 0.091) | 0.069 | 0.008 |
| 256 | 21.33 | 0.07 | 0.051 | ( 0.091) | 0.046 | 0.005 |
| 257 | 21.42 | 0.07 | 0.051 | ( 0.091) | 0.046 | 0.005 |
| 258 | 21.50 | 0.07 | 0.051 | ( 0.090) | 0.046 | 0.005 |
| 259 | 21.58 | 0.10 | 0.076 | ( 0.090) | 0.069 | 0.008 |
| 260 | 21.67 | 0.10 | 0.076 | ( 0.090) | 0.069 | 0.008 |
| 261 | 21.75 | 0.10 | 0.076 | ( 0.089) | 0.069 | 0.008 |
| 262 | 21.83 | 0.07 | 0.051 | ( 0.089) | 0.046 | 0.005 |
| 263 | 21.92 | 0.07 | 0.051 | ( 0.089) | 0.046 | 0.005 |
| 264 | 22.00 | 0.07 | 0.051 | ( 0.089) | 0.046 | 0.005 |
| 265 | 22.08 | 0.10 | 0.076 | ( 0.088) | 0.069 | 0.008 |
| 266 | 22.17 | 0.10 | 0.076 | ( 0.088) | 0.069 | 0.008 |
| 267 | 22.25 | 0.10 | 0.076 | ( 0.088) | 0.069 | 0.008 |
| 268 | 22.33 | 0.07 | 0.051 | ( 0.087) | 0.046 | 0.005 |
| 269 | 22.42 | 0.07 | 0.051 | ( 0.087) | 0.046 | 0.005 |
| 270 | 22.50 | 0.07 | 0.051 | ( 0.087) | 0.046 | 0.005 |
| 271 | 22.58 | 0.07 | 0.051 | ( 0.087) | 0.046 | 0.005 |
| 272 | 22.67 | 0.07 | 0.051 | ( 0.086) | 0.046 | 0.005 |
| 273 | 22.75 | 0.07 | 0.051 | ( 0.086) | 0.046 | 0.005 |
| 274 | 22.83 | 0.07 | 0.051 | ( 0.086) | 0.046 | 0.005 |
| 275 | 22.92 | 0.07 | 0.051 | ( 0.086) | 0.046 | 0.005 |
| 276 | 23.00 | 0.07 | 0.051 | ( 0.086) | 0.046 | 0.005 |
| 277 | 23.08 | 0.07 | 0.051 | ( 0.085) | 0.046 | 0.005 |
| 278 | 23.17 | 0.07 | 0.051 | ( 0.085) | 0.046 | 0.005 |
| 279 | 23.25 | 0.07 | 0.051 | ( 0.085) | 0.046 | 0.005 |
| 280 | 23.33 | 0.07 | 0.051 | ( 0.085) | 0.046 | 0.005 |
| 281 | 23.42 | 0.07 | 0.051 | ( 0.085) | 0.046 | 0.005 |
| 282 | 23.50 | 0.07 | 0.051 | ( 0.084) | 0.046 | 0.005 |
| 283 | 23.58 | 0.07 | 0.051 | ( 0.084) | 0.046 | 0.005 |
| 284 | 23.67 | 0.07 | 0.051 | ( 0.084) | 0.046 | 0.005 |
| 285 | 23.75 | 0.07 | 0.051 | ( 0.084) | 0.046 | 0.005 |
| 286 | 23.83 | 0.07 | 0.051 | ( 0.084) | 0.046 | 0.005 |
| 287 | 23.92 | 0.07 | 0.051 | ( 0.084) | 0.046 | 0.005 |
| 288 | 24.00 | 0.07 | 0.051 | ( 0.084) | 0.046 | 0.005 |

(Loss Rate Not Used)

Sum = 100.0

Sum = 41.2

Flood volume = Effective rainfall 3.43(In)  
times area 8.4(Ac.) / [(In)/(Ft.)] = 2.4(Ac.Ft)  
Total soil loss = 2.92(In)  
Total soil loss = 2.041(Ac.Ft)  
Total rainfall = 6.35(In)  
Flood volume = 104697.4 Cubic Feet  
Total soil loss = 88923.6 Cubic Feet

-----  
Peak flow rate of this hydrograph = 6.091(CFS)  
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+++++

24 - H O U R S T O R M  
R u n o f f H y d r o g r a p h

-----  
Hydrograph in 5 Minute intervals ((CFS))  
-----

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 2.5 | 5.0 | 7.5 | 10.0 |
|-----------|--------------|--------|---|-----|-----|-----|------|
| 0+ 5      | 0.0001       | 0.01 Q |   |     |     |     |      |
| 0+10      | 0.0003       | 0.03 Q |   |     |     |     |      |
| 0+15      | 0.0006       | 0.04 Q |   |     |     |     |      |
| 0+20      | 0.0009       | 0.05 Q |   |     |     |     |      |
| 0+25      | 0.0013       | 0.06 Q |   |     |     |     |      |
| 0+30      | 0.0018       | 0.06 Q |   |     |     |     |      |
| 0+35      | 0.0022       | 0.06 Q |   |     |     |     |      |
| 0+40      | 0.0026       | 0.06 Q |   |     |     |     |      |
| 0+45      | 0.0031       | 0.06 Q |   |     |     |     |      |
| 0+50      | 0.0036       | 0.07 Q |   |     |     |     |      |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|      |        |      |    |  |  |  |  |
|------|--------|------|----|--|--|--|--|
| 0+55 | 0.0041 | 0.08 | Q  |  |  |  |  |
| 1+ 0 | 0.0047 | 0.08 | Q  |  |  |  |  |
| 1+ 5 | 0.0053 | 0.08 | Q  |  |  |  |  |
| 1+10 | 0.0057 | 0.07 | Q  |  |  |  |  |
| 1+15 | 0.0062 | 0.07 | Q  |  |  |  |  |
| 1+20 | 0.0066 | 0.06 | Q  |  |  |  |  |
| 1+25 | 0.0071 | 0.06 | Q  |  |  |  |  |
| 1+30 | 0.0075 | 0.06 | Q  |  |  |  |  |
| 1+35 | 0.0080 | 0.06 | Q  |  |  |  |  |
| 1+40 | 0.0084 | 0.06 | Q  |  |  |  |  |
| 1+45 | 0.0089 | 0.06 | Q  |  |  |  |  |
| 1+50 | 0.0093 | 0.07 | Q  |  |  |  |  |
| 1+55 | 0.0099 | 0.08 | Q  |  |  |  |  |
| 2+ 0 | 0.0105 | 0.08 | Q  |  |  |  |  |
| 2+ 5 | 0.0111 | 0.09 | Q  |  |  |  |  |
| 2+10 | 0.0117 | 0.09 | Q  |  |  |  |  |
| 2+15 | 0.0123 | 0.09 | Q  |  |  |  |  |
| 2+20 | 0.0129 | 0.09 | Q  |  |  |  |  |
| 2+25 | 0.0135 | 0.09 | Q  |  |  |  |  |
| 2+30 | 0.0140 | 0.09 | Q  |  |  |  |  |
| 2+35 | 0.0147 | 0.09 | Q  |  |  |  |  |
| 2+40 | 0.0154 | 0.10 | Q  |  |  |  |  |
| 2+45 | 0.0161 | 0.11 | Q  |  |  |  |  |
| 2+50 | 0.0169 | 0.11 | Q  |  |  |  |  |
| 2+55 | 0.0176 | 0.11 | Q  |  |  |  |  |
| 3+ 0 | 0.0183 | 0.11 | Q  |  |  |  |  |
| 3+ 5 | 0.0191 | 0.11 | Q  |  |  |  |  |
| 3+10 | 0.0198 | 0.11 | Q  |  |  |  |  |
| 3+15 | 0.0206 | 0.11 | Q  |  |  |  |  |
| 3+20 | 0.0213 | 0.11 | Q  |  |  |  |  |
| 3+25 | 0.0220 | 0.11 | Q  |  |  |  |  |
| 3+30 | 0.0228 | 0.11 | Q  |  |  |  |  |
| 3+35 | 0.0235 | 0.11 | Q  |  |  |  |  |
| 3+40 | 0.0243 | 0.11 | Q  |  |  |  |  |
| 3+45 | 0.0250 | 0.11 | Q  |  |  |  |  |
| 3+50 | 0.0258 | 0.11 | Q  |  |  |  |  |
| 3+55 | 0.0266 | 0.12 | Q  |  |  |  |  |
| 4+ 0 | 0.0275 | 0.13 | Q  |  |  |  |  |
| 4+ 5 | 0.0284 | 0.13 | Q  |  |  |  |  |
| 4+10 | 0.0293 | 0.13 | Q  |  |  |  |  |
| 4+15 | 0.0302 | 0.13 | Q  |  |  |  |  |
| 4+20 | 0.0311 | 0.13 | Q  |  |  |  |  |
| 4+25 | 0.0321 | 0.15 | Q  |  |  |  |  |
| 4+30 | 0.0331 | 0.15 | Q  |  |  |  |  |
| 4+35 | 0.0342 | 0.15 | Q  |  |  |  |  |
| 4+40 | 0.0352 | 0.15 | Q  |  |  |  |  |
| 4+45 | 0.0363 | 0.15 | Q  |  |  |  |  |
| 4+50 | 0.0373 | 0.16 | Q  |  |  |  |  |
| 4+55 | 0.0385 | 0.17 | Q  |  |  |  |  |
| 5+ 0 | 0.0397 | 0.17 | Q  |  |  |  |  |
| 5+ 5 | 0.0408 | 0.16 | Q  |  |  |  |  |
| 5+10 | 0.0417 | 0.14 | Q  |  |  |  |  |
| 5+15 | 0.0426 | 0.13 | Q  |  |  |  |  |
| 5+20 | 0.0436 | 0.13 | Q  |  |  |  |  |
| 5+25 | 0.0446 | 0.15 | Q  |  |  |  |  |
| 5+30 | 0.0456 | 0.15 | Q  |  |  |  |  |
| 5+35 | 0.0467 | 0.16 | Q  |  |  |  |  |
| 5+40 | 0.0478 | 0.17 | Q  |  |  |  |  |
| 5+45 | 0.0490 | 0.17 | Q  |  |  |  |  |
| 5+50 | 0.0502 | 0.17 | Q  |  |  |  |  |
| 5+55 | 0.0514 | 0.17 | Q  |  |  |  |  |
| 6+ 0 | 0.0525 | 0.17 | Q  |  |  |  |  |
| 6+ 5 | 0.0538 | 0.18 | Q  |  |  |  |  |
| 6+10 | 0.0551 | 0.19 | Q  |  |  |  |  |
| 6+15 | 0.0564 | 0.19 | Q  |  |  |  |  |
| 6+20 | 0.0577 | 0.19 | Q  |  |  |  |  |
| 6+25 | 0.0591 | 0.19 | Q  |  |  |  |  |
| 6+30 | 0.0604 | 0.19 | QV |  |  |  |  |
| 6+35 | 0.0620 | 0.23 | QV |  |  |  |  |
| 6+40 | 0.0641 | 0.31 | IQ |  |  |  |  |
| 6+45 | 0.0664 | 0.33 | IQ |  |  |  |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|       |        |      |       |  |  |  |  |
|-------|--------|------|-------|--|--|--|--|
| 6+50  | 0.0688 | 0.35 | Q     |  |  |  |  |
| 6+55  | 0.0712 | 0.36 | Q     |  |  |  |  |
| 7+ 0  | 0.0738 | 0.37 | Q     |  |  |  |  |
| 7+ 5  | 0.0763 | 0.37 | Q     |  |  |  |  |
| 7+10  | 0.0790 | 0.38 | Q     |  |  |  |  |
| 7+15  | 0.0817 | 0.39 | Q     |  |  |  |  |
| 7+20  | 0.0848 | 0.45 | Q     |  |  |  |  |
| 7+25  | 0.0887 | 0.58 | VQ    |  |  |  |  |
| 7+30  | 0.0930 | 0.62 | VQ    |  |  |  |  |
| 7+35  | 0.0977 | 0.69 | VQ    |  |  |  |  |
| 7+40  | 0.1033 | 0.82 | V Q   |  |  |  |  |
| 7+45  | 0.1092 | 0.86 | V Q   |  |  |  |  |
| 7+50  | 0.1156 | 0.92 | V Q   |  |  |  |  |
| 7+55  | 0.1229 | 1.05 | V Q   |  |  |  |  |
| 8+ 0  | 0.1304 | 1.09 | V Q   |  |  |  |  |
| 8+ 5  | 0.1388 | 1.21 | V Q   |  |  |  |  |
| 8+10  | 0.1488 | 1.46 | V Q   |  |  |  |  |
| 8+15  | 0.1594 | 1.54 | V Q   |  |  |  |  |
| 8+20  | 0.1702 | 1.56 | V Q   |  |  |  |  |
| 8+25  | 0.1810 | 1.57 | V Q   |  |  |  |  |
| 8+30  | 0.1919 | 1.58 | V Q   |  |  |  |  |
| 8+35  | 0.2033 | 1.64 | V Q   |  |  |  |  |
| 8+40  | 0.2154 | 1.77 | V Q   |  |  |  |  |
| 8+45  | 0.2279 | 1.81 | V Q   |  |  |  |  |
| 8+50  | 0.2408 | 1.88 | V Q   |  |  |  |  |
| 8+55  | 0.2547 | 2.01 | V Q   |  |  |  |  |
| 9+ 0  | 0.2688 | 2.05 | V Q   |  |  |  |  |
| 9+ 5  | 0.2837 | 2.17 | V Q   |  |  |  |  |
| 9+10  | 0.3003 | 2.42 | V Q   |  |  |  |  |
| 9+15  | 0.3175 | 2.49 | V Q   |  |  |  |  |
| 9+20  | 0.3352 | 2.57 | V Q   |  |  |  |  |
| 9+25  | 0.3537 | 2.70 | V Q   |  |  |  |  |
| 9+30  | 0.3726 | 2.74 | V Q   |  |  |  |  |
| 9+35  | 0.3919 | 2.81 | V  Q  |  |  |  |  |
| 9+40  | 0.4121 | 2.94 | V  Q  |  |  |  |  |
| 9+45  | 0.4326 | 2.98 | V  Q  |  |  |  |  |
| 9+50  | 0.4536 | 3.04 | V   Q |  |  |  |  |
| 9+55  | 0.4754 | 3.17 | V   Q |  |  |  |  |
| 10+ 0 | 0.4976 | 3.21 | V   Q |  |  |  |  |
| 10+ 5 | 0.5173 | 2.87 | V  Q  |  |  |  |  |
| 10+10 | 0.5314 | 2.04 | Q     |  |  |  |  |
| 10+15 | 0.5440 | 1.83 | Q V   |  |  |  |  |
| 10+20 | 0.5562 | 1.77 | Q V   |  |  |  |  |
| 10+25 | 0.5683 | 1.76 | Q V   |  |  |  |  |
| 10+30 | 0.5805 | 1.76 | Q V   |  |  |  |  |
| 10+35 | 0.5944 | 2.03 | QV    |  |  |  |  |
| 10+40 | 0.6126 | 2.63 | Q     |  |  |  |  |
| 10+45 | 0.6318 | 2.80 | VQ    |  |  |  |  |
| 10+50 | 0.6515 | 2.85 | VQ    |  |  |  |  |
| 10+55 | 0.6712 | 2.87 | Q     |  |  |  |  |
| 11+ 0 | 0.6910 | 2.88 | Q     |  |  |  |  |
| 11+ 5 | 0.7106 | 2.84 | Q     |  |  |  |  |
| 11+10 | 0.7293 | 2.72 | Q V   |  |  |  |  |
| 11+15 | 0.7479 | 2.70 | Q V   |  |  |  |  |
| 11+20 | 0.7665 | 2.70 | Q V   |  |  |  |  |
| 11+25 | 0.7851 | 2.70 | Q V   |  |  |  |  |
| 11+30 | 0.8038 | 2.71 | Q V   |  |  |  |  |
| 11+35 | 0.8217 | 2.61 | Q V   |  |  |  |  |
| 11+40 | 0.8381 | 2.38 | Q  V  |  |  |  |  |
| 11+45 | 0.8541 | 2.32 | Q  V  |  |  |  |  |
| 11+50 | 0.8704 | 2.36 | Q  V  |  |  |  |  |
| 11+55 | 0.8875 | 2.48 | Q  V  |  |  |  |  |
| 12+ 0 | 0.9049 | 2.52 | Q V   |  |  |  |  |
| 12+ 5 | 0.9248 | 2.89 | Q V   |  |  |  |  |
| 12+10 | 0.9506 | 3.74 | QV    |  |  |  |  |
| 12+15 | 0.9779 | 3.97 | QV    |  |  |  |  |
| 12+20 | 1.0061 | 4.09 | Q     |  |  |  |  |
| 12+25 | 1.0353 | 4.24 | QV    |  |  |  |  |
| 12+30 | 1.0647 | 4.28 | Q     |  |  |  |  |
| 12+35 | 1.0950 | 4.40 | QV    |  |  |  |  |
| 12+40 | 1.1271 | 4.65 | Q     |  |  |  |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|       |        |      |   |   |   |     |  |  |  |
|-------|--------|------|---|---|---|-----|--|--|--|
| 12+45 | 1.1595 | 4.72 |   |   |   | QV  |  |  |  |
| 12+50 | 1.1926 | 4.79 |   |   |   | Q   |  |  |  |
| 12+55 | 1.2265 | 4.93 |   |   |   | QV  |  |  |  |
| 13+ 0 | 1.2607 | 4.97 |   |   |   | QV  |  |  |  |
| 13+ 5 | 1.2967 | 5.24 |   |   |   | QV  |  |  |  |
| 13+10 | 1.3370 | 5.84 |   |   |   | VQ  |  |  |  |
| 13+15 | 1.3784 | 6.01 |   |   |   | V Q |  |  |  |
| 13+20 | 1.4201 | 6.06 |   |   |   | VQ  |  |  |  |
| 13+25 | 1.4620 | 6.08 |   |   |   | Q   |  |  |  |
| 13+30 | 1.5040 | 6.09 |   |   |   | QV  |  |  |  |
| 13+35 | 1.5421 | 5.54 |   |   |   | Q V |  |  |  |
| 13+40 | 1.5712 | 4.22 |   |   | Q | V   |  |  |  |
| 13+45 | 1.5979 | 3.88 |   |   | Q | V   |  |  |  |
| 13+50 | 1.6240 | 3.79 |   |   | Q | V   |  |  |  |
| 13+55 | 1.6499 | 3.77 |   |   | Q | V   |  |  |  |
| 14+ 0 | 1.6758 | 3.76 |   |   | Q | V   |  |  |  |
| 14+ 5 | 1.7032 | 3.97 |   |   | Q | V   |  |  |  |
| 14+10 | 1.7339 | 4.46 |   |   | Q | V   |  |  |  |
| 14+15 | 1.7655 | 4.59 |   |   | Q | V   |  |  |  |
| 14+20 | 1.7971 | 4.58 |   |   | Q | V   |  |  |  |
| 14+25 | 1.8279 | 4.48 |   |   | Q | V   |  |  |  |
| 14+30 | 1.8586 | 4.46 |   |   | Q | V   |  |  |  |
| 14+35 | 1.8893 | 4.45 |   |   | Q | V   |  |  |  |
| 14+40 | 1.9199 | 4.46 |   |   | Q | V   |  |  |  |
| 14+45 | 1.9507 | 4.46 |   |   | Q | V   |  |  |  |
| 14+50 | 1.9811 | 4.42 |   |   | Q | V   |  |  |  |
| 14+55 | 2.0107 | 4.30 |   |   | Q | V   |  |  |  |
| 15+ 0 | 2.0401 | 4.28 |   |   | Q | V   |  |  |  |
| 15+ 5 | 2.0692 | 4.22 |   |   | Q | V   |  |  |  |
| 15+10 | 2.0975 | 4.10 |   |   | Q | V   |  |  |  |
| 15+15 | 2.1256 | 4.08 |   |   | Q | V   |  |  |  |
| 15+20 | 2.1533 | 4.02 |   |   | Q | V   |  |  |  |
| 15+25 | 2.1802 | 3.91 |   |   | Q | V   |  |  |  |
| 15+30 | 2.2069 | 3.88 |   |   | Q | V   |  |  |  |
| 15+35 | 2.2322 | 3.67 |   |   | Q | V   |  |  |  |
| 15+40 | 2.2542 | 3.19 |   | Q |   | V   |  |  |  |
| 15+45 | 2.2753 | 3.07 |   | Q |   | V   |  |  |  |
| 15+50 | 2.2963 | 3.04 |   | Q |   | V   |  |  |  |
| 15+55 | 2.3172 | 3.04 |   | Q |   | V   |  |  |  |
| 16+ 0 | 2.3381 | 3.04 |   | Q |   | V   |  |  |  |
| 16+ 5 | 2.3543 | 2.34 |   | Q |   | V   |  |  |  |
| 16+10 | 2.3590 | 0.69 | Q |   |   | V   |  |  |  |
| 16+15 | 2.3608 | 0.26 | Q |   |   | V   |  |  |  |
| 16+20 | 2.3617 | 0.13 | Q |   |   | V   |  |  |  |
| 16+25 | 2.3624 | 0.10 | Q |   |   | V   |  |  |  |
| 16+30 | 2.3630 | 0.09 | Q |   |   | V   |  |  |  |
| 16+35 | 2.3636 | 0.08 | Q |   |   | V   |  |  |  |
| 16+40 | 2.3640 | 0.07 | Q |   |   | V   |  |  |  |
| 16+45 | 2.3645 | 0.07 | Q |   |   | V   |  |  |  |
| 16+50 | 2.3649 | 0.06 | Q |   |   | V   |  |  |  |
| 16+55 | 2.3654 | 0.06 | Q |   |   | V   |  |  |  |
| 17+ 0 | 2.3658 | 0.06 | Q |   |   | V   |  |  |  |
| 17+ 5 | 2.3663 | 0.07 | Q |   |   | V   |  |  |  |
| 17+10 | 2.3670 | 0.10 | Q |   |   | V   |  |  |  |
| 17+15 | 2.3678 | 0.11 | Q |   |   | V   |  |  |  |
| 17+20 | 2.3685 | 0.11 | Q |   |   | V   |  |  |  |
| 17+25 | 2.3693 | 0.11 | Q |   |   | V   |  |  |  |
| 17+30 | 2.3701 | 0.12 | Q |   |   | V   |  |  |  |
| 17+35 | 2.3710 | 0.12 | Q |   |   | V   |  |  |  |
| 17+40 | 2.3718 | 0.13 | Q |   |   | V   |  |  |  |
| 17+45 | 2.3728 | 0.13 | Q |   |   | V   |  |  |  |
| 17+50 | 2.3736 | 0.12 | Q |   |   | V   |  |  |  |
| 17+55 | 2.3743 | 0.10 | Q |   |   | V   |  |  |  |
| 18+ 0 | 2.3749 | 0.09 | Q |   |   | V   |  |  |  |
| 18+ 5 | 2.3755 | 0.09 | Q |   |   | V   |  |  |  |
| 18+10 | 2.3761 | 0.09 | Q |   |   | V   |  |  |  |
| 18+15 | 2.3767 | 0.09 | Q |   |   | V   |  |  |  |
| 18+20 | 2.3773 | 0.09 | Q |   |   | V   |  |  |  |
| 18+25 | 2.3779 | 0.09 | Q |   |   | V   |  |  |  |
| 18+30 | 2.3785 | 0.09 | Q |   |   | V   |  |  |  |
| 18+35 | 2.3790 | 0.08 | Q |   |   | V   |  |  |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|       |        |      |   |  |  |  |   |
|-------|--------|------|---|--|--|--|---|
| 18+40 | 2.3795 | 0.07 | Q |  |  |  | V |
| 18+45 | 2.3799 | 0.07 | Q |  |  |  | V |
| 18+50 | 2.3804 | 0.06 | Q |  |  |  | V |
| 18+55 | 2.3807 | 0.05 | Q |  |  |  | V |
| 19+ 0 | 2.3810 | 0.04 | Q |  |  |  | V |
| 19+ 5 | 2.3813 | 0.05 | Q |  |  |  | V |
| 19+10 | 2.3817 | 0.06 | Q |  |  |  | V |
| 19+15 | 2.3822 | 0.06 | Q |  |  |  | V |
| 19+20 | 2.3826 | 0.07 | Q |  |  |  | V |
| 19+25 | 2.3832 | 0.08 | Q |  |  |  | V |
| 19+30 | 2.3838 | 0.08 | Q |  |  |  | V |
| 19+35 | 2.3843 | 0.08 | Q |  |  |  | V |
| 19+40 | 2.3848 | 0.07 | Q |  |  |  | V |
| 19+45 | 2.3853 | 0.07 | Q |  |  |  | V |
| 19+50 | 2.3857 | 0.06 | Q |  |  |  | V |
| 19+55 | 2.3860 | 0.05 | Q |  |  |  | V |
| 20+ 0 | 2.3863 | 0.04 | Q |  |  |  | V |
| 20+ 5 | 2.3867 | 0.05 | Q |  |  |  | V |
| 20+10 | 2.3871 | 0.06 | Q |  |  |  | V |
| 20+15 | 2.3875 | 0.06 | Q |  |  |  | V |
| 20+20 | 2.3879 | 0.06 | Q |  |  |  | V |
| 20+25 | 2.3884 | 0.06 | Q |  |  |  | V |
| 20+30 | 2.3888 | 0.06 | Q |  |  |  | V |
| 20+35 | 2.3893 | 0.06 | Q |  |  |  | V |
| 20+40 | 2.3897 | 0.06 | Q |  |  |  | V |
| 20+45 | 2.3902 | 0.06 | Q |  |  |  | V |
| 20+50 | 2.3906 | 0.06 | Q |  |  |  | V |
| 20+55 | 2.3909 | 0.05 | Q |  |  |  | V |
| 21+ 0 | 2.3912 | 0.04 | Q |  |  |  | V |
| 21+ 5 | 2.3915 | 0.05 | Q |  |  |  | V |
| 21+10 | 2.3920 | 0.06 | Q |  |  |  | V |
| 21+15 | 2.3924 | 0.06 | Q |  |  |  | V |
| 21+20 | 2.3928 | 0.06 | Q |  |  |  | V |
| 21+25 | 2.3931 | 0.05 | Q |  |  |  | V |
| 21+30 | 2.3934 | 0.04 | Q |  |  |  | V |
| 21+35 | 2.3938 | 0.05 | Q |  |  |  | V |
| 21+40 | 2.3942 | 0.06 | Q |  |  |  | V |
| 21+45 | 2.3946 | 0.06 | Q |  |  |  | V |
| 21+50 | 2.3950 | 0.06 | Q |  |  |  | V |
| 21+55 | 2.3953 | 0.05 | Q |  |  |  | V |
| 22+ 0 | 2.3957 | 0.04 | Q |  |  |  | V |
| 22+ 5 | 2.3960 | 0.05 | Q |  |  |  | V |
| 22+10 | 2.3964 | 0.06 | Q |  |  |  | V |
| 22+15 | 2.3968 | 0.06 | Q |  |  |  | V |
| 22+20 | 2.3972 | 0.06 | Q |  |  |  | V |
| 22+25 | 2.3976 | 0.05 | Q |  |  |  | V |
| 22+30 | 2.3979 | 0.04 | Q |  |  |  | V |
| 22+35 | 2.3982 | 0.04 | Q |  |  |  | V |
| 22+40 | 2.3985 | 0.04 | Q |  |  |  | V |
| 22+45 | 2.3988 | 0.04 | Q |  |  |  | V |
| 22+50 | 2.3991 | 0.04 | Q |  |  |  | V |
| 22+55 | 2.3994 | 0.04 | Q |  |  |  | V |
| 23+ 0 | 2.3997 | 0.04 | Q |  |  |  | V |
| 23+ 5 | 2.4000 | 0.04 | Q |  |  |  | V |
| 23+10 | 2.4002 | 0.04 | Q |  |  |  | V |
| 23+15 | 2.4005 | 0.04 | Q |  |  |  | V |
| 23+20 | 2.4008 | 0.04 | Q |  |  |  | V |
| 23+25 | 2.4011 | 0.04 | Q |  |  |  | V |
| 23+30 | 2.4014 | 0.04 | Q |  |  |  | V |
| 23+35 | 2.4017 | 0.04 | Q |  |  |  | V |
| 23+40 | 2.4020 | 0.04 | Q |  |  |  | V |
| 23+45 | 2.4023 | 0.04 | Q |  |  |  | V |
| 23+50 | 2.4026 | 0.04 | Q |  |  |  | V |
| 23+55 | 2.4029 | 0.04 | Q |  |  |  | V |
| 24+ 0 | 2.4032 | 0.04 | Q |  |  |  | V |
| 24+ 5 | 2.4034 | 0.03 | Q |  |  |  | V |
| 24+10 | 2.4035 | 0.01 | Q |  |  |  | V |
| 24+15 | 2.4035 | 0.00 | Q |  |  |  | V |
| 24+20 | 2.4035 | 0.00 | Q |  |  |  | V |
| 24+25 | 2.4035 | 0.00 | Q |  |  |  | V |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

### U n i t   H y d r o g r a p h   A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1  
Study date 01/29/18 File: nrareabex2242.out

+++++

Riverside County Synthetic Unit Hydrology Method  
RCFC & WCD Manual date - April 1978

Program License Serial Number 4029

-----  
English (in-lb) Input Units Used  
English Rainfall Data (Inches) Input Values Used

English Units used in output format

-----  
Nichols Road Project - Tract 37305  
Drainage Area B = 8.4 Ac  
Existing Condition for comparison HCOC mitigation  
2-year 24-hour storm

-----  
Drainage Area = 8.40(Ac.) = 0.013 Sq. Mi.  
Drainage Area for Depth-Area Areal Adjustment = 8.40(Ac.) = 0.013 Sq. Mi.  
Length along longest watercourse = 1015.00(Ft.)  
Length along longest watercourse measured to centroid = 444.00(Ft.)  
Length along longest watercourse = 0.192 Mi.  
Length along longest watercourse measured to centroid = 0.084 Mi.  
Difference in elevation = 34.00(Ft.)  
Slope along watercourse = 176.8670 Ft./Mi.  
Average Manning's 'N' = 0.035  
Lag time = 0.066 Hr.  
Lag time = 3.93 Min.  
25% of lag time = 0.98 Min.  
40% of lag time = 1.57 Min.  
Unit time = 5.00 Min.  
Duration of storm = 24 Hour(s)  
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 8.40          | 2.38             | 19.99          |

100 YEAR Area rainfall data:

| Area(Ac.) [1] | Rainfall(In) [2] | Weighting[1*2] |
|---------------|------------------|----------------|
| 8.40          | 6.35             | 53.34          |

STORM EVENT (YEAR) = 2.00  
Area Averaged 2-Year Rainfall = 2.380(In)  
Area Averaged 100-Year Rainfall = 6.350(In)

Point rain (area averaged) = 2.380(In)  
Areal adjustment factor = 100.00 %  
Adjusted average point rain = 2.380(In)

Sub-Area Data:  
Area(Ac.)                  Runoff Index          Impervious %  
8.400                      86.00                  0.050

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)

Total Area Entered = 8.40 (Ac.)

|      |       |             |            |                  |           |         |
|------|-------|-------------|------------|------------------|-----------|---------|
| RI   | RI    | Infil. Rate | Impervious | Adj. Infil. Rate | Area%     | F       |
| AMC2 | AMC-2 | (In/Hr)     | (Dec.%)    | (In/Hr)          | (Dec.)    | (In/Hr) |
| 86.0 | 86.0  | 0.176       | 0.050      | 0.168            | 1.000     | 0.168   |
|      |       |             |            |                  | Sum (F) = | 0.168   |

Area averaged mean soil loss (F) (In/Hr) = 0.168

Minimum soil loss rate ((In/Hr)) = 0.084

(for 24 hour storm duration)

Soil low loss rate (decimal) = 0.900

## Unit Hydrograph FOOTHILL S-Curve

### Unit Hydrograph Data

| Unit time period<br>(hrs) | Time % of lag | Distribution<br>Graph % | Unit Hydrograph<br>(CFS) |
|---------------------------|---------------|-------------------------|--------------------------|
| 1                         | 0.083         | 127.154                 | 23.749                   |
| 2                         | 0.167         | 254.309                 | 55.783                   |
| 3                         | 0.250         | 381.463                 | 14.621                   |
| 4                         | 0.333         | 508.618                 | 4.238                    |
| 5                         | 0.417         | 635.772                 | 1.080                    |
| 6                         | 0.500         | 762.927                 | 0.529                    |
|                           |               | Sum = 100.000           | Sum= 8.466               |

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

| Unit | Time<br>(Hr.) | Pattern<br>Percent | Storm Rain<br>(In/Hr) | Loss rate(In./Hr)<br>Max   Low | Effective<br>(In/Hr) |
|------|---------------|--------------------|-----------------------|--------------------------------|----------------------|
| 1    | 0.08          | 0.07               | 0.019                 | ( 0.297)                       | 0.017                |
| 2    | 0.17          | 0.07               | 0.019                 | ( 0.296)                       | 0.017                |
| 3    | 0.25          | 0.07               | 0.019                 | ( 0.295)                       | 0.017                |
| 4    | 0.33          | 0.10               | 0.029                 | ( 0.294)                       | 0.026                |
| 5    | 0.42          | 0.10               | 0.029                 | ( 0.293)                       | 0.026                |
| 6    | 0.50          | 0.10               | 0.029                 | ( 0.292)                       | 0.026                |
| 7    | 0.58          | 0.10               | 0.029                 | ( 0.290)                       | 0.026                |
| 8    | 0.67          | 0.10               | 0.029                 | ( 0.289)                       | 0.026                |
| 9    | 0.75          | 0.10               | 0.029                 | ( 0.288)                       | 0.026                |
| 10   | 0.83          | 0.13               | 0.038                 | ( 0.287)                       | 0.034                |
| 11   | 0.92          | 0.13               | 0.038                 | ( 0.286)                       | 0.034                |
| 12   | 1.00          | 0.13               | 0.038                 | ( 0.285)                       | 0.034                |
| 13   | 1.08          | 0.10               | 0.029                 | ( 0.284)                       | 0.026                |
| 14   | 1.17          | 0.10               | 0.029                 | ( 0.283)                       | 0.026                |
| 15   | 1.25          | 0.10               | 0.029                 | ( 0.281)                       | 0.026                |
| 16   | 1.33          | 0.10               | 0.029                 | ( 0.280)                       | 0.026                |
| 17   | 1.42          | 0.10               | 0.029                 | ( 0.279)                       | 0.026                |
| 18   | 1.50          | 0.10               | 0.029                 | ( 0.278)                       | 0.026                |
| 19   | 1.58          | 0.10               | 0.029                 | ( 0.277)                       | 0.026                |
| 20   | 1.67          | 0.10               | 0.029                 | ( 0.276)                       | 0.026                |
| 21   | 1.75          | 0.10               | 0.029                 | ( 0.275)                       | 0.026                |
| 22   | 1.83          | 0.13               | 0.038                 | ( 0.274)                       | 0.034                |
| 23   | 1.92          | 0.13               | 0.038                 | ( 0.273)                       | 0.034                |
| 24   | 2.00          | 0.13               | 0.038                 | ( 0.271)                       | 0.034                |
| 25   | 2.08          | 0.13               | 0.038                 | ( 0.270)                       | 0.034                |
| 26   | 2.17          | 0.13               | 0.038                 | ( 0.269)                       | 0.034                |
| 27   | 2.25          | 0.13               | 0.038                 | ( 0.268)                       | 0.034                |
| 28   | 2.33          | 0.13               | 0.038                 | ( 0.267)                       | 0.034                |
| 29   | 2.42          | 0.13               | 0.038                 | ( 0.266)                       | 0.034                |
| 30   | 2.50          | 0.13               | 0.038                 | ( 0.265)                       | 0.034                |
| 31   | 2.58          | 0.17               | 0.048                 | ( 0.264)                       | 0.043                |
| 32   | 2.67          | 0.17               | 0.048                 | ( 0.263)                       | 0.043                |
| 33   | 2.75          | 0.17               | 0.048                 | ( 0.262)                       | 0.043                |
| 34   | 2.83          | 0.17               | 0.048                 | ( 0.261)                       | 0.043                |
| 35   | 2.92          | 0.17               | 0.048                 | ( 0.259)                       | 0.043                |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|     |      |      |       |          |       |       |
|-----|------|------|-------|----------|-------|-------|
| 36  | 3.00 | 0.17 | 0.048 | ( 0.258) | 0.043 | 0.005 |
| 37  | 3.08 | 0.17 | 0.048 | ( 0.257) | 0.043 | 0.005 |
| 38  | 3.17 | 0.17 | 0.048 | ( 0.256) | 0.043 | 0.005 |
| 39  | 3.25 | 0.17 | 0.048 | ( 0.255) | 0.043 | 0.005 |
| 40  | 3.33 | 0.17 | 0.048 | ( 0.254) | 0.043 | 0.005 |
| 41  | 3.42 | 0.17 | 0.048 | ( 0.253) | 0.043 | 0.005 |
| 42  | 3.50 | 0.17 | 0.048 | ( 0.252) | 0.043 | 0.005 |
| 43  | 3.58 | 0.17 | 0.048 | ( 0.251) | 0.043 | 0.005 |
| 44  | 3.67 | 0.17 | 0.048 | ( 0.250) | 0.043 | 0.005 |
| 45  | 3.75 | 0.17 | 0.048 | ( 0.249) | 0.043 | 0.005 |
| 46  | 3.83 | 0.20 | 0.057 | ( 0.248) | 0.051 | 0.006 |
| 47  | 3.92 | 0.20 | 0.057 | ( 0.247) | 0.051 | 0.006 |
| 48  | 4.00 | 0.20 | 0.057 | ( 0.246) | 0.051 | 0.006 |
| 49  | 4.08 | 0.20 | 0.057 | ( 0.245) | 0.051 | 0.006 |
| 50  | 4.17 | 0.20 | 0.057 | ( 0.244) | 0.051 | 0.006 |
| 51  | 4.25 | 0.20 | 0.057 | ( 0.243) | 0.051 | 0.006 |
| 52  | 4.33 | 0.23 | 0.067 | ( 0.242) | 0.060 | 0.007 |
| 53  | 4.42 | 0.23 | 0.067 | ( 0.241) | 0.060 | 0.007 |
| 54  | 4.50 | 0.23 | 0.067 | ( 0.239) | 0.060 | 0.007 |
| 55  | 4.58 | 0.23 | 0.067 | ( 0.238) | 0.060 | 0.007 |
| 56  | 4.67 | 0.23 | 0.067 | ( 0.237) | 0.060 | 0.007 |
| 57  | 4.75 | 0.23 | 0.067 | ( 0.236) | 0.060 | 0.007 |
| 58  | 4.83 | 0.27 | 0.076 | ( 0.235) | 0.069 | 0.008 |
| 59  | 4.92 | 0.27 | 0.076 | ( 0.234) | 0.069 | 0.008 |
| 60  | 5.00 | 0.27 | 0.076 | ( 0.233) | 0.069 | 0.008 |
| 61  | 5.08 | 0.20 | 0.057 | ( 0.232) | 0.051 | 0.006 |
| 62  | 5.17 | 0.20 | 0.057 | ( 0.231) | 0.051 | 0.006 |
| 63  | 5.25 | 0.20 | 0.057 | ( 0.230) | 0.051 | 0.006 |
| 64  | 5.33 | 0.23 | 0.067 | ( 0.229) | 0.060 | 0.007 |
| 65  | 5.42 | 0.23 | 0.067 | ( 0.228) | 0.060 | 0.007 |
| 66  | 5.50 | 0.23 | 0.067 | ( 0.227) | 0.060 | 0.007 |
| 67  | 5.58 | 0.27 | 0.076 | ( 0.226) | 0.069 | 0.008 |
| 68  | 5.67 | 0.27 | 0.076 | ( 0.225) | 0.069 | 0.008 |
| 69  | 5.75 | 0.27 | 0.076 | ( 0.224) | 0.069 | 0.008 |
| 70  | 5.83 | 0.27 | 0.076 | ( 0.223) | 0.069 | 0.008 |
| 71  | 5.92 | 0.27 | 0.076 | ( 0.222) | 0.069 | 0.008 |
| 72  | 6.00 | 0.27 | 0.076 | ( 0.221) | 0.069 | 0.008 |
| 73  | 6.08 | 0.30 | 0.086 | ( 0.220) | 0.077 | 0.009 |
| 74  | 6.17 | 0.30 | 0.086 | ( 0.219) | 0.077 | 0.009 |
| 75  | 6.25 | 0.30 | 0.086 | ( 0.218) | 0.077 | 0.009 |
| 76  | 6.33 | 0.30 | 0.086 | ( 0.217) | 0.077 | 0.009 |
| 77  | 6.42 | 0.30 | 0.086 | ( 0.216) | 0.077 | 0.009 |
| 78  | 6.50 | 0.30 | 0.086 | ( 0.215) | 0.077 | 0.009 |
| 79  | 6.58 | 0.33 | 0.095 | ( 0.215) | 0.086 | 0.010 |
| 80  | 6.67 | 0.33 | 0.095 | ( 0.214) | 0.086 | 0.010 |
| 81  | 6.75 | 0.33 | 0.095 | ( 0.213) | 0.086 | 0.010 |
| 82  | 6.83 | 0.33 | 0.095 | ( 0.212) | 0.086 | 0.010 |
| 83  | 6.92 | 0.33 | 0.095 | ( 0.211) | 0.086 | 0.010 |
| 84  | 7.00 | 0.33 | 0.095 | ( 0.210) | 0.086 | 0.010 |
| 85  | 7.08 | 0.33 | 0.095 | ( 0.209) | 0.086 | 0.010 |
| 86  | 7.17 | 0.33 | 0.095 | ( 0.208) | 0.086 | 0.010 |
| 87  | 7.25 | 0.33 | 0.095 | ( 0.207) | 0.086 | 0.010 |
| 88  | 7.33 | 0.37 | 0.105 | ( 0.206) | 0.094 | 0.010 |
| 89  | 7.42 | 0.37 | 0.105 | ( 0.205) | 0.094 | 0.010 |
| 90  | 7.50 | 0.37 | 0.105 | ( 0.204) | 0.094 | 0.010 |
| 91  | 7.58 | 0.40 | 0.114 | ( 0.203) | 0.103 | 0.011 |
| 92  | 7.67 | 0.40 | 0.114 | ( 0.202) | 0.103 | 0.011 |
| 93  | 7.75 | 0.40 | 0.114 | ( 0.201) | 0.103 | 0.011 |
| 94  | 7.83 | 0.43 | 0.124 | ( 0.200) | 0.111 | 0.012 |
| 95  | 7.92 | 0.43 | 0.124 | ( 0.199) | 0.111 | 0.012 |
| 96  | 8.00 | 0.43 | 0.124 | ( 0.198) | 0.111 | 0.012 |
| 97  | 8.08 | 0.50 | 0.143 | ( 0.198) | 0.129 | 0.014 |
| 98  | 8.17 | 0.50 | 0.143 | ( 0.197) | 0.129 | 0.014 |
| 99  | 8.25 | 0.50 | 0.143 | ( 0.196) | 0.129 | 0.014 |
| 100 | 8.33 | 0.50 | 0.143 | ( 0.195) | 0.129 | 0.014 |
| 101 | 8.42 | 0.50 | 0.143 | ( 0.194) | 0.129 | 0.014 |
| 102 | 8.50 | 0.50 | 0.143 | ( 0.193) | 0.129 | 0.014 |
| 103 | 8.58 | 0.53 | 0.152 | ( 0.192) | 0.137 | 0.015 |
| 104 | 8.67 | 0.53 | 0.152 | ( 0.191) | 0.137 | 0.015 |
| 105 | 8.75 | 0.53 | 0.152 | ( 0.190) | 0.137 | 0.015 |
| 106 | 8.83 | 0.57 | 0.162 | ( 0.189) | 0.146 | 0.016 |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|     |       |      |       |          |          |       |
|-----|-------|------|-------|----------|----------|-------|
| 107 | 8.92  | 0.57 | 0.162 | ( 0.188) | 0.146    | 0.016 |
| 108 | 9.00  | 0.57 | 0.162 | ( 0.188) | 0.146    | 0.016 |
| 109 | 9.08  | 0.63 | 0.181 | ( 0.187) | 0.163    | 0.018 |
| 110 | 9.17  | 0.63 | 0.181 | ( 0.186) | 0.163    | 0.018 |
| 111 | 9.25  | 0.63 | 0.181 | ( 0.185) | 0.163    | 0.018 |
| 112 | 9.33  | 0.67 | 0.190 | ( 0.184) | 0.171    | 0.019 |
| 113 | 9.42  | 0.67 | 0.190 | ( 0.183) | 0.171    | 0.019 |
| 114 | 9.50  | 0.67 | 0.190 | ( 0.182) | 0.171    | 0.019 |
| 115 | 9.58  | 0.70 | 0.200 | ( 0.181) | 0.180    | 0.020 |
| 116 | 9.67  | 0.70 | 0.200 | ( 0.181) | 0.180    | 0.020 |
| 117 | 9.75  | 0.70 | 0.200 | 0.180    | ( 0.180) | 0.020 |
| 118 | 9.83  | 0.73 | 0.209 | 0.179    | ( 0.188) | 0.031 |
| 119 | 9.92  | 0.73 | 0.209 | 0.178    | ( 0.188) | 0.031 |
| 120 | 10.00 | 0.73 | 0.209 | 0.177    | ( 0.188) | 0.032 |
| 121 | 10.08 | 0.50 | 0.143 | ( 0.176) | 0.129    | 0.014 |
| 122 | 10.17 | 0.50 | 0.143 | ( 0.175) | 0.129    | 0.014 |
| 123 | 10.25 | 0.50 | 0.143 | ( 0.175) | 0.129    | 0.014 |
| 124 | 10.33 | 0.50 | 0.143 | ( 0.174) | 0.129    | 0.014 |
| 125 | 10.42 | 0.50 | 0.143 | ( 0.173) | 0.129    | 0.014 |
| 126 | 10.50 | 0.50 | 0.143 | ( 0.172) | 0.129    | 0.014 |
| 127 | 10.58 | 0.67 | 0.190 | 0.171    | ( 0.171) | 0.019 |
| 128 | 10.67 | 0.67 | 0.190 | 0.170    | ( 0.171) | 0.020 |
| 129 | 10.75 | 0.67 | 0.190 | 0.169    | ( 0.171) | 0.021 |
| 130 | 10.83 | 0.67 | 0.190 | 0.169    | ( 0.171) | 0.022 |
| 131 | 10.92 | 0.67 | 0.190 | 0.168    | ( 0.171) | 0.023 |
| 132 | 11.00 | 0.67 | 0.190 | 0.167    | ( 0.171) | 0.023 |
| 133 | 11.08 | 0.63 | 0.181 | ( 0.166) | 0.163    | 0.018 |
| 134 | 11.17 | 0.63 | 0.181 | ( 0.165) | 0.163    | 0.018 |
| 135 | 11.25 | 0.63 | 0.181 | ( 0.165) | 0.163    | 0.018 |
| 136 | 11.33 | 0.63 | 0.181 | ( 0.164) | 0.163    | 0.018 |
| 137 | 11.42 | 0.63 | 0.181 | ( 0.163) | 0.163    | 0.018 |
| 138 | 11.50 | 0.63 | 0.181 | 0.162    | ( 0.163) | 0.019 |
| 139 | 11.58 | 0.57 | 0.162 | ( 0.161) | 0.146    | 0.016 |
| 140 | 11.67 | 0.57 | 0.162 | ( 0.161) | 0.146    | 0.016 |
| 141 | 11.75 | 0.57 | 0.162 | ( 0.160) | 0.146    | 0.016 |
| 142 | 11.83 | 0.60 | 0.171 | ( 0.159) | 0.154    | 0.017 |
| 143 | 11.92 | 0.60 | 0.171 | ( 0.158) | 0.154    | 0.017 |
| 144 | 12.00 | 0.60 | 0.171 | ( 0.157) | 0.154    | 0.017 |
| 145 | 12.08 | 0.83 | 0.238 | 0.157    | ( 0.214) | 0.081 |
| 146 | 12.17 | 0.83 | 0.238 | 0.156    | ( 0.214) | 0.082 |
| 147 | 12.25 | 0.83 | 0.238 | 0.155    | ( 0.214) | 0.083 |
| 148 | 12.33 | 0.87 | 0.248 | 0.154    | ( 0.223) | 0.093 |
| 149 | 12.42 | 0.87 | 0.248 | 0.153    | ( 0.223) | 0.094 |
| 150 | 12.50 | 0.87 | 0.248 | 0.153    | ( 0.223) | 0.095 |
| 151 | 12.58 | 0.93 | 0.267 | 0.152    | ( 0.240) | 0.115 |
| 152 | 12.67 | 0.93 | 0.267 | 0.151    | ( 0.240) | 0.115 |
| 153 | 12.75 | 0.93 | 0.267 | 0.150    | ( 0.240) | 0.116 |
| 154 | 12.83 | 0.97 | 0.276 | 0.150    | ( 0.248) | 0.126 |
| 155 | 12.92 | 0.97 | 0.276 | 0.149    | ( 0.248) | 0.127 |
| 156 | 13.00 | 0.97 | 0.276 | 0.148    | ( 0.248) | 0.128 |
| 157 | 13.08 | 1.13 | 0.324 | 0.147    | ( 0.291) | 0.176 |
| 158 | 13.17 | 1.13 | 0.324 | 0.147    | ( 0.291) | 0.177 |
| 159 | 13.25 | 1.13 | 0.324 | 0.146    | ( 0.291) | 0.178 |
| 160 | 13.33 | 1.13 | 0.324 | 0.145    | ( 0.291) | 0.179 |
| 161 | 13.42 | 1.13 | 0.324 | 0.144    | ( 0.291) | 0.179 |
| 162 | 13.50 | 1.13 | 0.324 | 0.144    | ( 0.291) | 0.180 |
| 163 | 13.58 | 0.77 | 0.219 | 0.143    | ( 0.197) | 0.076 |
| 164 | 13.67 | 0.77 | 0.219 | 0.142    | ( 0.197) | 0.077 |
| 165 | 13.75 | 0.77 | 0.219 | 0.141    | ( 0.197) | 0.078 |
| 166 | 13.83 | 0.77 | 0.219 | 0.141    | ( 0.197) | 0.078 |
| 167 | 13.92 | 0.77 | 0.219 | 0.140    | ( 0.197) | 0.079 |
| 168 | 14.00 | 0.77 | 0.219 | 0.139    | ( 0.197) | 0.080 |
| 169 | 14.08 | 0.90 | 0.257 | 0.139    | ( 0.231) | 0.118 |
| 170 | 14.17 | 0.90 | 0.257 | 0.138    | ( 0.231) | 0.119 |
| 171 | 14.25 | 0.90 | 0.257 | 0.137    | ( 0.231) | 0.120 |
| 172 | 14.33 | 0.87 | 0.248 | 0.136    | ( 0.223) | 0.111 |
| 173 | 14.42 | 0.87 | 0.248 | 0.136    | ( 0.223) | 0.112 |
| 174 | 14.50 | 0.87 | 0.248 | 0.135    | ( 0.223) | 0.112 |
| 175 | 14.58 | 0.87 | 0.248 | 0.134    | ( 0.223) | 0.113 |
| 176 | 14.67 | 0.87 | 0.248 | 0.134    | ( 0.223) | 0.114 |
| 177 | 14.75 | 0.87 | 0.248 | 0.133    | ( 0.223) | 0.115 |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|     |       |      |       |          |          |       |
|-----|-------|------|-------|----------|----------|-------|
| 178 | 14.83 | 0.83 | 0.238 | 0.132    | ( 0.214) | 0.106 |
| 179 | 14.92 | 0.83 | 0.238 | 0.132    | ( 0.214) | 0.106 |
| 180 | 15.00 | 0.83 | 0.238 | 0.131    | ( 0.214) | 0.107 |
| 181 | 15.08 | 0.80 | 0.228 | 0.130    | ( 0.206) | 0.098 |
| 182 | 15.17 | 0.80 | 0.228 | 0.130    | ( 0.206) | 0.099 |
| 183 | 15.25 | 0.80 | 0.228 | 0.129    | ( 0.206) | 0.100 |
| 184 | 15.33 | 0.77 | 0.219 | 0.128    | ( 0.197) | 0.091 |
| 185 | 15.42 | 0.77 | 0.219 | 0.128    | ( 0.197) | 0.091 |
| 186 | 15.50 | 0.77 | 0.219 | 0.127    | ( 0.197) | 0.092 |
| 187 | 15.58 | 0.63 | 0.181 | 0.126    | ( 0.163) | 0.055 |
| 188 | 15.67 | 0.63 | 0.181 | 0.126    | ( 0.163) | 0.055 |
| 189 | 15.75 | 0.63 | 0.181 | 0.125    | ( 0.163) | 0.056 |
| 190 | 15.83 | 0.63 | 0.181 | 0.124    | ( 0.163) | 0.056 |
| 191 | 15.92 | 0.63 | 0.181 | 0.124    | ( 0.163) | 0.057 |
| 192 | 16.00 | 0.63 | 0.181 | 0.123    | ( 0.163) | 0.058 |
| 193 | 16.08 | 0.13 | 0.038 | ( 0.123) | 0.034    | 0.004 |
| 194 | 16.17 | 0.13 | 0.038 | ( 0.122) | 0.034    | 0.004 |
| 195 | 16.25 | 0.13 | 0.038 | ( 0.121) | 0.034    | 0.004 |
| 196 | 16.33 | 0.13 | 0.038 | ( 0.121) | 0.034    | 0.004 |
| 197 | 16.42 | 0.13 | 0.038 | ( 0.120) | 0.034    | 0.004 |
| 198 | 16.50 | 0.13 | 0.038 | ( 0.119) | 0.034    | 0.004 |
| 199 | 16.58 | 0.10 | 0.029 | ( 0.119) | 0.026    | 0.003 |
| 200 | 16.67 | 0.10 | 0.029 | ( 0.118) | 0.026    | 0.003 |
| 201 | 16.75 | 0.10 | 0.029 | ( 0.118) | 0.026    | 0.003 |
| 202 | 16.83 | 0.10 | 0.029 | ( 0.117) | 0.026    | 0.003 |
| 203 | 16.92 | 0.10 | 0.029 | ( 0.116) | 0.026    | 0.003 |
| 204 | 17.00 | 0.10 | 0.029 | ( 0.116) | 0.026    | 0.003 |
| 205 | 17.08 | 0.17 | 0.048 | ( 0.115) | 0.043    | 0.005 |
| 206 | 17.17 | 0.17 | 0.048 | ( 0.115) | 0.043    | 0.005 |
| 207 | 17.25 | 0.17 | 0.048 | ( 0.114) | 0.043    | 0.005 |
| 208 | 17.33 | 0.17 | 0.048 | ( 0.114) | 0.043    | 0.005 |
| 209 | 17.42 | 0.17 | 0.048 | ( 0.113) | 0.043    | 0.005 |
| 210 | 17.50 | 0.17 | 0.048 | ( 0.112) | 0.043    | 0.005 |
| 211 | 17.58 | 0.17 | 0.048 | ( 0.112) | 0.043    | 0.005 |
| 212 | 17.67 | 0.17 | 0.048 | ( 0.111) | 0.043    | 0.005 |
| 213 | 17.75 | 0.17 | 0.048 | ( 0.111) | 0.043    | 0.005 |
| 214 | 17.83 | 0.13 | 0.038 | ( 0.110) | 0.034    | 0.004 |
| 215 | 17.92 | 0.13 | 0.038 | ( 0.110) | 0.034    | 0.004 |
| 216 | 18.00 | 0.13 | 0.038 | ( 0.109) | 0.034    | 0.004 |
| 217 | 18.08 | 0.13 | 0.038 | ( 0.109) | 0.034    | 0.004 |
| 218 | 18.17 | 0.13 | 0.038 | ( 0.108) | 0.034    | 0.004 |
| 219 | 18.25 | 0.13 | 0.038 | ( 0.107) | 0.034    | 0.004 |
| 220 | 18.33 | 0.13 | 0.038 | ( 0.107) | 0.034    | 0.004 |
| 221 | 18.42 | 0.13 | 0.038 | ( 0.106) | 0.034    | 0.004 |
| 222 | 18.50 | 0.13 | 0.038 | ( 0.106) | 0.034    | 0.004 |
| 223 | 18.58 | 0.10 | 0.029 | ( 0.105) | 0.026    | 0.003 |
| 224 | 18.67 | 0.10 | 0.029 | ( 0.105) | 0.026    | 0.003 |
| 225 | 18.75 | 0.10 | 0.029 | ( 0.104) | 0.026    | 0.003 |
| 226 | 18.83 | 0.07 | 0.019 | ( 0.104) | 0.017    | 0.002 |
| 227 | 18.92 | 0.07 | 0.019 | ( 0.103) | 0.017    | 0.002 |
| 228 | 19.00 | 0.07 | 0.019 | ( 0.103) | 0.017    | 0.002 |
| 229 | 19.08 | 0.10 | 0.029 | ( 0.102) | 0.026    | 0.003 |
| 230 | 19.17 | 0.10 | 0.029 | ( 0.102) | 0.026    | 0.003 |
| 231 | 19.25 | 0.10 | 0.029 | ( 0.101) | 0.026    | 0.003 |
| 232 | 19.33 | 0.13 | 0.038 | ( 0.101) | 0.034    | 0.004 |
| 233 | 19.42 | 0.13 | 0.038 | ( 0.101) | 0.034    | 0.004 |
| 234 | 19.50 | 0.13 | 0.038 | ( 0.100) | 0.034    | 0.004 |
| 235 | 19.58 | 0.10 | 0.029 | ( 0.100) | 0.026    | 0.003 |
| 236 | 19.67 | 0.10 | 0.029 | ( 0.099) | 0.026    | 0.003 |
| 237 | 19.75 | 0.10 | 0.029 | ( 0.099) | 0.026    | 0.003 |
| 238 | 19.83 | 0.07 | 0.019 | ( 0.098) | 0.017    | 0.002 |
| 239 | 19.92 | 0.07 | 0.019 | ( 0.098) | 0.017    | 0.002 |
| 240 | 20.00 | 0.07 | 0.019 | ( 0.097) | 0.017    | 0.002 |
| 241 | 20.08 | 0.10 | 0.029 | ( 0.097) | 0.026    | 0.003 |
| 242 | 20.17 | 0.10 | 0.029 | ( 0.097) | 0.026    | 0.003 |
| 243 | 20.25 | 0.10 | 0.029 | ( 0.096) | 0.026    | 0.003 |
| 244 | 20.33 | 0.10 | 0.029 | ( 0.096) | 0.026    | 0.003 |
| 245 | 20.42 | 0.10 | 0.029 | ( 0.095) | 0.026    | 0.003 |
| 246 | 20.50 | 0.10 | 0.029 | ( 0.095) | 0.026    | 0.003 |
| 247 | 20.58 | 0.10 | 0.029 | ( 0.094) | 0.026    | 0.003 |
| 248 | 20.67 | 0.10 | 0.029 | ( 0.094) | 0.026    | 0.003 |



**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|      |        |      |     |  |  |  |  |
|------|--------|------|-----|--|--|--|--|
| 0+55 | 0.0015 | 0.03 | Q   |  |  |  |  |
| 1+ 0 | 0.0018 | 0.03 | Q   |  |  |  |  |
| 1+ 5 | 0.0020 | 0.03 | Q   |  |  |  |  |
| 1+10 | 0.0022 | 0.03 | Q   |  |  |  |  |
| 1+15 | 0.0023 | 0.02 | Q   |  |  |  |  |
| 1+20 | 0.0025 | 0.02 | Q   |  |  |  |  |
| 1+25 | 0.0027 | 0.02 | Q   |  |  |  |  |
| 1+30 | 0.0028 | 0.02 | Q   |  |  |  |  |
| 1+35 | 0.0030 | 0.02 | Q   |  |  |  |  |
| 1+40 | 0.0032 | 0.02 | Q   |  |  |  |  |
| 1+45 | 0.0033 | 0.02 | Q   |  |  |  |  |
| 1+50 | 0.0035 | 0.03 | Q   |  |  |  |  |
| 1+55 | 0.0037 | 0.03 | Q   |  |  |  |  |
| 2+ 0 | 0.0039 | 0.03 | Q   |  |  |  |  |
| 2+ 5 | 0.0042 | 0.03 | Q   |  |  |  |  |
| 2+10 | 0.0044 | 0.03 | Q   |  |  |  |  |
| 2+15 | 0.0046 | 0.03 | Q   |  |  |  |  |
| 2+20 | 0.0048 | 0.03 | Q   |  |  |  |  |
| 2+25 | 0.0050 | 0.03 | Q   |  |  |  |  |
| 2+30 | 0.0053 | 0.03 | Q   |  |  |  |  |
| 2+35 | 0.0055 | 0.03 | Q   |  |  |  |  |
| 2+40 | 0.0058 | 0.04 | Q   |  |  |  |  |
| 2+45 | 0.0060 | 0.04 | Q   |  |  |  |  |
| 2+50 | 0.0063 | 0.04 | Q   |  |  |  |  |
| 2+55 | 0.0066 | 0.04 | Q   |  |  |  |  |
| 3+ 0 | 0.0069 | 0.04 | Q   |  |  |  |  |
| 3+ 5 | 0.0072 | 0.04 | Q   |  |  |  |  |
| 3+10 | 0.0074 | 0.04 | Q   |  |  |  |  |
| 3+15 | 0.0077 | 0.04 | Q   |  |  |  |  |
| 3+20 | 0.0080 | 0.04 | Q   |  |  |  |  |
| 3+25 | 0.0083 | 0.04 | Q   |  |  |  |  |
| 3+30 | 0.0085 | 0.04 | Q   |  |  |  |  |
| 3+35 | 0.0088 | 0.04 | Q   |  |  |  |  |
| 3+40 | 0.0091 | 0.04 | Q   |  |  |  |  |
| 3+45 | 0.0094 | 0.04 | Q   |  |  |  |  |
| 3+50 | 0.0097 | 0.04 | Q   |  |  |  |  |
| 3+55 | 0.0100 | 0.05 | QV  |  |  |  |  |
| 4+ 0 | 0.0103 | 0.05 | QV  |  |  |  |  |
| 4+ 5 | 0.0106 | 0.05 | QV  |  |  |  |  |
| 4+10 | 0.0110 | 0.05 | QV  |  |  |  |  |
| 4+15 | 0.0113 | 0.05 | QV  |  |  |  |  |
| 4+20 | 0.0117 | 0.05 | QV  |  |  |  |  |
| 4+25 | 0.0120 | 0.05 | QV  |  |  |  |  |
| 4+30 | 0.0124 | 0.06 | QV  |  |  |  |  |
| 4+35 | 0.0128 | 0.06 | QV  |  |  |  |  |
| 4+40 | 0.0132 | 0.06 | QV  |  |  |  |  |
| 4+45 | 0.0136 | 0.06 | QV  |  |  |  |  |
| 4+50 | 0.0140 | 0.06 | QV  |  |  |  |  |
| 4+55 | 0.0144 | 0.06 | QV  |  |  |  |  |
| 5+ 0 | 0.0149 | 0.06 | QV  |  |  |  |  |
| 5+ 5 | 0.0153 | 0.06 | QV  |  |  |  |  |
| 5+10 | 0.0156 | 0.05 | QV  |  |  |  |  |
| 5+15 | 0.0160 | 0.05 | QV  |  |  |  |  |
| 5+20 | 0.0163 | 0.05 | QV  |  |  |  |  |
| 5+25 | 0.0167 | 0.05 | QV  |  |  |  |  |
| 5+30 | 0.0171 | 0.06 | QV  |  |  |  |  |
| 5+35 | 0.0175 | 0.06 | QV  |  |  |  |  |
| 5+40 | 0.0179 | 0.06 | QV  |  |  |  |  |
| 5+45 | 0.0184 | 0.06 | QV  |  |  |  |  |
| 5+50 | 0.0188 | 0.06 | QV  |  |  |  |  |
| 5+55 | 0.0192 | 0.06 | QV  |  |  |  |  |
| 6+ 0 | 0.0197 | 0.06 | QV  |  |  |  |  |
| 6+ 5 | 0.0202 | 0.07 | Q V |  |  |  |  |
| 6+10 | 0.0206 | 0.07 | Q V |  |  |  |  |
| 6+15 | 0.0211 | 0.07 | Q V |  |  |  |  |
| 6+20 | 0.0216 | 0.07 | Q V |  |  |  |  |
| 6+25 | 0.0221 | 0.07 | Q V |  |  |  |  |
| 6+30 | 0.0226 | 0.07 | Q V |  |  |  |  |
| 6+35 | 0.0231 | 0.07 | Q V |  |  |  |  |
| 6+40 | 0.0237 | 0.08 | Q V |  |  |  |  |
| 6+45 | 0.0242 | 0.08 | Q V |  |  |  |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|       |        |      |   |   |  |  |  |  |
|-------|--------|------|---|---|--|--|--|--|
| 6+50  | 0.0248 | 0.08 | Q | V |  |  |  |  |
| 6+55  | 0.0254 | 0.08 | Q | V |  |  |  |  |
| 7+ 0  | 0.0259 | 0.08 | Q | V |  |  |  |  |
| 7+ 5  | 0.0265 | 0.08 | Q | V |  |  |  |  |
| 7+10  | 0.0270 | 0.08 | Q | V |  |  |  |  |
| 7+15  | 0.0276 | 0.08 | Q | V |  |  |  |  |
| 7+20  | 0.0281 | 0.08 | Q | V |  |  |  |  |
| 7+25  | 0.0287 | 0.09 | Q | V |  |  |  |  |
| 7+30  | 0.0293 | 0.09 | Q | V |  |  |  |  |
| 7+35  | 0.0300 | 0.09 | Q | V |  |  |  |  |
| 7+40  | 0.0306 | 0.10 | Q | V |  |  |  |  |
| 7+45  | 0.0313 | 0.10 | Q | V |  |  |  |  |
| 7+50  | 0.0320 | 0.10 | Q | V |  |  |  |  |
| 7+55  | 0.0327 | 0.10 | Q | V |  |  |  |  |
| 8+ 0  | 0.0334 | 0.10 | Q | V |  |  |  |  |
| 8+ 5  | 0.0341 | 0.11 | Q | V |  |  |  |  |
| 8+10  | 0.0350 | 0.12 | Q | V |  |  |  |  |
| 8+15  | 0.0358 | 0.12 | Q | V |  |  |  |  |
| 8+20  | 0.0366 | 0.12 | Q | V |  |  |  |  |
| 8+25  | 0.0374 | 0.12 | Q | V |  |  |  |  |
| 8+30  | 0.0383 | 0.12 | Q | V |  |  |  |  |
| 8+35  | 0.0391 | 0.12 | Q | V |  |  |  |  |
| 8+40  | 0.0400 | 0.13 | Q | V |  |  |  |  |
| 8+45  | 0.0409 | 0.13 | Q | V |  |  |  |  |
| 8+50  | 0.0418 | 0.13 | Q | V |  |  |  |  |
| 8+55  | 0.0427 | 0.14 | Q | V |  |  |  |  |
| 9+ 0  | 0.0437 | 0.14 | Q | V |  |  |  |  |
| 9+ 5  | 0.0446 | 0.14 | Q | V |  |  |  |  |
| 9+10  | 0.0457 | 0.15 | Q | V |  |  |  |  |
| 9+15  | 0.0467 | 0.15 | Q | V |  |  |  |  |
| 9+20  | 0.0478 | 0.15 | Q | V |  |  |  |  |
| 9+25  | 0.0489 | 0.16 | Q | V |  |  |  |  |
| 9+30  | 0.0500 | 0.16 | Q | V |  |  |  |  |
| 9+35  | 0.0511 | 0.16 | Q | V |  |  |  |  |
| 9+40  | 0.0523 | 0.17 | Q | V |  |  |  |  |
| 9+45  | 0.0534 | 0.17 | Q | V |  |  |  |  |
| 9+50  | 0.0547 | 0.19 | Q | V |  |  |  |  |
| 9+55  | 0.0564 | 0.24 | Q | V |  |  |  |  |
| 10+ 0 | 0.0582 | 0.26 | Q | V |  |  |  |  |
| 10+ 5 | 0.0598 | 0.23 | Q | V |  |  |  |  |
| 10+10 | 0.0609 | 0.15 | Q | V |  |  |  |  |
| 10+15 | 0.0618 | 0.13 | Q | V |  |  |  |  |
| 10+20 | 0.0626 | 0.12 | Q | V |  |  |  |  |
| 10+25 | 0.0635 | 0.12 | Q | V |  |  |  |  |
| 10+30 | 0.0643 | 0.12 | Q | V |  |  |  |  |
| 10+35 | 0.0652 | 0.13 | Q | V |  |  |  |  |
| 10+40 | 0.0663 | 0.16 | Q | V |  |  |  |  |
| 10+45 | 0.0674 | 0.17 | Q | V |  |  |  |  |
| 10+50 | 0.0686 | 0.18 | Q | V |  |  |  |  |
| 10+55 | 0.0699 | 0.18 | Q | V |  |  |  |  |
| 11+ 0 | 0.0712 | 0.19 | Q | V |  |  |  |  |
| 11+ 5 | 0.0725 | 0.19 | Q | V |  |  |  |  |
| 11+10 | 0.0736 | 0.16 | Q | V |  |  |  |  |
| 11+15 | 0.0747 | 0.16 | Q | V |  |  |  |  |
| 11+20 | 0.0757 | 0.15 | Q | V |  |  |  |  |
| 11+25 | 0.0768 | 0.15 | Q | V |  |  |  |  |
| 11+30 | 0.0779 | 0.15 | Q | V |  |  |  |  |
| 11+35 | 0.0789 | 0.15 | Q | V |  |  |  |  |
| 11+40 | 0.0799 | 0.14 | Q | V |  |  |  |  |
| 11+45 | 0.0808 | 0.14 | Q | V |  |  |  |  |
| 11+50 | 0.0818 | 0.14 | Q | V |  |  |  |  |
| 11+55 | 0.0828 | 0.14 | Q | V |  |  |  |  |
| 12+ 0 | 0.0838 | 0.14 | Q | V |  |  |  |  |
| 12+ 5 | 0.0857 | 0.27 | Q | V |  |  |  |  |
| 12+10 | 0.0897 | 0.58 | Q | V |  |  |  |  |
| 12+15 | 0.0942 | 0.66 | Q | V |  |  |  |  |
| 12+20 | 0.0992 | 0.71 | Q | V |  |  |  |  |
| 12+25 | 0.1045 | 0.77 | Q | V |  |  |  |  |
| 12+30 | 0.1099 | 0.79 | Q | V |  |  |  |  |
| 12+35 | 0.1157 | 0.84 | Q | V |  |  |  |  |
| 12+40 | 0.1222 | 0.94 | Q | V |  |  |  |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|       |        |      |   |   |  |  |  |
|-------|--------|------|---|---|--|--|--|
| 12+45 | 0.1288 | 0.97 | Q | V |  |  |  |
| 12+50 | 0.1357 | 1.00 | Q | V |  |  |  |
| 12+55 | 0.1430 | 1.05 | Q | V |  |  |  |
| 13+ 0 | 0.1504 | 1.07 | Q | V |  |  |  |
| 13+ 5 | 0.1585 | 1.18 | Q | V |  |  |  |
| 13+10 | 0.1682 | 1.41 | Q | V |  |  |  |
| 13+15 | 0.1784 | 1.48 | Q | V |  |  |  |
| 13+20 | 0.1887 | 1.50 | Q | V |  |  |  |
| 13+25 | 0.1991 | 1.51 | Q | V |  |  |  |
| 13+30 | 0.2095 | 1.52 | Q | V |  |  |  |
| 13+35 | 0.2186 | 1.31 | Q | V |  |  |  |
| 13+40 | 0.2243 | 0.83 | Q | V |  |  |  |
| 13+45 | 0.2291 | 0.70 | Q | V |  |  |  |
| 13+50 | 0.2337 | 0.67 | Q | V |  |  |  |
| 13+55 | 0.2383 | 0.67 | Q | V |  |  |  |
| 14+ 0 | 0.2429 | 0.67 | Q | V |  |  |  |
| 14+ 5 | 0.2481 | 0.75 | Q | V |  |  |  |
| 14+10 | 0.2545 | 0.94 | Q | V |  |  |  |
| 14+15 | 0.2614 | 0.99 | Q | V |  |  |  |
| 14+20 | 0.2682 | 0.99 | Q | V |  |  |  |
| 14+25 | 0.2748 | 0.96 | Q | V |  |  |  |
| 14+30 | 0.2813 | 0.95 | Q | V |  |  |  |
| 14+35 | 0.2879 | 0.95 | Q | V |  |  |  |
| 14+40 | 0.2945 | 0.96 | Q | V |  |  |  |
| 14+45 | 0.3011 | 0.96 | Q | V |  |  |  |
| 14+50 | 0.3077 | 0.95 | Q | V |  |  |  |
| 14+55 | 0.3139 | 0.91 | Q | V |  |  |  |
| 15+ 0 | 0.3202 | 0.91 | Q | V |  |  |  |
| 15+ 5 | 0.3263 | 0.89 | Q | V |  |  |  |
| 15+10 | 0.3321 | 0.85 | Q | V |  |  |  |
| 15+15 | 0.3379 | 0.84 | Q | V |  |  |  |
| 15+20 | 0.3436 | 0.82 | Q | V |  |  |  |
| 15+25 | 0.3490 | 0.78 | Q | V |  |  |  |
| 15+30 | 0.3544 | 0.78 | Q | V |  |  |  |
| 15+35 | 0.3592 | 0.70 | Q | V |  |  |  |
| 15+40 | 0.3628 | 0.53 | Q | V |  |  |  |
| 15+45 | 0.3662 | 0.49 | Q | V |  |  |  |
| 15+50 | 0.3695 | 0.48 | Q | V |  |  |  |
| 15+55 | 0.3728 | 0.48 | Q | V |  |  |  |
| 16+ 0 | 0.3761 | 0.48 | Q | V |  |  |  |
| 16+ 5 | 0.3787 | 0.38 | Q | V |  |  |  |
| 16+10 | 0.3796 | 0.13 | Q | V |  |  |  |
| 16+15 | 0.3800 | 0.06 | Q | V |  |  |  |
| 16+20 | 0.3803 | 0.04 | Q | V |  |  |  |
| 16+25 | 0.3805 | 0.03 | Q | V |  |  |  |
| 16+30 | 0.3807 | 0.03 | Q | V |  |  |  |
| 16+35 | 0.3809 | 0.03 | Q | V |  |  |  |
| 16+40 | 0.3811 | 0.03 | Q | V |  |  |  |
| 16+45 | 0.3813 | 0.02 | Q | V |  |  |  |
| 16+50 | 0.3815 | 0.02 | Q | V |  |  |  |
| 16+55 | 0.3816 | 0.02 | Q | V |  |  |  |
| 17+ 0 | 0.3818 | 0.02 | Q | V |  |  |  |
| 17+ 5 | 0.3820 | 0.03 | Q | V |  |  |  |
| 17+10 | 0.3822 | 0.04 | Q | V |  |  |  |
| 17+15 | 0.3825 | 0.04 | Q | V |  |  |  |
| 17+20 | 0.3828 | 0.04 | Q | V |  |  |  |
| 17+25 | 0.3831 | 0.04 | Q | V |  |  |  |
| 17+30 | 0.3833 | 0.04 | Q | V |  |  |  |
| 17+35 | 0.3836 | 0.04 | Q | V |  |  |  |
| 17+40 | 0.3839 | 0.04 | Q | V |  |  |  |
| 17+45 | 0.3842 | 0.04 | Q | V |  |  |  |
| 17+50 | 0.3844 | 0.04 | Q | V |  |  |  |
| 17+55 | 0.3847 | 0.03 | Q | V |  |  |  |
| 18+ 0 | 0.3849 | 0.03 | Q | V |  |  |  |
| 18+ 5 | 0.3851 | 0.03 | Q | V |  |  |  |
| 18+10 | 0.3853 | 0.03 | Q | V |  |  |  |
| 18+15 | 0.3856 | 0.03 | Q | V |  |  |  |
| 18+20 | 0.3858 | 0.03 | Q | V |  |  |  |
| 18+25 | 0.3860 | 0.03 | Q | V |  |  |  |
| 18+30 | 0.3862 | 0.03 | Q | V |  |  |  |
| 18+35 | 0.3864 | 0.03 | Q | V |  |  |  |

**Tract 37305, Nichols South Specific Plan – Lake Elsinore**  
**ATTACHMENT C – Inflow Hydrographs, Existing Condition (for comparison)**

|       |        |      |   |  |  |  |   |
|-------|--------|------|---|--|--|--|---|
| 18+40 | 0.3866 | 0.03 | Q |  |  |  | V |
| 18+45 | 0.3868 | 0.02 | Q |  |  |  | V |
| 18+50 | 0.3869 | 0.02 | Q |  |  |  | V |
| 18+55 | 0.3871 | 0.02 | Q |  |  |  | V |
| 19+ 0 | 0.3872 | 0.02 | Q |  |  |  | V |
| 19+ 5 | 0.3873 | 0.02 | Q |  |  |  | V |
| 19+10 | 0.3875 | 0.02 | Q |  |  |  | V |
| 19+15 | 0.3876 | 0.02 | Q |  |  |  | V |
| 19+20 | 0.3878 | 0.03 | Q |  |  |  | V |
| 19+25 | 0.3880 | 0.03 | Q |  |  |  | V |
| 19+30 | 0.3882 | 0.03 | Q |  |  |  | V |
| 19+35 | 0.3884 | 0.03 | Q |  |  |  | V |
| 19+40 | 0.3886 | 0.03 | Q |  |  |  | V |
| 19+45 | 0.3888 | 0.02 | Q |  |  |  | V |
| 19+50 | 0.3889 | 0.02 | Q |  |  |  | V |
| 19+55 | 0.3891 | 0.02 | Q |  |  |  | V |
| 20+ 0 | 0.3892 | 0.02 | Q |  |  |  | V |
| 20+ 5 | 0.3893 | 0.02 | Q |  |  |  | V |
| 20+10 | 0.3895 | 0.02 | Q |  |  |  | V |
| 20+15 | 0.3896 | 0.02 | Q |  |  |  | V |
| 20+20 | 0.3898 | 0.02 | Q |  |  |  | V |
| 20+25 | 0.3899 | 0.02 | Q |  |  |  | V |
| 20+30 | 0.3901 | 0.02 | Q |  |  |  | V |
| 20+35 | 0.3903 | 0.02 | Q |  |  |  | V |
| 20+40 | 0.3904 | 0.02 | Q |  |  |  | V |
| 20+45 | 0.3906 | 0.02 | Q |  |  |  | V |
| 20+50 | 0.3908 | 0.02 | Q |  |  |  | V |
| 20+55 | 0.3909 | 0.02 | Q |  |  |  | V |
| 21+ 0 | 0.3910 | 0.02 | Q |  |  |  | V |
| 21+ 5 | 0.3911 | 0.02 | Q |  |  |  | V |
| 21+10 | 0.3913 | 0.02 | Q |  |  |  | V |
| 21+15 | 0.3915 | 0.02 | Q |  |  |  | V |
| 21+20 | 0.3916 | 0.02 | Q |  |  |  | V |
| 21+25 | 0.3917 | 0.02 | Q |  |  |  | V |
| 21+30 | 0.3918 | 0.02 | Q |  |  |  | V |
| 21+35 | 0.3920 | 0.02 | Q |  |  |  | V |
| 21+40 | 0.3921 | 0.02 | Q |  |  |  | V |
| 21+45 | 0.3923 | 0.02 | Q |  |  |  | V |
| 21+50 | 0.3924 | 0.02 | Q |  |  |  | V |
| 21+55 | 0.3926 | 0.02 | Q |  |  |  | V |
| 22+ 0 | 0.3927 | 0.02 | Q |  |  |  | V |
| 22+ 5 | 0.3928 | 0.02 | Q |  |  |  | V |
| 22+10 | 0.3930 | 0.02 | Q |  |  |  | V |
| 22+15 | 0.3931 | 0.02 | Q |  |  |  | V |
| 22+20 | 0.3933 | 0.02 | Q |  |  |  | V |
| 22+25 | 0.3934 | 0.02 | Q |  |  |  | V |
| 22+30 | 0.3935 | 0.02 | Q |  |  |  | V |
| 22+35 | 0.3936 | 0.02 | Q |  |  |  | V |
| 22+40 | 0.3937 | 0.02 | Q |  |  |  | V |
| 22+45 | 0.3938 | 0.02 | Q |  |  |  | V |
| 22+50 | 0.3940 | 0.02 | Q |  |  |  | V |
| 22+55 | 0.3941 | 0.02 | Q |  |  |  | V |
| 23+ 0 | 0.3942 | 0.02 | Q |  |  |  | V |
| 23+ 5 | 0.3943 | 0.02 | Q |  |  |  | V |
| 23+10 | 0.3944 | 0.02 | Q |  |  |  | V |
| 23+15 | 0.3945 | 0.02 | Q |  |  |  | V |
| 23+20 | 0.3946 | 0.02 | Q |  |  |  | V |
| 23+25 | 0.3947 | 0.02 | Q |  |  |  | V |
| 23+30 | 0.3948 | 0.02 | Q |  |  |  | V |
| 23+35 | 0.3949 | 0.02 | Q |  |  |  | V |
| 23+40 | 0.3951 | 0.02 | Q |  |  |  | V |
| 23+45 | 0.3952 | 0.02 | Q |  |  |  | V |
| 23+50 | 0.3953 | 0.02 | Q |  |  |  | V |
| 23+55 | 0.3954 | 0.02 | Q |  |  |  | V |
| 24+ 0 | 0.3955 | 0.02 | Q |  |  |  | V |
| 24+ 5 | 0.3956 | 0.01 | Q |  |  |  | V |
| 24+10 | 0.3956 | 0.00 | Q |  |  |  | V |
| 24+15 | 0.3956 | 0.00 | Q |  |  |  | V |
| 24+20 | 0.3956 | 0.00 | Q |  |  |  | V |
| 24+25 | 0.3956 | 0.00 | Q |  |  |  | V |

**ATTACHMENT D**  
**Detention Basin Routings**  
**Proposed Condition – Drainage Areas A and B**  
**100-Year 1-hr, 3-hr, 6-hr, 24-hr storm and 2-year 24-hr storm**

# **Detention Basin Routing**

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT D – Detention Basin Routing

## **DETENTION BASIN ROUTING**

The Detention Basin Routing Calculations were conducted using the CivilCADD/Design software and the Riverside County Hydrology Manual. In this analysis, the goal was to estimate the quantity of storm water to be detained onsite to mitigate the increase in storm water peak discharge and volume resulting from this development for the 100-year 1-hour, 3-hour, 6-hour, 24-hour storms and 2-year 24-hour for HCOC mitigation.

**HCOC** criteria is **considered mitigated** by mimicking the pre-development hydrograph with the post-development hydrograph, for a 2-year return frequency storm. Generally, the hydrologic conditions of concern are not significant, if the post-development hydrograph is no more than 10% greater than pre-development hydrograph. In cases where excess volume cannot be infiltrated or captured and reused, discharge from the site must be limited to a flow rate no greater than 110% of the pre-development 2-year peak flow.

Based on the information provided above, **this project meets the requirements of Condition C** and will not create a hydrologic condition of concern in the proximate or downstream receiving waters.

Project development and other improvements include local storm drain systems which convey developed flows and street areas runoff to proposed Enhanced Sand Filter Basins and Enhanced Extended Detention Basins. For Hydromodification, the proposed Detention Basins include sufficient volume above the proposed water quality volume that will satisfy the requirement of post-development peak discharge, volume and time of concentration for the 2-year 24-hour storm that DOES NOT exceed the pre-development peak runoff by more than 10 percent.

The hydrology calculations for determining the on-site and offsite flows have been conducted using the Rational Method as incorporated into the CivilCADD Rational Method Hydrology software. The rational method relates rainfall intensity, the ratio of runoff to rainfall, and the drainage area size to the peak storm runoff and is expressed by the equation:  $Q = CIA$ . Where  $Q$  = runoff (in cubic feet per second),  $C$  = runoff coefficient relating the ratio of runoff to rainfall,  $I$  = rainfall intensity (in inches per hour),  $A$  = drainage area (in acres). The soil type used in the analysis is a combination Type B, and D but majority is Type D, yielding a relatively high soil runoff potential is Type D.

## **HYDROMODIFICATION - (HCOC)**

The proposed project Water Quality/Detention Basins are capable of all of the following:

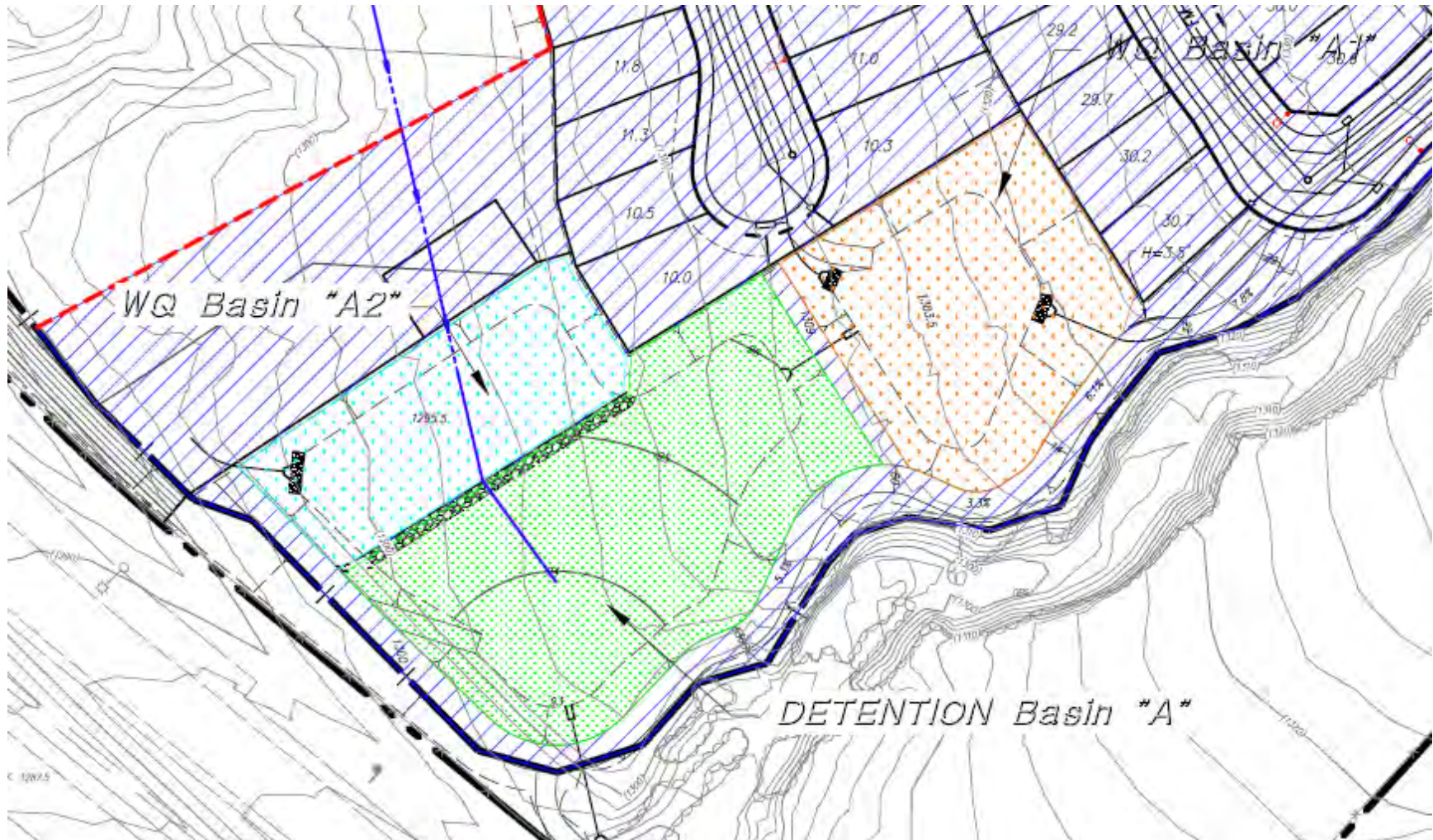
1. Releasing the post-development hydrograph for 2-year, 24-hour at flow rates no greater than 110% of pre-development 2-year flow, 24-hour peak flow rates.
2. By-passing the 100-year storm event without damage to the BMP.
3. Control outlet velocities such that downstream erosion potential is minimized and outlet flows are released in a safe manner

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT D – Detention Basin Routing

| Nichols Road Project - Tr. 37305 |       |           |                   |                        |                          |                                      |                           |                           |
|----------------------------------|-------|-----------|-------------------|------------------------|--------------------------|--------------------------------------|---------------------------|---------------------------|
| Drainage Area A                  |       |           |                   |                        |                          |                                      |                           |                           |
| WQ/Detention Basin A             |       |           |                   |                        |                          |                                      |                           |                           |
| Elev.                            | Depth | Area (sf) | Vol. inc.<br>(cf) | Vol.<br>Accum.<br>(cf) | Vol.<br>Accum.<br>(Acft) | Orifice<br>12"<br>opening<br>at 1293 | Weir<br>L=20' @<br>1297.5 | Basin<br>Outflow<br>(cfs) |
| 1293                             | 0     | 0         |                   |                        | 0                        | 0                                    |                           | 0                         |
| 1294                             | 1     | 9900      | 4950              | 4950                   | 0.11                     | 2.98                                 |                           | 2.98                      |
| 1295                             | 2     | 33985     | 21942.5           | 26892.5                | 0.62                     | 5.17                                 |                           | 5.17                      |
| 1296                             | 3     | 46355     | 40170             | 67062.5                | 1.54                     | 6.67                                 |                           | 6.67                      |
| 1297                             | 4     | 71020     | 58687.5           | 125750                 | 2.89                     | 7.9                                  |                           | 7.9                       |
| 1298                             | 5     | 73600     | 72310             | 198060                 | 4.55                     | 8.95                                 | 10.61                     | 19.56                     |
| 1299                             | 6     | 88081     | 80840.5           | 278900.5               | 6.40                     | 9.9                                  | 55.11                     | 65.01                     |
| 1300                             | 7     | 92000     | 90040.5           | 368941                 | 8.47                     | 10.76                                | 118.59                    | 129.35                    |

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT D – Detention Basin Routing

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT D – Detention Basin Routing



# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT D – Detention Basin Routing

FLOOD HYDROGRAPH ROUTING PROGRAM  
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005  
Study date: 01/31/18

-----  
Nichols Road Project - Tract 37305  
Drainage Area A = 40.1 Ac  
Tributary to Detention Basin A  
Detention Basin Routing  
100-year 1-hour storm  
-----

Program License Serial Number 4029

-----  
\*\*\*\*\* HYDROGRAPH INFORMATION \*\*\*\*\*  
-----  
From study/file name: nrareaaprx1100.rte  
\*\*\*\*\*HYDROGRAPH DATA\*\*\*\*\*  
Number of intervals = 17  
Time interval = 5.0 (Min.)  
Maximum/Peak flow rate = 120.953 (CFS)  
Total volume = 4.293 (Ac.Ft)  
Status of hydrographs being held in storage  
Stream 1 Stream 2 Stream 3 Stream 4 Stream 5  
Peak (CFS) 0.000 0.000 0.000 0.000 0.000  
Vol (Ac.Ft) 0.000 0.000 0.000 0.000 0.000  
\*\*\*\*\*

+++++  
Process from Point/Station 10.000 to Point/Station 11.000  
\*\*\*\* RETARDING BASIN ROUTING \*\*\*\*

-----  
User entry of depth-outflow-storage data  
-----

Total number of inflow hydrograph intervals = 17  
Hydrograph time unit = 5.000 (Min.)  
Initial depth in storage basin = 0.00 (Ft.)  
-----

-----  
Initial basin depth = 0.00 (Ft.)  
Initial basin storage = 0.00 (Ac.Ft)  
Initial basin outflow = 0.00 (CFS)  
-----

-----  
Depth vs. Storage and Depth vs. Discharge data:  
Basin Depth Storage Outflow (S-O\*dt/2) (S+O\*dt/2)  
(Ft.) (Ac.Ft) (CFS) (Ac.Ft) (Ac.Ft)  
-----  
0.000 0.000 0.000 0.000 0.000  
1.000 0.110 2.980 0.100 0.120  
2.000 0.620 5.170 0.602 0.638  
3.000 1.540 6.670 1.517 1.563  
4.000 2.890 7.900 2.863 2.917  
5.000 4.550 19.560 4.483 4.617  
6.000 6.400 65.010 6.176 6.624  
7.000 8.470 129.350 8.025 8.915  
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Hydrograph Detention Basin Routing  
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# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

| Time<br>(Hours) | Inflow<br>(CFS) | Outflow<br>(CFS) | Storage<br>(Ac.Ft) |    |      |       |       |        |  | Depth<br>(Ft.) |
|-----------------|-----------------|------------------|--------------------|----|------|-------|-------|--------|--|----------------|
|                 |                 |                  |                    | .0 | 30.2 | 60.48 | 90.71 | 120.95 |  |                |
| 0.083           | 5.42            | 0.46             | 0.017              | OI |      |       |       |        |  | 0.16           |
| 0.167           | 19.93           | 2.55             | 0.094              | O  | I    |       |       |        |  | 0.85           |
| 0.250           | 25.58           | 3.49             | 0.230              | O  | I    |       |       |        |  | 1.24           |
| 0.333           | 30.38           | 4.21             | 0.396              | IO | I    |       |       |        |  | 1.56           |
| 0.417           | 32.10           | 5.00             | 0.579              | IO | I    |       |       |        |  | 1.92           |
| 0.500           | 34.73           | 5.42             | 0.774              | IO | I    |       |       |        |  | 2.17           |
| 0.583           | 39.88           | 5.78             | 0.992              | IO | I    | I     |       |        |  | 2.40           |
| 0.667           | 48.09           | 6.20             | 1.254              | IO | I    | I     |       |        |  | 2.69           |
| 0.750           | 59.66           | 6.71             | 1.580              | IO | I    | I     |       |        |  | 3.03           |
| 0.833           | 93.51           | 7.14             | 2.060              | IO | I    | I     | I     |        |  | 3.39           |
| 0.917           | 120.95          | 7.77             | 2.747              | IO | I    | I     | I     | I      |  | 3.89           |
| 1.000           | 65.09           | 10.94            | 3.323              | IO | I    | I     | I     | I      |  | 4.26           |
| 1.083           | 33.96           | 12.77            | 3.583              | IO | I    | I     | I     | I      |  | 4.42           |
| 1.167           | 9.78            | 13.20            | 3.644              | IO | I    | I     | I     | I      |  | 4.45           |
| 1.250           | 3.40            | 12.88            | 3.600              | IO | I    | I     | I     | I      |  | 4.43           |
| 1.333           | 0.74            | 12.37            | 3.527              | IO | I    | I     | I     | I      |  | 4.38           |
| 1.417           | 0.22            | 11.81            | 3.447              | IO | I    | I     | I     | I      |  | 4.34           |
| 1.500           | 0.00            | 11.26            | 3.368              | IO | I    | I     | I     | I      |  | 4.29           |
| 1.583           | 0.00            | 10.73            | 3.293              | IO | I    | I     | I     | I      |  | 4.24           |
| 1.667           | 0.00            | 10.22            | 3.220              | IO | I    | I     | I     | I      |  | 4.20           |
| 1.750           | 0.00            | 9.74             | 3.152              | IO | I    | I     | I     | I      |  | 4.16           |
| 1.833           | 0.00            | 9.28             | 3.086              | IO | I    | I     | I     | I      |  | 4.12           |
| 1.917           | 0.00            | 8.84             | 3.024              | IO | I    | I     | I     | I      |  | 4.08           |
| 2.000           | 0.00            | 8.42             | 2.964              | IO | I    | I     | I     | I      |  | 4.04           |
| 2.083           | 0.00            | 8.02             | 2.908              | IO | I    | I     | I     | I      |  | 4.01           |
| 2.167           | 0.00            | 7.87             | 2.853              | IO | I    | I     | I     | I      |  | 3.97           |
| 2.250           | 0.00            | 7.82             | 2.799              | IO | I    | I     | I     | I      |  | 3.93           |
| 2.333           | 0.00            | 7.77             | 2.745              | IO | I    | I     | I     | I      |  | 3.89           |
| 2.417           | 0.00            | 7.72             | 2.692              | IO | I    | I     | I     | I      |  | 3.85           |
| 2.500           | 0.00            | 7.67             | 2.639              | IO | I    | I     | I     | I      |  | 3.81           |
| 2.583           | 0.00            | 7.62             | 2.586              | IO | I    | I     | I     | I      |  | 3.78           |
| 2.667           | 0.00            | 7.58             | 2.534              | IO | I    | I     | I     | I      |  | 3.74           |
| 2.750           | 0.00            | 7.53             | 2.482              | IO | I    | I     | I     | I      |  | 3.70           |
| 2.833           | 0.00            | 7.48             | 2.430              | IO | I    | I     | I     | I      |  | 3.66           |
| 2.917           | 0.00            | 7.43             | 2.379              | IO | I    | I     | I     | I      |  | 3.62           |
| 3.000           | 0.00            | 7.39             | 2.328              | IO | I    | I     | I     | I      |  | 3.58           |
| 3.083           | 0.00            | 7.34             | 2.277              | IO | I    | I     | I     | I      |  | 3.55           |
| 3.167           | 0.00            | 7.30             | 2.227              | IO | I    | I     | I     | I      |  | 3.51           |
| 3.250           | 0.00            | 7.25             | 2.177              | IO | I    | I     | I     | I      |  | 3.47           |
| 3.333           | 0.00            | 7.20             | 2.127              | IO | I    | I     | I     | I      |  | 3.43           |
| 3.417           | 0.00            | 7.16             | 2.077              | IO | I    | I     | I     | I      |  | 3.40           |
| 3.500           | 0.00            | 7.11             | 2.028              | IO | I    | I     | I     | I      |  | 3.36           |
| 3.583           | 0.00            | 7.07             | 1.979              | IO | I    | I     | I     | I      |  | 3.33           |
| 3.667           | 0.00            | 7.03             | 1.931              | IO | I    | I     | I     | I      |  | 3.29           |
| 3.750           | 0.00            | 6.98             | 1.883              | IO | I    | I     | I     | I      |  | 3.25           |
| 3.833           | 0.00            | 6.94             | 1.835              | IO | I    | I     | I     | I      |  | 3.22           |
| 3.917           | 0.00            | 6.90             | 1.787              | IO | I    | I     | I     | I      |  | 3.18           |
| 4.000           | 0.00            | 6.85             | 1.740              | IO | I    | I     | I     | I      |  | 3.15           |
| 4.083           | 0.00            | 6.81             | 1.693              | IO | I    | I     | I     | I      |  | 3.11           |
| 4.167           | 0.00            | 6.77             | 1.646              | IO | I    | I     | I     | I      |  | 3.08           |
| 4.250           | 0.00            | 6.72             | 1.599              | IO | I    | I     | I     | I      |  | 3.04           |
| 4.333           | 0.00            | 6.68             | 1.553              | IO | I    | I     | I     | I      |  | 3.01           |
| 4.417           | 0.00            | 6.62             | 1.508              | IO | I    | I     | I     | I      |  | 2.96           |
| 4.500           | 0.00            | 6.54             | 1.462              | IO | I    | I     | I     | I      |  | 2.92           |
| 4.583           | 0.00            | 6.47             | 1.417              | IO | I    | I     | I     | I      |  | 2.87           |
| 4.667           | 0.00            | 6.40             | 1.373              | IO | I    | I     | I     | I      |  | 2.82           |
| 4.750           | 0.00            | 6.33             | 1.329              | IO | I    | I     | I     | I      |  | 2.77           |
| 4.833           | 0.00            | 6.26             | 1.286              | IO | I    | I     | I     | I      |  | 2.72           |
| 4.917           | 0.00            | 6.19             | 1.243              | IO | I    | I     | I     | I      |  | 2.68           |
| 5.000           | 0.00            | 6.12             | 1.201              | IO | I    | I     | I     | I      |  | 2.63           |
| 5.083           | 0.00            | 6.05             | 1.159              | IO | I    | I     | I     | I      |  | 2.59           |
| 5.167           | 0.00            | 5.98             | 1.117              | IO | I    | I     | I     | I      |  | 2.54           |
| 5.250           | 0.00            | 5.91             | 1.076              | IO | I    | I     | I     | I      |  | 2.50           |
| 5.333           | 0.00            | 5.85             | 1.036              | IO | I    | I     | I     | I      |  | 2.45           |
| 5.417           | 0.00            | 5.78             | 0.996              | IO | I    | I     | I     | I      |  | 2.41           |
| 5.500           | 0.00            | 5.72             | 0.956              | IO | I    | I     | I     | I      |  | 2.37           |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |    |  |  |  |  |      |
|--------|------|------|-------|----|--|--|--|--|------|
| 5.583  | 0.00 | 5.65 | 0.917 | IO |  |  |  |  | 2.32 |
| 5.667  | 0.00 | 5.59 | 0.878 | IO |  |  |  |  | 2.28 |
| 5.750  | 0.00 | 5.53 | 0.840 | IO |  |  |  |  | 2.24 |
| 5.833  | 0.00 | 5.47 | 0.802 | IO |  |  |  |  | 2.20 |
| 5.917  | 0.00 | 5.41 | 0.765 | IO |  |  |  |  | 2.16 |
| 6.000  | 0.00 | 5.35 | 0.728 | IO |  |  |  |  | 2.12 |
| 6.083  | 0.00 | 5.29 | 0.691 | IO |  |  |  |  | 2.08 |
| 6.167  | 0.00 | 5.23 | 0.655 | IO |  |  |  |  | 2.04 |
| 6.250  | 0.00 | 5.17 | 0.619 | IO |  |  |  |  | 2.00 |
| 6.333  | 0.00 | 5.02 | 0.584 | IO |  |  |  |  | 1.93 |
| 6.417  | 0.00 | 4.87 | 0.550 | IO |  |  |  |  | 1.86 |
| 6.500  | 0.00 | 4.73 | 0.517 | IO |  |  |  |  | 1.80 |
| 6.583  | 0.00 | 4.59 | 0.485 | IO |  |  |  |  | 1.74 |
| 6.667  | 0.00 | 4.46 | 0.454 | IO |  |  |  |  | 1.67 |
| 6.750  | 0.00 | 4.33 | 0.424 | IO |  |  |  |  | 1.61 |
| 6.833  | 0.00 | 4.20 | 0.394 | IO |  |  |  |  | 1.56 |
| 6.917  | 0.00 | 4.08 | 0.366 | IO |  |  |  |  | 1.50 |
| 7.000  | 0.00 | 3.96 | 0.338 | IO |  |  |  |  | 1.45 |
| 7.083  | 0.00 | 3.84 | 0.311 | IO |  |  |  |  | 1.39 |
| 7.167  | 0.00 | 3.73 | 0.285 | O  |  |  |  |  | 1.34 |
| 7.250  | 0.00 | 3.62 | 0.260 | O  |  |  |  |  | 1.29 |
| 7.333  | 0.00 | 3.52 | 0.235 | O  |  |  |  |  | 1.25 |
| 7.417  | 0.00 | 3.41 | 0.211 | O  |  |  |  |  | 1.20 |
| 7.500  | 0.00 | 3.32 | 0.188 | O  |  |  |  |  | 1.15 |
| 7.583  | 0.00 | 3.22 | 0.166 | O  |  |  |  |  | 1.11 |
| 7.667  | 0.00 | 3.12 | 0.144 | O  |  |  |  |  | 1.07 |
| 7.750  | 0.00 | 3.03 | 0.123 | O  |  |  |  |  | 1.02 |
| 7.833  | 0.00 | 2.78 | 0.103 | O  |  |  |  |  | 0.93 |
| 7.917  | 0.00 | 2.30 | 0.085 | O  |  |  |  |  | 0.77 |
| 8.000  | 0.00 | 1.91 | 0.071 | O  |  |  |  |  | 0.64 |
| 8.083  | 0.00 | 1.58 | 0.058 | O  |  |  |  |  | 0.53 |
| 8.167  | 0.00 | 1.31 | 0.049 | O  |  |  |  |  | 0.44 |
| 8.250  | 0.00 | 1.09 | 0.040 | O  |  |  |  |  | 0.37 |
| 8.333  | 0.00 | 0.90 | 0.033 | O  |  |  |  |  | 0.30 |
| 8.417  | 0.00 | 0.75 | 0.028 | O  |  |  |  |  | 0.25 |
| 8.500  | 0.00 | 0.62 | 0.023 | O  |  |  |  |  | 0.21 |
| 8.583  | 0.00 | 0.52 | 0.019 | O  |  |  |  |  | 0.17 |
| 8.667  | 0.00 | 0.43 | 0.016 | O  |  |  |  |  | 0.14 |
| 8.750  | 0.00 | 0.35 | 0.013 | O  |  |  |  |  | 0.12 |
| 8.833  | 0.00 | 0.29 | 0.011 | O  |  |  |  |  | 0.10 |
| 8.917  | 0.00 | 0.24 | 0.009 | O  |  |  |  |  | 0.08 |
| 9.000  | 0.00 | 0.20 | 0.007 | O  |  |  |  |  | 0.07 |
| 9.083  | 0.00 | 0.17 | 0.006 | O  |  |  |  |  | 0.06 |
| 9.167  | 0.00 | 0.14 | 0.005 | O  |  |  |  |  | 0.05 |
| 9.250  | 0.00 | 0.12 | 0.004 | O  |  |  |  |  | 0.04 |
| 9.333  | 0.00 | 0.10 | 0.004 | O  |  |  |  |  | 0.03 |
| 9.417  | 0.00 | 0.08 | 0.003 | O  |  |  |  |  | 0.03 |
| 9.500  | 0.00 | 0.07 | 0.002 | O  |  |  |  |  | 0.02 |
| 9.583  | 0.00 | 0.05 | 0.002 | O  |  |  |  |  | 0.02 |
| 9.667  | 0.00 | 0.05 | 0.002 | O  |  |  |  |  | 0.02 |
| 9.750  | 0.00 | 0.04 | 0.001 | O  |  |  |  |  | 0.01 |
| 9.833  | 0.00 | 0.03 | 0.001 | O  |  |  |  |  | 0.01 |
| 9.917  | 0.00 | 0.03 | 0.001 | O  |  |  |  |  | 0.01 |
| 10.000 | 0.00 | 0.02 | 0.001 | O  |  |  |  |  | 0.01 |
| 10.083 | 0.00 | 0.02 | 0.001 | O  |  |  |  |  | 0.01 |
| 10.167 | 0.00 | 0.01 | 0.001 | O  |  |  |  |  | 0.00 |
| 10.250 | 0.00 | 0.01 | 0.000 | O  |  |  |  |  | 0.00 |
| 10.333 | 0.00 | 0.01 | 0.000 | O  |  |  |  |  | 0.00 |
| 10.417 | 0.00 | 0.01 | 0.000 | O  |  |  |  |  | 0.00 |
| 10.500 | 0.00 | 0.01 | 0.000 | O  |  |  |  |  | 0.00 |
| 10.583 | 0.00 | 0.01 | 0.000 | O  |  |  |  |  | 0.00 |
| 10.667 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |
| 10.750 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |
| 10.833 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |
| 10.917 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |

\*\*\*\*\*HYDROGRAPH DATA\*\*\*\*\*

Number of intervals = 131  
Time interval = 5.0 (Min.)  
Maximum/Peak flow rate = 13.196 (CFS)  
Total volume = 4.293 (Ac.Ft)

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT D – Detention Basin Routing

Status of hydrographs being held in storage

|             | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|-------------|----------|----------|----------|----------|----------|
| Peak (CFS)  | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| Vol (Ac.Ft) | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |

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# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT D – Detention Basin Routing

FLOOD HYDROGRAPH ROUTING PROGRAM  
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005  
Study date: 01/31/18

Nichols Road Project - Tract 37305  
Drainage Area A = 40.1 Ac  
Tributary to Detention Basin A  
Detention Basin Routing  
100-year 3-hour storm

Program License Serial Number 4029

### \*\*\*\*\* HYDROGRAPH INFORMATION \*\*\*\*\*

From study/file name: nrareaaprx3100.rte  
\*\*\*\*\*HYDROGRAPH DATA\*\*\*\*\*  
Number of intervals = 41  
Time interval = 5.0 (Min.)  
Maximum/Peak flow rate = 76.056 (CFS)  
Total volume = 6.477 (Ac.Ft)  
Status of hydrographs being held in storage  
Stream 1 Stream 2 Stream 3 Stream 4 Stream 5  
Peak (CFS) 0.000 0.000 0.000 0.000 0.000  
Vol (Ac.Ft) 0.000 0.000 0.000 0.000 0.000  
\*\*\*\*\*

+++++  
Process from Point/Station 10.000 to Point/Station 11.000  
\*\*\*\* RETARDING BASIN ROUTING \*\*\*\*

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 41  
Hydrograph time unit = 5.000 (Min.)  
Initial depth in storage basin = 0.00 (Ft.)

Initial basin depth = 0.00 (Ft.)  
Initial basin storage = 0.00 (Ac.Ft)  
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:  

| Basin Depth<br>(Ft.) | Storage<br>(Ac.Ft) | Outflow<br>(CFS) | (S-O*dt/2)<br>(Ac.Ft) | (S+O*dt/2)<br>(Ac.Ft) |
|----------------------|--------------------|------------------|-----------------------|-----------------------|
| 0.000                | 0.000              | 0.000            | 0.000                 | 0.000                 |
| 1.000                | 0.110              | 2.980            | 0.100                 | 0.120                 |
| 2.000                | 0.620              | 5.170            | 0.602                 | 0.638                 |
| 3.000                | 1.540              | 6.670            | 1.517                 | 1.563                 |
| 4.000                | 2.890              | 7.900            | 2.863                 | 2.917                 |
| 5.000                | 4.550              | 19.560           | 4.483                 | 4.617                 |
| 6.000                | 6.400              | 65.010           | 6.176                 | 6.624                 |
| 7.000                | 8.470              | 129.350          | 8.025                 | 8.915                 |

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

| Time | Inflow | Outflow | Storage | Depth |
|------|--------|---------|---------|-------|
|------|--------|---------|---------|-------|

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

| (Hours) | (CFS) | (CFS) | (Ac.Ft) | .0  | 19.0 | 38.03 | 57.04 | 76.06 | (Ft.) |
|---------|-------|-------|---------|-----|------|-------|-------|-------|-------|
| 0.083   | 2.15  | 0.18  | 0.007   | O   |      |       |       |       | 0.06  |
| 0.167   | 7.86  | 1.01  | 0.037   | O I |      |       |       |       | 0.34  |
| 0.250   | 8.99  | 2.27  | 0.084   | O I |      |       |       |       | 0.76  |
| 0.333   | 9.21  | 3.06  | 0.128   | O I |      |       |       |       | 1.04  |
| 0.417   | 11.42 | 3.27  | 0.177   | O I |      |       |       |       | 1.13  |
| 0.500   | 12.74 | 3.53  | 0.237   | O I |      |       |       |       | 1.25  |
| 0.583   | 14.07 | 3.81  | 0.304   | O I |      |       |       |       | 1.38  |
| 0.667   | 13.48 | 4.10  | 0.372   | O I |      |       |       |       | 1.51  |
| 0.750   | 14.99 | 4.40  | 0.441   | O I |      |       |       |       | 1.65  |
| 0.833   | 14.68 | 4.70  | 0.511   | O I |      |       |       |       | 1.79  |
| 0.917   | 13.25 | 4.97  | 0.574   | O I |      |       |       |       | 1.91  |
| 1.000   | 13.82 | 5.19  | 0.633   | O I |      |       |       |       | 2.01  |
| 1.083   | 15.97 | 5.30  | 0.699   | O I |      |       |       |       | 2.09  |
| 1.167   | 18.73 | 5.43  | 0.781   | O I |      |       |       |       | 2.18  |
| 1.250   | 19.50 | 5.59  | 0.875   | O I |      |       |       |       | 2.28  |
| 1.333   | 19.31 | 5.74  | 0.970   | O I |      |       |       |       | 2.38  |
| 1.417   | 19.53 | 5.89  | 1.064   | O I |      |       |       |       | 2.48  |
| 1.500   | 23.08 | 6.07  | 1.169   | O I |      |       |       |       | 2.60  |
| 1.583   | 23.90 | 6.26  | 1.288   | O I |      |       |       |       | 2.73  |
| 1.667   | 23.25 | 6.45  | 1.407   | O I |      |       |       |       | 2.86  |
| 1.750   | 26.04 | 6.66  | 1.532   | O I |      |       |       |       | 2.99  |
| 1.833   | 29.61 | 6.79  | 1.677   | O I | I    |       |       |       | 3.10  |
| 1.917   | 29.09 | 6.94  | 1.832   | O I | I    |       |       |       | 3.22  |
| 2.000   | 28.12 | 7.07  | 1.981   | O I | I    |       |       |       | 3.33  |
| 2.083   | 28.61 | 7.20  | 2.127   | O I | I    |       |       |       | 3.43  |
| 2.167   | 31.80 | 7.35  | 2.285   | O I | I    |       |       |       | 3.55  |
| 2.250   | 40.45 | 7.53  | 2.482   | O I | I    | I     |       |       | 3.70  |
| 2.333   | 43.76 | 7.74  | 2.720   | O I | I    | I     |       |       | 3.87  |
| 2.417   | 44.19 | 8.44  | 2.967   | O I | I    | I     |       |       | 4.05  |
| 2.500   | 63.34 | 10.58 | 3.272   | O I | I    | I     | I     |       | 4.23  |
| 2.583   | 73.33 | 13.31 | 3.660   | O I | I    | I     | I     | I     | 4.46  |
| 2.667   | 76.06 | 16.21 | 4.073   | O I | I    | I     | I     | I     | 4.71  |
| 2.750   | 55.40 | 18.55 | 4.406   | O I | I    | I     | I     | I     | 4.91  |
| 2.833   | 28.35 | 19.85 | 4.562   | O I | I    | I     | I     | I     | 5.01  |
| 2.917   | 19.48 | 20.49 | 4.588   | O I | I    | I     | I     | I     | 5.02  |
| 3.000   | 14.30 | 19.92 | 4.565   | I O | I    | I     | I     | I     | 5.01  |
| 3.083   | 6.12  | 19.21 | 4.500   | I O | I    | I     | I     | I     | 4.97  |
| 3.167   | 1.75  | 18.49 | 4.398   | I O | I    | I     | I     | I     | 4.91  |
| 3.250   | 0.52  | 17.67 | 4.281   | I O | I    | I     | I     | I     | 4.84  |
| 3.333   | 0.17  | 16.85 | 4.164   | I O | I    | I     | I     | I     | 4.77  |
| 3.417   | 0.03  | 16.06 | 4.052   | I O | I    | I     | I     | I     | 4.70  |
| 3.500   | 0.00  | 15.30 | 3.944   | I O | I    | I     | I     | I     | 4.63  |
| 3.583   | 0.00  | 14.58 | 3.841   | I O | I    | I     | I     | I     | 4.57  |
| 3.667   | 0.00  | 13.89 | 3.743   | I O | I    | I     | I     | I     | 4.51  |
| 3.750   | 0.00  | 13.24 | 3.650   | I O | I    | I     | I     | I     | 4.46  |
| 3.833   | 0.00  | 12.61 | 3.561   | I O | I    | I     | I     | I     | 4.40  |
| 3.917   | 0.00  | 12.01 | 3.476   | I O | I    | I     | I     | I     | 4.35  |
| 4.000   | 0.00  | 11.45 | 3.395   | I O | I    | I     | I     | I     | 4.30  |
| 4.083   | 0.00  | 10.91 | 3.318   | I O | I    | I     | I     | I     | 4.26  |
| 4.167   | 0.00  | 10.39 | 3.245   | I O | I    | I     | I     | I     | 4.21  |
| 4.250   | 0.00  | 9.90  | 3.175   | I O | I    | I     | I     | I     | 4.17  |
| 4.333   | 0.00  | 9.43  | 3.108   | I O | I    | I     | I     | I     | 4.13  |
| 4.417   | 0.00  | 8.99  | 3.045   | I O | I    | I     | I     | I     | 4.09  |
| 4.500   | 0.00  | 8.56  | 2.984   | I O | I    | I     | I     | I     | 4.06  |
| 4.583   | 0.00  | 8.16  | 2.927   | I O | I    | I     | I     | I     | 4.02  |
| 4.667   | 0.00  | 7.88  | 2.872   | I O | I    | I     | I     | I     | 3.99  |
| 4.750   | 0.00  | 7.83  | 2.817   | I O | I    | I     | I     | I     | 3.95  |
| 4.833   | 0.00  | 7.78  | 2.764   | I O | I    | I     | I     | I     | 3.91  |
| 4.917   | 0.00  | 7.74  | 2.710   | I O | I    | I     | I     | I     | 3.87  |
| 5.000   | 0.00  | 7.69  | 2.657   | I O | I    | I     | I     | I     | 3.83  |
| 5.083   | 0.00  | 7.64  | 2.604   | I O | I    | I     | I     | I     | 3.79  |
| 5.167   | 0.00  | 7.59  | 2.552   | I O | I    | I     | I     | I     | 3.75  |
| 5.250   | 0.00  | 7.54  | 2.500   | I O | I    | I     | I     | I     | 3.71  |
| 5.333   | 0.00  | 7.50  | 2.448   | I O | I    | I     | I     | I     | 3.67  |
| 5.417   | 0.00  | 7.45  | 2.396   | I O | I    | I     | I     | I     | 3.63  |
| 5.500   | 0.00  | 7.40  | 2.345   | I O | I    | I     | I     | I     | 3.60  |
| 5.583   | 0.00  | 7.36  | 2.294   | I O | I    | I     | I     | I     | 3.56  |
| 5.667   | 0.00  | 7.31  | 2.244   | I O | I    | I     | I     | I     | 3.52  |
| 5.750   | 0.00  | 7.27  | 2.194   | I O | I    | I     | I     | I     | 3.48  |
| 5.833   | 0.00  | 7.22  | 2.144   | I O | I    | I     | I     | I     | 3.45  |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |     |  |  |  |  |      |
|--------|------|------|-------|-----|--|--|--|--|------|
| 5.917  | 0.00 | 7.18 | 2.094 | I O |  |  |  |  | 3.41 |
| 6.000  | 0.00 | 7.13 | 2.045 | I O |  |  |  |  | 3.37 |
| 6.083  | 0.00 | 7.09 | 1.996 | I O |  |  |  |  | 3.34 |
| 6.167  | 0.00 | 7.04 | 1.947 | I O |  |  |  |  | 3.30 |
| 6.250  | 0.00 | 7.00 | 1.899 | I O |  |  |  |  | 3.27 |
| 6.333  | 0.00 | 6.95 | 1.851 | I O |  |  |  |  | 3.23 |
| 6.417  | 0.00 | 6.91 | 1.803 | I O |  |  |  |  | 3.20 |
| 6.500  | 0.00 | 6.87 | 1.756 | I O |  |  |  |  | 3.16 |
| 6.583  | 0.00 | 6.82 | 1.709 | I O |  |  |  |  | 3.12 |
| 6.667  | 0.00 | 6.78 | 1.662 | I O |  |  |  |  | 3.09 |
| 6.750  | 0.00 | 6.74 | 1.615 | I O |  |  |  |  | 3.06 |
| 6.833  | 0.00 | 6.70 | 1.569 | I O |  |  |  |  | 3.02 |
| 6.917  | 0.00 | 6.64 | 1.523 | I O |  |  |  |  | 2.98 |
| 7.000  | 0.00 | 6.57 | 1.478 | I O |  |  |  |  | 2.93 |
| 7.083  | 0.00 | 6.49 | 1.433 | I O |  |  |  |  | 2.88 |
| 7.167  | 0.00 | 6.42 | 1.388 | I O |  |  |  |  | 2.83 |
| 7.250  | 0.00 | 6.35 | 1.344 | I O |  |  |  |  | 2.79 |
| 7.333  | 0.00 | 6.28 | 1.301 | I O |  |  |  |  | 2.74 |
| 7.417  | 0.00 | 6.21 | 1.258 | I O |  |  |  |  | 2.69 |
| 7.500  | 0.00 | 6.14 | 1.215 | I O |  |  |  |  | 2.65 |
| 7.583  | 0.00 | 6.07 | 1.173 | I O |  |  |  |  | 2.60 |
| 7.667  | 0.00 | 6.00 | 1.132 | I O |  |  |  |  | 2.56 |
| 7.750  | 0.00 | 5.94 | 1.090 | I O |  |  |  |  | 2.51 |
| 7.833  | 0.00 | 5.87 | 1.050 | I O |  |  |  |  | 2.47 |
| 7.917  | 0.00 | 5.81 | 1.010 | I O |  |  |  |  | 2.42 |
| 8.000  | 0.00 | 5.74 | 0.970 | I O |  |  |  |  | 2.38 |
| 8.083  | 0.00 | 5.68 | 0.930 | I O |  |  |  |  | 2.34 |
| 8.167  | 0.00 | 5.61 | 0.892 | I O |  |  |  |  | 2.30 |
| 8.250  | 0.00 | 5.55 | 0.853 | I O |  |  |  |  | 2.25 |
| 8.333  | 0.00 | 5.49 | 0.815 | I O |  |  |  |  | 2.21 |
| 8.417  | 0.00 | 5.43 | 0.778 | I O |  |  |  |  | 2.17 |
| 8.500  | 0.00 | 5.37 | 0.740 | I O |  |  |  |  | 2.13 |
| 8.583  | 0.00 | 5.31 | 0.704 | I O |  |  |  |  | 2.09 |
| 8.667  | 0.00 | 5.25 | 0.667 | I O |  |  |  |  | 2.05 |
| 8.750  | 0.00 | 5.19 | 0.631 | I O |  |  |  |  | 2.01 |
| 8.833  | 0.00 | 5.07 | 0.596 | I O |  |  |  |  | 1.95 |
| 8.917  | 0.00 | 4.92 | 0.562 | I O |  |  |  |  | 1.89 |
| 9.000  | 0.00 | 4.78 | 0.528 | I O |  |  |  |  | 1.82 |
| 9.083  | 0.00 | 4.64 | 0.496 | IO  |  |  |  |  | 1.76 |
| 9.167  | 0.00 | 4.50 | 0.464 | IO  |  |  |  |  | 1.69 |
| 9.250  | 0.00 | 4.37 | 0.434 | IO  |  |  |  |  | 1.63 |
| 9.333  | 0.00 | 4.24 | 0.404 | IO  |  |  |  |  | 1.58 |
| 9.417  | 0.00 | 4.12 | 0.375 | IO  |  |  |  |  | 1.52 |
| 9.500  | 0.00 | 4.00 | 0.347 | IO  |  |  |  |  | 1.47 |
| 9.583  | 0.00 | 3.88 | 0.320 | IO  |  |  |  |  | 1.41 |
| 9.667  | 0.00 | 3.77 | 0.294 | IO  |  |  |  |  | 1.36 |
| 9.750  | 0.00 | 3.66 | 0.268 | IO  |  |  |  |  | 1.31 |
| 9.833  | 0.00 | 3.55 | 0.244 | IO  |  |  |  |  | 1.26 |
| 9.917  | 0.00 | 3.45 | 0.219 | IO  |  |  |  |  | 1.21 |
| 10.000 | 0.00 | 3.35 | 0.196 | IO  |  |  |  |  | 1.17 |
| 10.083 | 0.00 | 3.25 | 0.173 | IO  |  |  |  |  | 1.12 |
| 10.167 | 0.00 | 3.16 | 0.151 | IO  |  |  |  |  | 1.08 |
| 10.250 | 0.00 | 3.06 | 0.130 | IO  |  |  |  |  | 1.04 |
| 10.333 | 0.00 | 2.95 | 0.109 | IO  |  |  |  |  | 0.99 |
| 10.417 | 0.00 | 2.45 | 0.090 | IO  |  |  |  |  | 0.82 |
| 10.500 | 0.00 | 2.03 | 0.075 | O   |  |  |  |  | 0.68 |
| 10.583 | 0.00 | 1.68 | 0.062 | O   |  |  |  |  | 0.57 |
| 10.667 | 0.00 | 1.40 | 0.052 | O   |  |  |  |  | 0.47 |
| 10.750 | 0.00 | 1.16 | 0.043 | O   |  |  |  |  | 0.39 |
| 10.833 | 0.00 | 0.96 | 0.035 | O   |  |  |  |  | 0.32 |
| 10.917 | 0.00 | 0.80 | 0.029 | O   |  |  |  |  | 0.27 |
| 11.000 | 0.00 | 0.66 | 0.024 | O   |  |  |  |  | 0.22 |
| 11.083 | 0.00 | 0.55 | 0.020 | O   |  |  |  |  | 0.18 |
| 11.167 | 0.00 | 0.45 | 0.017 | O   |  |  |  |  | 0.15 |
| 11.250 | 0.00 | 0.38 | 0.014 | O   |  |  |  |  | 0.13 |
| 11.333 | 0.00 | 0.31 | 0.012 | O   |  |  |  |  | 0.10 |
| 11.417 | 0.00 | 0.26 | 0.010 | O   |  |  |  |  | 0.09 |
| 11.500 | 0.00 | 0.22 | 0.008 | O   |  |  |  |  | 0.07 |
| 11.583 | 0.00 | 0.18 | 0.007 | O   |  |  |  |  | 0.06 |
| 11.667 | 0.00 | 0.15 | 0.005 | O   |  |  |  |  | 0.05 |
| 11.750 | 0.00 | 0.12 | 0.005 | O   |  |  |  |  | 0.04 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |   |  |  |  |  |      |
|--------|------|------|-------|---|--|--|--|--|------|
| 11.833 | 0.00 | 0.10 | 0.004 | O |  |  |  |  | 0.03 |
| 11.917 | 0.00 | 0.08 | 0.003 | O |  |  |  |  | 0.03 |
| 12.000 | 0.00 | 0.07 | 0.003 | O |  |  |  |  | 0.02 |
| 12.083 | 0.00 | 0.06 | 0.002 | O |  |  |  |  | 0.02 |
| 12.167 | 0.00 | 0.05 | 0.002 | O |  |  |  |  | 0.02 |
| 12.250 | 0.00 | 0.04 | 0.001 | O |  |  |  |  | 0.01 |
| 12.333 | 0.00 | 0.03 | 0.001 | O |  |  |  |  | 0.01 |
| 12.417 | 0.00 | 0.03 | 0.001 | O |  |  |  |  | 0.01 |
| 12.500 | 0.00 | 0.02 | 0.001 | O |  |  |  |  | 0.01 |
| 12.583 | 0.00 | 0.02 | 0.001 | O |  |  |  |  | 0.01 |
| 12.667 | 0.00 | 0.02 | 0.001 | O |  |  |  |  | 0.01 |
| 12.750 | 0.00 | 0.01 | 0.000 | O |  |  |  |  | 0.00 |
| 12.833 | 0.00 | 0.01 | 0.000 | O |  |  |  |  | 0.00 |
| 12.917 | 0.00 | 0.01 | 0.000 | O |  |  |  |  | 0.00 |
| 13.000 | 0.00 | 0.01 | 0.000 | O |  |  |  |  | 0.00 |
| 13.083 | 0.00 | 0.01 | 0.000 | O |  |  |  |  | 0.00 |
| 13.167 | 0.00 | 0.01 | 0.000 | O |  |  |  |  | 0.00 |
| 13.250 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 13.333 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 13.417 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |

```

*****HYDROGRAPH DATA*****
      Number of intervals = 161
      Time interval = 5.0 (Min.)
      Maximum/Peak flow rate = 20.486 (CFS)
      Total volume = 6.477 (Ac.Ft)
      Status of hydrographs being held in storage
      Stream 1 Stream 2 Stream 3 Stream 4 Stream 5
      Peak (CFS) 0.000 0.000 0.000 0.000 0.000
      Vol (Ac.Ft) 0.000 0.000 0.000 0.000 0.000
*****

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# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT D – Detention Basin Routing

FLOOD HYDROGRAPH ROUTING PROGRAM  
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005  
Study date: 01/31/18

Nichols Road Project - Tract 37305  
Drainage Area A = 40.1 Ac  
Tributary to Detention Basin A  
Detention Basin Routing  
100-year 6-hour storm

Program License Serial Number 4029

### \*\*\*\*\* HYDROGRAPH INFORMATION \*\*\*\*\*

From study/file name: nrareaaprx6100.rte  
\*\*\*\*\*HYDROGRAPH DATA\*\*\*\*\*  
Number of intervals = 77  
Time interval = 5.0 (Min.)  
Maximum/Peak flow rate = 67.994 (CFS)  
Total volume = 8.580 (Ac.Ft)  
Status of hydrographs being held in storage  
Stream 1 Stream 2 Stream 3 Stream 4 Stream 5  
Peak (CFS) 0.000 0.000 0.000 0.000 0.000  
Vol (Ac.Ft) 0.000 0.000 0.000 0.000 0.000  
\*\*\*\*\*

+++++  
Process from Point/Station 10.000 to Point/Station 11.000  
\*\*\*\* RETARDING BASIN ROUTING \*\*\*\*

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 77  
Hydrograph time unit = 5.000 (Min.)  
Initial depth in storage basin = 0.00 (Ft.)

Initial basin depth = 0.00 (Ft.)  
Initial basin storage = 0.00 (Ac.Ft)  
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:  

| Basin Depth<br>(Ft.) | Storage<br>(Ac.Ft) | Outflow<br>(CFS) | (S-O*dt/2)<br>(Ac.Ft) | (S+O*dt/2)<br>(Ac.Ft) |
|----------------------|--------------------|------------------|-----------------------|-----------------------|
| 0.000                | 0.000              | 0.000            | 0.000                 | 0.000                 |
| 1.000                | 0.110              | 2.980            | 0.100                 | 0.120                 |
| 2.000                | 0.620              | 5.170            | 0.602                 | 0.638                 |
| 3.000                | 1.540              | 6.670            | 1.517                 | 1.563                 |
| 4.000                | 2.890              | 7.900            | 2.863                 | 2.917                 |
| 5.000                | 4.550              | 19.560           | 4.483                 | 4.617                 |
| 6.000                | 6.400              | 65.010           | 6.176                 | 6.624                 |
| 7.000                | 8.470              | 129.350          | 8.025                 | 8.915                 |

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

| Time | Inflow | Outflow | Storage | Depth |
|------|--------|---------|---------|-------|
|------|--------|---------|---------|-------|

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

| (Hours) | (CFS) | (CFS) | (Ac.Ft) | .0  | 17.0 | 34.00 | 51.00 | 67.99 | (Ft.) |
|---------|-------|-------|---------|-----|------|-------|-------|-------|-------|
| 0.083   | 0.98  | 0.08  | 0.003   | O   |      |       |       |       | 0.03  |
| 0.167   | 3.76  | 0.47  | 0.017   | OI  |      |       |       |       | 0.16  |
| 0.250   | 5.00  | 1.14  | 0.042   | O I |      |       |       |       | 0.38  |
| 0.333   | 5.38  | 1.83  | 0.068   | O I |      |       |       |       | 0.61  |
| 0.417   | 5.49  | 2.45  | 0.090   | OI  |      |       |       |       | 0.82  |
| 0.500   | 5.79  | 2.98  | 0.110   | OI  |      |       |       |       | 1.00  |
| 0.583   | 6.49  | 3.07  | 0.132   | O I |      |       |       |       | 1.04  |
| 0.667   | 6.68  | 3.18  | 0.156   | O I |      |       |       |       | 1.09  |
| 0.750   | 6.74  | 3.28  | 0.180   | O I |      |       |       |       | 1.14  |
| 0.833   | 6.76  | 3.38  | 0.203   | O I |      |       |       |       | 1.18  |
| 0.917   | 6.77  | 3.48  | 0.226   | O I |      |       |       |       | 1.23  |
| 1.000   | 7.09  | 3.58  | 0.250   | O I |      |       |       |       | 1.27  |
| 1.083   | 7.94  | 3.69  | 0.276   | O I |      |       |       |       | 1.33  |
| 1.167   | 8.17  | 3.82  | 0.306   | O I |      |       |       |       | 1.38  |
| 1.250   | 8.25  | 3.95  | 0.336   | O I |      |       |       |       | 1.44  |
| 1.333   | 8.27  | 4.07  | 0.365   | O I |      |       |       |       | 1.50  |
| 1.417   | 8.28  | 4.20  | 0.393   | O I |      |       |       |       | 1.56  |
| 1.500   | 8.28  | 4.32  | 0.421   | OI  |      |       |       |       | 1.61  |
| 1.583   | 8.28  | 4.43  | 0.448   | OI  |      |       |       |       | 1.66  |
| 1.667   | 8.28  | 4.54  | 0.474   | OI  |      |       |       |       | 1.71  |
| 1.750   | 8.28  | 4.65  | 0.499   | OI  |      |       |       |       | 1.76  |
| 1.833   | 8.28  | 4.76  | 0.524   | OI  |      |       |       |       | 1.81  |
| 1.917   | 8.28  | 4.86  | 0.548   | OI  |      |       |       |       | 1.86  |
| 2.000   | 8.60  | 4.97  | 0.572   | O I |      |       |       |       | 1.91  |
| 2.083   | 9.13  | 5.08  | 0.599   | O I |      |       |       |       | 1.96  |
| 2.167   | 8.84  | 5.18  | 0.625   | O I |      |       |       |       | 2.01  |
| 2.250   | 9.53  | 5.22  | 0.653   | O I |      |       |       |       | 2.04  |
| 2.333   | 9.70  | 5.27  | 0.683   | O I |      |       |       |       | 2.07  |
| 2.417   | 9.77  | 5.32  | 0.713   | O I |      |       |       |       | 2.10  |
| 2.500   | 9.78  | 5.37  | 0.744   | O I |      |       |       |       | 2.13  |
| 2.583   | 9.79  | 5.42  | 0.774   | O I |      |       |       |       | 2.17  |
| 2.667   | 9.79  | 5.47  | 0.804   | O I |      |       |       |       | 2.20  |
| 2.750   | 10.11 | 5.52  | 0.835   | O I |      |       |       |       | 2.23  |
| 2.833   | 10.96 | 5.58  | 0.869   | O I |      |       |       |       | 2.27  |
| 2.917   | 11.20 | 5.64  | 0.907   | O I |      |       |       |       | 2.31  |
| 3.000   | 11.28 | 5.70  | 0.945   | O I |      |       |       |       | 2.35  |
| 3.083   | 11.30 | 5.76  | 0.984   | O I |      |       |       |       | 2.40  |
| 3.167   | 11.63 | 5.83  | 1.023   | O I |      |       |       |       | 2.44  |
| 3.250   | 12.48 | 5.90  | 1.065   | O I |      |       |       |       | 2.48  |
| 3.333   | 12.71 | 5.97  | 1.111   | O I |      |       |       |       | 2.53  |
| 3.417   | 13.11 | 6.05  | 1.159   | O I |      |       |       |       | 2.59  |
| 3.500   | 14.30 | 6.13  | 1.211   | O I |      |       |       |       | 2.64  |
| 3.583   | 15.72 | 6.23  | 1.272   | O I |      |       |       |       | 2.71  |
| 3.667   | 16.88 | 6.35  | 1.341   | O I |      |       |       |       | 2.78  |
| 3.750   | 17.53 | 6.47  | 1.415   | O I |      |       |       |       | 2.86  |
| 3.833   | 18.49 | 6.60  | 1.494   | O I |      |       |       |       | 2.95  |
| 3.917   | 19.08 | 6.70  | 1.578   | O I |      |       |       |       | 3.03  |
| 4.000   | 20.01 | 6.78  | 1.666   | O I |      |       |       |       | 3.09  |
| 4.083   | 20.59 | 6.87  | 1.759   | O I |      |       |       |       | 3.16  |
| 4.167   | 21.85 | 6.96  | 1.857   | O I |      |       |       |       | 3.23  |
| 4.250   | 23.27 | 7.06  | 1.964   | O I |      |       |       |       | 3.31  |
| 4.333   | 24.77 | 7.16  | 2.081   | O I |      |       |       |       | 3.40  |
| 4.417   | 26.27 | 7.28  | 2.207   | O I |      |       |       |       | 3.49  |
| 4.500   | 27.46 | 7.40  | 2.341   | O I |      |       |       |       | 3.59  |
| 4.583   | 28.13 | 7.53  | 2.481   | O I |      |       |       |       | 3.70  |
| 4.667   | 29.40 | 7.66  | 2.627   | O I |      |       |       |       | 3.81  |
| 4.750   | 30.84 | 7.80  | 2.781   | O I |      |       |       |       | 3.92  |
| 4.833   | 32.02 | 8.27  | 2.942   | O I |      |       |       |       | 4.03  |
| 4.917   | 32.67 | 9.41  | 3.104   | O I |      |       |       |       | 4.13  |
| 5.000   | 33.95 | 10.53 | 3.265   | O I |      |       |       |       | 4.23  |
| 5.083   | 36.66 | 11.70 | 3.432   | O I |      |       |       |       | 4.33  |
| 5.167   | 42.83 | 13.03 | 3.620   | O I |      | I     |       |       | 4.44  |
| 5.250   | 49.32 | 14.59 | 3.842   | O I |      | I     |       |       | 4.57  |
| 5.333   | 54.42 | 16.35 | 4.093   | O I |      | I     |       |       | 4.72  |
| 5.417   | 59.77 | 18.27 | 4.367   | O I |      | I     |       |       | 4.89  |
| 5.500   | 67.99 | 22.43 | 4.667   | O I |      | I     |       | I     | 5.06  |
| 5.583   | 65.32 | 29.33 | 4.948   | O I |      | I     |       | I     | 5.21  |
| 5.667   | 33.32 | 32.45 | 5.075   | O I |      | I     |       | I     | 5.28  |
| 5.750   | 16.01 | 31.23 | 5.025   | O I |      | I     |       | I     | 5.26  |
| 5.833   | 8.43  | 28.27 | 4.904   | O I |      | I     |       | I     | 5.19  |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |       |       |   |   |   |  |  |  |      |
|--------|------|-------|-------|---|---|---|--|--|--|------|
| 5.917  | 5.48 | 24.94 | 4.769 | I | I | O |  |  |  | 5.12 |
| 6.000  | 3.26 | 21.73 | 4.639 | I | I | O |  |  |  | 5.05 |
| 6.083  | 1.85 | 19.31 | 4.515 | I |   | O |  |  |  | 4.98 |
| 6.167  | 0.53 | 18.46 | 4.393 | I |   | O |  |  |  | 4.91 |
| 6.250  | 0.17 | 17.60 | 4.271 | I |   | O |  |  |  | 4.83 |
| 6.333  | 0.04 | 16.77 | 4.154 | I |   | O |  |  |  | 4.76 |
| 6.417  | 0.01 | 15.98 | 4.041 | I |   | O |  |  |  | 4.69 |
| 6.500  | 0.00 | 15.23 | 3.933 | I |   | O |  |  |  | 4.63 |
| 6.583  | 0.00 | 14.51 | 3.831 | I |   | O |  |  |  | 4.57 |
| 6.667  | 0.00 | 13.82 | 3.733 | I |   | O |  |  |  | 4.51 |
| 6.750  | 0.00 | 13.17 | 3.641 | I |   | O |  |  |  | 4.45 |
| 6.833  | 0.00 | 12.55 | 3.552 | I |   | O |  |  |  | 4.40 |
| 6.917  | 0.00 | 11.96 | 3.468 | I |   | O |  |  |  | 4.35 |
| 7.000  | 0.00 | 11.39 | 3.387 | I |   | O |  |  |  | 4.30 |
| 7.083  | 0.00 | 10.85 | 3.311 | I |   | O |  |  |  | 4.25 |
| 7.167  | 0.00 | 10.34 | 3.238 | I |   | O |  |  |  | 4.21 |
| 7.250  | 0.00 | 9.85  | 3.168 | I |   | O |  |  |  | 4.17 |
| 7.333  | 0.00 | 9.39  | 3.102 | I |   | O |  |  |  | 4.13 |
| 7.417  | 0.00 | 8.94  | 3.039 | I |   | O |  |  |  | 4.09 |
| 7.500  | 0.00 | 8.52  | 2.979 | I |   | O |  |  |  | 4.05 |
| 7.583  | 0.00 | 8.12  | 2.921 | I |   | O |  |  |  | 4.02 |
| 7.667  | 0.00 | 7.88  | 2.866 | I |   | O |  |  |  | 3.98 |
| 7.750  | 0.00 | 7.83  | 2.812 | I |   | O |  |  |  | 3.94 |
| 7.833  | 0.00 | 7.78  | 2.758 | I |   | O |  |  |  | 3.90 |
| 7.917  | 0.00 | 7.73  | 2.705 | I |   | O |  |  |  | 3.86 |
| 8.000  | 0.00 | 7.68  | 2.652 | I |   | O |  |  |  | 3.82 |
| 8.083  | 0.00 | 7.63  | 2.599 | I |   | O |  |  |  | 3.78 |
| 8.167  | 0.00 | 7.59  | 2.547 | I |   | O |  |  |  | 3.75 |
| 8.250  | 0.00 | 7.54  | 2.495 | I |   | O |  |  |  | 3.71 |
| 8.333  | 0.00 | 7.49  | 2.443 | I |   | O |  |  |  | 3.67 |
| 8.417  | 0.00 | 7.45  | 2.391 | I |   | O |  |  |  | 3.63 |
| 8.500  | 0.00 | 7.40  | 2.340 | I |   | O |  |  |  | 3.59 |
| 8.583  | 0.00 | 7.35  | 2.289 | I |   | O |  |  |  | 3.56 |
| 8.667  | 0.00 | 7.31  | 2.239 | I |   | O |  |  |  | 3.52 |
| 8.750  | 0.00 | 7.26  | 2.189 | I |   | O |  |  |  | 3.48 |
| 8.833  | 0.00 | 7.22  | 2.139 | I |   | O |  |  |  | 3.44 |
| 8.917  | 0.00 | 7.17  | 2.089 | I |   | O |  |  |  | 3.41 |
| 9.000  | 0.00 | 7.13  | 2.040 | I |   | O |  |  |  | 3.37 |
| 9.083  | 0.00 | 7.08  | 1.991 | I |   | O |  |  |  | 3.33 |
| 9.167  | 0.00 | 7.04  | 1.943 | I |   | O |  |  |  | 3.30 |
| 9.250  | 0.00 | 6.99  | 1.894 | I |   | O |  |  |  | 3.26 |
| 9.333  | 0.00 | 6.95  | 1.846 | I |   | O |  |  |  | 3.23 |
| 9.417  | 0.00 | 6.91  | 1.799 | I |   | O |  |  |  | 3.19 |
| 9.500  | 0.00 | 6.86  | 1.751 | I |   | O |  |  |  | 3.16 |
| 9.583  | 0.00 | 6.82  | 1.704 | I |   | O |  |  |  | 3.12 |
| 9.667  | 0.00 | 6.78  | 1.657 | I |   | O |  |  |  | 3.09 |
| 9.750  | 0.00 | 6.73  | 1.611 | I |   | O |  |  |  | 3.05 |
| 9.833  | 0.00 | 6.69  | 1.564 | I |   | O |  |  |  | 3.02 |
| 9.917  | 0.00 | 6.64  | 1.519 | I |   | O |  |  |  | 2.98 |
| 10.000 | 0.00 | 6.56  | 1.473 | I |   | O |  |  |  | 2.93 |
| 10.083 | 0.00 | 6.49  | 1.428 | I |   | O |  |  |  | 2.88 |
| 10.167 | 0.00 | 6.42  | 1.384 | I |   | O |  |  |  | 2.83 |
| 10.250 | 0.00 | 6.34  | 1.340 | I |   | O |  |  |  | 2.78 |
| 10.333 | 0.00 | 6.27  | 1.296 | I |   | O |  |  |  | 2.74 |
| 10.417 | 0.00 | 6.20  | 1.253 | I |   | O |  |  |  | 2.69 |
| 10.500 | 0.00 | 6.13  | 1.211 | I |   | O |  |  |  | 2.64 |
| 10.583 | 0.00 | 6.07  | 1.169 | I |   | O |  |  |  | 2.60 |
| 10.667 | 0.00 | 6.00  | 1.127 | I |   | O |  |  |  | 2.55 |
| 10.750 | 0.00 | 5.93  | 1.086 | I |   | O |  |  |  | 2.51 |
| 10.833 | 0.00 | 5.86  | 1.046 | I |   | O |  |  |  | 2.46 |
| 10.917 | 0.00 | 5.80  | 1.006 | I |   | O |  |  |  | 2.42 |
| 11.000 | 0.00 | 5.73  | 0.966 | I |   | O |  |  |  | 2.38 |
| 11.083 | 0.00 | 5.67  | 0.927 | I |   | O |  |  |  | 2.33 |
| 11.167 | 0.00 | 5.61  | 0.888 | I |   | O |  |  |  | 2.29 |
| 11.250 | 0.00 | 5.54  | 0.849 | I |   | O |  |  |  | 2.25 |
| 11.333 | 0.00 | 5.48  | 0.811 | I |   | O |  |  |  | 2.21 |
| 11.417 | 0.00 | 5.42  | 0.774 | I |   | O |  |  |  | 2.17 |
| 11.500 | 0.00 | 5.36  | 0.737 | I |   | O |  |  |  | 2.13 |
| 11.583 | 0.00 | 5.30  | 0.700 | I |   | O |  |  |  | 2.09 |
| 11.667 | 0.00 | 5.24  | 0.664 | I |   | O |  |  |  | 2.05 |
| 11.750 | 0.00 | 5.18  | 0.628 | I |   | O |  |  |  | 2.01 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |     |  |  |  |  |      |
|--------|------|------|-------|-----|--|--|--|--|------|
| 11.833 | 0.00 | 5.05 | 0.593 | I O |  |  |  |  | 1.95 |
| 11.917 | 0.00 | 4.90 | 0.558 | I O |  |  |  |  | 1.88 |
| 12.000 | 0.00 | 4.76 | 0.525 | I O |  |  |  |  | 1.81 |
| 12.083 | 0.00 | 4.62 | 0.493 | I O |  |  |  |  | 1.75 |
| 12.167 | 0.00 | 4.49 | 0.461 | I O |  |  |  |  | 1.69 |
| 12.250 | 0.00 | 4.36 | 0.431 | I O |  |  |  |  | 1.63 |
| 12.333 | 0.00 | 4.23 | 0.401 | IO  |  |  |  |  | 1.57 |
| 12.417 | 0.00 | 4.11 | 0.373 | IO  |  |  |  |  | 1.51 |
| 12.500 | 0.00 | 3.99 | 0.345 | IO  |  |  |  |  | 1.46 |
| 12.583 | 0.00 | 3.87 | 0.318 | IO  |  |  |  |  | 1.41 |
| 12.667 | 0.00 | 3.76 | 0.291 | IO  |  |  |  |  | 1.36 |
| 12.750 | 0.00 | 3.65 | 0.266 | IO  |  |  |  |  | 1.31 |
| 12.833 | 0.00 | 3.54 | 0.241 | IO  |  |  |  |  | 1.26 |
| 12.917 | 0.00 | 3.44 | 0.217 | IO  |  |  |  |  | 1.21 |
| 13.000 | 0.00 | 3.34 | 0.194 | IO  |  |  |  |  | 1.16 |
| 13.083 | 0.00 | 3.24 | 0.171 | IO  |  |  |  |  | 1.12 |
| 13.167 | 0.00 | 3.15 | 0.149 | IO  |  |  |  |  | 1.08 |
| 13.250 | 0.00 | 3.06 | 0.128 | IO  |  |  |  |  | 1.03 |
| 13.333 | 0.00 | 2.90 | 0.107 | IO  |  |  |  |  | 0.97 |
| 13.417 | 0.00 | 2.41 | 0.089 | IO  |  |  |  |  | 0.81 |
| 13.500 | 0.00 | 2.00 | 0.074 | O   |  |  |  |  | 0.67 |
| 13.583 | 0.00 | 1.66 | 0.061 | O   |  |  |  |  | 0.56 |
| 13.667 | 0.00 | 1.37 | 0.051 | O   |  |  |  |  | 0.46 |
| 13.750 | 0.00 | 1.14 | 0.042 | O   |  |  |  |  | 0.38 |
| 13.833 | 0.00 | 0.94 | 0.035 | O   |  |  |  |  | 0.32 |
| 13.917 | 0.00 | 0.78 | 0.029 | O   |  |  |  |  | 0.26 |
| 14.000 | 0.00 | 0.65 | 0.024 | O   |  |  |  |  | 0.22 |
| 14.083 | 0.00 | 0.54 | 0.020 | O   |  |  |  |  | 0.18 |
| 14.167 | 0.00 | 0.45 | 0.016 | O   |  |  |  |  | 0.15 |
| 14.250 | 0.00 | 0.37 | 0.014 | O   |  |  |  |  | 0.12 |
| 14.333 | 0.00 | 0.31 | 0.011 | O   |  |  |  |  | 0.10 |
| 14.417 | 0.00 | 0.25 | 0.009 | O   |  |  |  |  | 0.09 |
| 14.500 | 0.00 | 0.21 | 0.008 | O   |  |  |  |  | 0.07 |
| 14.583 | 0.00 | 0.18 | 0.006 | O   |  |  |  |  | 0.06 |
| 14.667 | 0.00 | 0.15 | 0.005 | O   |  |  |  |  | 0.05 |
| 14.750 | 0.00 | 0.12 | 0.004 | O   |  |  |  |  | 0.04 |
| 14.833 | 0.00 | 0.10 | 0.004 | O   |  |  |  |  | 0.03 |
| 14.917 | 0.00 | 0.08 | 0.003 | O   |  |  |  |  | 0.03 |
| 15.000 | 0.00 | 0.07 | 0.003 | O   |  |  |  |  | 0.02 |
| 15.083 | 0.00 | 0.06 | 0.002 | O   |  |  |  |  | 0.02 |
| 15.167 | 0.00 | 0.05 | 0.002 | O   |  |  |  |  | 0.02 |
| 15.250 | 0.00 | 0.04 | 0.001 | O   |  |  |  |  | 0.01 |
| 15.333 | 0.00 | 0.03 | 0.001 | O   |  |  |  |  | 0.01 |
| 15.417 | 0.00 | 0.03 | 0.001 | O   |  |  |  |  | 0.01 |
| 15.500 | 0.00 | 0.02 | 0.001 | O   |  |  |  |  | 0.01 |
| 15.583 | 0.00 | 0.02 | 0.001 | O   |  |  |  |  | 0.01 |
| 15.667 | 0.00 | 0.02 | 0.001 | O   |  |  |  |  | 0.01 |
| 15.750 | 0.00 | 0.01 | 0.000 | O   |  |  |  |  | 0.00 |
| 15.833 | 0.00 | 0.01 | 0.000 | O   |  |  |  |  | 0.00 |
| 15.917 | 0.00 | 0.01 | 0.000 | O   |  |  |  |  | 0.00 |
| 16.000 | 0.00 | 0.01 | 0.000 | O   |  |  |  |  | 0.00 |
| 16.083 | 0.00 | 0.01 | 0.000 | O   |  |  |  |  | 0.00 |
| 16.167 | 0.00 | 0.01 | 0.000 | O   |  |  |  |  | 0.00 |
| 16.250 | 0.00 | 0.00 | 0.000 | O   |  |  |  |  | 0.00 |
| 16.333 | 0.00 | 0.00 | 0.000 | O   |  |  |  |  | 0.00 |
| 16.417 | 0.00 | 0.00 | 0.000 | O   |  |  |  |  | 0.00 |

```

*****HYDROGRAPH DATA*****
      Number of intervals =   197
      Time interval =      5.0 (Min.)
      Maximum/Peak flow rate =      32.449 (CFS)
      Total volume =      8.580 (Ac.Ft)
      Status of hydrographs being held in storage
            Stream 1 Stream 2 Stream 3 Stream 4 Stream 5
      Peak (CFS)      0.000      0.000      0.000      0.000      0.000
      Vol (Ac.Ft)      0.000      0.000      0.000      0.000      0.000
*****

```

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# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT D – Detention Basin Routing

FLOOD HYDROGRAPH ROUTING PROGRAM  
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005  
Study date: 01/31/18

Nichols Road Project - Tract 37305  
Drainage Area A = 40.1 Ac  
Tributary to Detention Basin A  
Detention Basin Routing  
100-year 24-hour storm

Program License Serial Number 4029

### \*\*\*\*\* HYDROGRAPH INFORMATION \*\*\*\*\*

From study/file name: nrareaaprx24100.rte  
\*\*\*\*\*HYDROGRAPH DATA\*\*\*\*\*  
Number of intervals = 293  
Time interval = 5.0 (Min.)  
Maximum/Peak flow rate = 31.618 (CFS)  
Total volume = 16.358 (Ac.Ft)  
Status of hydrographs being held in storage  
Stream 1 Stream 2 Stream 3 Stream 4 Stream 5  
Peak (CFS) 0.000 0.000 0.000 0.000 0.000  
Vol (Ac.Ft) 0.000 0.000 0.000 0.000 0.000  
\*\*\*\*\*

+++++  
Process from Point/Station 10.000 to Point/Station 11.000  
\*\*\*\* RETARDING BASIN ROUTING \*\*\*\*

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 293  
Hydrograph time unit = 5.000 (Min.)  
Initial depth in storage basin = 0.00 (Ft.)

Initial basin depth = 0.00 (Ft.)  
Initial basin storage = 0.00 (Ac.Ft)  
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

| Basin Depth<br>(Ft.) | Storage<br>(Ac.Ft) | Outflow<br>(CFS) | (S-O*dt/2)<br>(Ac.Ft) | (S+O*dt/2)<br>(Ac.Ft) |
|----------------------|--------------------|------------------|-----------------------|-----------------------|
| 0.000                | 0.000              | 0.000            | 0.000                 | 0.000                 |
| 1.000                | 0.110              | 2.980            | 0.100                 | 0.120                 |
| 2.000                | 0.620              | 5.170            | 0.602                 | 0.638                 |
| 3.000                | 1.540              | 6.670            | 1.517                 | 1.563                 |
| 4.000                | 2.890              | 7.900            | 2.863                 | 2.917                 |
| 5.000                | 4.550              | 19.560           | 4.483                 | 4.617                 |
| 6.000                | 6.400              | 65.010           | 6.176                 | 6.624                 |
| 7.000                | 8.470              | 129.350          | 8.025                 | 8.915                 |

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

| Time<br>(Hours) | Inflow<br>(CFS) | Outflow<br>(CFS) | Storage<br>(Ac.Ft) |     | 7.9 | 15.81 | 23.71 | 31.62 | Depth<br>(Ft.) |
|-----------------|-----------------|------------------|--------------------|-----|-----|-------|-------|-------|----------------|
| 0.083           | 0.26            | 0.02             | 0.001              | O   |     |       |       |       | 0.01           |
| 0.167           | 0.97            | 0.12             | 0.005              | O   |     |       |       |       | 0.04           |
| 0.250           | 1.16            | 0.28             | 0.011              | OI  |     |       |       |       | 0.10           |
| 0.333           | 1.36            | 0.45             | 0.017              | OI  |     |       |       |       | 0.15           |
| 0.417           | 1.73            | 0.64             | 0.024              | OI  |     |       |       |       | 0.21           |
| 0.500           | 1.83            | 0.83             | 0.031              | OI  |     |       |       |       | 0.28           |
| 0.583           | 1.87            | 1.01             | 0.037              | IO  |     |       |       |       | 0.34           |
| 0.667           | 1.87            | 1.15             | 0.043              | IO  |     |       |       |       | 0.39           |
| 0.750           | 1.88            | 1.28             | 0.047              | IO  |     |       |       |       | 0.43           |
| 0.833           | 2.01            | 1.39             | 0.051              | OI  |     |       |       |       | 0.47           |
| 0.917           | 2.36            | 1.53             | 0.056              | OI  |     |       |       |       | 0.51           |
| 1.000           | 2.46            | 1.68             | 0.062              | OI  |     |       |       |       | 0.56           |
| 1.083           | 2.36            | 1.80             | 0.067              | OI  |     |       |       |       | 0.61           |
| 1.167           | 2.02            | 1.87             | 0.069              | OI  |     |       |       |       | 0.63           |
| 1.250           | 1.92            | 1.89             | 0.070              | IO  |     |       |       |       | 0.63           |
| 1.333           | 1.89            | 1.89             | 0.070              | IO  |     |       |       |       | 0.63           |
| 1.417           | 1.88            | 1.89             | 0.070              | IO  |     |       |       |       | 0.63           |
| 1.500           | 1.88            | 1.89             | 0.070              | IO  |     |       |       |       | 0.63           |
| 1.583           | 1.88            | 1.89             | 0.070              | IO  |     |       |       |       | 0.63           |
| 1.667           | 1.88            | 1.89             | 0.070              | IO  |     |       |       |       | 0.63           |
| 1.750           | 1.88            | 1.88             | 0.070              | IO  |     |       |       |       | 0.63           |
| 1.833           | 2.01            | 1.89             | 0.070              | OI  |     |       |       |       | 0.64           |
| 1.917           | 2.36            | 1.94             | 0.072              | OI  |     |       |       |       | 0.65           |
| 2.000           | 2.46            | 2.02             | 0.075              | O   |     |       |       |       | 0.68           |
| 2.083           | 2.49            | 2.10             | 0.078              | O   |     |       |       |       | 0.71           |
| 2.167           | 2.50            | 2.17             | 0.080              | O   |     |       |       |       | 0.73           |
| 2.250           | 2.51            | 2.23             | 0.082              | O   |     |       |       |       | 0.75           |
| 2.333           | 2.51            | 2.27             | 0.084              | O   |     |       |       |       | 0.76           |
| 2.417           | 2.51            | 2.31             | 0.085              | O   |     |       |       |       | 0.78           |
| 2.500           | 2.51            | 2.35             | 0.087              | O   |     |       |       |       | 0.79           |
| 2.583           | 2.64            | 2.38             | 0.088              | O   |     |       |       |       | 0.80           |
| 2.667           | 2.99            | 2.46             | 0.091              | OI  |     |       |       |       | 0.82           |
| 2.750           | 3.09            | 2.56             | 0.094              | OI  |     |       |       |       | 0.86           |
| 2.833           | 3.12            | 2.65             | 0.098              | OI  |     |       |       |       | 0.89           |
| 2.917           | 3.13            | 2.73             | 0.101              | OI  |     |       |       |       | 0.92           |
| 3.000           | 3.13            | 2.80             | 0.103              | OI  |     |       |       |       | 0.94           |
| 3.083           | 3.13            | 2.86             | 0.105              | OI  |     |       |       |       | 0.96           |
| 3.167           | 3.13            | 2.90             | 0.107              | OI  |     |       |       |       | 0.97           |
| 3.250           | 3.13            | 2.94             | 0.109              | OI  |     |       |       |       | 0.99           |
| 3.333           | 3.13            | 2.97             | 0.110              | O   |     |       |       |       | 1.00           |
| 3.417           | 3.13            | 2.98             | 0.111              | O   |     |       |       |       | 1.00           |
| 3.500           | 3.13            | 2.99             | 0.112              | O   |     |       |       |       | 1.00           |
| 3.583           | 3.13            | 2.99             | 0.113              | O   |     |       |       |       | 1.01           |
| 3.667           | 3.13            | 3.00             | 0.114              | O   |     |       |       |       | 1.01           |
| 3.750           | 3.13            | 3.00             | 0.115              | O   |     |       |       |       | 1.01           |
| 3.833           | 3.26            | 3.01             | 0.116              | O   |     |       |       |       | 1.01           |
| 3.917           | 3.62            | 3.02             | 0.119              | O   |     |       |       |       | 1.02           |
| 4.000           | 3.71            | 3.04             | 0.123              | O   |     |       |       |       | 1.03           |
| 4.083           | 3.75            | 3.06             | 0.128              | O   |     |       |       |       | 1.04           |
| 4.167           | 3.75            | 3.08             | 0.133              | O   |     |       |       |       | 1.04           |
| 4.250           | 3.76            | 3.10             | 0.137              | O   |     |       |       |       | 1.05           |
| 4.333           | 3.89            | 3.12             | 0.142              | O   |     |       |       |       | 1.06           |
| 4.417           | 4.24            | 3.15             | 0.149              | OI  |     |       |       |       | 1.08           |
| 4.500           | 4.34            | 3.18             | 0.157              | OI  |     |       |       |       | 1.09           |
| 4.583           | 4.37            | 3.21             | 0.165              | OI  |     |       |       |       | 1.11           |
| 4.667           | 4.38            | 3.25             | 0.172              | OI  |     |       |       |       | 1.12           |
| 4.750           | 4.39            | 3.28             | 0.180              | OI  |     |       |       |       | 1.14           |
| 4.833           | 4.52            | 3.32             | 0.188              | OI  |     |       |       |       | 1.15           |
| 4.917           | 4.87            | 3.36             | 0.197              | OI  |     |       |       |       | 1.17           |
| 5.000           | 4.97            | 3.40             | 0.208              | O I |     |       |       |       | 1.19           |
| 5.083           | 4.73            | 3.44             | 0.218              | OI  |     |       |       |       | 1.21           |
| 5.167           | 4.04            | 3.47             | 0.224              | OI  |     |       |       |       | 1.22           |
| 5.250           | 3.85            | 3.48             | 0.227              | O   |     |       |       |       | 1.23           |
| 5.333           | 3.92            | 3.50             | 0.230              | O   |     |       |       |       | 1.24           |
| 5.417           | 4.25            | 3.51             | 0.234              | OI  |     |       |       |       | 1.24           |
| 5.500           | 4.34            | 3.54             | 0.239              | OI  |     |       |       |       | 1.25           |
| 5.583           | 4.50            | 3.56             | 0.245              | OI  |     |       |       |       | 1.27           |
| 5.667           | 4.86            | 3.59             | 0.253              | OI  |     |       |       |       | 1.28           |

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT D – Detention Basin Routing

|        |       |      |       |   |   |  |  |  |  |      |
|--------|-------|------|-------|---|---|--|--|--|--|------|
| 5.750  | 4.97  | 3.63 | 0.262 | O | I |  |  |  |  | 1.30 |
| 5.833  | 5.00  | 3.67 | 0.271 | O | I |  |  |  |  | 1.32 |
| 5.917  | 5.01  | 3.71 | 0.280 | O | I |  |  |  |  | 1.33 |
| 6.000  | 5.01  | 3.75 | 0.289 | O | I |  |  |  |  | 1.35 |
| 6.083  | 5.14  | 3.79 | 0.298 | O | I |  |  |  |  | 1.37 |
| 6.167  | 5.50  | 3.83 | 0.308 | O | I |  |  |  |  | 1.39 |
| 6.250  | 5.59  | 3.88 | 0.320 | O | I |  |  |  |  | 1.41 |
| 6.333  | 5.63  | 3.93 | 0.332 | O | I |  |  |  |  | 1.43 |
| 6.417  | 5.63  | 3.98 | 0.343 | O | I |  |  |  |  | 1.46 |
| 6.500  | 5.64  | 4.03 | 0.355 | O | I |  |  |  |  | 1.48 |
| 6.583  | 5.77  | 4.08 | 0.366 | O | I |  |  |  |  | 1.50 |
| 6.667  | 6.12  | 4.13 | 0.379 | O | I |  |  |  |  | 1.53 |
| 6.750  | 6.22  | 4.19 | 0.392 | O | I |  |  |  |  | 1.55 |
| 6.833  | 6.25  | 4.25 | 0.406 | O | I |  |  |  |  | 1.58 |
| 6.917  | 6.26  | 4.31 | 0.420 | O | I |  |  |  |  | 1.61 |
| 7.000  | 6.26  | 4.37 | 0.433 | O | I |  |  |  |  | 1.63 |
| 7.083  | 6.26  | 4.42 | 0.446 | O | I |  |  |  |  | 1.66 |
| 7.167  | 6.26  | 4.48 | 0.458 | O | I |  |  |  |  | 1.68 |
| 7.250  | 6.26  | 4.53 | 0.471 | O | I |  |  |  |  | 1.71 |
| 7.333  | 6.40  | 4.58 | 0.483 | O | I |  |  |  |  | 1.73 |
| 7.417  | 6.75  | 4.64 | 0.496 | O | I |  |  |  |  | 1.76 |
| 7.500  | 6.85  | 4.70 | 0.511 | O | I |  |  |  |  | 1.79 |
| 7.583  | 7.05  | 4.77 | 0.526 | O | I |  |  |  |  | 1.82 |
| 7.667  | 7.50  | 4.84 | 0.543 | O | I |  |  |  |  | 1.85 |
| 7.750  | 7.65  | 4.92 | 0.562 | O | I |  |  |  |  | 1.89 |
| 7.833  | 7.93  | 5.00 | 0.581 | O | I |  |  |  |  | 1.92 |
| 7.917  | 8.53  | 5.10 | 0.603 | O | I |  |  |  |  | 1.97 |
| 8.000  | 8.72  | 5.18 | 0.627 | O | I |  |  |  |  | 2.01 |
| 8.083  | 9.23  | 5.22 | 0.653 | O | I |  |  |  |  | 2.04 |
| 8.167  | 10.42 | 5.28 | 0.685 | O | I |  |  |  |  | 2.07 |
| 8.250  | 10.77 | 5.33 | 0.721 | O | I |  |  |  |  | 2.11 |
| 8.333  | 10.89 | 5.40 | 0.759 | O | I |  |  |  |  | 2.15 |
| 8.417  | 10.94 | 5.46 | 0.797 | O | I |  |  |  |  | 2.19 |
| 8.500  | 10.98 | 5.52 | 0.834 | O | I |  |  |  |  | 2.23 |
| 8.583  | 11.21 | 5.58 | 0.872 | O | I |  |  |  |  | 2.27 |
| 8.667  | 11.81 | 5.65 | 0.913 | O | I |  |  |  |  | 2.32 |
| 8.750  | 11.99 | 5.72 | 0.956 | O | I |  |  |  |  | 2.37 |
| 8.833  | 12.28 | 5.79 | 1.000 | O | I |  |  |  |  | 2.41 |
| 8.917  | 12.89 | 5.87 | 1.046 | O | I |  |  |  |  | 2.46 |
| 9.000  | 13.08 | 5.94 | 1.095 | O | I |  |  |  |  | 2.52 |
| 9.083  | 13.59 | 6.03 | 1.146 | O | I |  |  |  |  | 2.57 |
| 9.167  | 14.77 | 6.12 | 1.202 | O | I |  |  |  |  | 2.63 |
| 9.250  | 15.12 | 6.22 | 1.262 | O | I |  |  |  |  | 2.70 |
| 9.333  | 15.46 | 6.32 | 1.324 | O | I |  |  |  |  | 2.77 |
| 9.417  | 16.09 | 6.42 | 1.389 | O | I |  |  |  |  | 2.84 |
| 9.500  | 16.28 | 6.53 | 1.456 | O | I |  |  |  |  | 2.91 |
| 9.583  | 16.57 | 6.64 | 1.523 | O | I |  |  |  |  | 2.98 |
| 9.667  | 17.18 | 6.72 | 1.594 | O | I |  |  |  |  | 3.04 |
| 9.750  | 17.37 | 6.78 | 1.666 | O | I |  |  |  |  | 3.09 |
| 9.833  | 17.66 | 6.85 | 1.740 | O | I |  |  |  |  | 3.15 |
| 9.917  | 18.27 | 6.92 | 1.816 | O | I |  |  |  |  | 3.20 |
| 10.000 | 18.45 | 6.99 | 1.895 | O | I |  |  |  |  | 3.26 |
| 10.083 | 17.01 | 7.06 | 1.968 | O | I |  |  |  |  | 3.32 |
| 10.167 | 13.01 | 7.11 | 2.023 | O | I |  |  |  |  | 3.36 |
| 10.250 | 11.91 | 7.14 | 2.060 | O | I |  |  |  |  | 3.38 |
| 10.333 | 11.56 | 7.17 | 2.091 | O | I |  |  |  |  | 3.41 |
| 10.417 | 11.49 | 7.20 | 2.121 | O | I |  |  |  |  | 3.43 |
| 10.500 | 11.46 | 7.23 | 2.150 | O | I |  |  |  |  | 3.45 |
| 10.583 | 12.56 | 7.26 | 2.183 | O | I |  |  |  |  | 3.48 |
| 10.667 | 15.46 | 7.30 | 2.230 | O | I |  |  |  |  | 3.51 |
| 10.750 | 16.28 | 7.35 | 2.288 | O | I |  |  |  |  | 3.55 |
| 10.833 | 16.56 | 7.41 | 2.351 | O | I |  |  |  |  | 3.60 |
| 10.917 | 16.65 | 7.47 | 2.414 | O | I |  |  |  |  | 3.65 |
| 11.000 | 16.71 | 7.52 | 2.477 | O | I |  |  |  |  | 3.69 |
| 11.083 | 16.51 | 7.58 | 2.539 | O | I |  |  |  |  | 3.74 |
| 11.167 | 15.95 | 7.63 | 2.599 | O | I |  |  |  |  | 3.78 |
| 11.250 | 15.81 | 7.69 | 2.655 | O | I |  |  |  |  | 3.83 |
| 11.333 | 15.77 | 7.74 | 2.711 | O | I |  |  |  |  | 3.87 |
| 11.417 | 15.78 | 7.79 | 2.766 | O | I |  |  |  |  | 3.91 |
| 11.500 | 15.79 | 7.84 | 2.821 | O | I |  |  |  |  | 3.95 |
| 11.583 | 15.37 | 7.89 | 2.874 | O | I |  |  |  |  | 3.99 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |       |       |       |  |   |   |    |   |   |      |
|--------|-------|-------|-------|--|---|---|----|---|---|------|
| 11.667 | 14.24 | 8.12  | 2.921 |  | O | I |    |   |   | 4.02 |
| 11.750 | 13.94 | 8.40  | 2.961 |  | O | I |    |   |   | 4.04 |
| 11.833 | 14.07 | 8.67  | 2.999 |  | O | I |    |   |   | 4.07 |
| 11.917 | 14.64 | 8.93  | 3.037 |  | O | I |    |   |   | 4.09 |
| 12.000 | 14.80 | 9.21  | 3.076 |  | O | I |    |   |   | 4.11 |
| 12.083 | 16.39 | 9.51  | 3.119 |  | O | I |    |   |   | 4.14 |
| 12.167 | 20.45 | 9.93  | 3.179 |  |   | O |    | I |   | 4.17 |
| 12.250 | 21.60 | 10.45 | 3.254 |  |   | O |    | I |   | 4.22 |
| 12.333 | 22.20 | 11.00 | 3.331 |  |   | O |    | I |   | 4.27 |
| 12.417 | 22.89 | 11.54 | 3.408 |  |   | O |    | I |   | 4.31 |
| 12.500 | 23.12 | 12.08 | 3.485 |  |   | O |    | I |   | 4.36 |
| 12.583 | 23.63 | 12.62 | 3.561 |  |   | O |    | I |   | 4.40 |
| 12.667 | 24.81 | 13.16 | 3.639 |  |   | O |    | I |   | 4.45 |
| 12.750 | 25.16 | 13.72 | 3.719 |  |   | O |    | I |   | 4.50 |
| 12.833 | 25.49 | 14.27 | 3.797 |  |   | O |    | I |   | 4.55 |
| 12.917 | 26.11 | 14.81 | 3.874 |  |   | O |    | I |   | 4.59 |
| 13.000 | 26.31 | 15.35 | 3.951 |  |   | O |    | I |   | 4.64 |
| 13.083 | 27.46 | 15.90 | 4.029 |  |   | O |    | I |   | 4.69 |
| 13.167 | 30.37 | 16.51 | 4.116 |  |   | O |    | I |   | 4.74 |
| 13.250 | 31.20 | 17.19 | 4.212 |  |   | O |    | I |   | 4.80 |
| 13.333 | 31.48 | 17.86 | 4.307 |  |   |   | O  |   | I | 4.85 |
| 13.417 | 31.56 | 18.50 | 4.399 |  |   |   | O  |   | I | 4.91 |
| 13.500 | 31.62 | 19.12 | 4.487 |  |   |   | O  |   | I | 4.96 |
| 13.583 | 29.25 | 19.87 | 4.563 |  |   |   | O  |   | I | 5.01 |
| 13.667 | 22.93 | 20.84 | 4.602 |  |   |   | O  | I |   | 5.03 |
| 13.750 | 21.18 | 21.03 | 4.610 |  |   |   | O  |   |   | 5.03 |
| 13.833 | 20.62 | 21.01 | 4.609 |  |   |   | IO |   |   | 5.03 |
| 13.917 | 20.49 | 20.94 | 4.606 |  |   |   | IO |   |   | 5.03 |
| 14.000 | 20.42 | 20.86 | 4.603 |  |   |   | IO |   |   | 5.03 |
| 14.083 | 21.31 | 20.86 | 4.603 |  |   |   | O  |   |   | 5.03 |
| 14.167 | 23.63 | 21.11 | 4.613 |  |   |   | O  | I |   | 5.03 |
| 14.250 | 24.28 | 21.56 | 4.631 |  |   |   | O  | I |   | 5.04 |
| 14.333 | 24.29 | 21.98 | 4.649 |  |   |   | O  | I |   | 5.05 |
| 14.417 | 23.79 | 22.30 | 4.662 |  |   |   | O  | I |   | 5.06 |
| 14.500 | 23.67 | 22.53 | 4.671 |  |   |   | OI |   |   | 5.07 |
| 14.583 | 23.64 | 22.70 | 4.678 |  |   |   | OI |   |   | 5.07 |
| 14.667 | 23.64 | 22.85 | 4.684 |  |   |   | O  |   |   | 5.07 |
| 14.750 | 23.65 | 22.97 | 4.689 |  |   |   | O  |   |   | 5.08 |
| 14.833 | 23.44 | 23.06 | 4.693 |  |   |   | O  |   |   | 5.08 |
| 14.917 | 22.88 | 23.08 | 4.693 |  |   |   | O  |   |   | 5.08 |
| 15.000 | 22.74 | 23.04 | 4.691 |  |   |   | O  |   |   | 5.08 |
| 15.083 | 22.49 | 22.97 | 4.689 |  |   |   | IO |   |   | 5.08 |
| 15.167 | 21.91 | 22.85 | 4.684 |  |   |   | IO |   |   | 5.07 |
| 15.250 | 21.76 | 22.69 | 4.677 |  |   |   | O  |   |   | 5.07 |
| 15.333 | 21.50 | 22.53 | 4.671 |  |   |   | IO |   |   | 5.07 |
| 15.417 | 20.93 | 22.32 | 4.662 |  |   |   | IO |   |   | 5.06 |
| 15.500 | 20.78 | 22.09 | 4.653 |  |   |   | IO |   |   | 5.06 |
| 15.583 | 19.87 | 21.82 | 4.642 |  |   |   | I  | O |   | 5.05 |
| 15.667 | 17.57 | 21.33 | 4.622 |  |   |   | I  | O |   | 5.04 |
| 15.750 | 16.93 | 20.70 | 4.596 |  |   |   | I  | O |   | 5.03 |
| 15.833 | 16.74 | 20.09 | 4.572 |  |   |   | I  | O |   | 5.01 |
| 15.917 | 16.70 | 19.57 | 4.550 |  |   |   | I  | O |   | 5.00 |
| 16.000 | 16.68 | 19.43 | 4.531 |  |   |   | I  | O |   | 4.99 |
| 16.083 | 13.69 | 19.23 | 4.503 |  |   | I |    | O |   | 4.97 |
| 16.167 | 5.74  | 18.78 | 4.439 |  | I |   |    | O |   | 4.93 |
| 16.250 | 3.52  | 18.11 | 4.343 |  | I |   |    | O |   | 4.88 |
| 16.333 | 2.79  | 17.40 | 4.243 |  | I |   |    | O |   | 4.81 |
| 16.417 | 2.62  | 16.71 | 4.144 |  | I |   |    | O |   | 4.76 |
| 16.500 | 2.51  | 16.04 | 4.049 |  | I |   |    | O |   | 4.70 |
| 16.583 | 2.37  | 15.40 | 3.957 |  | I |   |    | O |   | 4.64 |
| 16.667 | 2.02  | 14.77 | 3.869 |  | I |   |    | O |   | 4.59 |
| 16.750 | 1.92  | 14.17 | 3.783 |  | I |   |    | O |   | 4.54 |
| 16.833 | 1.89  | 13.59 | 3.700 |  | I |   |    | O |   | 4.49 |
| 16.917 | 1.88  | 13.04 | 3.621 |  | I |   |    | O |   | 4.44 |
| 17.000 | 1.88  | 12.51 | 3.546 |  | I |   |    | O |   | 4.40 |
| 17.083 | 2.14  | 12.02 | 3.476 |  | I |   |    | O |   | 4.35 |
| 17.167 | 2.85  | 11.57 | 3.412 |  | I |   |    | O |   | 4.31 |
| 17.250 | 3.04  | 11.16 | 3.354 |  | I |   |    | O |   | 4.28 |
| 17.333 | 3.11  | 10.78 | 3.300 |  | I |   |    | O |   | 4.25 |
| 17.417 | 3.12  | 10.41 | 3.248 |  | I |   |    | O |   | 4.22 |
| 17.500 | 3.13  | 10.07 | 3.199 |  | I |   |    | O |   | 4.19 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |   |   |  |  |  |      |
|--------|------|------|-------|---|---|--|--|--|------|
| 17.583 | 3.13 | 9.74 | 3.152 | I | O |  |  |  | 4.16 |
| 17.667 | 3.13 | 9.43 | 3.108 | I | O |  |  |  | 4.13 |
| 17.750 | 3.13 | 9.13 | 3.066 | I | O |  |  |  | 4.11 |
| 17.833 | 3.00 | 8.85 | 3.025 | I | O |  |  |  | 4.08 |
| 17.917 | 2.65 | 8.56 | 2.984 | I | O |  |  |  | 4.06 |
| 18.000 | 2.55 | 8.28 | 2.944 | I | O |  |  |  | 4.03 |
| 18.083 | 2.52 | 8.01 | 2.906 | I | O |  |  |  | 4.01 |
| 18.167 | 2.51 | 7.88 | 2.868 | I | O |  |  |  | 3.98 |
| 18.250 | 2.51 | 7.85 | 2.831 | I | O |  |  |  | 3.96 |
| 18.333 | 2.51 | 7.81 | 2.795 | I | O |  |  |  | 3.93 |
| 18.417 | 2.51 | 7.78 | 2.758 | I | O |  |  |  | 3.90 |
| 18.500 | 2.51 | 7.75 | 2.722 | I | O |  |  |  | 3.88 |
| 18.583 | 2.37 | 7.71 | 2.685 | I | O |  |  |  | 3.85 |
| 18.667 | 2.02 | 7.68 | 2.648 | I | O |  |  |  | 3.82 |
| 18.750 | 1.92 | 7.64 | 2.608 | I | O |  |  |  | 3.79 |
| 18.833 | 1.76 | 7.61 | 2.569 | I | O |  |  |  | 3.76 |
| 18.917 | 1.40 | 7.57 | 2.527 | I | O |  |  |  | 3.73 |
| 19.000 | 1.30 | 7.53 | 2.485 | I | O |  |  |  | 3.70 |
| 19.083 | 1.40 | 7.49 | 2.442 | I | O |  |  |  | 3.67 |
| 19.167 | 1.74 | 7.45 | 2.401 | I | O |  |  |  | 3.64 |
| 19.250 | 1.83 | 7.42 | 2.363 | I | O |  |  |  | 3.61 |
| 19.333 | 2.00 | 7.38 | 2.325 | I | O |  |  |  | 3.58 |
| 19.417 | 2.36 | 7.35 | 2.289 | I | O |  |  |  | 3.55 |
| 19.500 | 2.46 | 7.32 | 2.255 | I | O |  |  |  | 3.53 |
| 19.583 | 2.36 | 7.29 | 2.221 | I | O |  |  |  | 3.50 |
| 19.667 | 2.02 | 7.26 | 2.186 | I | O |  |  |  | 3.48 |
| 19.750 | 1.92 | 7.23 | 2.150 | I | O |  |  |  | 3.45 |
| 19.833 | 1.76 | 7.19 | 2.113 | I | O |  |  |  | 3.42 |
| 19.917 | 1.40 | 7.16 | 2.075 | I | O |  |  |  | 3.40 |
| 20.000 | 1.30 | 7.12 | 2.035 | I | O |  |  |  | 3.37 |
| 20.083 | 1.40 | 7.08 | 1.995 | I | O |  |  |  | 3.34 |
| 20.167 | 1.74 | 7.05 | 1.957 | I | O |  |  |  | 3.31 |
| 20.250 | 1.83 | 7.02 | 1.921 | I | O |  |  |  | 3.28 |
| 20.333 | 1.87 | 6.98 | 1.886 | I | O |  |  |  | 3.26 |
| 20.417 | 1.87 | 6.95 | 1.850 | I | O |  |  |  | 3.23 |
| 20.500 | 1.88 | 6.92 | 1.816 | I | O |  |  |  | 3.20 |
| 20.583 | 1.88 | 6.89 | 1.781 | I | O |  |  |  | 3.18 |
| 20.667 | 1.88 | 6.86 | 1.747 | I | O |  |  |  | 3.15 |
| 20.750 | 1.88 | 6.83 | 1.712 | I | O |  |  |  | 3.13 |
| 20.833 | 1.75 | 6.80 | 1.678 | I | O |  |  |  | 3.10 |
| 20.917 | 1.40 | 6.76 | 1.642 | I | O |  |  |  | 3.08 |
| 21.000 | 1.30 | 6.73 | 1.605 | I | O |  |  |  | 3.05 |
| 21.083 | 1.40 | 6.70 | 1.568 | I | O |  |  |  | 3.02 |
| 21.167 | 1.74 | 6.66 | 1.533 | I | O |  |  |  | 2.99 |
| 21.250 | 1.83 | 6.60 | 1.499 | I | O |  |  |  | 2.96 |
| 21.333 | 1.73 | 6.55 | 1.466 | I | O |  |  |  | 2.92 |
| 21.417 | 1.39 | 6.49 | 1.432 | I | O |  |  |  | 2.88 |
| 21.500 | 1.30 | 6.44 | 1.397 | I | O |  |  |  | 2.84 |
| 21.583 | 1.40 | 6.38 | 1.362 | I | O |  |  |  | 2.81 |
| 21.667 | 1.74 | 6.33 | 1.329 | I | O |  |  |  | 2.77 |
| 21.750 | 1.83 | 6.28 | 1.298 | I | O |  |  |  | 2.74 |
| 21.833 | 1.73 | 6.23 | 1.267 | I | O |  |  |  | 2.70 |
| 21.917 | 1.39 | 6.17 | 1.235 | I | O |  |  |  | 2.67 |
| 22.000 | 1.30 | 6.12 | 1.202 | I | O |  |  |  | 2.63 |
| 22.083 | 1.40 | 6.07 | 1.170 | I | O |  |  |  | 2.60 |
| 22.167 | 1.74 | 6.02 | 1.139 | I | O |  |  |  | 2.56 |
| 22.250 | 1.83 | 5.97 | 1.110 | I | O |  |  |  | 2.53 |
| 22.333 | 1.73 | 5.92 | 1.081 | I | O |  |  |  | 2.50 |
| 22.417 | 1.39 | 5.87 | 1.051 | I | O |  |  |  | 2.47 |
| 22.500 | 1.30 | 5.82 | 1.020 | I | O |  |  |  | 2.44 |
| 22.583 | 1.27 | 5.77 | 0.989 | I | O |  |  |  | 2.40 |
| 22.667 | 1.26 | 5.72 | 0.958 | I | O |  |  |  | 2.37 |
| 22.750 | 1.25 | 5.67 | 0.928 | I | O |  |  |  | 2.33 |
| 22.833 | 1.25 | 5.62 | 0.898 | I | O |  |  |  | 2.30 |
| 22.917 | 1.25 | 5.57 | 0.868 | I | O |  |  |  | 2.27 |
| 23.000 | 1.25 | 5.53 | 0.838 | I | O |  |  |  | 2.24 |
| 23.083 | 1.25 | 5.48 | 0.809 | I | O |  |  |  | 2.21 |
| 23.167 | 1.25 | 5.43 | 0.780 | I | O |  |  |  | 2.17 |
| 23.250 | 1.25 | 5.38 | 0.751 | I | O |  |  |  | 2.14 |
| 23.333 | 1.25 | 5.34 | 0.723 | I | O |  |  |  | 2.11 |
| 23.417 | 1.25 | 5.29 | 0.695 | I | O |  |  |  | 2.08 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |   |   |  |  |  |  |  |  |      |
|--------|------|------|-------|---|---|--|--|--|--|--|--|------|
| 23.500 | 1.25 | 5.25 | 0.667 | I | O |  |  |  |  |  |  | 2.05 |
| 23.583 | 1.25 | 5.20 | 0.640 | I | O |  |  |  |  |  |  | 2.02 |
| 23.667 | 1.25 | 5.14 | 0.613 | I | O |  |  |  |  |  |  | 1.99 |
| 23.750 | 1.25 | 5.03 | 0.587 | I | O |  |  |  |  |  |  | 1.93 |
| 23.833 | 1.25 | 4.92 | 0.561 | I | O |  |  |  |  |  |  | 1.88 |
| 23.917 | 1.25 | 4.81 | 0.536 | I | O |  |  |  |  |  |  | 1.84 |
| 24.000 | 1.25 | 4.71 | 0.512 | I | O |  |  |  |  |  |  | 1.79 |
| 24.083 | 0.99 | 4.60 | 0.488 | I | O |  |  |  |  |  |  | 1.74 |
| 24.167 | 0.29 | 4.49 | 0.461 | I | O |  |  |  |  |  |  | 1.69 |
| 24.250 | 0.09 | 4.36 | 0.432 | I | O |  |  |  |  |  |  | 1.63 |
| 24.333 | 0.03 | 4.24 | 0.402 | I | O |  |  |  |  |  |  | 1.57 |
| 24.417 | 0.01 | 4.11 | 0.374 | I | O |  |  |  |  |  |  | 1.52 |
| 24.500 | 0.00 | 3.99 | 0.346 | I | O |  |  |  |  |  |  | 1.46 |
| 24.583 | 0.00 | 3.88 | 0.319 | I | O |  |  |  |  |  |  | 1.41 |
| 24.667 | 0.00 | 3.76 | 0.292 | I | O |  |  |  |  |  |  | 1.36 |
| 24.750 | 0.00 | 3.65 | 0.267 | I | O |  |  |  |  |  |  | 1.31 |
| 24.833 | 0.00 | 3.55 | 0.242 | I | O |  |  |  |  |  |  | 1.26 |
| 24.917 | 0.00 | 3.44 | 0.218 | I | O |  |  |  |  |  |  | 1.21 |
| 25.000 | 0.00 | 3.34 | 0.195 | I | O |  |  |  |  |  |  | 1.17 |
| 25.083 | 0.00 | 3.25 | 0.172 | I | O |  |  |  |  |  |  | 1.12 |
| 25.167 | 0.00 | 3.15 | 0.150 | I | O |  |  |  |  |  |  | 1.08 |
| 25.250 | 0.00 | 3.06 | 0.129 | I | O |  |  |  |  |  |  | 1.04 |
| 25.333 | 0.00 | 2.92 | 0.108 | I | O |  |  |  |  |  |  | 0.98 |
| 25.417 | 0.00 | 2.42 | 0.090 | I | O |  |  |  |  |  |  | 0.81 |
| 25.500 | 0.00 | 2.01 | 0.074 | I | O |  |  |  |  |  |  | 0.67 |
| 25.583 | 0.00 | 1.67 | 0.062 | I | O |  |  |  |  |  |  | 0.56 |
| 25.667 | 0.00 | 1.38 | 0.051 | I | O |  |  |  |  |  |  | 0.46 |
| 25.750 | 0.00 | 1.15 | 0.042 | I | O |  |  |  |  |  |  | 0.38 |
| 25.833 | 0.00 | 0.95 | 0.035 | O |   |  |  |  |  |  |  | 0.32 |
| 25.917 | 0.00 | 0.79 | 0.029 | O |   |  |  |  |  |  |  | 0.26 |
| 26.000 | 0.00 | 0.65 | 0.024 | O |   |  |  |  |  |  |  | 0.22 |
| 26.083 | 0.00 | 0.54 | 0.020 | O |   |  |  |  |  |  |  | 0.18 |
| 26.167 | 0.00 | 0.45 | 0.017 | O |   |  |  |  |  |  |  | 0.15 |
| 26.250 | 0.00 | 0.37 | 0.014 | O |   |  |  |  |  |  |  | 0.13 |
| 26.333 | 0.00 | 0.31 | 0.011 | O |   |  |  |  |  |  |  | 0.10 |
| 26.417 | 0.00 | 0.26 | 0.009 | O |   |  |  |  |  |  |  | 0.09 |
| 26.500 | 0.00 | 0.21 | 0.008 | O |   |  |  |  |  |  |  | 0.07 |
| 26.583 | 0.00 | 0.18 | 0.007 | O |   |  |  |  |  |  |  | 0.06 |
| 26.667 | 0.00 | 0.15 | 0.005 | O |   |  |  |  |  |  |  | 0.05 |
| 26.750 | 0.00 | 0.12 | 0.004 | O |   |  |  |  |  |  |  | 0.04 |
| 26.833 | 0.00 | 0.10 | 0.004 | O |   |  |  |  |  |  |  | 0.03 |
| 26.917 | 0.00 | 0.08 | 0.003 | O |   |  |  |  |  |  |  | 0.03 |
| 27.000 | 0.00 | 0.07 | 0.003 | O |   |  |  |  |  |  |  | 0.02 |
| 27.083 | 0.00 | 0.06 | 0.002 | O |   |  |  |  |  |  |  | 0.02 |
| 27.167 | 0.00 | 0.05 | 0.002 | O |   |  |  |  |  |  |  | 0.02 |
| 27.250 | 0.00 | 0.04 | 0.001 | O |   |  |  |  |  |  |  | 0.01 |
| 27.333 | 0.00 | 0.03 | 0.001 | O |   |  |  |  |  |  |  | 0.01 |
| 27.417 | 0.00 | 0.03 | 0.001 | O |   |  |  |  |  |  |  | 0.01 |
| 27.500 | 0.00 | 0.02 | 0.001 | O |   |  |  |  |  |  |  | 0.01 |
| 27.583 | 0.00 | 0.02 | 0.001 | O |   |  |  |  |  |  |  | 0.01 |
| 27.667 | 0.00 | 0.02 | 0.001 | O |   |  |  |  |  |  |  | 0.01 |
| 27.750 | 0.00 | 0.01 | 0.000 | O |   |  |  |  |  |  |  | 0.00 |
| 27.833 | 0.00 | 0.01 | 0.000 | O |   |  |  |  |  |  |  | 0.00 |
| 27.917 | 0.00 | 0.01 | 0.000 | O |   |  |  |  |  |  |  | 0.00 |
| 28.000 | 0.00 | 0.01 | 0.000 | O |   |  |  |  |  |  |  | 0.00 |
| 28.083 | 0.00 | 0.01 | 0.000 | O |   |  |  |  |  |  |  | 0.00 |
| 28.167 | 0.00 | 0.01 | 0.000 | O |   |  |  |  |  |  |  | 0.00 |
| 28.250 | 0.00 | 0.00 | 0.000 | O |   |  |  |  |  |  |  | 0.00 |
| 28.333 | 0.00 | 0.00 | 0.000 | O |   |  |  |  |  |  |  | 0.00 |
| 28.417 | 0.00 | 0.00 | 0.000 | O |   |  |  |  |  |  |  | 0.00 |

```

*****HYDROGRAPH DATA*****
      Number of intervals =    341
      Time interval =      5.0 (Min.)
      Maximum/Peak flow rate =      23.077 (CFS)
      Total volume =      16.358 (Ac.Ft)
      Status of hydrographs being held in storage
            Stream 1 Stream 2 Stream 3 Stream 4 Stream 5
      Peak (CFS)      0.000      0.000      0.000      0.000      0.000
      Vol (Ac.Ft)      0.000      0.000      0.000      0.000      0.000
*****

```

# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT D – Detention Basin Routing

FLOOD HYDROGRAPH ROUTING PROGRAM  
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005  
Study date: 01/31/18

Nichols Road Project - Tract 37305  
Drainage Area A = 51.4 Ac  
Tributary to Detention Basin A for HCOC Mitigation  
Detention Basin Routing  
2-year 24-hour storm

Program License Serial Number 4029

### \*\*\*\*\* HYDROGRAPH INFORMATION \*\*\*\*\*

From study/file name: nrareaapr2242.rte  
\*\*\*\*\*HYDROGRAPH DATA\*\*\*\*\*  
Number of intervals = 293  
Time interval = 5.0 (Min.)  
Maximum/Peak flow rate = 13.116 (CFS)  
Total volume = 6.986 (Ac.Ft)  
Status of hydrographs being held in storage  
Stream 1 Stream 2 Stream 3 Stream 4 Stream 5  
Peak (CFS) 0.000 0.000 0.000 0.000 0.000  
Vol (Ac.Ft) 0.000 0.000 0.000 0.000 0.000  
\*\*\*\*\*

+++++  
Process from Point/Station 10.000 to Point/Station 11.000  
\*\*\*\* RETARDING BASIN ROUTING \*\*\*\*

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 293  
Hydrograph time unit = 5.000 (Min.)  
Initial depth in storage basin = 0.00 (Ft.)

Initial basin depth = 0.00 (Ft.)  
Initial basin storage = 0.00 (Ac.Ft)  
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

| Basin Depth<br>(Ft.) | Storage<br>(Ac.Ft) | Outflow<br>(CFS) | (S-O*dt/2)<br>(Ac.Ft) | (S+O*dt/2)<br>(Ac.Ft) |
|----------------------|--------------------|------------------|-----------------------|-----------------------|
| 0.000                | 0.000              | 0.000            | 0.000                 | 0.000                 |
| 1.000                | 0.110              | 2.980            | 0.100                 | 0.120                 |
| 2.000                | 0.620              | 5.170            | 0.602                 | 0.638                 |
| 3.000                | 1.540              | 6.670            | 1.517                 | 1.563                 |
| 4.000                | 2.890              | 7.900            | 2.863                 | 2.917                 |
| 5.000                | 4.550              | 19.560           | 4.483                 | 4.617                 |
| 6.000                | 6.400              | 65.010           | 6.176                 | 6.624                 |
| 7.000                | 8.470              | 129.350          | 8.025                 | 8.915                 |

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

| Time<br>(Hours) | Inflow<br>(CFS) | Outflow<br>(CFS) | Storage<br>(Ac.Ft) |      | 3.3 | 6.56 | 9.84 | 13.12 | Depth<br>(Ft.) |
|-----------------|-----------------|------------------|--------------------|------|-----|------|------|-------|----------------|
| 0.083           | 0.15            | 0.01             | 0.000              | O    |     |      |      |       | 0.00           |
| 0.167           | 0.52            | 0.07             | 0.003              | OI   |     |      |      |       | 0.02           |
| 0.250           | 0.61            | 0.15             | 0.006              | OI   |     |      |      |       | 0.05           |
| 0.333           | 0.72            | 0.24             | 0.009              | OI   |     |      |      |       | 0.08           |
| 0.417           | 0.91            | 0.34             | 0.012              | O I  |     |      |      |       | 0.11           |
| 0.500           | 0.96            | 0.44             | 0.016              | IOI  |     |      |      |       | 0.15           |
| 0.583           | 0.97            | 0.53             | 0.020              | IOI  |     |      |      |       | 0.18           |
| 0.667           | 0.98            | 0.60             | 0.022              | IOI  |     |      |      |       | 0.20           |
| 0.750           | 0.98            | 0.67             | 0.025              | IOI  |     |      |      |       | 0.22           |
| 0.833           | 1.05            | 0.73             | 0.027              | IOI  |     |      |      |       | 0.24           |
| 0.917           | 1.24            | 0.80             | 0.029              | IO I |     |      |      |       | 0.27           |
| 1.000           | 1.28            | 0.88             | 0.032              | IOI  |     |      |      |       | 0.29           |
| 1.083           | 1.22            | 0.94             | 0.035              | O    |     |      |      |       | 0.32           |
| 1.167           | 1.04            | 0.97             | 0.036              | O    |     |      |      |       | 0.33           |
| 1.250           | 1.00            | 0.98             | 0.036              | O    |     |      |      |       | 0.33           |
| 1.333           | 0.98            | 0.98             | 0.036              | O    |     |      |      |       | 0.33           |
| 1.417           | 0.98            | 0.98             | 0.036              | O    |     |      |      |       | 0.33           |
| 1.500           | 0.98            | 0.98             | 0.036              | O    |     |      |      |       | 0.33           |
| 1.583           | 0.98            | 0.98             | 0.036              | O    |     |      |      |       | 0.33           |
| 1.667           | 0.98            | 0.98             | 0.036              | O    |     |      |      |       | 0.33           |
| 1.750           | 0.98            | 0.98             | 0.036              | O    |     |      |      |       | 0.33           |
| 1.833           | 1.05            | 0.99             | 0.036              | O    |     |      |      |       | 0.33           |
| 1.917           | 1.24            | 1.01             | 0.037              | IOI  |     |      |      |       | 0.34           |
| 2.000           | 1.28            | 1.05             | 0.039              | IOI  |     |      |      |       | 0.35           |
| 2.083           | 1.30            | 1.10             | 0.040              | IOI  |     |      |      |       | 0.37           |
| 2.167           | 1.30            | 1.13             | 0.042              | IOI  |     |      |      |       | 0.38           |
| 2.250           | 1.30            | 1.16             | 0.043              | IOI  |     |      |      |       | 0.39           |
| 2.333           | 1.30            | 1.18             | 0.044              | IOI  |     |      |      |       | 0.40           |
| 2.417           | 1.30            | 1.20             | 0.044              | IOI  |     |      |      |       | 0.40           |
| 2.500           | 1.30            | 1.22             | 0.045              | IOI  |     |      |      |       | 0.41           |
| 2.583           | 1.38            | 1.24             | 0.046              | O    |     |      |      |       | 0.42           |
| 2.667           | 1.56            | 1.28             | 0.047              | O    |     |      |      |       | 0.43           |
| 2.750           | 1.61            | 1.33             | 0.049              | O    |     |      |      |       | 0.45           |
| 2.833           | 1.62            | 1.38             | 0.051              | O    |     |      |      |       | 0.46           |
| 2.917           | 1.63            | 1.42             | 0.053              | O    |     |      |      |       | 0.48           |
| 3.000           | 1.63            | 1.46             | 0.054              | O    |     |      |      |       | 0.49           |
| 3.083           | 1.63            | 1.49             | 0.055              | O    |     |      |      |       | 0.50           |
| 3.167           | 1.63            | 1.51             | 0.056              | O    |     |      |      |       | 0.51           |
| 3.250           | 1.63            | 1.53             | 0.057              | O    |     |      |      |       | 0.51           |
| 3.333           | 1.63            | 1.55             | 0.057              | O    |     |      |      |       | 0.52           |
| 3.417           | 1.63            | 1.56             | 0.058              | O    |     |      |      |       | 0.52           |
| 3.500           | 1.63            | 1.57             | 0.058              | O    |     |      |      |       | 0.53           |
| 3.583           | 1.63            | 1.58             | 0.058              | O    |     |      |      |       | 0.53           |
| 3.667           | 1.63            | 1.59             | 0.059              | O    |     |      |      |       | 0.53           |
| 3.750           | 1.63            | 1.60             | 0.059              | O    |     |      |      |       | 0.54           |
| 3.833           | 1.71            | 1.61             | 0.059              | IOI  |     |      |      |       | 0.54           |
| 3.917           | 1.89            | 1.64             | 0.061              | O    |     |      |      |       | 0.55           |
| 4.000           | 1.93            | 1.69             | 0.062              | O    |     |      |      |       | 0.57           |
| 4.083           | 1.95            | 1.73             | 0.064              | O    |     |      |      |       | 0.58           |
| 4.167           | 1.95            | 1.77             | 0.065              | O    |     |      |      |       | 0.59           |
| 4.250           | 1.95            | 1.80             | 0.066              | O    |     |      |      |       | 0.60           |
| 4.333           | 2.03            | 1.83             | 0.068              | O    |     |      |      |       | 0.61           |
| 4.417           | 2.21            | 1.88             | 0.069              | IOI  |     |      |      |       | 0.63           |
| 4.500           | 2.26            | 1.94             | 0.072              | IOI  |     |      |      |       | 0.65           |
| 4.583           | 2.27            | 2.00             | 0.074              | IOI  |     |      |      |       | 0.67           |
| 4.667           | 2.28            | 2.05             | 0.075              | IOI  |     |      |      |       | 0.69           |
| 4.750           | 2.28            | 2.08             | 0.077              | O    |     |      |      |       | 0.70           |
| 4.833           | 2.36            | 2.12             | 0.078              | O    |     |      |      |       | 0.71           |
| 4.917           | 2.54            | 2.18             | 0.080              | IOI  |     |      |      |       | 0.73           |
| 5.000           | 2.59            | 2.24             | 0.083              | IOI  |     |      |      |       | 0.75           |
| 5.083           | 2.45            | 2.29             | 0.085              | O    |     |      |      |       | 0.77           |
| 5.167           | 2.09            | 2.29             | 0.084              | O    |     |      |      |       | 0.77           |
| 5.250           | 1.99            | 2.24             | 0.083              | IO   |     |      |      |       | 0.75           |
| 5.333           | 2.04            | 2.21             | 0.081              | IO   |     |      |      |       | 0.74           |
| 5.417           | 2.22            | 2.19             | 0.081              | O    |     |      |      |       | 0.74           |
| 5.500           | 2.26            | 2.20             | 0.081              | O    |     |      |      |       | 0.74           |
| 5.583           | 2.35            | 2.22             | 0.082              | O    |     |      |      |       | 0.74           |
| 5.667           | 2.54            | 2.26             | 0.083              | IOI  |     |      |      |       | 0.76           |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |  |    |   |  |  |  |  |      |
|--------|------|------|-------|--|----|---|--|--|--|--|------|
| 5.750  | 2.59 | 2.31 | 0.085 |  | OI |   |  |  |  |  | 0.77 |
| 5.833  | 2.60 | 2.36 | 0.087 |  | OI |   |  |  |  |  | 0.79 |
| 5.917  | 2.60 | 2.40 | 0.089 |  | OI |   |  |  |  |  | 0.80 |
| 6.000  | 2.60 | 2.43 | 0.090 |  | OI |   |  |  |  |  | 0.82 |
| 6.083  | 2.68 | 2.47 | 0.091 |  | O  |   |  |  |  |  | 0.83 |
| 6.167  | 2.86 | 2.52 | 0.093 |  | O  |   |  |  |  |  | 0.85 |
| 6.250  | 2.91 | 2.58 | 0.095 |  | OI |   |  |  |  |  | 0.87 |
| 6.333  | 2.93 | 2.64 | 0.097 |  | OI |   |  |  |  |  | 0.89 |
| 6.417  | 2.93 | 2.69 | 0.099 |  | OI |   |  |  |  |  | 0.90 |
| 6.500  | 2.93 | 2.73 | 0.101 |  | OI |   |  |  |  |  | 0.92 |
| 6.583  | 3.01 | 2.77 | 0.102 |  | OI |   |  |  |  |  | 0.93 |
| 6.667  | 3.19 | 2.83 | 0.104 |  | OI |   |  |  |  |  | 0.95 |
| 6.750  | 3.24 | 2.89 | 0.107 |  | O  |   |  |  |  |  | 0.97 |
| 6.833  | 3.25 | 2.95 | 0.109 |  | O  |   |  |  |  |  | 0.99 |
| 6.917  | 3.25 | 2.98 | 0.111 |  | O  |   |  |  |  |  | 1.00 |
| 7.000  | 3.26 | 2.99 | 0.113 |  | O  |   |  |  |  |  | 1.01 |
| 7.083  | 3.26 | 3.00 | 0.115 |  | O  |   |  |  |  |  | 1.01 |
| 7.167  | 3.26 | 3.01 | 0.116 |  | O  |   |  |  |  |  | 1.01 |
| 7.250  | 3.26 | 3.01 | 0.118 |  | O  |   |  |  |  |  | 1.02 |
| 7.333  | 3.33 | 3.02 | 0.120 |  | OI |   |  |  |  |  | 1.02 |
| 7.417  | 3.52 | 3.03 | 0.123 |  | OI |   |  |  |  |  | 1.02 |
| 7.500  | 3.56 | 3.05 | 0.126 |  | OI |   |  |  |  |  | 1.03 |
| 7.583  | 3.65 | 3.07 | 0.130 |  | OI |   |  |  |  |  | 1.04 |
| 7.667  | 3.84 | 3.09 | 0.134 |  | OI |   |  |  |  |  | 1.05 |
| 7.750  | 3.89 | 3.11 | 0.140 |  | OI |   |  |  |  |  | 1.06 |
| 7.833  | 3.98 | 3.13 | 0.145 |  | OI |   |  |  |  |  | 1.07 |
| 7.917  | 4.16 | 3.16 | 0.152 |  | O  | I |  |  |  |  | 1.08 |
| 8.000  | 4.21 | 3.19 | 0.159 |  | O  | I |  |  |  |  | 1.10 |
| 8.083  | 4.38 | 3.22 | 0.166 |  | O  | I |  |  |  |  | 1.11 |
| 8.167  | 4.75 | 3.26 | 0.175 |  | O  | I |  |  |  |  | 1.13 |
| 8.250  | 4.85 | 3.31 | 0.186 |  | O  | I |  |  |  |  | 1.15 |
| 8.333  | 4.87 | 3.35 | 0.196 |  | O  | I |  |  |  |  | 1.17 |
| 8.417  | 4.88 | 3.40 | 0.207 |  | O  | I |  |  |  |  | 1.19 |
| 8.500  | 4.88 | 3.44 | 0.217 |  | O  | I |  |  |  |  | 1.21 |
| 8.583  | 4.96 | 3.48 | 0.227 |  | O  | I |  |  |  |  | 1.23 |
| 8.667  | 5.14 | 3.53 | 0.238 |  | O  | I |  |  |  |  | 1.25 |
| 8.750  | 5.19 | 3.58 | 0.249 |  | O  | I |  |  |  |  | 1.27 |
| 8.833  | 5.28 | 3.62 | 0.260 |  | O  | I |  |  |  |  | 1.29 |
| 8.917  | 5.47 | 3.67 | 0.272 |  | O  | I |  |  |  |  | 1.32 |
| 9.000  | 5.52 | 3.73 | 0.284 |  | O  | I |  |  |  |  | 1.34 |
| 9.083  | 5.68 | 3.78 | 0.297 |  | O  | I |  |  |  |  | 1.37 |
| 9.167  | 6.05 | 3.84 | 0.311 |  | O  | I |  |  |  |  | 1.39 |
| 9.250  | 6.15 | 3.91 | 0.326 |  | O  | I |  |  |  |  | 1.42 |
| 9.333  | 6.25 | 3.98 | 0.342 |  | O  | I |  |  |  |  | 1.45 |
| 9.417  | 6.44 | 4.04 | 0.358 |  | O  | I |  |  |  |  | 1.49 |
| 9.500  | 6.49 | 4.12 | 0.374 |  | O  | I |  |  |  |  | 1.52 |
| 9.583  | 6.58 | 4.19 | 0.391 |  | O  | I |  |  |  |  | 1.55 |
| 9.667  | 6.77 | 4.26 | 0.408 |  | O  | I |  |  |  |  | 1.58 |
| 9.750  | 6.82 | 4.33 | 0.425 |  | O  | I |  |  |  |  | 1.62 |
| 9.833  | 6.91 | 4.41 | 0.442 |  | O  | I |  |  |  |  | 1.65 |
| 9.917  | 7.10 | 4.48 | 0.460 |  | O  | I |  |  |  |  | 1.69 |
| 10.000 | 7.14 | 4.56 | 0.478 |  | O  | I |  |  |  |  | 1.72 |
| 10.083 | 6.62 | 4.63 | 0.493 |  | O  | I |  |  |  |  | 1.75 |
| 10.167 | 5.35 | 4.67 | 0.503 |  | O  | I |  |  |  |  | 1.77 |
| 10.250 | 5.02 | 4.68 | 0.506 |  | OI |   |  |  |  |  | 1.78 |
| 10.333 | 4.92 | 4.69 | 0.508 |  | OI |   |  |  |  |  | 1.78 |
| 10.417 | 4.90 | 4.70 | 0.510 |  | O  |   |  |  |  |  | 1.78 |
| 10.500 | 4.88 | 4.70 | 0.511 |  | O  |   |  |  |  |  | 1.79 |
| 10.583 | 5.27 | 4.71 | 0.513 |  | OI |   |  |  |  |  | 1.79 |
| 10.667 | 6.18 | 4.74 | 0.520 |  | O  | I |  |  |  |  | 1.80 |
| 10.750 | 6.42 | 4.79 | 0.531 |  | O  | I |  |  |  |  | 1.83 |
| 10.833 | 6.49 | 4.84 | 0.542 |  | O  | I |  |  |  |  | 1.85 |
| 10.917 | 6.50 | 4.88 | 0.553 |  | O  | I |  |  |  |  | 1.87 |
| 11.000 | 6.51 | 4.93 | 0.564 |  | O  | I |  |  |  |  | 1.89 |
| 11.083 | 6.44 | 4.98 | 0.575 |  | O  | I |  |  |  |  | 1.91 |
| 11.167 | 6.25 | 5.02 | 0.584 |  | O  | I |  |  |  |  | 1.93 |
| 11.250 | 6.21 | 5.05 | 0.592 |  | O  | I |  |  |  |  | 1.95 |
| 11.333 | 6.19 | 5.09 | 0.600 |  | O  | I |  |  |  |  | 1.96 |
| 11.417 | 6.19 | 5.12 | 0.608 |  | O  | I |  |  |  |  | 1.98 |
| 11.500 | 6.19 | 5.15 | 0.615 |  | O  | I |  |  |  |  | 1.99 |
| 11.583 | 6.03 | 5.17 | 0.622 |  | O  | I |  |  |  |  | 2.00 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |       |      |       |  |   |     |  |   |  |      |
|--------|-------|------|-------|--|---|-----|--|---|--|------|
| 11.667 | 5.67  | 5.18 | 0.626 |  |   | OI  |  |   |  | 2.01 |
| 11.750 | 5.57  | 5.19 | 0.629 |  |   | OI  |  |   |  | 2.01 |
| 11.833 | 5.62  | 5.19 | 0.632 |  |   | OI  |  |   |  | 2.01 |
| 11.917 | 5.80  | 5.20 | 0.636 |  |   | O I |  |   |  | 2.02 |
| 12.000 | 5.84  | 5.20 | 0.640 |  |   | O I |  |   |  | 2.02 |
| 12.083 | 6.45  | 5.21 | 0.646 |  |   | O I |  |   |  | 2.03 |
| 12.167 | 7.86  | 5.23 | 0.660 |  |   | O   |  | I |  | 2.04 |
| 12.250 | 8.24  | 5.27 | 0.679 |  |   | O   |  | I |  | 2.06 |
| 12.333 | 8.48  | 5.30 | 0.700 |  |   | O   |  | I |  | 2.09 |
| 12.417 | 8.81  | 5.34 | 0.723 |  |   | O   |  | I |  | 2.11 |
| 12.500 | 8.91  | 5.38 | 0.747 |  |   | O   |  | I |  | 2.14 |
| 12.583 | 9.18  | 5.42 | 0.772 |  |   | O   |  | I |  | 2.17 |
| 12.667 | 9.76  | 5.46 | 0.800 |  |   | O   |  | I |  | 2.20 |
| 12.750 | 9.93  | 5.51 | 0.830 |  |   | O   |  | I |  | 2.23 |
| 12.833 | 10.10 | 5.56 | 0.861 |  |   | O   |  | I |  | 2.26 |
| 12.917 | 10.41 | 5.62 | 0.893 |  |   | O   |  | I |  | 2.30 |
| 13.000 | 10.51 | 5.67 | 0.926 |  |   | O   |  | I |  | 2.33 |
| 13.083 | 11.13 | 5.73 | 0.961 |  |   | O   |  | I |  | 2.37 |
| 13.167 | 12.53 | 5.79 | 1.003 |  |   | O   |  | I |  | 2.42 |
| 13.250 | 12.91 | 5.87 | 1.051 |  |   | O   |  | I |  | 2.47 |
| 13.333 | 13.04 | 5.95 | 1.099 |  |   | O   |  | I |  | 2.52 |
| 13.417 | 13.08 | 6.03 | 1.148 |  |   | O   |  | I |  | 2.57 |
| 13.500 | 13.12 | 6.11 | 1.196 |  |   | O   |  | I |  | 2.63 |
| 13.583 | 11.85 | 6.18 | 1.240 |  |   | O   |  | I |  | 2.67 |
| 13.667 | 8.84  | 6.23 | 1.269 |  |   | O   |  | I |  | 2.71 |
| 13.750 | 8.06  | 6.25 | 1.284 |  |   | O   |  | I |  | 2.72 |
| 13.833 | 7.85  | 6.27 | 1.296 |  |   | O   |  | I |  | 2.73 |
| 13.917 | 7.81  | 6.29 | 1.306 |  |   | O   |  | I |  | 2.75 |
| 14.000 | 7.80  | 6.31 | 1.317 |  |   | O   |  | I |  | 2.76 |
| 14.083 | 8.29  | 6.33 | 1.328 |  |   | O   |  | I |  | 2.77 |
| 14.167 | 9.40  | 6.35 | 1.346 |  |   | O   |  | I |  | 2.79 |
| 14.250 | 9.71  | 6.39 | 1.368 |  |   | O   |  | I |  | 2.81 |
| 14.333 | 9.70  | 6.43 | 1.390 |  |   | O   |  | I |  | 2.84 |
| 14.417 | 9.46  | 6.46 | 1.412 |  |   | O   |  | I |  | 2.86 |
| 14.500 | 9.42  | 6.49 | 1.432 |  |   | O   |  | I |  | 2.88 |
| 14.583 | 9.41  | 6.53 | 1.452 |  |   | O   |  | I |  | 2.90 |
| 14.667 | 9.42  | 6.56 | 1.472 |  |   | O   |  | I |  | 2.93 |
| 14.750 | 9.44  | 6.59 | 1.492 |  |   | O   |  | I |  | 2.95 |
| 14.833 | 9.34  | 6.62 | 1.511 |  |   | O   |  | I |  | 2.97 |
| 14.917 | 9.08  | 6.65 | 1.529 |  |   | O   |  | I |  | 2.99 |
| 15.000 | 9.03  | 6.67 | 1.545 |  |   | O   |  | I |  | 3.00 |
| 15.083 | 8.91  | 6.69 | 1.561 |  |   | O   |  | I |  | 3.02 |
| 15.167 | 8.64  | 6.70 | 1.575 |  |   | O   |  | I |  | 3.03 |
| 15.250 | 8.58  | 6.71 | 1.588 |  |   | O   |  | I |  | 3.04 |
| 15.333 | 8.46  | 6.73 | 1.601 |  |   | O   |  | I |  | 3.05 |
| 15.417 | 8.20  | 6.74 | 1.612 |  |   | O   |  | I |  | 3.05 |
| 15.500 | 8.14  | 6.74 | 1.622 |  |   | O   |  | I |  | 3.06 |
| 15.583 | 7.67  | 6.75 | 1.630 |  |   | O   |  | I |  | 3.07 |
| 15.667 | 6.59  | 6.75 | 1.632 |  |   | O   |  |   |  | 3.07 |
| 15.750 | 6.31  | 6.75 | 1.630 |  |   | IO  |  |   |  | 3.07 |
| 15.833 | 6.24  | 6.75 | 1.627 |  |   | IO  |  |   |  | 3.06 |
| 15.917 | 6.23  | 6.75 | 1.623 |  |   | IO  |  |   |  | 3.06 |
| 16.000 | 6.24  | 6.74 | 1.620 |  |   | IO  |  |   |  | 3.06 |
| 16.083 | 5.08  | 6.74 | 1.612 |  |   | I O |  |   |  | 3.05 |
| 16.167 | 2.32  | 6.72 | 1.591 |  | I | O   |  |   |  | 3.04 |
| 16.250 | 1.59  | 6.69 | 1.559 |  | I | O   |  |   |  | 3.01 |
| 16.333 | 1.38  | 6.64 | 1.523 |  | I | O   |  |   |  | 2.98 |
| 16.417 | 1.33  | 6.58 | 1.487 |  | I | O   |  |   |  | 2.94 |
| 16.500 | 1.30  | 6.52 | 1.451 |  | I | O   |  |   |  | 2.90 |
| 16.583 | 1.23  | 6.47 | 1.415 |  | I | O   |  |   |  | 2.86 |
| 16.667 | 1.04  | 6.41 | 1.378 |  | I | O   |  |   |  | 2.82 |
| 16.750 | 1.00  | 6.35 | 1.341 |  | I | O   |  |   |  | 2.78 |
| 16.833 | 0.98  | 6.29 | 1.305 |  | I | O   |  |   |  | 2.74 |
| 16.917 | 0.98  | 6.23 | 1.268 |  | I | O   |  |   |  | 2.70 |
| 17.000 | 0.98  | 6.17 | 1.232 |  | I | O   |  |   |  | 2.67 |
| 17.083 | 1.13  | 6.11 | 1.197 |  | I | O   |  |   |  | 2.63 |
| 17.167 | 1.49  | 6.06 | 1.164 |  | I | O   |  |   |  | 2.59 |
| 17.250 | 1.59  | 6.01 | 1.134 |  | I | O   |  |   |  | 2.56 |
| 17.333 | 1.62  | 5.96 | 1.103 |  | I | O   |  |   |  | 2.53 |
| 17.417 | 1.62  | 5.91 | 1.074 |  | I | O   |  |   |  | 2.49 |
| 17.500 | 1.63  | 5.86 | 1.044 |  | I | O   |  |   |  | 2.46 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |   |  |   |  |  |      |
|--------|------|------|-------|---|--|---|--|--|------|
| 17.583 | 1.63 | 5.81 | 1.015 | I |  | O |  |  | 2.43 |
| 17.667 | 1.63 | 5.77 | 0.987 | I |  | O |  |  | 2.40 |
| 17.750 | 1.63 | 5.72 | 0.958 | I |  | O |  |  | 2.37 |
| 17.833 | 1.55 | 5.68 | 0.930 | I |  | O |  |  | 2.34 |
| 17.917 | 1.37 | 5.63 | 0.901 | I |  | O |  |  | 2.31 |
| 18.000 | 1.32 | 5.58 | 0.872 | I |  | O |  |  | 2.27 |
| 18.083 | 1.31 | 5.53 | 0.843 | I |  | O |  |  | 2.24 |
| 18.167 | 1.30 | 5.49 | 0.814 | I |  | O |  |  | 2.21 |
| 18.250 | 1.30 | 5.44 | 0.785 | I |  | O |  |  | 2.18 |
| 18.333 | 1.30 | 5.39 | 0.757 | I |  | O |  |  | 2.15 |
| 18.417 | 1.30 | 5.35 | 0.729 | I |  | O |  |  | 2.12 |
| 18.500 | 1.30 | 5.30 | 0.701 | I |  | O |  |  | 2.09 |
| 18.583 | 1.23 | 5.26 | 0.673 | I |  | O |  |  | 2.06 |
| 18.667 | 1.04 | 5.21 | 0.645 | I |  | O |  |  | 2.03 |
| 18.750 | 1.00 | 5.15 | 0.616 | I |  | O |  |  | 1.99 |
| 18.833 | 0.90 | 5.03 | 0.588 | I |  | O |  |  | 1.94 |
| 18.917 | 0.72 | 4.91 | 0.559 | I |  | O |  |  | 1.88 |
| 19.000 | 0.67 | 4.79 | 0.531 | I |  | O |  |  | 1.82 |
| 19.083 | 0.73 | 4.67 | 0.503 | I |  | O |  |  | 1.77 |
| 19.167 | 0.91 | 4.56 | 0.477 | I |  | O |  |  | 1.72 |
| 19.250 | 0.96 | 4.45 | 0.452 | I |  | O |  |  | 1.67 |
| 19.333 | 1.05 | 4.35 | 0.429 | I |  | O |  |  | 1.63 |
| 19.417 | 1.23 | 4.26 | 0.407 | I |  | O |  |  | 1.58 |
| 19.500 | 1.28 | 4.17 | 0.387 | I |  | O |  |  | 1.54 |
| 19.583 | 1.22 | 4.08 | 0.367 | I |  | O |  |  | 1.50 |
| 19.667 | 1.04 | 4.00 | 0.347 | I |  | O |  |  | 1.46 |
| 19.750 | 1.00 | 3.91 | 0.327 | I |  | O |  |  | 1.42 |
| 19.833 | 0.90 | 3.82 | 0.307 | I |  | O |  |  | 1.39 |
| 19.917 | 0.72 | 3.74 | 0.286 | I |  | O |  |  | 1.35 |
| 20.000 | 0.67 | 3.65 | 0.266 | I |  | O |  |  | 1.31 |
| 20.083 | 0.73 | 3.56 | 0.246 | I |  | O |  |  | 1.27 |
| 20.167 | 0.91 | 3.48 | 0.227 | I |  | O |  |  | 1.23 |
| 20.250 | 0.96 | 3.41 | 0.210 | I |  | O |  |  | 1.20 |
| 20.333 | 0.97 | 3.34 | 0.193 | I |  | O |  |  | 1.16 |
| 20.417 | 0.98 | 3.27 | 0.177 | I |  | O |  |  | 1.13 |
| 20.500 | 0.98 | 3.20 | 0.162 | I |  | O |  |  | 1.10 |
| 20.583 | 0.98 | 3.14 | 0.146 | I |  | O |  |  | 1.07 |
| 20.667 | 0.98 | 3.07 | 0.132 | I |  | O |  |  | 1.04 |
| 20.750 | 0.98 | 3.01 | 0.118 | I |  | O |  |  | 1.01 |
| 20.833 | 0.90 | 2.82 | 0.104 | I |  | O |  |  | 0.94 |
| 20.917 | 0.72 | 2.47 | 0.091 | I |  | O |  |  | 0.83 |
| 21.000 | 0.67 | 2.17 | 0.080 | I |  | O |  |  | 0.73 |
| 21.083 | 0.73 | 1.92 | 0.071 | I |  | O |  |  | 0.64 |
| 21.167 | 0.91 | 1.73 | 0.064 | I |  | O |  |  | 0.58 |
| 21.250 | 0.96 | 1.60 | 0.059 | I |  | O |  |  | 0.54 |
| 21.333 | 0.89 | 1.48 | 0.055 | I |  | O |  |  | 0.50 |
| 21.417 | 0.72 | 1.37 | 0.050 | I |  | O |  |  | 0.46 |
| 21.500 | 0.67 | 1.25 | 0.046 | I |  | O |  |  | 0.42 |
| 21.583 | 0.73 | 1.16 | 0.043 | I |  | O |  |  | 0.39 |
| 21.667 | 0.91 | 1.10 | 0.041 | I |  | O |  |  | 0.37 |
| 21.750 | 0.96 | 1.07 | 0.040 | I |  | O |  |  | 0.36 |
| 21.833 | 0.89 | 1.05 | 0.039 | I |  | O |  |  | 0.35 |
| 21.917 | 0.72 | 1.01 | 0.037 | I |  | O |  |  | 0.34 |
| 22.000 | 0.67 | 0.95 | 0.035 | I |  | O |  |  | 0.32 |
| 22.083 | 0.73 | 0.91 | 0.034 | I |  | O |  |  | 0.31 |
| 22.167 | 0.91 | 0.89 | 0.033 | I |  | O |  |  | 0.30 |
| 22.250 | 0.96 | 0.90 | 0.033 | I |  | O |  |  | 0.30 |
| 22.333 | 0.89 | 0.91 | 0.033 | I |  | O |  |  | 0.30 |
| 22.417 | 0.72 | 0.89 | 0.033 | I |  | O |  |  | 0.30 |
| 22.500 | 0.67 | 0.86 | 0.032 | I |  | O |  |  | 0.29 |
| 22.583 | 0.66 | 0.82 | 0.030 | I |  | O |  |  | 0.28 |
| 22.667 | 0.65 | 0.79 | 0.029 | I |  | O |  |  | 0.27 |
| 22.750 | 0.65 | 0.77 | 0.028 | I |  | O |  |  | 0.26 |
| 22.833 | 0.65 | 0.75 | 0.028 | I |  | O |  |  | 0.25 |
| 22.917 | 0.65 | 0.73 | 0.027 | I |  | O |  |  | 0.25 |
| 23.000 | 0.65 | 0.72 | 0.027 | I |  | O |  |  | 0.24 |
| 23.083 | 0.65 | 0.71 | 0.026 | I |  | O |  |  | 0.24 |
| 23.167 | 0.65 | 0.70 | 0.026 | I |  | O |  |  | 0.23 |
| 23.250 | 0.65 | 0.69 | 0.025 | I |  | O |  |  | 0.23 |
| 23.333 | 0.65 | 0.68 | 0.025 | I |  | O |  |  | 0.23 |
| 23.417 | 0.65 | 0.68 | 0.025 | I |  | O |  |  | 0.23 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |    |  |  |  |  |      |
|--------|------|------|-------|----|--|--|--|--|------|
| 23.500 | 0.65 | 0.67 | 0.025 | IO |  |  |  |  | 0.23 |
| 23.583 | 0.65 | 0.67 | 0.025 | IO |  |  |  |  | 0.22 |
| 23.667 | 0.65 | 0.67 | 0.025 | IO |  |  |  |  | 0.22 |
| 23.750 | 0.65 | 0.66 | 0.025 | IO |  |  |  |  | 0.22 |
| 23.833 | 0.65 | 0.66 | 0.024 | IO |  |  |  |  | 0.22 |
| 23.917 | 0.65 | 0.66 | 0.024 | IO |  |  |  |  | 0.22 |
| 24.000 | 0.65 | 0.66 | 0.024 | IO |  |  |  |  | 0.22 |
| 24.083 | 0.50 | 0.64 | 0.024 | IO |  |  |  |  | 0.22 |
| 24.167 | 0.13 | 0.59 | 0.022 | IO |  |  |  |  | 0.20 |
| 24.250 | 0.04 | 0.50 | 0.019 | IO |  |  |  |  | 0.17 |
| 24.333 | 0.01 | 0.42 | 0.016 | IO |  |  |  |  | 0.14 |
| 24.417 | 0.00 | 0.35 | 0.013 | O  |  |  |  |  | 0.12 |
| 24.500 | 0.00 | 0.29 | 0.011 | O  |  |  |  |  | 0.10 |
| 24.583 | 0.00 | 0.24 | 0.009 | O  |  |  |  |  | 0.08 |
| 24.667 | 0.00 | 0.20 | 0.007 | O  |  |  |  |  | 0.07 |
| 24.750 | 0.00 | 0.17 | 0.006 | O  |  |  |  |  | 0.06 |
| 24.833 | 0.00 | 0.14 | 0.005 | O  |  |  |  |  | 0.05 |
| 24.917 | 0.00 | 0.11 | 0.004 | O  |  |  |  |  | 0.04 |
| 25.000 | 0.00 | 0.09 | 0.003 | O  |  |  |  |  | 0.03 |
| 25.083 | 0.00 | 0.08 | 0.003 | O  |  |  |  |  | 0.03 |
| 25.167 | 0.00 | 0.07 | 0.002 | O  |  |  |  |  | 0.02 |
| 25.250 | 0.00 | 0.05 | 0.002 | O  |  |  |  |  | 0.02 |
| 25.333 | 0.00 | 0.04 | 0.002 | O  |  |  |  |  | 0.02 |
| 25.417 | 0.00 | 0.04 | 0.001 | O  |  |  |  |  | 0.01 |
| 25.500 | 0.00 | 0.03 | 0.001 | O  |  |  |  |  | 0.01 |
| 25.583 | 0.00 | 0.03 | 0.001 | O  |  |  |  |  | 0.01 |
| 25.667 | 0.00 | 0.02 | 0.001 | O  |  |  |  |  | 0.01 |
| 25.750 | 0.00 | 0.02 | 0.001 | O  |  |  |  |  | 0.01 |
| 25.833 | 0.00 | 0.01 | 0.001 | O  |  |  |  |  | 0.00 |
| 25.917 | 0.00 | 0.01 | 0.000 | O  |  |  |  |  | 0.00 |
| 26.000 | 0.00 | 0.01 | 0.000 | O  |  |  |  |  | 0.00 |
| 26.083 | 0.00 | 0.01 | 0.000 | O  |  |  |  |  | 0.00 |
| 26.167 | 0.00 | 0.01 | 0.000 | O  |  |  |  |  | 0.00 |
| 26.250 | 0.00 | 0.01 | 0.000 | O  |  |  |  |  | 0.00 |
| 26.333 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |
| 26.417 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |
| 26.500 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |
| 26.583 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |

```

*****HYDROGRAPH DATA*****
      Number of intervals =    319
      Time interval =      5.0 (Min.)
      Maximum/Peak flow rate =      6.754 (CFS)
      Total volume =      6.986 (Ac.Ft)
      Status of hydrographs being held in storage
      Stream 1 Stream 2 Stream 3 Stream 4 Stream 5
      Peak (CFS)      0.000      0.000      0.000      0.000      0.000
      Vol (Ac.Ft)      0.000      0.000      0.000      0.000      0.000
*****

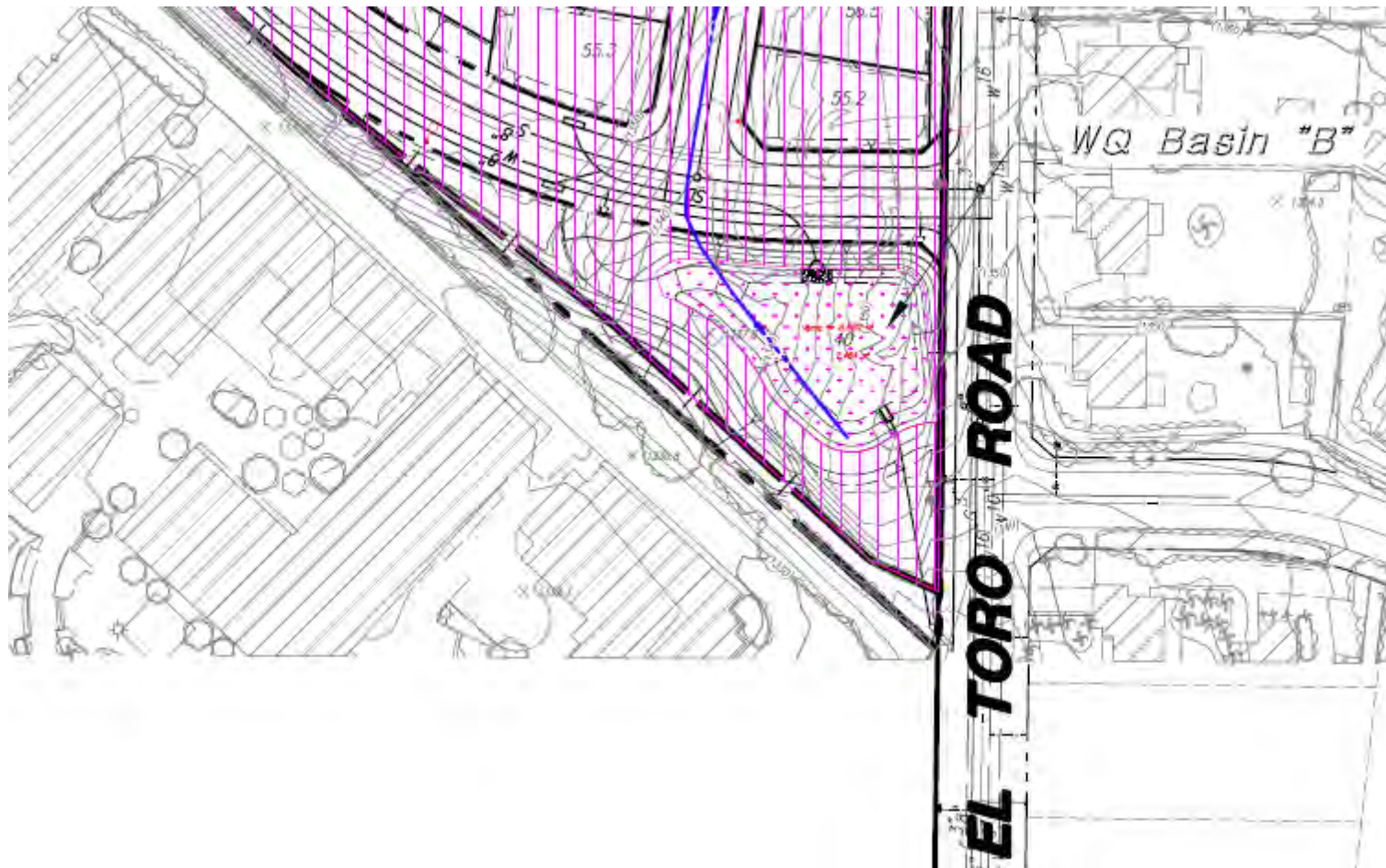
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Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT D – Detention Basin Routing

| <b>Nichols Road project - Tract 37305</b>                                                                    |               |                |                      |                              |                              |                    |                    |                    |                     |                         |
|--------------------------------------------------------------------------------------------------------------|---------------|----------------|----------------------|------------------------------|------------------------------|--------------------|--------------------|--------------------|---------------------|-------------------------|
| <b>City of Lake Elsinore</b>                                                                                 |               |                |                      |                              |                              |                    |                    |                    |                     |                         |
| <b>Proposed Enhanced Sand Filter/Detention Basin Area B</b>                                                  |               |                |                      |                              |                              |                    |                    |                    |                     |                         |
|                                                                                                              |               |                | Headwater<br>Stage 1 | Stage 1 Orifice<br>A=0.05 sf | Stage 1 Orifice<br>A=0.09 sf | Spillway           | HCOC Det.<br>Basin | HCOC Det.<br>Basin | Emergency Spillway  | Total<br>Outflow        |
| Elev<br>(ft)                                                                                                 | Depth<br>(ft) | Vol<br>(ac-ft) | Depth<br>(ft)        | 2ea-3" Opening<br>1338       | 2ea-4" Opening<br>1341       | 5' Opening<br>1343 | Depth<br>(ft)      | Vol<br>(ac-ft)     | 10' Opening<br>1344 | <b>Q total</b><br>(cfs) |
| 1338                                                                                                         | 0             | 0              | 0                    | 0                            | 0                            | 0                  |                    |                    | Enhanced SF         | <b>0.00</b>             |
| 1339                                                                                                         | 1             | 0.05           | 1                    | 0.48                         | 0                            | 0                  |                    |                    | Enhanced SF         | <b>0.48</b>             |
| 1340                                                                                                         | 2             | 0.103          | 2                    | 0.7                          | 0                            | 0                  |                    |                    | Enhanced SF         | <b>0.70</b>             |
| <b>Water Quality Volume = 8,520 cu-ft, Soil Media Void (30%) volume = 4,490.5 cu-ft &lt; V<sub>bmp</sub></b> |               |                |                      |                              |                              |                    |                    |                    |                     |                         |
| <b>WQ surface volume = 8,520 - 4,490 = 4,030 cu-ft (0.09 Ac-ft)</b>                                          |               |                |                      |                              |                              |                    |                    |                    |                     |                         |
| 1340                                                                                                         | 0             | 0.000          | 2                    | 0.7                          | 0                            | 0                  |                    |                    |                     | <b>0.70</b>             |
| 1340.5                                                                                                       | 0.5           | 0.196          | 2.5                  | 0.78                         | 0                            | 0                  | 0                  | 0                  |                     | <b>0.78</b>             |
| 1341                                                                                                         | 1             | 0.288          | 3                    | 0.86                         | 0                            | 0                  | 0.5                | 0.093              |                     | <b>0.86</b>             |
| 1342                                                                                                         | 2             | 0.502          | 4                    | 1                            | 0                            | 0                  | 1.5                | 0.306              |                     | <b>1.00</b>             |
| 1343                                                                                                         | 3             | 0.748          | 5                    | 1.14                         | 0.82                         | 0                  | 2.5                | 0.552              |                     | <b>1.96</b>             |
| 1344                                                                                                         | 4             | 1.027          | 6                    | 1.24                         | 1.2                          | 15                 | 3.5                | 0.832              |                     | <b>17.44</b>            |
| 1345                                                                                                         | 5             | 1.341          | 7                    | 1.34                         | 1.5                          | 42.43              | 4.5                | 1.145              | 30.00               | <b>75.27</b>            |
| <b>HCOC Detention Basin is above Water Quality volume @ elev = 1340.5</b>                                    |               |                |                      |                              |                              |                    |                    |                    |                     |                         |

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT D – Detention Basin Routing



# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT D – Detention Basin Routing

FLOOD HYDROGRAPH ROUTING PROGRAM  
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005  
Study date: 01/31/18

Nichols Road Project - Tract 37305  
Drainage Area B = 8.4 Ac  
Tributary to Detention Basin B  
Detention Basin Routing  
100-year 1-hour storm

Program License Serial Number 4029

### \*\*\*\*\* HYDROGRAPH INFORMATION \*\*\*\*\*

From study/file name: nrareabprl100.rte  
\*\*\*\*\*HYDROGRAPH DATA\*\*\*\*\*  
Number of intervals = 14  
Time interval = 5.0 (Min.)  
Maximum/Peak flow rate = 26.344 (CFS)  
Total volume = 0.892 (Ac.Ft)  
Status of hydrographs being held in storage  
Stream 1 Stream 2 Stream 3 Stream 4 Stream 5  
Peak (CFS) 0.000 0.000 0.000 0.000 0.000  
Vol (Ac.Ft) 0.000 0.000 0.000 0.000 0.000  
\*\*\*\*\*

+++++  
Process from Point/Station 20.000 to Point/Station 21.000  
\*\*\*\* RETARDING BASIN ROUTING \*\*\*\*

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 14  
Hydrograph time unit = 5.000 (Min.)  
Initial depth in storage basin = 0.00 (Ft.)

Initial basin depth = 0.00 (Ft.)  
Initial basin storage = 0.00 (Ac.Ft)  
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:  
Basin Depth Storage Outflow (S-O\*dt/2) (S+O\*dt/2)  
(Ft.) (Ac.Ft) (CFS) (Ac.Ft) (Ac.Ft)  
-----  
0.000 0.000 0.000 0.000 0.000  
0.500 0.093 0.860 0.090 0.096  
1.500 0.306 1.000 0.303 0.309  
2.500 0.552 1.960 0.545 0.559  
3.500 0.832 17.440 0.772 0.892  
4.500 1.145 75.270 0.886 1.404  
-----

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

| Time<br>(Hours) | Inflow<br>(CFS) | Outflow<br>(CFS) | Storage<br>(Ac.Ft) | 0 | 6.6 | 13.17 | 19.76 | 26.34 | Depth<br>(Ft.) |
|-----------------|-----------------|------------------|--------------------|---|-----|-------|-------|-------|----------------|
|-----------------|-----------------|------------------|--------------------|---|-----|-------|-------|-------|----------------|

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|       |       |      |       |   |   |   |  |   |   |      |
|-------|-------|------|-------|---|---|---|--|---|---|------|
| 0.083 | 2.78  | 0.09 | 0.009 | O | I |   |  |   |   | 0.05 |
| 0.167 | 5.17  | 0.33 | 0.035 | O | I |   |  |   |   | 0.19 |
| 0.250 | 6.07  | 0.65 | 0.071 | O | I |   |  |   |   | 0.38 |
| 0.333 | 6.63  | 0.87 | 0.109 |   | O | I |  |   |   | 0.58 |
| 0.417 | 6.90  | 0.90 | 0.150 |   | O | I |  |   |   | 0.77 |
| 0.500 | 7.60  | 0.93 | 0.193 |   | O | I |  |   |   | 0.97 |
| 0.583 | 9.15  | 0.96 | 0.244 |   | O | I |  |   |   | 1.21 |
| 0.667 | 11.00 | 1.00 | 0.307 |   | O | I |  |   |   | 1.50 |
| 0.750 | 14.54 | 1.32 | 0.387 |   | O | I |  |   |   | 1.83 |
| 0.833 | 26.34 | 1.82 | 0.517 |   | O | I |  |   | I | 2.36 |
| 0.917 | 21.31 | 7.35 | 0.649 |   | O | I |  | I |   | 2.85 |
| 1.000 | 8.80  | 9.81 | 0.694 |   | O | I |  |   |   | 3.01 |
| 1.083 | 2.97  | 8.56 | 0.671 |   | I | O |  |   |   | 2.93 |
| 1.167 | 0.20  | 6.33 | 0.631 | I | O |   |  |   |   | 2.78 |
| 1.250 | 0.00  | 4.33 | 0.595 | I | O |   |  |   |   | 2.65 |
| 1.333 | 0.00  | 2.95 | 0.570 | I | O |   |  |   |   | 2.56 |
| 1.417 | 0.00  | 2.01 | 0.553 | I | O |   |  |   |   | 2.50 |
| 1.500 | 0.00  | 1.91 | 0.539 | I | O |   |  |   |   | 2.45 |
| 1.583 | 0.00  | 1.86 | 0.526 | I | O |   |  |   |   | 2.40 |
| 1.667 | 0.00  | 1.81 | 0.514 | I | O |   |  |   |   | 2.34 |
| 1.750 | 0.00  | 1.76 | 0.501 | I | O |   |  |   |   | 2.29 |
| 1.833 | 0.00  | 1.72 | 0.489 | I | O |   |  |   |   | 2.25 |
| 1.917 | 0.00  | 1.67 | 0.478 | I | O |   |  |   |   | 2.20 |
| 2.000 | 0.00  | 1.63 | 0.466 | I | O |   |  |   |   | 2.15 |
| 2.083 | 0.00  | 1.58 | 0.455 | I | O |   |  |   |   | 2.11 |
| 2.167 | 0.00  | 1.54 | 0.445 | I | O |   |  |   |   | 2.06 |
| 2.250 | 0.00  | 1.50 | 0.434 | I | O |   |  |   |   | 2.02 |
| 2.333 | 0.00  | 1.46 | 0.424 | I | O |   |  |   |   | 1.98 |
| 2.417 | 0.00  | 1.42 | 0.414 | I | O |   |  |   |   | 1.94 |
| 2.500 | 0.00  | 1.38 | 0.404 | I | O |   |  |   |   | 1.90 |
| 2.583 | 0.00  | 1.35 | 0.395 | I | O |   |  |   |   | 1.86 |
| 2.667 | 0.00  | 1.31 | 0.386 | I | O |   |  |   |   | 1.82 |
| 2.750 | 0.00  | 1.28 | 0.377 | I | O |   |  |   |   | 1.79 |
| 2.833 | 0.00  | 1.24 | 0.368 | I | O |   |  |   |   | 1.75 |
| 2.917 | 0.00  | 1.21 | 0.360 | I | O |   |  |   |   | 1.72 |
| 3.000 | 0.00  | 1.18 | 0.352 | I | O |   |  |   |   | 1.69 |
| 3.083 | 0.00  | 1.15 | 0.344 | I | O |   |  |   |   | 1.65 |
| 3.167 | 0.00  | 1.12 | 0.336 | I | O |   |  |   |   | 1.62 |
| 3.250 | 0.00  | 1.09 | 0.328 | I | O |   |  |   |   | 1.59 |
| 3.333 | 0.00  | 1.06 | 0.321 | I | O |   |  |   |   | 1.56 |
| 3.417 | 0.00  | 1.03 | 0.314 | I | O |   |  |   |   | 1.53 |
| 3.500 | 0.00  | 1.00 | 0.307 | I | O |   |  |   |   | 1.50 |
| 3.583 | 0.00  | 1.00 | 0.300 | I | O |   |  |   |   | 1.47 |
| 3.667 | 0.00  | 0.99 | 0.293 | I | O |   |  |   |   | 1.44 |
| 3.750 | 0.00  | 0.99 | 0.286 | I | O |   |  |   |   | 1.41 |
| 3.833 | 0.00  | 0.98 | 0.279 | I | O |   |  |   |   | 1.37 |
| 3.917 | 0.00  | 0.98 | 0.273 | I | O |   |  |   |   | 1.34 |
| 4.000 | 0.00  | 0.97 | 0.266 | I | O |   |  |   |   | 1.31 |
| 4.083 | 0.00  | 0.97 | 0.259 | I | O |   |  |   |   | 1.28 |
| 4.167 | 0.00  | 0.96 | 0.252 | I | O |   |  |   |   | 1.25 |
| 4.250 | 0.00  | 0.96 | 0.246 | I | O |   |  |   |   | 1.22 |
| 4.333 | 0.00  | 0.96 | 0.239 | I | O |   |  |   |   | 1.19 |
| 4.417 | 0.00  | 0.95 | 0.233 | I | O |   |  |   |   | 1.16 |
| 4.500 | 0.00  | 0.95 | 0.226 | I | O |   |  |   |   | 1.12 |
| 4.583 | 0.00  | 0.94 | 0.220 | I | O |   |  |   |   | 1.09 |
| 4.667 | 0.00  | 0.94 | 0.213 | I | O |   |  |   |   | 1.06 |
| 4.750 | 0.00  | 0.93 | 0.207 | I | O |   |  |   |   | 1.03 |
| 4.833 | 0.00  | 0.93 | 0.200 | I | O |   |  |   |   | 1.00 |
| 4.917 | 0.00  | 0.93 | 0.194 | I | O |   |  |   |   | 0.97 |
| 5.000 | 0.00  | 0.92 | 0.187 | I | O |   |  |   |   | 0.94 |
| 5.083 | 0.00  | 0.92 | 0.181 | I | O |   |  |   |   | 0.91 |
| 5.167 | 0.00  | 0.91 | 0.175 | I | O |   |  |   |   | 0.88 |
| 5.250 | 0.00  | 0.91 | 0.169 | I | O |   |  |   |   | 0.85 |
| 5.333 | 0.00  | 0.91 | 0.162 | I | O |   |  |   |   | 0.83 |
| 5.417 | 0.00  | 0.90 | 0.156 | I | O |   |  |   |   | 0.80 |
| 5.500 | 0.00  | 0.90 | 0.150 | I | O |   |  |   |   | 0.77 |
| 5.583 | 0.00  | 0.89 | 0.144 | I | O |   |  |   |   | 0.74 |
| 5.667 | 0.00  | 0.89 | 0.138 | I | O |   |  |   |   | 0.71 |
| 5.750 | 0.00  | 0.89 | 0.131 | I | O |   |  |   |   | 0.68 |
| 5.833 | 0.00  | 0.88 | 0.125 | I | O |   |  |   |   | 0.65 |
| 5.917 | 0.00  | 0.88 | 0.119 | I | O |   |  |   |   | 0.62 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |    |  |  |  |  |      |
|--------|------|------|-------|----|--|--|--|--|------|
| 6.000  | 0.00 | 0.87 | 0.113 | IO |  |  |  |  | 0.60 |
| 6.083  | 0.00 | 0.87 | 0.107 | IO |  |  |  |  | 0.57 |
| 6.167  | 0.00 | 0.87 | 0.101 | IO |  |  |  |  | 0.54 |
| 6.250  | 0.00 | 0.86 | 0.095 | IO |  |  |  |  | 0.51 |
| 6.333  | 0.00 | 0.83 | 0.090 | IO |  |  |  |  | 0.48 |
| 6.417  | 0.00 | 0.78 | 0.084 | O  |  |  |  |  | 0.45 |
| 6.500  | 0.00 | 0.73 | 0.079 | O  |  |  |  |  | 0.42 |
| 6.583  | 0.00 | 0.68 | 0.074 | O  |  |  |  |  | 0.40 |
| 6.667  | 0.00 | 0.64 | 0.069 | O  |  |  |  |  | 0.37 |
| 6.750  | 0.00 | 0.60 | 0.065 | O  |  |  |  |  | 0.35 |
| 6.833  | 0.00 | 0.57 | 0.061 | O  |  |  |  |  | 0.33 |
| 6.917  | 0.00 | 0.53 | 0.057 | O  |  |  |  |  | 0.31 |
| 7.000  | 0.00 | 0.50 | 0.054 | O  |  |  |  |  | 0.29 |
| 7.083  | 0.00 | 0.47 | 0.050 | O  |  |  |  |  | 0.27 |
| 7.167  | 0.00 | 0.44 | 0.047 | O  |  |  |  |  | 0.25 |
| 7.250  | 0.00 | 0.41 | 0.044 | O  |  |  |  |  | 0.24 |
| 7.333  | 0.00 | 0.39 | 0.042 | O  |  |  |  |  | 0.22 |
| 7.417  | 0.00 | 0.36 | 0.039 | O  |  |  |  |  | 0.21 |
| 7.500  | 0.00 | 0.34 | 0.037 | O  |  |  |  |  | 0.20 |
| 7.583  | 0.00 | 0.32 | 0.034 | O  |  |  |  |  | 0.19 |
| 7.667  | 0.00 | 0.30 | 0.032 | O  |  |  |  |  | 0.17 |
| 7.750  | 0.00 | 0.28 | 0.030 | O  |  |  |  |  | 0.16 |
| 7.833  | 0.00 | 0.26 | 0.028 | O  |  |  |  |  | 0.15 |
| 7.917  | 0.00 | 0.25 | 0.027 | O  |  |  |  |  | 0.14 |
| 8.000  | 0.00 | 0.23 | 0.025 | O  |  |  |  |  | 0.13 |
| 8.083  | 0.00 | 0.22 | 0.024 | O  |  |  |  |  | 0.13 |
| 8.167  | 0.00 | 0.20 | 0.022 | O  |  |  |  |  | 0.12 |
| 8.250  | 0.00 | 0.19 | 0.021 | O  |  |  |  |  | 0.11 |
| 8.333  | 0.00 | 0.18 | 0.019 | O  |  |  |  |  | 0.10 |
| 8.417  | 0.00 | 0.17 | 0.018 | O  |  |  |  |  | 0.10 |
| 8.500  | 0.00 | 0.16 | 0.017 | O  |  |  |  |  | 0.09 |
| 8.583  | 0.00 | 0.15 | 0.016 | O  |  |  |  |  | 0.09 |
| 8.667  | 0.00 | 0.14 | 0.015 | O  |  |  |  |  | 0.08 |
| 8.750  | 0.00 | 0.13 | 0.014 | O  |  |  |  |  | 0.08 |
| 8.833  | 0.00 | 0.12 | 0.013 | O  |  |  |  |  | 0.07 |
| 8.917  | 0.00 | 0.11 | 0.012 | O  |  |  |  |  | 0.07 |
| 9.000  | 0.00 | 0.11 | 0.012 | O  |  |  |  |  | 0.06 |
| 9.083  | 0.00 | 0.10 | 0.011 | O  |  |  |  |  | 0.06 |
| 9.167  | 0.00 | 0.09 | 0.010 | O  |  |  |  |  | 0.06 |
| 9.250  | 0.00 | 0.09 | 0.010 | O  |  |  |  |  | 0.05 |
| 9.333  | 0.00 | 0.08 | 0.009 | O  |  |  |  |  | 0.05 |
| 9.417  | 0.00 | 0.08 | 0.008 | O  |  |  |  |  | 0.05 |
| 9.500  | 0.00 | 0.07 | 0.008 | O  |  |  |  |  | 0.04 |
| 9.583  | 0.00 | 0.07 | 0.007 | O  |  |  |  |  | 0.04 |
| 9.667  | 0.00 | 0.06 | 0.007 | O  |  |  |  |  | 0.04 |
| 9.750  | 0.00 | 0.06 | 0.007 | O  |  |  |  |  | 0.04 |
| 9.833  | 0.00 | 0.06 | 0.006 | O  |  |  |  |  | 0.03 |
| 9.917  | 0.00 | 0.05 | 0.006 | O  |  |  |  |  | 0.03 |
| 10.000 | 0.00 | 0.05 | 0.005 | O  |  |  |  |  | 0.03 |
| 10.083 | 0.00 | 0.05 | 0.005 | O  |  |  |  |  | 0.03 |
| 10.167 | 0.00 | 0.04 | 0.005 | O  |  |  |  |  | 0.03 |
| 10.250 | 0.00 | 0.04 | 0.004 | O  |  |  |  |  | 0.02 |
| 10.333 | 0.00 | 0.04 | 0.004 | O  |  |  |  |  | 0.02 |
| 10.417 | 0.00 | 0.04 | 0.004 | O  |  |  |  |  | 0.02 |
| 10.500 | 0.00 | 0.03 | 0.004 | O  |  |  |  |  | 0.02 |
| 10.583 | 0.00 | 0.03 | 0.003 | O  |  |  |  |  | 0.02 |
| 10.667 | 0.00 | 0.03 | 0.003 | O  |  |  |  |  | 0.02 |
| 10.750 | 0.00 | 0.03 | 0.003 | O  |  |  |  |  | 0.02 |
| 10.833 | 0.00 | 0.03 | 0.003 | O  |  |  |  |  | 0.02 |
| 10.917 | 0.00 | 0.02 | 0.003 | O  |  |  |  |  | 0.01 |
| 11.000 | 0.00 | 0.02 | 0.003 | O  |  |  |  |  | 0.01 |
| 11.083 | 0.00 | 0.02 | 0.002 | O  |  |  |  |  | 0.01 |
| 11.167 | 0.00 | 0.02 | 0.002 | O  |  |  |  |  | 0.01 |
| 11.250 | 0.00 | 0.02 | 0.002 | O  |  |  |  |  | 0.01 |
| 11.333 | 0.00 | 0.02 | 0.002 | O  |  |  |  |  | 0.01 |
| 11.417 | 0.00 | 0.02 | 0.002 | O  |  |  |  |  | 0.01 |
| 11.500 | 0.00 | 0.02 | 0.002 | O  |  |  |  |  | 0.01 |
| 11.583 | 0.00 | 0.01 | 0.002 | O  |  |  |  |  | 0.01 |
| 11.667 | 0.00 | 0.01 | 0.002 | O  |  |  |  |  | 0.01 |
| 11.750 | 0.00 | 0.01 | 0.001 | O  |  |  |  |  | 0.01 |
| 11.833 | 0.00 | 0.01 | 0.001 | O  |  |  |  |  | 0.01 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |   |  |  |  |  |      |
|--------|------|------|-------|---|--|--|--|--|------|
| 11.917 | 0.00 | 0.01 | 0.001 | 0 |  |  |  |  | 0.01 |
| 12.000 | 0.00 | 0.01 | 0.001 | 0 |  |  |  |  | 0.01 |
| 12.083 | 0.00 | 0.01 | 0.001 | 0 |  |  |  |  | 0.01 |
| 12.167 | 0.00 | 0.01 | 0.001 | 0 |  |  |  |  | 0.01 |
| 12.250 | 0.00 | 0.01 | 0.001 | 0 |  |  |  |  | 0.01 |
| 12.333 | 0.00 | 0.01 | 0.001 | 0 |  |  |  |  | 0.00 |
| 12.417 | 0.00 | 0.01 | 0.001 | 0 |  |  |  |  | 0.00 |
| 12.500 | 0.00 | 0.01 | 0.001 | 0 |  |  |  |  | 0.00 |
| 12.583 | 0.00 | 0.01 | 0.001 | 0 |  |  |  |  | 0.00 |
| 12.667 | 0.00 | 0.01 | 0.001 | 0 |  |  |  |  | 0.00 |
| 12.750 | 0.00 | 0.01 | 0.001 | 0 |  |  |  |  | 0.00 |
| 12.833 | 0.00 | 0.01 | 0.001 | 0 |  |  |  |  | 0.00 |
| 12.917 | 0.00 | 0.01 | 0.001 | 0 |  |  |  |  | 0.00 |
| 13.000 | 0.00 | 0.01 | 0.001 | 0 |  |  |  |  | 0.00 |
| 13.083 | 0.00 | 0.00 | 0.001 | 0 |  |  |  |  | 0.00 |
| 13.167 | 0.00 | 0.00 | 0.000 | 0 |  |  |  |  | 0.00 |
| 13.250 | 0.00 | 0.00 | 0.000 | 0 |  |  |  |  | 0.00 |
| 13.333 | 0.00 | 0.00 | 0.000 | 0 |  |  |  |  | 0.00 |
| 13.417 | 0.00 | 0.00 | 0.000 | 0 |  |  |  |  | 0.00 |
| 13.500 | 0.00 | 0.00 | 0.000 | 0 |  |  |  |  | 0.00 |
| 13.583 | 0.00 | 0.00 | 0.000 | 0 |  |  |  |  | 0.00 |
| 13.667 | 0.00 | 0.00 | 0.000 | 0 |  |  |  |  | 0.00 |
| 13.750 | 0.00 | 0.00 | 0.000 | 0 |  |  |  |  | 0.00 |
| 13.833 | 0.00 | 0.00 | 0.000 | 0 |  |  |  |  | 0.00 |
| 13.917 | 0.00 | 0.00 | 0.000 | 0 |  |  |  |  | 0.00 |
| 14.000 | 0.00 | 0.00 | 0.000 | 0 |  |  |  |  | 0.00 |
| 14.083 | 0.00 | 0.00 | 0.000 | 0 |  |  |  |  | 0.00 |
| 14.167 | 0.00 | 0.00 | 0.000 | 0 |  |  |  |  | 0.00 |
| 14.250 | 0.00 | 0.00 | 0.000 | 0 |  |  |  |  | 0.00 |
| 14.333 | 0.00 | 0.00 | 0.000 | 0 |  |  |  |  | 0.00 |
| 14.417 | 0.00 | 0.00 | 0.000 | 0 |  |  |  |  | 0.00 |

```

*****HYDROGRAPH DATA*****
      Number of intervals =   173
      Time interval =      5.0 (Min.)
      Maximum/Peak flow rate =      9.813 (CFS)
      Total volume =      0.891 (Ac.Ft)
      Status of hydrographs being held in storage
            Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
      Peak (CFS)      0.000      0.000      0.000      0.000      0.000
      Vol (Ac.Ft)      0.000      0.000      0.000      0.000      0.000
*****

```

-----

# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT D – Detention Basin Routing

FLOOD HYDROGRAPH ROUTING PROGRAM  
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005  
Study date: 01/31/18

Nichols Road Project - Tract 37305  
Drainage Area B = 8.4 Ac  
Tributary to Detention Basin B  
Detention Basin Routing  
100-year 3-hour storm

Program License Serial Number 4029

### \*\*\*\*\* HYDROGRAPH INFORMATION \*\*\*\*\*

From study/file name: nrareabr3100.rte  
\*\*\*\*\*HYDROGRAPH DATA\*\*\*\*\*  
Number of intervals = 38  
Time interval = 5.0 (Min.)  
Maximum/Peak flow rate = 16.604 (CFS)  
Total volume = 1.333 (Ac.Ft)  
Status of hydrographs being held in storage  
Stream 1 Stream 2 Stream 3 Stream 4 Stream 5  
Peak (CFS) 0.000 0.000 0.000 0.000 0.000  
Vol (Ac.Ft) 0.000 0.000 0.000 0.000 0.000  
\*\*\*\*\*

+++++  
Process from Point/Station 20.000 to Point/Station 21.000  
\*\*\*\* RETARDING BASIN ROUTING \*\*\*\*

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 38  
Hydrograph time unit = 5.000 (Min.)  
Initial depth in storage basin = 0.00 (Ft.)

Initial basin depth = 0.00 (Ft.)  
Initial basin storage = 0.00 (Ac.Ft)  
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:  
Basin Depth Storage Outflow (S-O\*dt/2) (S+O\*dt/2)  
(Ft.) (Ac.Ft) (CFS) (Ac.Ft) (Ac.Ft)  
-----  
0.000 0.000 0.000 0.000 0.000  
0.500 0.093 0.860 0.090 0.096  
1.500 0.306 1.000 0.303 0.309  
2.500 0.552 1.960 0.545 0.559  
3.500 0.832 17.440 0.772 0.892  
4.500 1.145 75.270 0.886 1.404  
-----

### Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

| Time<br>(Hours) | Inflow<br>(CFS) | Outflow<br>(CFS) | Storage<br>(Ac.Ft) | .0  | 4.2 | 8.30 | 12.45 | 16.60 | Depth<br>(Ft.) |
|-----------------|-----------------|------------------|--------------------|-----|-----|------|-------|-------|----------------|
| 0.083           | 1.07            | 0.03             | 0.004              | O I |     |      |       |       | 0.02           |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|       |       |       |       |   |   |  |  |  |  |      |
|-------|-------|-------|-------|---|---|--|--|--|--|------|
| 0.167 | 1.96  | 0.12  | 0.013 | O | I |  |  |  |  | 0.07 |
| 0.250 | 1.80  | 0.23  | 0.025 | O | I |  |  |  |  | 0.14 |
| 0.333 | 2.07  | 0.34  | 0.037 | O | I |  |  |  |  | 0.20 |
| 0.417 | 2.45  | 0.46  | 0.049 | O | I |  |  |  |  | 0.27 |
| 0.500 | 2.84  | 0.59  | 0.064 | O | I |  |  |  |  | 0.34 |
| 0.583 | 2.78  | 0.73  | 0.079 | O | I |  |  |  |  | 0.42 |
| 0.667 | 2.86  | 0.86  | 0.093 | O | I |  |  |  |  | 0.50 |
| 0.750 | 3.14  | 0.87  | 0.108 | O | I |  |  |  |  | 0.57 |
| 0.833 | 2.80  | 0.88  | 0.122 | O | I |  |  |  |  | 0.64 |
| 0.917 | 2.63  | 0.89  | 0.135 | O | I |  |  |  |  | 0.70 |
| 1.000 | 2.94  | 0.90  | 0.148 | O | I |  |  |  |  | 0.76 |
| 1.083 | 3.62  | 0.91  | 0.164 | O | I |  |  |  |  | 0.83 |
| 1.167 | 4.03  | 0.92  | 0.184 | O | I |  |  |  |  | 0.93 |
| 1.250 | 4.06  | 0.93  | 0.206 | O | I |  |  |  |  | 1.03 |
| 1.333 | 3.83  | 0.95  | 0.226 | O | I |  |  |  |  | 1.13 |
| 1.417 | 4.34  | 0.96  | 0.248 | O | I |  |  |  |  | 1.23 |
| 1.500 | 5.04  | 0.98  | 0.274 | O | I |  |  |  |  | 1.35 |
| 1.583 | 4.83  | 1.00  | 0.301 | O | I |  |  |  |  | 1.48 |
| 1.667 | 4.90  | 1.08  | 0.327 | O | I |  |  |  |  | 1.59 |
| 1.750 | 5.88  | 1.20  | 0.356 | O | I |  |  |  |  | 1.70 |
| 1.833 | 6.26  | 1.33  | 0.389 | O | I |  |  |  |  | 1.84 |
| 1.917 | 5.87  | 1.45  | 0.422 | O | I |  |  |  |  | 1.97 |
| 2.000 | 5.78  | 1.57  | 0.451 | O | I |  |  |  |  | 2.09 |
| 2.083 | 5.98  | 1.68  | 0.481 | O | I |  |  |  |  | 2.21 |
| 2.167 | 7.40  | 1.81  | 0.515 | O | I |  |  |  |  | 2.35 |
| 2.250 | 9.44  | 2.32  | 0.558 | O | I |  |  |  |  | 2.52 |
| 2.333 | 8.54  | 4.45  | 0.597 | O | I |  |  |  |  | 2.66 |
| 2.417 | 11.04 | 6.16  | 0.628 | O | I |  |  |  |  | 2.77 |
| 2.500 | 14.79 | 8.32  | 0.667 | O | I |  |  |  |  | 2.91 |
| 2.583 | 16.60 | 10.68 | 0.710 | O | I |  |  |  |  | 3.06 |
| 2.667 | 14.80 | 12.28 | 0.739 | O | I |  |  |  |  | 3.17 |
| 2.750 | 7.95  | 11.99 | 0.733 | O | I |  |  |  |  | 3.15 |
| 2.833 | 3.67  | 10.02 | 0.698 | O | I |  |  |  |  | 3.02 |
| 2.917 | 3.18  | 7.91  | 0.660 | O | I |  |  |  |  | 2.88 |
| 3.000 | 1.90  | 6.19  | 0.629 | O | I |  |  |  |  | 2.77 |
| 3.083 | 0.45  | 4.59  | 0.599 | O | I |  |  |  |  | 2.67 |
| 3.167 | 0.03  | 3.19  | 0.574 | O | I |  |  |  |  | 2.58 |
| 3.250 | 0.00  | 2.18  | 0.556 | O | I |  |  |  |  | 2.51 |
| 3.333 | 0.00  | 1.92  | 0.542 | O | I |  |  |  |  | 2.46 |
| 3.417 | 0.00  | 1.87  | 0.529 | O | I |  |  |  |  | 2.41 |
| 3.500 | 0.00  | 1.82  | 0.516 | O | I |  |  |  |  | 2.35 |
| 3.583 | 0.00  | 1.77  | 0.504 | O | I |  |  |  |  | 2.30 |
| 3.667 | 0.00  | 1.72  | 0.492 | O | I |  |  |  |  | 2.25 |
| 3.750 | 0.00  | 1.68  | 0.480 | O | I |  |  |  |  | 2.21 |
| 3.833 | 0.00  | 1.63  | 0.469 | O | I |  |  |  |  | 2.16 |
| 3.917 | 0.00  | 1.59  | 0.457 | O | I |  |  |  |  | 2.12 |
| 4.000 | 0.00  | 1.55  | 0.447 | O | I |  |  |  |  | 2.07 |
| 4.083 | 0.00  | 1.51  | 0.436 | O | I |  |  |  |  | 2.03 |
| 4.167 | 0.00  | 1.47  | 0.426 | O | I |  |  |  |  | 1.99 |
| 4.250 | 0.00  | 1.43  | 0.416 | O | I |  |  |  |  | 1.95 |
| 4.333 | 0.00  | 1.39  | 0.406 | O | I |  |  |  |  | 1.91 |
| 4.417 | 0.00  | 1.35  | 0.397 | O | I |  |  |  |  | 1.87 |
| 4.500 | 0.00  | 1.32  | 0.388 | O | I |  |  |  |  | 1.83 |
| 4.583 | 0.00  | 1.28  | 0.379 | O | I |  |  |  |  | 1.79 |
| 4.667 | 0.00  | 1.25  | 0.370 | O | I |  |  |  |  | 1.76 |
| 4.750 | 0.00  | 1.22  | 0.361 | O | I |  |  |  |  | 1.72 |
| 4.833 | 0.00  | 1.18  | 0.353 | O | I |  |  |  |  | 1.69 |
| 4.917 | 0.00  | 1.15  | 0.345 | O | I |  |  |  |  | 1.66 |
| 5.000 | 0.00  | 1.12  | 0.337 | O | I |  |  |  |  | 1.63 |
| 5.083 | 0.00  | 1.09  | 0.330 | O | I |  |  |  |  | 1.60 |
| 5.167 | 0.00  | 1.06  | 0.322 | O | I |  |  |  |  | 1.57 |
| 5.250 | 0.00  | 1.03  | 0.315 | O | I |  |  |  |  | 1.54 |
| 5.333 | 0.00  | 1.01  | 0.308 | O | I |  |  |  |  | 1.51 |
| 5.417 | 0.00  | 1.00  | 0.301 | O | I |  |  |  |  | 1.48 |
| 5.500 | 0.00  | 0.99  | 0.294 | O | I |  |  |  |  | 1.44 |
| 5.583 | 0.00  | 0.99  | 0.287 | O | I |  |  |  |  | 1.41 |
| 5.667 | 0.00  | 0.98  | 0.281 | O | I |  |  |  |  | 1.38 |
| 5.750 | 0.00  | 0.98  | 0.274 | O | I |  |  |  |  | 1.35 |
| 5.833 | 0.00  | 0.97  | 0.267 | O | I |  |  |  |  | 1.32 |
| 5.917 | 0.00  | 0.97  | 0.260 | O | I |  |  |  |  | 1.29 |
| 6.000 | 0.00  | 0.97  | 0.254 | O | I |  |  |  |  | 1.25 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |    |  |  |  |  |      |
|--------|------|------|-------|----|--|--|--|--|------|
| 6.083  | 0.00 | 0.96 | 0.247 | IO |  |  |  |  | 1.22 |
| 6.167  | 0.00 | 0.96 | 0.240 | IO |  |  |  |  | 1.19 |
| 6.250  | 0.00 | 0.95 | 0.234 | IO |  |  |  |  | 1.16 |
| 6.333  | 0.00 | 0.95 | 0.227 | IO |  |  |  |  | 1.13 |
| 6.417  | 0.00 | 0.94 | 0.221 | IO |  |  |  |  | 1.10 |
| 6.500  | 0.00 | 0.94 | 0.214 | IO |  |  |  |  | 1.07 |
| 6.583  | 0.00 | 0.94 | 0.208 | IO |  |  |  |  | 1.04 |
| 6.667  | 0.00 | 0.93 | 0.201 | IO |  |  |  |  | 1.01 |
| 6.750  | 0.00 | 0.93 | 0.195 | IO |  |  |  |  | 0.98 |
| 6.833  | 0.00 | 0.92 | 0.189 | IO |  |  |  |  | 0.95 |
| 6.917  | 0.00 | 0.92 | 0.182 | IO |  |  |  |  | 0.92 |
| 7.000  | 0.00 | 0.91 | 0.176 | IO |  |  |  |  | 0.89 |
| 7.083  | 0.00 | 0.91 | 0.170 | IO |  |  |  |  | 0.86 |
| 7.167  | 0.00 | 0.91 | 0.163 | IO |  |  |  |  | 0.83 |
| 7.250  | 0.00 | 0.90 | 0.157 | IO |  |  |  |  | 0.80 |
| 7.333  | 0.00 | 0.90 | 0.151 | IO |  |  |  |  | 0.77 |
| 7.417  | 0.00 | 0.89 | 0.145 | IO |  |  |  |  | 0.74 |
| 7.500  | 0.00 | 0.89 | 0.139 | IO |  |  |  |  | 0.71 |
| 7.583  | 0.00 | 0.89 | 0.133 | IO |  |  |  |  | 0.69 |
| 7.667  | 0.00 | 0.88 | 0.127 | IO |  |  |  |  | 0.66 |
| 7.750  | 0.00 | 0.88 | 0.120 | IO |  |  |  |  | 0.63 |
| 7.833  | 0.00 | 0.87 | 0.114 | IO |  |  |  |  | 0.60 |
| 7.917  | 0.00 | 0.87 | 0.108 | IO |  |  |  |  | 0.57 |
| 8.000  | 0.00 | 0.87 | 0.102 | IO |  |  |  |  | 0.54 |
| 8.083  | 0.00 | 0.86 | 0.097 | IO |  |  |  |  | 0.52 |
| 8.167  | 0.00 | 0.84 | 0.091 | IO |  |  |  |  | 0.49 |
| 8.250  | 0.00 | 0.79 | 0.085 | IO |  |  |  |  | 0.46 |
| 8.333  | 0.00 | 0.74 | 0.080 | IO |  |  |  |  | 0.43 |
| 8.417  | 0.00 | 0.69 | 0.075 | IO |  |  |  |  | 0.40 |
| 8.500  | 0.00 | 0.65 | 0.070 | IO |  |  |  |  | 0.38 |
| 8.583  | 0.00 | 0.61 | 0.066 | IO |  |  |  |  | 0.35 |
| 8.667  | 0.00 | 0.57 | 0.062 | IO |  |  |  |  | 0.33 |
| 8.750  | 0.00 | 0.54 | 0.058 | IO |  |  |  |  | 0.31 |
| 8.833  | 0.00 | 0.50 | 0.054 | O  |  |  |  |  | 0.29 |
| 8.917  | 0.00 | 0.47 | 0.051 | O  |  |  |  |  | 0.27 |
| 9.000  | 0.00 | 0.44 | 0.048 | O  |  |  |  |  | 0.26 |
| 9.083  | 0.00 | 0.42 | 0.045 | O  |  |  |  |  | 0.24 |
| 9.167  | 0.00 | 0.39 | 0.042 | O  |  |  |  |  | 0.23 |
| 9.250  | 0.00 | 0.37 | 0.040 | O  |  |  |  |  | 0.21 |
| 9.333  | 0.00 | 0.34 | 0.037 | O  |  |  |  |  | 0.20 |
| 9.417  | 0.00 | 0.32 | 0.035 | O  |  |  |  |  | 0.19 |
| 9.500  | 0.00 | 0.30 | 0.033 | O  |  |  |  |  | 0.18 |
| 9.583  | 0.00 | 0.28 | 0.031 | O  |  |  |  |  | 0.17 |
| 9.667  | 0.00 | 0.27 | 0.029 | O  |  |  |  |  | 0.15 |
| 9.750  | 0.00 | 0.25 | 0.027 | O  |  |  |  |  | 0.15 |
| 9.833  | 0.00 | 0.23 | 0.025 | O  |  |  |  |  | 0.14 |
| 9.917  | 0.00 | 0.22 | 0.024 | O  |  |  |  |  | 0.13 |
| 10.000 | 0.00 | 0.21 | 0.022 | O  |  |  |  |  | 0.12 |
| 10.083 | 0.00 | 0.19 | 0.021 | O  |  |  |  |  | 0.11 |
| 10.167 | 0.00 | 0.18 | 0.020 | O  |  |  |  |  | 0.11 |
| 10.250 | 0.00 | 0.17 | 0.018 | O  |  |  |  |  | 0.10 |
| 10.333 | 0.00 | 0.16 | 0.017 | O  |  |  |  |  | 0.09 |
| 10.417 | 0.00 | 0.15 | 0.016 | O  |  |  |  |  | 0.09 |
| 10.500 | 0.00 | 0.14 | 0.015 | O  |  |  |  |  | 0.08 |
| 10.583 | 0.00 | 0.13 | 0.014 | O  |  |  |  |  | 0.08 |
| 10.667 | 0.00 | 0.12 | 0.013 | O  |  |  |  |  | 0.07 |
| 10.750 | 0.00 | 0.12 | 0.013 | O  |  |  |  |  | 0.07 |
| 10.833 | 0.00 | 0.11 | 0.012 | O  |  |  |  |  | 0.06 |
| 10.917 | 0.00 | 0.10 | 0.011 | O  |  |  |  |  | 0.06 |
| 11.000 | 0.00 | 0.10 | 0.010 | O  |  |  |  |  | 0.06 |
| 11.083 | 0.00 | 0.09 | 0.010 | O  |  |  |  |  | 0.05 |
| 11.167 | 0.00 | 0.08 | 0.009 | O  |  |  |  |  | 0.05 |
| 11.250 | 0.00 | 0.08 | 0.009 | O  |  |  |  |  | 0.05 |
| 11.333 | 0.00 | 0.07 | 0.008 | O  |  |  |  |  | 0.04 |
| 11.417 | 0.00 | 0.07 | 0.008 | O  |  |  |  |  | 0.04 |
| 11.500 | 0.00 | 0.07 | 0.007 | O  |  |  |  |  | 0.04 |
| 11.583 | 0.00 | 0.06 | 0.007 | O  |  |  |  |  | 0.04 |
| 11.667 | 0.00 | 0.06 | 0.006 | O  |  |  |  |  | 0.03 |
| 11.750 | 0.00 | 0.05 | 0.006 | O  |  |  |  |  | 0.03 |
| 11.833 | 0.00 | 0.05 | 0.005 | O  |  |  |  |  | 0.03 |
| 11.917 | 0.00 | 0.05 | 0.005 | O  |  |  |  |  | 0.03 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |   |  |  |  |  |      |
|--------|------|------|-------|---|--|--|--|--|------|
| 12.000 | 0.00 | 0.04 | 0.005 | O |  |  |  |  | 0.03 |
| 12.083 | 0.00 | 0.04 | 0.005 | O |  |  |  |  | 0.02 |
| 12.167 | 0.00 | 0.04 | 0.004 | O |  |  |  |  | 0.02 |
| 12.250 | 0.00 | 0.04 | 0.004 | O |  |  |  |  | 0.02 |
| 12.333 | 0.00 | 0.03 | 0.004 | O |  |  |  |  | 0.02 |
| 12.417 | 0.00 | 0.03 | 0.004 | O |  |  |  |  | 0.02 |
| 12.500 | 0.00 | 0.03 | 0.003 | O |  |  |  |  | 0.02 |
| 12.583 | 0.00 | 0.03 | 0.003 | O |  |  |  |  | 0.02 |
| 12.667 | 0.00 | 0.03 | 0.003 | O |  |  |  |  | 0.02 |
| 12.750 | 0.00 | 0.03 | 0.003 | O |  |  |  |  | 0.01 |
| 12.833 | 0.00 | 0.02 | 0.003 | O |  |  |  |  | 0.01 |
| 12.917 | 0.00 | 0.02 | 0.002 | O |  |  |  |  | 0.01 |
| 13.000 | 0.00 | 0.02 | 0.002 | O |  |  |  |  | 0.01 |
| 13.083 | 0.00 | 0.02 | 0.002 | O |  |  |  |  | 0.01 |
| 13.167 | 0.00 | 0.02 | 0.002 | O |  |  |  |  | 0.01 |
| 13.250 | 0.00 | 0.02 | 0.002 | O |  |  |  |  | 0.01 |
| 13.333 | 0.00 | 0.02 | 0.002 | O |  |  |  |  | 0.01 |
| 13.417 | 0.00 | 0.02 | 0.002 | O |  |  |  |  | 0.01 |
| 13.500 | 0.00 | 0.01 | 0.002 | O |  |  |  |  | 0.01 |
| 13.583 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.01 |
| 13.667 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.01 |
| 13.750 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.01 |
| 13.833 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.01 |
| 13.917 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.01 |
| 14.000 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.01 |
| 14.083 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.01 |
| 14.167 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 14.250 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 14.333 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 14.417 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 14.500 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 14.583 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 14.667 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 14.750 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 14.833 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 14.917 | 0.00 | 0.00 | 0.001 | O |  |  |  |  | 0.00 |
| 15.000 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 15.083 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 15.167 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 15.250 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 15.333 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 15.417 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 15.500 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 15.583 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 15.667 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 15.750 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 15.833 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 15.917 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 16.000 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 16.083 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 16.167 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 16.250 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 16.333 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |

```

*****HYDROGRAPH DATA*****
      Number of intervals =    196
      Time interval =      5.0 (Min.)
      Maximum/Peak flow rate =      12.285 (CFS)
      Total volume =      1.333 (Ac.Ft)
      Status of hydrographs being held in storage
      Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
      Peak (CFS)      0.000      0.000      0.000      0.000      0.000
      Vol (Ac.Ft)      0.000      0.000      0.000      0.000      0.000
*****

```

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# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT D – Detention Basin Routing

FLOOD HYDROGRAPH ROUTING PROGRAM  
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005  
Study date: 01/31/18

Nichols Road Project - Tract 37305  
Drainage Area B = 8.4 Ac  
Tributary to Detention Basin B  
Detention Basin Routing  
100-year 6-hour storm

Program License Serial Number 4029

### \*\*\*\*\* HYDROGRAPH INFORMATION \*\*\*\*\*

From study/file name: nrareabpr6100.rte  
\*\*\*\*\*HYDROGRAPH DATA\*\*\*\*\*  
Number of intervals = 74  
Time interval = 5.0 (Min.)  
Maximum/Peak flow rate = 15.456 (CFS)  
Total volume = 1.751 (Ac.Ft)  
Status of hydrographs being held in storage  
Stream 1 Stream 2 Stream 3 Stream 4 Stream 5  
Peak (CFS) 0.000 0.000 0.000 0.000 0.000  
Vol (Ac.Ft) 0.000 0.000 0.000 0.000 0.000  
\*\*\*\*\*

+++++  
Process from Point/Station 20.000 to Point/Station 21.000  
\*\*\*\* RETARDING BASIN ROUTING \*\*\*\*

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 74  
Hydrograph time unit = 5.000 (Min.)  
Initial depth in storage basin = 0.00 (Ft.)

Initial basin depth = 0.00 (Ft.)  
Initial basin storage = 0.00 (Ac.Ft)  
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:  
Basin Depth Storage Outflow (S-O\*dt/2) (S+O\*dt/2)  
(Ft.) (Ac.Ft) (CFS) (Ac.Ft) (Ac.Ft)  
-----  
0.000 0.000 0.000 0.000 0.000  
0.500 0.093 0.860 0.090 0.096  
1.500 0.306 1.000 0.303 0.309  
2.500 0.552 1.960 0.545 0.559  
3.500 0.832 17.440 0.772 0.892  
4.500 1.145 75.270 0.886 1.404  
-----

### Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

| Time<br>(Hours) | Inflow<br>(CFS) | Outflow<br>(CFS) | Storage<br>(Ac.Ft) | 0 | 3.9 | 7.73 | 11.59 | 15.46<br>Depth<br>(Ft.) |
|-----------------|-----------------|------------------|--------------------|---|-----|------|-------|-------------------------|
|-----------------|-----------------|------------------|--------------------|---|-----|------|-------|-------------------------|

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|       |       |       |       |     |  |  |  |  |      |
|-------|-------|-------|-------|-----|--|--|--|--|------|
| 0.083 | 0.48  | 0.01  | 0.002 | O   |  |  |  |  | 0.01 |
| 0.167 | 0.97  | 0.06  | 0.006 | O I |  |  |  |  | 0.03 |
| 0.250 | 1.08  | 0.12  | 0.013 | O I |  |  |  |  | 0.07 |
| 0.333 | 1.08  | 0.18  | 0.019 | O I |  |  |  |  | 0.10 |
| 0.417 | 1.08  | 0.23  | 0.025 | O I |  |  |  |  | 0.14 |
| 0.500 | 1.21  | 0.29  | 0.031 | O I |  |  |  |  | 0.17 |
| 0.583 | 1.31  | 0.35  | 0.038 | O I |  |  |  |  | 0.20 |
| 0.667 | 1.32  | 0.41  | 0.044 | O I |  |  |  |  | 0.24 |
| 0.750 | 1.32  | 0.47  | 0.050 | O I |  |  |  |  | 0.27 |
| 0.833 | 1.32  | 0.52  | 0.056 | OI  |  |  |  |  | 0.30 |
| 0.917 | 1.32  | 0.57  | 0.061 | OI  |  |  |  |  | 0.33 |
| 1.000 | 1.49  | 0.62  | 0.067 | O I |  |  |  |  | 0.36 |
| 1.083 | 1.63  | 0.68  | 0.073 | O I |  |  |  |  | 0.39 |
| 1.167 | 1.64  | 0.74  | 0.080 | O I |  |  |  |  | 0.43 |
| 1.250 | 1.64  | 0.79  | 0.086 | O I |  |  |  |  | 0.46 |
| 1.333 | 1.64  | 0.84  | 0.091 | O I |  |  |  |  | 0.49 |
| 1.417 | 1.64  | 0.86  | 0.097 | O I |  |  |  |  | 0.52 |
| 1.500 | 1.64  | 0.87  | 0.102 | O I |  |  |  |  | 0.54 |
| 1.583 | 1.64  | 0.87  | 0.107 | O I |  |  |  |  | 0.57 |
| 1.667 | 1.64  | 0.87  | 0.113 | O I |  |  |  |  | 0.59 |
| 1.750 | 1.64  | 0.88  | 0.118 | O I |  |  |  |  | 0.62 |
| 1.833 | 1.64  | 0.88  | 0.123 | O I |  |  |  |  | 0.64 |
| 1.917 | 1.64  | 0.88  | 0.128 | O I |  |  |  |  | 0.67 |
| 2.000 | 1.80  | 0.89  | 0.134 | O I |  |  |  |  | 0.69 |
| 2.083 | 1.78  | 0.89  | 0.140 | O I |  |  |  |  | 0.72 |
| 2.167 | 1.82  | 0.90  | 0.146 | O I |  |  |  |  | 0.75 |
| 2.250 | 1.94  | 0.90  | 0.153 | O I |  |  |  |  | 0.78 |
| 2.333 | 1.95  | 0.90  | 0.160 | O I |  |  |  |  | 0.82 |
| 2.417 | 1.95  | 0.91  | 0.168 | O I |  |  |  |  | 0.85 |
| 2.500 | 1.95  | 0.91  | 0.175 | O I |  |  |  |  | 0.88 |
| 2.583 | 1.95  | 0.92  | 0.182 | O I |  |  |  |  | 0.92 |
| 2.667 | 1.95  | 0.92  | 0.189 | O I |  |  |  |  | 0.95 |
| 2.750 | 2.12  | 0.93  | 0.197 | O I |  |  |  |  | 0.99 |
| 2.833 | 2.26  | 0.93  | 0.205 | O I |  |  |  |  | 1.03 |
| 2.917 | 2.27  | 0.94  | 0.215 | O I |  |  |  |  | 1.07 |
| 3.000 | 2.27  | 0.95  | 0.224 | O I |  |  |  |  | 1.11 |
| 3.083 | 2.27  | 0.95  | 0.233 | O I |  |  |  |  | 1.16 |
| 3.167 | 2.44  | 0.96  | 0.242 | O I |  |  |  |  | 1.20 |
| 3.250 | 2.58  | 0.97  | 0.253 | O I |  |  |  |  | 1.25 |
| 3.333 | 2.59  | 0.97  | 0.264 | O I |  |  |  |  | 1.30 |
| 3.417 | 2.76  | 0.98  | 0.276 | O I |  |  |  |  | 1.36 |
| 3.500 | 3.06  | 0.99  | 0.289 | O I |  |  |  |  | 1.42 |
| 3.583 | 3.38  | 1.00  | 0.305 | O I |  |  |  |  | 1.49 |
| 3.667 | 3.53  | 1.06  | 0.321 | O I |  |  |  |  | 1.56 |
| 3.750 | 3.71  | 1.13  | 0.339 | O I |  |  |  |  | 1.63 |
| 3.833 | 3.85  | 1.20  | 0.357 | O I |  |  |  |  | 1.71 |
| 3.917 | 4.02  | 1.27  | 0.375 | O I |  |  |  |  | 1.78 |
| 4.000 | 4.16  | 1.35  | 0.394 | O I |  |  |  |  | 1.86 |
| 4.083 | 4.34  | 1.42  | 0.414 | O I |  |  |  |  | 1.94 |
| 4.167 | 4.65  | 1.50  | 0.435 | O I |  |  |  |  | 2.02 |
| 4.250 | 4.96  | 1.59  | 0.458 | O I |  |  |  |  | 2.12 |
| 4.333 | 5.28  | 1.68  | 0.482 | O I |  |  |  |  | 2.21 |
| 4.417 | 5.60  | 1.78  | 0.507 | O I |  |  |  |  | 2.32 |
| 4.500 | 5.75  | 1.89  | 0.533 | O I |  |  |  |  | 2.42 |
| 4.583 | 5.93  | 2.35  | 0.559 | O I |  |  |  |  | 2.53 |
| 4.667 | 6.23  | 3.54  | 0.581 | O I |  |  |  |  | 2.60 |
| 4.750 | 6.55  | 4.45  | 0.597 | O I |  |  |  |  | 2.66 |
| 4.833 | 6.70  | 5.15  | 0.610 | O I |  |  |  |  | 2.71 |
| 4.917 | 6.88  | 5.67  | 0.619 | O I |  |  |  |  | 2.74 |
| 5.000 | 7.18  | 6.11  | 0.627 | O I |  |  |  |  | 2.77 |
| 5.083 | 8.17  | 6.61  | 0.636 | O I |  |  |  |  | 2.80 |
| 5.167 | 9.71  | 7.36  | 0.650 | O I |  |  |  |  | 2.85 |
| 5.250 | 10.96 | 8.31  | 0.667 | O I |  |  |  |  | 2.91 |
| 5.333 | 11.94 | 9.31  | 0.685 | O I |  |  |  |  | 2.98 |
| 5.417 | 13.22 | 10.36 | 0.704 | O I |  |  |  |  | 3.04 |
| 5.500 | 15.46 | 11.63 | 0.727 | O I |  |  |  |  | 3.12 |
| 5.583 | 10.58 | 12.07 | 0.735 | O I |  |  |  |  | 3.15 |
| 5.667 | 3.85  | 10.52 | 0.707 | O I |  |  |  |  | 3.05 |
| 5.750 | 1.60  | 8.03  | 0.662 | O I |  |  |  |  | 2.89 |
| 5.833 | 1.02  | 5.88  | 0.623 | O I |  |  |  |  | 2.75 |
| 5.917 | 0.72  | 4.28  | 0.594 | O I |  |  |  |  | 2.65 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |    |   |  |  |  |  |      |
|--------|------|------|-------|----|---|--|--|--|--|------|
| 6.000  | 0.46 | 3.10 | 0.573 | I  | O |  |  |  |  | 2.57 |
| 6.083  | 0.18 | 2.21 | 0.556 | I  | O |  |  |  |  | 2.52 |
| 6.167  | 0.01 | 1.92 | 0.543 | I  | O |  |  |  |  | 2.46 |
| 6.250  | 0.00 | 1.87 | 0.530 | I  | O |  |  |  |  | 2.41 |
| 6.333  | 0.00 | 1.82 | 0.517 | I  | O |  |  |  |  | 2.36 |
| 6.417  | 0.00 | 1.78 | 0.505 | I  | O |  |  |  |  | 2.31 |
| 6.500  | 0.00 | 1.73 | 0.493 | I  | O |  |  |  |  | 2.26 |
| 6.583  | 0.00 | 1.68 | 0.481 | I  | O |  |  |  |  | 2.21 |
| 6.667  | 0.00 | 1.64 | 0.469 | I  | O |  |  |  |  | 2.16 |
| 6.750  | 0.00 | 1.59 | 0.458 | I  | O |  |  |  |  | 2.12 |
| 6.833  | 0.00 | 1.55 | 0.448 | I  | O |  |  |  |  | 2.08 |
| 6.917  | 0.00 | 1.51 | 0.437 | I  | O |  |  |  |  | 2.03 |
| 7.000  | 0.00 | 1.47 | 0.427 | I  | O |  |  |  |  | 1.99 |
| 7.083  | 0.00 | 1.43 | 0.417 | I  | O |  |  |  |  | 1.95 |
| 7.167  | 0.00 | 1.39 | 0.407 | I  | O |  |  |  |  | 1.91 |
| 7.250  | 0.00 | 1.36 | 0.398 | I  | O |  |  |  |  | 1.87 |
| 7.333  | 0.00 | 1.32 | 0.388 | I  | O |  |  |  |  | 1.83 |
| 7.417  | 0.00 | 1.29 | 0.379 | I  | O |  |  |  |  | 1.80 |
| 7.500  | 0.00 | 1.25 | 0.371 | I  | O |  |  |  |  | 1.76 |
| 7.583  | 0.00 | 1.22 | 0.362 | I  | O |  |  |  |  | 1.73 |
| 7.667  | 0.00 | 1.19 | 0.354 | I  | O |  |  |  |  | 1.69 |
| 7.750  | 0.00 | 1.15 | 0.346 | I  | O |  |  |  |  | 1.66 |
| 7.833  | 0.00 | 1.12 | 0.338 | I  | O |  |  |  |  | 1.63 |
| 7.917  | 0.00 | 1.09 | 0.330 | I  | O |  |  |  |  | 1.60 |
| 8.000  | 0.00 | 1.07 | 0.323 | I  | O |  |  |  |  | 1.57 |
| 8.083  | 0.00 | 1.04 | 0.316 | I  | O |  |  |  |  | 1.54 |
| 8.167  | 0.00 | 1.01 | 0.308 | I  | O |  |  |  |  | 1.51 |
| 8.250  | 0.00 | 1.00 | 0.302 | I  | O |  |  |  |  | 1.48 |
| 8.333  | 0.00 | 0.99 | 0.295 | I  | O |  |  |  |  | 1.45 |
| 8.417  | 0.00 | 0.99 | 0.288 | I  | O |  |  |  |  | 1.42 |
| 8.500  | 0.00 | 0.98 | 0.281 | I  | O |  |  |  |  | 1.38 |
| 8.583  | 0.00 | 0.98 | 0.274 | I  | O |  |  |  |  | 1.35 |
| 8.667  | 0.00 | 0.97 | 0.268 | I  | O |  |  |  |  | 1.32 |
| 8.750  | 0.00 | 0.97 | 0.261 | I  | O |  |  |  |  | 1.29 |
| 8.833  | 0.00 | 0.97 | 0.254 | I  | O |  |  |  |  | 1.26 |
| 8.917  | 0.00 | 0.96 | 0.248 | IO |   |  |  |  |  | 1.23 |
| 9.000  | 0.00 | 0.96 | 0.241 | IO |   |  |  |  |  | 1.19 |
| 9.083  | 0.00 | 0.95 | 0.234 | IO |   |  |  |  |  | 1.16 |
| 9.167  | 0.00 | 0.95 | 0.228 | IO |   |  |  |  |  | 1.13 |
| 9.250  | 0.00 | 0.94 | 0.221 | IO |   |  |  |  |  | 1.10 |
| 9.333  | 0.00 | 0.94 | 0.215 | IO |   |  |  |  |  | 1.07 |
| 9.417  | 0.00 | 0.94 | 0.208 | IO |   |  |  |  |  | 1.04 |
| 9.500  | 0.00 | 0.93 | 0.202 | IO |   |  |  |  |  | 1.01 |
| 9.583  | 0.00 | 0.93 | 0.196 | IO |   |  |  |  |  | 0.98 |
| 9.667  | 0.00 | 0.92 | 0.189 | IO |   |  |  |  |  | 0.95 |
| 9.750  | 0.00 | 0.92 | 0.183 | IO |   |  |  |  |  | 0.92 |
| 9.833  | 0.00 | 0.91 | 0.177 | IO |   |  |  |  |  | 0.89 |
| 9.917  | 0.00 | 0.91 | 0.170 | IO |   |  |  |  |  | 0.86 |
| 10.000 | 0.00 | 0.91 | 0.164 | IO |   |  |  |  |  | 0.83 |
| 10.083 | 0.00 | 0.90 | 0.158 | IO |   |  |  |  |  | 0.80 |
| 10.167 | 0.00 | 0.90 | 0.152 | IO |   |  |  |  |  | 0.78 |
| 10.250 | 0.00 | 0.89 | 0.145 | IO |   |  |  |  |  | 0.75 |
| 10.333 | 0.00 | 0.89 | 0.139 | IO |   |  |  |  |  | 0.72 |
| 10.417 | 0.00 | 0.89 | 0.133 | IO |   |  |  |  |  | 0.69 |
| 10.500 | 0.00 | 0.88 | 0.127 | IO |   |  |  |  |  | 0.66 |
| 10.583 | 0.00 | 0.88 | 0.121 | IO |   |  |  |  |  | 0.63 |
| 10.667 | 0.00 | 0.87 | 0.115 | IO |   |  |  |  |  | 0.60 |
| 10.750 | 0.00 | 0.87 | 0.109 | IO |   |  |  |  |  | 0.57 |
| 10.833 | 0.00 | 0.87 | 0.103 | IO |   |  |  |  |  | 0.55 |
| 10.917 | 0.00 | 0.86 | 0.097 | IO |   |  |  |  |  | 0.52 |
| 11.000 | 0.00 | 0.84 | 0.091 | IO |   |  |  |  |  | 0.49 |
| 11.083 | 0.00 | 0.79 | 0.086 | IO |   |  |  |  |  | 0.46 |
| 11.167 | 0.00 | 0.74 | 0.080 | IO |   |  |  |  |  | 0.43 |
| 11.250 | 0.00 | 0.70 | 0.075 | IO |   |  |  |  |  | 0.40 |
| 11.333 | 0.00 | 0.65 | 0.071 | IO |   |  |  |  |  | 0.38 |
| 11.417 | 0.00 | 0.61 | 0.066 | IO |   |  |  |  |  | 0.36 |
| 11.500 | 0.00 | 0.58 | 0.062 | IO |   |  |  |  |  | 0.33 |
| 11.583 | 0.00 | 0.54 | 0.058 | IO |   |  |  |  |  | 0.31 |
| 11.667 | 0.00 | 0.51 | 0.055 | IO |   |  |  |  |  | 0.29 |
| 11.750 | 0.00 | 0.48 | 0.051 | O  |   |  |  |  |  | 0.28 |
| 11.833 | 0.00 | 0.45 | 0.048 | O  |   |  |  |  |  | 0.26 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |   |  |  |  |  |      |
|--------|------|------|-------|---|--|--|--|--|------|
| 11.917 | 0.00 | 0.42 | 0.045 | O |  |  |  |  | 0.24 |
| 12.000 | 0.00 | 0.39 | 0.042 | O |  |  |  |  | 0.23 |
| 12.083 | 0.00 | 0.37 | 0.040 | O |  |  |  |  | 0.21 |
| 12.167 | 0.00 | 0.35 | 0.037 | O |  |  |  |  | 0.20 |
| 12.250 | 0.00 | 0.32 | 0.035 | O |  |  |  |  | 0.19 |
| 12.333 | 0.00 | 0.30 | 0.033 | O |  |  |  |  | 0.18 |
| 12.417 | 0.00 | 0.29 | 0.031 | O |  |  |  |  | 0.17 |
| 12.500 | 0.00 | 0.27 | 0.029 | O |  |  |  |  | 0.16 |
| 12.583 | 0.00 | 0.25 | 0.027 | O |  |  |  |  | 0.15 |
| 12.667 | 0.00 | 0.24 | 0.025 | O |  |  |  |  | 0.14 |
| 12.750 | 0.00 | 0.22 | 0.024 | O |  |  |  |  | 0.13 |
| 12.833 | 0.00 | 0.21 | 0.022 | O |  |  |  |  | 0.12 |
| 12.917 | 0.00 | 0.19 | 0.021 | O |  |  |  |  | 0.11 |
| 13.000 | 0.00 | 0.18 | 0.020 | O |  |  |  |  | 0.11 |
| 13.083 | 0.00 | 0.17 | 0.019 | O |  |  |  |  | 0.10 |
| 13.167 | 0.00 | 0.16 | 0.017 | O |  |  |  |  | 0.09 |
| 13.250 | 0.00 | 0.15 | 0.016 | O |  |  |  |  | 0.09 |
| 13.333 | 0.00 | 0.14 | 0.015 | O |  |  |  |  | 0.08 |
| 13.417 | 0.00 | 0.13 | 0.014 | O |  |  |  |  | 0.08 |
| 13.500 | 0.00 | 0.12 | 0.013 | O |  |  |  |  | 0.07 |
| 13.583 | 0.00 | 0.12 | 0.013 | O |  |  |  |  | 0.07 |
| 13.667 | 0.00 | 0.11 | 0.012 | O |  |  |  |  | 0.06 |
| 13.750 | 0.00 | 0.10 | 0.011 | O |  |  |  |  | 0.06 |
| 13.833 | 0.00 | 0.10 | 0.010 | O |  |  |  |  | 0.06 |
| 13.917 | 0.00 | 0.09 | 0.010 | O |  |  |  |  | 0.05 |
| 14.000 | 0.00 | 0.09 | 0.009 | O |  |  |  |  | 0.05 |
| 14.083 | 0.00 | 0.08 | 0.009 | O |  |  |  |  | 0.05 |
| 14.167 | 0.00 | 0.07 | 0.008 | O |  |  |  |  | 0.04 |
| 14.250 | 0.00 | 0.07 | 0.008 | O |  |  |  |  | 0.04 |
| 14.333 | 0.00 | 0.07 | 0.007 | O |  |  |  |  | 0.04 |
| 14.417 | 0.00 | 0.06 | 0.007 | O |  |  |  |  | 0.04 |
| 14.500 | 0.00 | 0.06 | 0.006 | O |  |  |  |  | 0.03 |
| 14.583 | 0.00 | 0.05 | 0.006 | O |  |  |  |  | 0.03 |
| 14.667 | 0.00 | 0.05 | 0.006 | O |  |  |  |  | 0.03 |
| 14.750 | 0.00 | 0.05 | 0.005 | O |  |  |  |  | 0.03 |
| 14.833 | 0.00 | 0.04 | 0.005 | O |  |  |  |  | 0.03 |
| 14.917 | 0.00 | 0.04 | 0.005 | O |  |  |  |  | 0.02 |
| 15.000 | 0.00 | 0.04 | 0.004 | O |  |  |  |  | 0.02 |
| 15.083 | 0.00 | 0.04 | 0.004 | O |  |  |  |  | 0.02 |
| 15.167 | 0.00 | 0.03 | 0.004 | O |  |  |  |  | 0.02 |
| 15.250 | 0.00 | 0.03 | 0.004 | O |  |  |  |  | 0.02 |
| 15.333 | 0.00 | 0.03 | 0.003 | O |  |  |  |  | 0.02 |
| 15.417 | 0.00 | 0.03 | 0.003 | O |  |  |  |  | 0.02 |
| 15.500 | 0.00 | 0.03 | 0.003 | O |  |  |  |  | 0.02 |
| 15.583 | 0.00 | 0.03 | 0.003 | O |  |  |  |  | 0.01 |
| 15.667 | 0.00 | 0.02 | 0.003 | O |  |  |  |  | 0.01 |
| 15.750 | 0.00 | 0.02 | 0.002 | O |  |  |  |  | 0.01 |
| 15.833 | 0.00 | 0.02 | 0.002 | O |  |  |  |  | 0.01 |
| 15.917 | 0.00 | 0.02 | 0.002 | O |  |  |  |  | 0.01 |
| 16.000 | 0.00 | 0.02 | 0.002 | O |  |  |  |  | 0.01 |
| 16.083 | 0.00 | 0.02 | 0.002 | O |  |  |  |  | 0.01 |
| 16.167 | 0.00 | 0.02 | 0.002 | O |  |  |  |  | 0.01 |
| 16.250 | 0.00 | 0.02 | 0.002 | O |  |  |  |  | 0.01 |
| 16.333 | 0.00 | 0.01 | 0.002 | O |  |  |  |  | 0.01 |
| 16.417 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.01 |
| 16.500 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.01 |
| 16.583 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.01 |
| 16.667 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.01 |
| 16.750 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.01 |
| 16.833 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.01 |
| 16.917 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.01 |
| 17.000 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 17.083 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 17.167 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 17.250 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 17.333 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 17.417 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 17.500 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 17.583 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 17.667 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 17.750 | 0.00 | 0.00 | 0.001 | O |  |  |  |  | 0.00 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |   |  |  |  |  |      |
|--------|------|------|-------|---|--|--|--|--|------|
| 17.833 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 17.917 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 18.000 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 18.083 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 18.167 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 18.250 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 18.333 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 18.417 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 18.500 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 18.583 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 18.667 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 18.750 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 18.833 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 18.917 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 19.000 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 19.083 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 19.167 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |

```

*****HYDROGRAPH DATA*****
      Number of intervals =   230
      Time interval =     5.0 (Min.)
      Maximum/Peak flow rate =    12.075 (CFS)
      Total volume =      1.751 (Ac.Ft)
      Status of hydrographs being held in storage
          Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
      Peak (CFS)      0.000      0.000      0.000      0.000      0.000
      Vol (Ac.Ft)      0.000      0.000      0.000      0.000      0.000
*****

```

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# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT D – Detention Basin Routing

FLOOD HYDROGRAPH ROUTING PROGRAM  
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005  
Study date: 01/31/18

Nichols Road Project - Tract 37305  
Drainage Area B = 8.4 Ac  
Tributary to Detention Basin B  
Detention Basin Routing  
100-year 24-hour storm

Program License Serial Number 4029

### \*\*\*\*\* HYDROGRAPH INFORMATION \*\*\*\*\*

From study/file name: nrareabr24100.rte  
\*\*\*\*\*HYDROGRAPH DATA\*\*\*\*\*  
Number of intervals = 290  
Time interval = 5.0 (Min.)  
Maximum/Peak flow rate = 6.542 (CFS)  
Total volume = 3.312 (Ac.Ft)  
Status of hydrographs being held in storage  
Stream 1 Stream 2 Stream 3 Stream 4 Stream 5  
Peak (CFS) 0.000 0.000 0.000 0.000 0.000  
Vol (Ac.Ft) 0.000 0.000 0.000 0.000 0.000  
\*\*\*\*\*

+++++  
Process from Point/Station 20.000 to Point/Station 21.000  
\*\*\*\* RETARDING BASIN ROUTING \*\*\*\*

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 290  
Hydrograph time unit = 5.000 (Min.)  
Initial depth in storage basin = 0.00 (Ft.)

Initial basin depth = 0.00 (Ft.)  
Initial basin storage = 0.00 (Ac.Ft)  
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:  
Basin Depth Storage Outflow (S-O\*dt/2) (S+O\*dt/2)  
(Ft.) (Ac.Ft) (CFS) (Ac.Ft) (Ac.Ft)  
-----  
0.000 0.000 0.000 0.000 0.000  
0.500 0.093 0.860 0.090 0.096  
1.500 0.306 1.000 0.303 0.309  
2.500 0.552 1.960 0.545 0.559  
3.500 0.832 17.440 0.772 0.892  
4.500 1.145 75.270 0.886 1.404  
-----

### Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

| Time<br>(Hours) | Inflow<br>(CFS) | Outflow<br>(CFS) | Storage<br>(Ac.Ft) | .0 | 1.6 | 3.27 | 4.91 | 6.54 | Depth<br>(Ft.) |
|-----------------|-----------------|------------------|--------------------|----|-----|------|------|------|----------------|
| 0.083           | 0.13            | 0.00             | 0.000              | O  |     |      |      |      | 0.00           |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|       |      |      |       |     |  |  |  |  |      |
|-------|------|------|-------|-----|--|--|--|--|------|
| 0.167 | 0.24 | 0.02 | 0.002 | OI  |  |  |  |  | 0.01 |
| 0.250 | 0.25 | 0.03 | 0.003 | OI  |  |  |  |  | 0.02 |
| 0.333 | 0.31 | 0.04 | 0.005 | OI  |  |  |  |  | 0.03 |
| 0.417 | 0.36 | 0.06 | 0.007 | OI  |  |  |  |  | 0.04 |
| 0.500 | 0.37 | 0.08 | 0.009 | OI  |  |  |  |  | 0.05 |
| 0.583 | 0.37 | 0.10 | 0.011 | OI  |  |  |  |  | 0.06 |
| 0.667 | 0.37 | 0.12 | 0.012 | OI  |  |  |  |  | 0.07 |
| 0.750 | 0.37 | 0.13 | 0.014 | OI  |  |  |  |  | 0.08 |
| 0.833 | 0.43 | 0.15 | 0.016 | O I |  |  |  |  | 0.09 |
| 0.917 | 0.49 | 0.17 | 0.018 | O I |  |  |  |  | 0.10 |
| 1.000 | 0.49 | 0.19 | 0.020 | O I |  |  |  |  | 0.11 |
| 1.083 | 0.43 | 0.20 | 0.022 | O I |  |  |  |  | 0.12 |
| 1.167 | 0.37 | 0.22 | 0.023 | O   |  |  |  |  | 0.13 |
| 1.250 | 0.37 | 0.23 | 0.024 | O   |  |  |  |  | 0.13 |
| 1.333 | 0.37 | 0.23 | 0.025 | O   |  |  |  |  | 0.14 |
| 1.417 | 0.37 | 0.24 | 0.026 | O   |  |  |  |  | 0.14 |
| 1.500 | 0.37 | 0.25 | 0.027 | O   |  |  |  |  | 0.15 |
| 1.583 | 0.37 | 0.26 | 0.028 | O   |  |  |  |  | 0.15 |
| 1.667 | 0.37 | 0.26 | 0.029 | O   |  |  |  |  | 0.15 |
| 1.750 | 0.37 | 0.27 | 0.029 | O   |  |  |  |  | 0.16 |
| 1.833 | 0.43 | 0.28 | 0.030 | OI  |  |  |  |  | 0.16 |
| 1.917 | 0.49 | 0.29 | 0.031 | OI  |  |  |  |  | 0.17 |
| 2.000 | 0.49 | 0.30 | 0.033 | OI  |  |  |  |  | 0.18 |
| 2.083 | 0.49 | 0.31 | 0.034 | OI  |  |  |  |  | 0.18 |
| 2.167 | 0.49 | 0.32 | 0.035 | OI  |  |  |  |  | 0.19 |
| 2.250 | 0.49 | 0.33 | 0.036 | OI  |  |  |  |  | 0.19 |
| 2.333 | 0.49 | 0.34 | 0.037 | OI  |  |  |  |  | 0.20 |
| 2.417 | 0.49 | 0.35 | 0.038 | OI  |  |  |  |  | 0.21 |
| 2.500 | 0.49 | 0.36 | 0.039 | OI  |  |  |  |  | 0.21 |
| 2.583 | 0.56 | 0.37 | 0.040 | OI  |  |  |  |  | 0.22 |
| 2.667 | 0.61 | 0.38 | 0.042 | OI  |  |  |  |  | 0.22 |
| 2.750 | 0.61 | 0.40 | 0.043 | OI  |  |  |  |  | 0.23 |
| 2.833 | 0.61 | 0.41 | 0.045 | O   |  |  |  |  | 0.24 |
| 2.917 | 0.61 | 0.42 | 0.046 | O   |  |  |  |  | 0.25 |
| 3.000 | 0.61 | 0.44 | 0.047 | O   |  |  |  |  | 0.25 |
| 3.083 | 0.61 | 0.45 | 0.048 | O   |  |  |  |  | 0.26 |
| 3.167 | 0.61 | 0.46 | 0.049 | O   |  |  |  |  | 0.27 |
| 3.250 | 0.61 | 0.47 | 0.050 | O   |  |  |  |  | 0.27 |
| 3.333 | 0.61 | 0.48 | 0.051 | O   |  |  |  |  | 0.28 |
| 3.417 | 0.61 | 0.48 | 0.052 | O   |  |  |  |  | 0.28 |
| 3.500 | 0.61 | 0.49 | 0.053 | O   |  |  |  |  | 0.29 |
| 3.583 | 0.61 | 0.50 | 0.054 | O   |  |  |  |  | 0.29 |
| 3.667 | 0.61 | 0.51 | 0.055 | O   |  |  |  |  | 0.29 |
| 3.750 | 0.61 | 0.51 | 0.056 | O   |  |  |  |  | 0.30 |
| 3.833 | 0.68 | 0.52 | 0.056 | OI  |  |  |  |  | 0.30 |
| 3.917 | 0.73 | 0.53 | 0.058 | OI  |  |  |  |  | 0.31 |
| 4.000 | 0.74 | 0.55 | 0.059 | OI  |  |  |  |  | 0.32 |
| 4.083 | 0.74 | 0.56 | 0.060 | OI  |  |  |  |  | 0.32 |
| 4.167 | 0.74 | 0.57 | 0.061 | OI  |  |  |  |  | 0.33 |
| 4.250 | 0.74 | 0.58 | 0.063 | OI  |  |  |  |  | 0.34 |
| 4.333 | 0.80 | 0.59 | 0.064 | OI  |  |  |  |  | 0.34 |
| 4.417 | 0.85 | 0.60 | 0.065 | O I |  |  |  |  | 0.35 |
| 4.500 | 0.86 | 0.62 | 0.067 | OI  |  |  |  |  | 0.36 |
| 4.583 | 0.86 | 0.63 | 0.069 | OI  |  |  |  |  | 0.37 |
| 4.667 | 0.86 | 0.65 | 0.070 | OI  |  |  |  |  | 0.38 |
| 4.750 | 0.86 | 0.66 | 0.072 | OI  |  |  |  |  | 0.38 |
| 4.833 | 0.92 | 0.68 | 0.073 | OI  |  |  |  |  | 0.39 |
| 4.917 | 0.98 | 0.69 | 0.075 | OI  |  |  |  |  | 0.40 |
| 5.000 | 0.98 | 0.71 | 0.077 | OI  |  |  |  |  | 0.41 |
| 5.083 | 0.85 | 0.72 | 0.078 | OI  |  |  |  |  | 0.42 |
| 5.167 | 0.74 | 0.73 | 0.079 | O   |  |  |  |  | 0.42 |
| 5.250 | 0.74 | 0.73 | 0.079 | O   |  |  |  |  | 0.42 |
| 5.333 | 0.80 | 0.73 | 0.079 | O   |  |  |  |  | 0.42 |
| 5.417 | 0.85 | 0.74 | 0.080 | OI  |  |  |  |  | 0.43 |
| 5.500 | 0.86 | 0.74 | 0.080 | OI  |  |  |  |  | 0.43 |
| 5.583 | 0.92 | 0.75 | 0.081 | OI  |  |  |  |  | 0.44 |
| 5.667 | 0.98 | 0.77 | 0.083 | OI  |  |  |  |  | 0.45 |
| 5.750 | 0.98 | 0.78 | 0.084 | OI  |  |  |  |  | 0.45 |
| 5.833 | 0.98 | 0.79 | 0.086 | OI  |  |  |  |  | 0.46 |
| 5.917 | 0.98 | 0.80 | 0.087 | OI  |  |  |  |  | 0.47 |
| 6.000 | 0.98 | 0.81 | 0.088 | OI  |  |  |  |  | 0.47 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |  |     |  |  |  |  |  |      |
|--------|------|------|-------|--|-----|--|--|--|--|--|------|
| 6.083  | 1.05 | 0.83 | 0.089 |  | OI  |  |  |  |  |  | 0.48 |
| 6.167  | 1.10 | 0.84 | 0.091 |  | OI  |  |  |  |  |  | 0.49 |
| 6.250  | 1.10 | 0.86 | 0.093 |  | OI  |  |  |  |  |  | 0.50 |
| 6.333  | 1.10 | 0.86 | 0.094 |  | OI  |  |  |  |  |  | 0.51 |
| 6.417  | 1.10 | 0.86 | 0.096 |  | OI  |  |  |  |  |  | 0.51 |
| 6.500  | 1.10 | 0.86 | 0.098 |  | OI  |  |  |  |  |  | 0.52 |
| 6.583  | 1.17 | 0.86 | 0.100 |  | OI  |  |  |  |  |  | 0.53 |
| 6.667  | 1.22 | 0.87 | 0.102 |  | OI  |  |  |  |  |  | 0.54 |
| 6.750  | 1.23 | 0.87 | 0.104 |  | OI  |  |  |  |  |  | 0.55 |
| 6.833  | 1.23 | 0.87 | 0.107 |  | OI  |  |  |  |  |  | 0.56 |
| 6.917  | 1.23 | 0.87 | 0.109 |  | OI  |  |  |  |  |  | 0.58 |
| 7.000  | 1.23 | 0.87 | 0.112 |  | OI  |  |  |  |  |  | 0.59 |
| 7.083  | 1.23 | 0.87 | 0.114 |  | OI  |  |  |  |  |  | 0.60 |
| 7.167  | 1.23 | 0.88 | 0.117 |  | OI  |  |  |  |  |  | 0.61 |
| 7.250  | 1.23 | 0.88 | 0.119 |  | OI  |  |  |  |  |  | 0.62 |
| 7.333  | 1.29 | 0.88 | 0.122 |  | O I |  |  |  |  |  | 0.63 |
| 7.417  | 1.34 | 0.88 | 0.125 |  | O I |  |  |  |  |  | 0.65 |
| 7.500  | 1.35 | 0.88 | 0.128 |  | O I |  |  |  |  |  | 0.66 |
| 7.583  | 1.42 | 0.89 | 0.131 |  | O I |  |  |  |  |  | 0.68 |
| 7.667  | 1.49 | 0.89 | 0.135 |  | O I |  |  |  |  |  | 0.70 |
| 7.750  | 1.50 | 0.89 | 0.139 |  | O I |  |  |  |  |  | 0.72 |
| 7.833  | 1.62 | 0.89 | 0.144 |  | O I |  |  |  |  |  | 0.74 |
| 7.917  | 1.72 | 0.90 | 0.149 |  | O I |  |  |  |  |  | 0.76 |
| 8.000  | 1.73 | 0.90 | 0.155 |  | O I |  |  |  |  |  | 0.79 |
| 8.083  | 1.96 | 0.90 | 0.161 |  | O I |  |  |  |  |  | 0.82 |
| 8.167  | 2.16 | 0.91 | 0.169 |  | O I |  |  |  |  |  | 0.86 |
| 8.250  | 2.17 | 0.92 | 0.178 |  | O I |  |  |  |  |  | 0.90 |
| 8.333  | 2.18 | 0.92 | 0.187 |  | O I |  |  |  |  |  | 0.94 |
| 8.417  | 2.18 | 0.93 | 0.195 |  | O I |  |  |  |  |  | 0.98 |
| 8.500  | 2.19 | 0.93 | 0.204 |  | O I |  |  |  |  |  | 1.02 |
| 8.583  | 2.31 | 0.94 | 0.213 |  | O I |  |  |  |  |  | 1.06 |
| 8.667  | 2.41 | 0.95 | 0.223 |  | O I |  |  |  |  |  | 1.11 |
| 8.750  | 2.42 | 0.95 | 0.233 |  | O I |  |  |  |  |  | 1.16 |
| 8.833  | 2.54 | 0.96 | 0.243 |  | O I |  |  |  |  |  | 1.21 |
| 8.917  | 2.64 | 0.97 | 0.255 |  | O I |  |  |  |  |  | 1.26 |
| 9.000  | 2.65 | 0.97 | 0.266 |  | O I |  |  |  |  |  | 1.31 |
| 9.083  | 2.88 | 0.98 | 0.278 |  | O I |  |  |  |  |  | 1.37 |
| 9.167  | 3.07 | 0.99 | 0.292 |  | O I |  |  |  |  |  | 1.43 |
| 9.250  | 3.09 | 1.00 | 0.306 |  | O I |  |  |  |  |  | 1.50 |
| 9.333  | 3.21 | 1.06 | 0.321 |  | O I |  |  |  |  |  | 1.56 |
| 9.417  | 3.31 | 1.12 | 0.336 |  | O I |  |  |  |  |  | 1.62 |
| 9.500  | 3.32 | 1.18 | 0.351 |  | O I |  |  |  |  |  | 1.68 |
| 9.583  | 3.44 | 1.23 | 0.366 |  | O I |  |  |  |  |  | 1.74 |
| 9.667  | 3.54 | 1.29 | 0.381 |  | O I |  |  |  |  |  | 1.81 |
| 9.750  | 3.55 | 1.35 | 0.397 |  | O I |  |  |  |  |  | 1.87 |
| 9.833  | 3.67 | 1.41 | 0.412 |  | O I |  |  |  |  |  | 1.93 |
| 9.917  | 3.77 | 1.47 | 0.428 |  | O I |  |  |  |  |  | 1.99 |
| 10.000 | 3.78 | 1.54 | 0.443 |  | O I |  |  |  |  |  | 2.06 |
| 10.083 | 2.99 | 1.58 | 0.456 |  | O I |  |  |  |  |  | 2.11 |
| 10.167 | 2.33 | 1.61 | 0.463 |  | O I |  |  |  |  |  | 2.14 |
| 10.250 | 2.29 | 1.63 | 0.468 |  | O I |  |  |  |  |  | 2.16 |
| 10.333 | 2.29 | 1.65 | 0.472 |  | O I |  |  |  |  |  | 2.18 |
| 10.417 | 2.30 | 1.67 | 0.477 |  | O I |  |  |  |  |  | 2.19 |
| 10.500 | 2.30 | 1.68 | 0.481 |  | O I |  |  |  |  |  | 2.21 |
| 10.583 | 2.87 | 1.71 | 0.487 |  | O I |  |  |  |  |  | 2.24 |
| 10.667 | 3.35 | 1.74 | 0.497 |  | O I |  |  |  |  |  | 2.28 |
| 10.750 | 3.39 | 1.79 | 0.508 |  | O I |  |  |  |  |  | 2.32 |
| 10.833 | 3.40 | 1.83 | 0.519 |  | O I |  |  |  |  |  | 2.36 |
| 10.917 | 3.40 | 1.87 | 0.529 |  | O I |  |  |  |  |  | 2.41 |
| 11.000 | 3.40 | 1.91 | 0.540 |  | O I |  |  |  |  |  | 2.45 |
| 11.083 | 3.30 | 1.95 | 0.550 |  | O I |  |  |  |  |  | 2.49 |
| 11.167 | 3.21 | 2.26 | 0.557 |  | O I |  |  |  |  |  | 2.52 |
| 11.250 | 3.20 | 2.56 | 0.563 |  | O I |  |  |  |  |  | 2.54 |
| 11.333 | 3.21 | 2.77 | 0.567 |  | O I |  |  |  |  |  | 2.55 |
| 11.417 | 3.21 | 2.91 | 0.569 |  | O I |  |  |  |  |  | 2.56 |
| 11.500 | 3.22 | 3.01 | 0.571 |  | O I |  |  |  |  |  | 2.57 |
| 11.583 | 2.99 | 3.04 | 0.571 |  | O I |  |  |  |  |  | 2.57 |
| 11.667 | 2.81 | 2.99 | 0.571 |  | O I |  |  |  |  |  | 2.57 |
| 11.750 | 2.80 | 2.93 | 0.570 |  | O I |  |  |  |  |  | 2.56 |
| 11.833 | 2.92 | 2.91 | 0.569 |  | O I |  |  |  |  |  | 2.56 |
| 11.917 | 3.01 | 2.93 | 0.569 |  | O I |  |  |  |  |  | 2.56 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |  |   |   |   |   |  |      |
|--------|------|------|-------|--|---|---|---|---|--|------|
| 12.000 | 3.03 | 2.96 | 0.570 |  |   | O |   |   |  | 2.56 |
| 12.083 | 3.82 | 3.11 | 0.573 |  |   | O |   | I |  | 2.57 |
| 12.167 | 4.49 | 3.44 | 0.579 |  |   | O |   | I |  | 2.60 |
| 12.250 | 4.54 | 3.79 | 0.585 |  |   |   | O | I |  | 2.62 |
| 12.333 | 4.66 | 4.05 | 0.590 |  |   |   | O | I |  | 2.63 |
| 12.417 | 4.76 | 4.26 | 0.594 |  |   |   | O | I |  | 2.65 |
| 12.500 | 4.77 | 4.42 | 0.597 |  |   |   | O | I |  | 2.66 |
| 12.583 | 5.00 | 4.57 | 0.599 |  |   |   | O | I |  | 2.67 |
| 12.667 | 5.20 | 4.74 | 0.602 |  |   |   | O | I |  | 2.68 |
| 12.750 | 5.22 | 4.89 | 0.605 |  |   |   | O | I |  | 2.69 |
| 12.833 | 5.33 | 5.01 | 0.607 |  |   |   | O | I |  | 2.70 |
| 12.917 | 5.43 | 5.13 | 0.609 |  |   |   | O | I |  | 2.70 |
| 13.000 | 5.44 | 5.23 | 0.611 |  |   |   | O | I |  | 2.71 |
| 13.083 | 6.01 | 5.39 | 0.614 |  |   |   | O | I |  | 2.72 |
| 13.167 | 6.49 | 5.66 | 0.619 |  |   |   | O | I |  | 2.74 |
| 13.250 | 6.53 | 5.94 | 0.624 |  |   |   | O | I |  | 2.76 |
| 13.333 | 6.53 | 6.13 | 0.627 |  |   |   | O | I |  | 2.77 |
| 13.417 | 6.54 | 6.26 | 0.630 |  |   |   | O | I |  | 2.78 |
| 13.500 | 6.54 | 6.35 | 0.631 |  |   |   | O | I |  | 2.78 |
| 13.583 | 5.30 | 6.21 | 0.629 |  |   |   | I | O |  | 2.77 |
| 13.667 | 4.26 | 5.75 | 0.621 |  |   |   | I | O |  | 2.75 |
| 13.750 | 4.19 | 5.26 | 0.612 |  |   |   | I | O |  | 2.71 |
| 13.833 | 4.19 | 4.92 | 0.606 |  |   |   | I | O |  | 2.69 |
| 13.917 | 4.20 | 4.69 | 0.601 |  |   |   | I | O |  | 2.68 |
| 14.000 | 4.20 | 4.53 | 0.599 |  |   |   | I | O |  | 2.67 |
| 14.083 | 4.66 | 4.50 | 0.598 |  |   |   | O | I |  | 2.66 |
| 14.167 | 5.04 | 4.61 | 0.600 |  |   |   | O | I |  | 2.67 |
| 14.250 | 5.07 | 4.75 | 0.603 |  |   |   | O | I |  | 2.68 |
| 14.333 | 4.96 | 4.84 | 0.604 |  |   |   | O | I |  | 2.69 |
| 14.417 | 4.87 | 4.86 | 0.604 |  |   |   | O | I |  | 2.69 |
| 14.500 | 4.87 | 4.86 | 0.605 |  |   |   | O | I |  | 2.69 |
| 14.583 | 4.87 | 4.87 | 0.605 |  |   |   | O | I |  | 2.69 |
| 14.667 | 4.87 | 4.87 | 0.605 |  |   |   | O | I |  | 2.69 |
| 14.750 | 4.88 | 4.87 | 0.605 |  |   |   | O | I |  | 2.69 |
| 14.833 | 4.77 | 4.86 | 0.604 |  |   |   | O | I |  | 2.69 |
| 14.917 | 4.68 | 4.81 | 0.604 |  |   |   | O | I |  | 2.68 |
| 15.000 | 4.67 | 4.77 | 0.603 |  |   |   | O | I |  | 2.68 |
| 15.083 | 4.56 | 4.72 | 0.602 |  |   |   | O | I |  | 2.68 |
| 15.167 | 4.47 | 4.66 | 0.601 |  |   |   | O | I |  | 2.67 |
| 15.250 | 4.47 | 4.60 | 0.600 |  |   |   | O | I |  | 2.67 |
| 15.333 | 4.36 | 4.54 | 0.599 |  |   |   | O | I |  | 2.67 |
| 15.417 | 4.27 | 4.47 | 0.597 |  |   |   | O | I |  | 2.66 |
| 15.500 | 4.27 | 4.40 | 0.596 |  |   |   | O | I |  | 2.66 |
| 15.583 | 3.81 | 4.29 | 0.594 |  |   |   | O | I |  | 2.65 |
| 15.667 | 3.44 | 4.08 | 0.590 |  |   |   | O | I |  | 2.64 |
| 15.750 | 3.42 | 3.87 | 0.587 |  |   |   | O | I |  | 2.62 |
| 15.833 | 3.42 | 3.72 | 0.584 |  |   |   | O | I |  | 2.61 |
| 15.917 | 3.42 | 3.63 | 0.582 |  |   |   | O | I |  | 2.61 |
| 16.000 | 3.43 | 3.56 | 0.581 |  |   |   | O | I |  | 2.60 |
| 16.083 | 1.88 | 3.27 | 0.576 |  | I | O |   |   |  | 2.58 |
| 16.167 | 0.59 | 2.62 | 0.564 |  | I | O |   |   |  | 2.54 |
| 16.250 | 0.49 | 1.96 | 0.552 |  | I | O |   |   |  | 2.50 |
| 16.333 | 0.49 | 1.92 | 0.542 |  | I | O |   |   |  | 2.46 |
| 16.417 | 0.49 | 1.88 | 0.532 |  | I | O |   |   |  | 2.42 |
| 16.500 | 0.49 | 1.85 | 0.523 |  | I | O |   |   |  | 2.38 |
| 16.583 | 0.43 | 1.81 | 0.513 |  | I | O |   |   |  | 2.34 |
| 16.667 | 0.37 | 1.77 | 0.504 |  | I | O |   |   |  | 2.30 |
| 16.750 | 0.37 | 1.73 | 0.494 |  | I | O |   |   |  | 2.26 |
| 16.833 | 0.37 | 1.70 | 0.485 |  | I | O |   |   |  | 2.23 |
| 16.917 | 0.37 | 1.66 | 0.476 |  | I | O |   |   |  | 2.19 |
| 17.000 | 0.37 | 1.63 | 0.467 |  | I | O |   |   |  | 2.15 |
| 17.083 | 0.50 | 1.60 | 0.459 |  | I | O |   |   |  | 2.12 |
| 17.167 | 0.60 | 1.57 | 0.452 |  | I | O |   |   |  | 2.09 |
| 17.250 | 0.61 | 1.54 | 0.445 |  | I | O |   |   |  | 2.07 |
| 17.333 | 0.61 | 1.52 | 0.439 |  | I | O |   |   |  | 2.04 |
| 17.417 | 0.61 | 1.49 | 0.433 |  | I | O |   |   |  | 2.02 |
| 17.500 | 0.61 | 1.47 | 0.427 |  | I | O |   |   |  | 1.99 |
| 17.583 | 0.61 | 1.45 | 0.421 |  | I | O |   |   |  | 1.97 |
| 17.667 | 0.61 | 1.43 | 0.415 |  | I | O |   |   |  | 1.94 |
| 17.750 | 0.61 | 1.41 | 0.410 |  | I | O |   |   |  | 1.92 |
| 17.833 | 0.55 | 1.38 | 0.404 |  | I | O |   |   |  | 1.90 |

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT D – Detention Basin Routing

|        |      |      |       |   |   |  |  |  |  |      |
|--------|------|------|-------|---|---|--|--|--|--|------|
| 17.917 | 0.49 | 1.36 | 0.398 | I | O |  |  |  |  | 1.88 |
| 18.000 | 0.49 | 1.34 | 0.392 | I | O |  |  |  |  | 1.85 |
| 18.083 | 0.49 | 1.31 | 0.387 | I | O |  |  |  |  | 1.83 |
| 18.167 | 0.49 | 1.29 | 0.381 | I | O |  |  |  |  | 1.81 |
| 18.250 | 0.49 | 1.27 | 0.376 | I | O |  |  |  |  | 1.78 |
| 18.333 | 0.49 | 1.25 | 0.370 | I | O |  |  |  |  | 1.76 |
| 18.417 | 0.49 | 1.23 | 0.365 | I | O |  |  |  |  | 1.74 |
| 18.500 | 0.49 | 1.21 | 0.360 | I | O |  |  |  |  | 1.72 |
| 18.583 | 0.43 | 1.19 | 0.355 | I | O |  |  |  |  | 1.70 |
| 18.667 | 0.37 | 1.17 | 0.350 | I | O |  |  |  |  | 1.68 |
| 18.750 | 0.37 | 1.15 | 0.344 | I | O |  |  |  |  | 1.66 |
| 18.833 | 0.30 | 1.13 | 0.339 | I | O |  |  |  |  | 1.63 |
| 18.917 | 0.25 | 1.10 | 0.333 | I | O |  |  |  |  | 1.61 |
| 19.000 | 0.25 | 1.08 | 0.327 | I | O |  |  |  |  | 1.59 |
| 19.083 | 0.31 | 1.06 | 0.322 | I | O |  |  |  |  | 1.56 |
| 19.167 | 0.36 | 1.04 | 0.317 | I | O |  |  |  |  | 1.54 |
| 19.250 | 0.37 | 1.02 | 0.312 | I | O |  |  |  |  | 1.52 |
| 19.333 | 0.43 | 1.01 | 0.308 | I | O |  |  |  |  | 1.51 |
| 19.417 | 0.49 | 1.00 | 0.304 | I | O |  |  |  |  | 1.49 |
| 19.500 | 0.49 | 1.00 | 0.301 | I | O |  |  |  |  | 1.47 |
| 19.583 | 0.43 | 0.99 | 0.297 | I | O |  |  |  |  | 1.46 |
| 19.667 | 0.37 | 0.99 | 0.293 | I | O |  |  |  |  | 1.44 |
| 19.750 | 0.37 | 0.99 | 0.289 | I | O |  |  |  |  | 1.42 |
| 19.833 | 0.30 | 0.99 | 0.284 | I | O |  |  |  |  | 1.40 |
| 19.917 | 0.25 | 0.98 | 0.279 | I | O |  |  |  |  | 1.37 |
| 20.000 | 0.25 | 0.98 | 0.274 | I | O |  |  |  |  | 1.35 |
| 20.083 | 0.31 | 0.98 | 0.269 | I | O |  |  |  |  | 1.33 |
| 20.167 | 0.36 | 0.97 | 0.265 | I | O |  |  |  |  | 1.31 |
| 20.250 | 0.37 | 0.97 | 0.261 | I | O |  |  |  |  | 1.29 |
| 20.333 | 0.37 | 0.97 | 0.257 | I | O |  |  |  |  | 1.27 |
| 20.417 | 0.37 | 0.96 | 0.252 | I | O |  |  |  |  | 1.25 |
| 20.500 | 0.37 | 0.96 | 0.248 | I | O |  |  |  |  | 1.23 |
| 20.583 | 0.37 | 0.96 | 0.244 | I | O |  |  |  |  | 1.21 |
| 20.667 | 0.37 | 0.96 | 0.240 | I | O |  |  |  |  | 1.19 |
| 20.750 | 0.37 | 0.95 | 0.236 | I | O |  |  |  |  | 1.17 |
| 20.833 | 0.30 | 0.95 | 0.232 | I | O |  |  |  |  | 1.15 |
| 20.917 | 0.25 | 0.95 | 0.227 | I | O |  |  |  |  | 1.13 |
| 21.000 | 0.25 | 0.95 | 0.222 | I | O |  |  |  |  | 1.11 |
| 21.083 | 0.31 | 0.94 | 0.218 | I | O |  |  |  |  | 1.09 |
| 21.167 | 0.36 | 0.94 | 0.214 | I | O |  |  |  |  | 1.07 |
| 21.250 | 0.37 | 0.94 | 0.210 | I | O |  |  |  |  | 1.05 |
| 21.333 | 0.30 | 0.93 | 0.206 | I | O |  |  |  |  | 1.03 |
| 21.417 | 0.25 | 0.93 | 0.201 | I | O |  |  |  |  | 1.01 |
| 21.500 | 0.25 | 0.93 | 0.196 | I | O |  |  |  |  | 0.99 |
| 21.583 | 0.31 | 0.93 | 0.192 | I | O |  |  |  |  | 0.96 |
| 21.667 | 0.36 | 0.92 | 0.188 | I | O |  |  |  |  | 0.95 |
| 21.750 | 0.37 | 0.92 | 0.184 | I | O |  |  |  |  | 0.93 |
| 21.833 | 0.30 | 0.92 | 0.180 | I | O |  |  |  |  | 0.91 |
| 21.917 | 0.25 | 0.91 | 0.176 | I | O |  |  |  |  | 0.89 |
| 22.000 | 0.25 | 0.91 | 0.171 | I | O |  |  |  |  | 0.87 |
| 22.083 | 0.31 | 0.91 | 0.167 | I | O |  |  |  |  | 0.85 |
| 22.167 | 0.36 | 0.91 | 0.163 | I | O |  |  |  |  | 0.83 |
| 22.250 | 0.37 | 0.90 | 0.159 | I | O |  |  |  |  | 0.81 |
| 22.333 | 0.30 | 0.90 | 0.155 | I | O |  |  |  |  | 0.79 |
| 22.417 | 0.25 | 0.90 | 0.151 | I | O |  |  |  |  | 0.77 |
| 22.500 | 0.25 | 0.90 | 0.146 | I | O |  |  |  |  | 0.75 |
| 22.583 | 0.25 | 0.89 | 0.142 | I | O |  |  |  |  | 0.73 |
| 22.667 | 0.25 | 0.89 | 0.138 | I | O |  |  |  |  | 0.71 |
| 22.750 | 0.25 | 0.89 | 0.133 | I | O |  |  |  |  | 0.69 |
| 22.833 | 0.25 | 0.88 | 0.129 | I | O |  |  |  |  | 0.67 |
| 22.917 | 0.25 | 0.88 | 0.124 | I | O |  |  |  |  | 0.65 |
| 23.000 | 0.25 | 0.88 | 0.120 | I | O |  |  |  |  | 0.63 |
| 23.083 | 0.25 | 0.87 | 0.116 | I | O |  |  |  |  | 0.61 |
| 23.167 | 0.25 | 0.87 | 0.111 | I | O |  |  |  |  | 0.59 |
| 23.250 | 0.25 | 0.87 | 0.107 | I | O |  |  |  |  | 0.57 |
| 23.333 | 0.25 | 0.87 | 0.103 | I | O |  |  |  |  | 0.55 |
| 23.417 | 0.25 | 0.86 | 0.098 | I | O |  |  |  |  | 0.53 |
| 23.500 | 0.25 | 0.86 | 0.094 | I | O |  |  |  |  | 0.51 |
| 23.583 | 0.25 | 0.83 | 0.090 | I | O |  |  |  |  | 0.48 |
| 23.667 | 0.25 | 0.80 | 0.086 | I | O |  |  |  |  | 0.46 |
| 23.750 | 0.25 | 0.76 | 0.082 | I | O |  |  |  |  | 0.44 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |     |  |  |  |  |      |
|--------|------|------|-------|-----|--|--|--|--|------|
| 23.833 | 0.25 | 0.73 | 0.079 | I O |  |  |  |  | 0.42 |
| 23.917 | 0.25 | 0.70 | 0.076 | I O |  |  |  |  | 0.41 |
| 24.000 | 0.25 | 0.67 | 0.073 | I O |  |  |  |  | 0.39 |
| 24.083 | 0.12 | 0.64 | 0.069 | I O |  |  |  |  | 0.37 |
| 24.167 | 0.01 | 0.61 | 0.066 | I O |  |  |  |  | 0.35 |
| 24.250 | 0.00 | 0.57 | 0.062 | I O |  |  |  |  | 0.33 |
| 24.333 | 0.00 | 0.53 | 0.058 | I O |  |  |  |  | 0.31 |
| 24.417 | 0.00 | 0.50 | 0.054 | I O |  |  |  |  | 0.29 |
| 24.500 | 0.00 | 0.47 | 0.051 | I O |  |  |  |  | 0.27 |
| 24.583 | 0.00 | 0.44 | 0.048 | I O |  |  |  |  | 0.26 |
| 24.667 | 0.00 | 0.41 | 0.045 | I O |  |  |  |  | 0.24 |
| 24.750 | 0.00 | 0.39 | 0.042 | IO  |  |  |  |  | 0.23 |
| 24.833 | 0.00 | 0.36 | 0.039 | IO  |  |  |  |  | 0.21 |
| 24.917 | 0.00 | 0.34 | 0.037 | IO  |  |  |  |  | 0.20 |
| 25.000 | 0.00 | 0.32 | 0.035 | IO  |  |  |  |  | 0.19 |
| 25.083 | 0.00 | 0.30 | 0.033 | IO  |  |  |  |  | 0.17 |
| 25.167 | 0.00 | 0.28 | 0.031 | IO  |  |  |  |  | 0.16 |
| 25.250 | 0.00 | 0.26 | 0.029 | IO  |  |  |  |  | 0.15 |
| 25.333 | 0.00 | 0.25 | 0.027 | IO  |  |  |  |  | 0.14 |
| 25.417 | 0.00 | 0.23 | 0.025 | IO  |  |  |  |  | 0.14 |
| 25.500 | 0.00 | 0.22 | 0.024 | IO  |  |  |  |  | 0.13 |
| 25.583 | 0.00 | 0.21 | 0.022 | IO  |  |  |  |  | 0.12 |
| 25.667 | 0.00 | 0.19 | 0.021 | O   |  |  |  |  | 0.11 |
| 25.750 | 0.00 | 0.18 | 0.020 | O   |  |  |  |  | 0.11 |
| 25.833 | 0.00 | 0.17 | 0.018 | O   |  |  |  |  | 0.10 |
| 25.917 | 0.00 | 0.16 | 0.017 | O   |  |  |  |  | 0.09 |
| 26.000 | 0.00 | 0.15 | 0.016 | O   |  |  |  |  | 0.09 |
| 26.083 | 0.00 | 0.14 | 0.015 | O   |  |  |  |  | 0.08 |
| 26.167 | 0.00 | 0.13 | 0.014 | O   |  |  |  |  | 0.08 |
| 26.250 | 0.00 | 0.12 | 0.013 | O   |  |  |  |  | 0.07 |
| 26.333 | 0.00 | 0.12 | 0.013 | O   |  |  |  |  | 0.07 |
| 26.417 | 0.00 | 0.11 | 0.012 | O   |  |  |  |  | 0.06 |
| 26.500 | 0.00 | 0.10 | 0.011 | O   |  |  |  |  | 0.06 |
| 26.583 | 0.00 | 0.10 | 0.010 | O   |  |  |  |  | 0.06 |
| 26.667 | 0.00 | 0.09 | 0.010 | O   |  |  |  |  | 0.05 |
| 26.750 | 0.00 | 0.08 | 0.009 | O   |  |  |  |  | 0.05 |
| 26.833 | 0.00 | 0.08 | 0.009 | O   |  |  |  |  | 0.05 |
| 26.917 | 0.00 | 0.07 | 0.008 | O   |  |  |  |  | 0.04 |
| 27.000 | 0.00 | 0.07 | 0.008 | O   |  |  |  |  | 0.04 |
| 27.083 | 0.00 | 0.07 | 0.007 | O   |  |  |  |  | 0.04 |
| 27.167 | 0.00 | 0.06 | 0.007 | O   |  |  |  |  | 0.04 |
| 27.250 | 0.00 | 0.06 | 0.006 | O   |  |  |  |  | 0.03 |
| 27.333 | 0.00 | 0.05 | 0.006 | O   |  |  |  |  | 0.03 |
| 27.417 | 0.00 | 0.05 | 0.005 | O   |  |  |  |  | 0.03 |
| 27.500 | 0.00 | 0.05 | 0.005 | O   |  |  |  |  | 0.03 |
| 27.583 | 0.00 | 0.04 | 0.005 | O   |  |  |  |  | 0.03 |
| 27.667 | 0.00 | 0.04 | 0.005 | O   |  |  |  |  | 0.02 |
| 27.750 | 0.00 | 0.04 | 0.004 | O   |  |  |  |  | 0.02 |
| 27.833 | 0.00 | 0.04 | 0.004 | O   |  |  |  |  | 0.02 |
| 27.917 | 0.00 | 0.03 | 0.004 | O   |  |  |  |  | 0.02 |
| 28.000 | 0.00 | 0.03 | 0.003 | O   |  |  |  |  | 0.02 |
| 28.083 | 0.00 | 0.03 | 0.003 | O   |  |  |  |  | 0.02 |
| 28.167 | 0.00 | 0.03 | 0.003 | O   |  |  |  |  | 0.02 |
| 28.250 | 0.00 | 0.03 | 0.003 | O   |  |  |  |  | 0.02 |
| 28.333 | 0.00 | 0.03 | 0.003 | O   |  |  |  |  | 0.01 |
| 28.417 | 0.00 | 0.02 | 0.003 | O   |  |  |  |  | 0.01 |
| 28.500 | 0.00 | 0.02 | 0.002 | O   |  |  |  |  | 0.01 |
| 28.583 | 0.00 | 0.02 | 0.002 | O   |  |  |  |  | 0.01 |
| 28.667 | 0.00 | 0.02 | 0.002 | O   |  |  |  |  | 0.01 |
| 28.750 | 0.00 | 0.02 | 0.002 | O   |  |  |  |  | 0.01 |
| 28.833 | 0.00 | 0.02 | 0.002 | O   |  |  |  |  | 0.01 |
| 28.917 | 0.00 | 0.02 | 0.002 | O   |  |  |  |  | 0.01 |
| 29.000 | 0.00 | 0.02 | 0.002 | O   |  |  |  |  | 0.01 |
| 29.083 | 0.00 | 0.01 | 0.002 | O   |  |  |  |  | 0.01 |
| 29.167 | 0.00 | 0.01 | 0.001 | O   |  |  |  |  | 0.01 |
| 29.250 | 0.00 | 0.01 | 0.001 | O   |  |  |  |  | 0.01 |
| 29.333 | 0.00 | 0.01 | 0.001 | O   |  |  |  |  | 0.01 |
| 29.417 | 0.00 | 0.01 | 0.001 | O   |  |  |  |  | 0.01 |
| 29.500 | 0.00 | 0.01 | 0.001 | O   |  |  |  |  | 0.01 |
| 29.583 | 0.00 | 0.01 | 0.001 | O   |  |  |  |  | 0.01 |
| 29.667 | 0.00 | 0.01 | 0.001 | O   |  |  |  |  | 0.01 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |   |  |  |  |  |      |
|--------|------|------|-------|---|--|--|--|--|------|
| 29.750 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 29.833 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 29.917 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 30.000 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 30.083 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 30.167 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 30.250 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 30.333 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 30.417 | 0.00 | 0.01 | 0.001 | O |  |  |  |  | 0.00 |
| 30.500 | 0.00 | 0.00 | 0.001 | O |  |  |  |  | 0.00 |
| 30.583 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 30.667 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 30.750 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 30.833 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 30.917 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 31.000 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 31.083 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 31.167 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 31.250 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 31.333 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 31.417 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 31.500 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 31.583 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 31.667 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 31.750 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 31.833 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |
| 31.917 | 0.00 | 0.00 | 0.000 | O |  |  |  |  | 0.00 |

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*****HYDROGRAPH DATA*****
      Number of intervals =   383
      Time interval =     5.0 (Min.)
      Maximum/Peak flow rate =       6.348 (CFS)
      Total volume =       3.312 (Ac.Ft)
      Status of hydrographs being held in storage
      Stream 1 Stream 2 Stream 3 Stream 4 Stream 5
      Peak (CFS)    0.000    0.000    0.000    0.000    0.000
      Vol (Ac.Ft)    0.000    0.000    0.000    0.000    0.000
*****

```

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# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT D – Detention Basin Routing

FLOOD HYDROGRAPH ROUTING PROGRAM  
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005  
Study date: 01/31/18

Nichols Road Project - Tract 37305  
Drainage Area B = 8.4 Ac  
Tributary to Detention Basin B for HCOC Mitigation  
Detention Basin Routing  
2-year 24-hour storm

Program License Serial Number 4029

### \*\*\*\*\* HYDROGRAPH INFORMATION \*\*\*\*\*

From study/file name: nrareabr2242.rte  
\*\*\*\*\*HYDROGRAPH DATA\*\*\*\*\*  
Number of intervals = 290  
Time interval = 5.0 (Min.)  
Maximum/Peak flow rate = 1.969 (CFS)  
Total volume = 0.998 (Ac.Ft)  
Status of hydrographs being held in storage  
Stream 1 Stream 2 Stream 3 Stream 4 Stream 5  
Peak (CFS) 0.000 0.000 0.000 0.000 0.000  
Vol (Ac.Ft) 0.000 0.000 0.000 0.000 0.000  
\*\*\*\*\*

+++++  
Process from Point/Station 20.000 to Point/Station 21.000  
\*\*\*\* RETARDING BASIN ROUTING \*\*\*\*

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 290  
Hydrograph time unit = 5.000 (Min.)  
Initial depth in storage basin = 0.00 (Ft.)

Initial basin depth = 0.00 (Ft.)  
Initial basin storage = 0.00 (Ac.Ft)  
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:  
Basin Depth Storage Outflow (S-O\*dt/2) (S+O\*dt/2)  
(Ft.) (Ac.Ft) (CFS) (Ac.Ft) (Ac.Ft)  
-----  
0.000 0.000 0.000 0.000 0.000  
0.500 0.093 0.860 0.090 0.096  
1.500 0.306 1.000 0.303 0.309  
2.500 0.552 1.960 0.545 0.559  
3.500 0.832 17.440 0.772 0.892  
4.500 1.145 75.270 0.886 1.404  
-----

### Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

| Time<br>(Hours) | Inflow<br>(CFS) | Outflow<br>(CFS) | Storage<br>(Ac.Ft) | .0 | 0.5 | 0.98 | 1.48 | 1.97 | Depth<br>(Ft.) |
|-----------------|-----------------|------------------|--------------------|----|-----|------|------|------|----------------|
| 0.083           | 0.05            | 0.00             | 0.000              | O  |     |      |      |      | 0.00           |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|       |      |      |       |     |  |  |  |  |      |
|-------|------|------|-------|-----|--|--|--|--|------|
| 0.167 | 0.09 | 0.01 | 0.001 | OI  |  |  |  |  | 0.00 |
| 0.250 | 0.09 | 0.01 | 0.001 | OI  |  |  |  |  | 0.01 |
| 0.333 | 0.12 | 0.02 | 0.002 | OI  |  |  |  |  | 0.01 |
| 0.417 | 0.14 | 0.02 | 0.003 | O I |  |  |  |  | 0.01 |
| 0.500 | 0.14 | 0.03 | 0.003 | O I |  |  |  |  | 0.02 |
| 0.583 | 0.14 | 0.04 | 0.004 | O I |  |  |  |  | 0.02 |
| 0.667 | 0.14 | 0.04 | 0.005 | O I |  |  |  |  | 0.03 |
| 0.750 | 0.14 | 0.05 | 0.005 | O I |  |  |  |  | 0.03 |
| 0.833 | 0.16 | 0.06 | 0.006 | O I |  |  |  |  | 0.03 |
| 0.917 | 0.18 | 0.06 | 0.007 | OI  |  |  |  |  | 0.04 |
| 1.000 | 0.18 | 0.07 | 0.008 | OI  |  |  |  |  | 0.04 |
| 1.083 | 0.16 | 0.08 | 0.008 | OI  |  |  |  |  | 0.04 |
| 1.167 | 0.14 | 0.08 | 0.009 | OI  |  |  |  |  | 0.05 |
| 1.250 | 0.14 | 0.08 | 0.009 | OI  |  |  |  |  | 0.05 |
| 1.333 | 0.14 | 0.09 | 0.009 | OI  |  |  |  |  | 0.05 |
| 1.417 | 0.14 | 0.09 | 0.010 | OI  |  |  |  |  | 0.05 |
| 1.500 | 0.14 | 0.09 | 0.010 | OI  |  |  |  |  | 0.05 |
| 1.583 | 0.14 | 0.10 | 0.010 | OI  |  |  |  |  | 0.06 |
| 1.667 | 0.14 | 0.10 | 0.011 | OI  |  |  |  |  | 0.06 |
| 1.750 | 0.14 | 0.10 | 0.011 | OI  |  |  |  |  | 0.06 |
| 1.833 | 0.16 | 0.10 | 0.011 | OI  |  |  |  |  | 0.06 |
| 1.917 | 0.18 | 0.11 | 0.012 | OI  |  |  |  |  | 0.06 |
| 2.000 | 0.18 | 0.11 | 0.012 | OI  |  |  |  |  | 0.07 |
| 2.083 | 0.18 | 0.12 | 0.013 | OI  |  |  |  |  | 0.07 |
| 2.167 | 0.18 | 0.12 | 0.013 | OI  |  |  |  |  | 0.07 |
| 2.250 | 0.18 | 0.13 | 0.014 | O   |  |  |  |  | 0.07 |
| 2.333 | 0.18 | 0.13 | 0.014 | O   |  |  |  |  | 0.08 |
| 2.417 | 0.18 | 0.13 | 0.014 | O   |  |  |  |  | 0.08 |
| 2.500 | 0.18 | 0.14 | 0.015 | O   |  |  |  |  | 0.08 |
| 2.583 | 0.21 | 0.14 | 0.015 | OI  |  |  |  |  | 0.08 |
| 2.667 | 0.23 | 0.14 | 0.016 | OI  |  |  |  |  | 0.08 |
| 2.750 | 0.23 | 0.15 | 0.016 | OI  |  |  |  |  | 0.09 |
| 2.833 | 0.23 | 0.15 | 0.017 | OI  |  |  |  |  | 0.09 |
| 2.917 | 0.23 | 0.16 | 0.017 | OI  |  |  |  |  | 0.09 |
| 3.000 | 0.23 | 0.16 | 0.018 | OI  |  |  |  |  | 0.10 |
| 3.083 | 0.23 | 0.17 | 0.018 | OI  |  |  |  |  | 0.10 |
| 3.167 | 0.23 | 0.17 | 0.019 | OI  |  |  |  |  | 0.10 |
| 3.250 | 0.23 | 0.17 | 0.019 | OI  |  |  |  |  | 0.10 |
| 3.333 | 0.23 | 0.18 | 0.019 | OI  |  |  |  |  | 0.10 |
| 3.417 | 0.23 | 0.18 | 0.020 | OI  |  |  |  |  | 0.11 |
| 3.500 | 0.23 | 0.18 | 0.020 | OI  |  |  |  |  | 0.11 |
| 3.583 | 0.23 | 0.19 | 0.020 | O   |  |  |  |  | 0.11 |
| 3.667 | 0.23 | 0.19 | 0.021 | O   |  |  |  |  | 0.11 |
| 3.750 | 0.23 | 0.19 | 0.021 | O   |  |  |  |  | 0.11 |
| 3.833 | 0.25 | 0.20 | 0.021 | OI  |  |  |  |  | 0.11 |
| 3.917 | 0.27 | 0.20 | 0.022 | OI  |  |  |  |  | 0.12 |
| 4.000 | 0.28 | 0.20 | 0.022 | OI  |  |  |  |  | 0.12 |
| 4.083 | 0.28 | 0.21 | 0.023 | OI  |  |  |  |  | 0.12 |
| 4.167 | 0.28 | 0.21 | 0.023 | OI  |  |  |  |  | 0.12 |
| 4.250 | 0.28 | 0.22 | 0.023 | OI  |  |  |  |  | 0.13 |
| 4.333 | 0.30 | 0.22 | 0.024 | OI  |  |  |  |  | 0.13 |
| 4.417 | 0.32 | 0.23 | 0.025 | O I |  |  |  |  | 0.13 |
| 4.500 | 0.32 | 0.23 | 0.025 | O I |  |  |  |  | 0.14 |
| 4.583 | 0.32 | 0.24 | 0.026 | O I |  |  |  |  | 0.14 |
| 4.667 | 0.32 | 0.24 | 0.026 | O I |  |  |  |  | 0.14 |
| 4.750 | 0.32 | 0.25 | 0.027 | OI  |  |  |  |  | 0.14 |
| 4.833 | 0.35 | 0.25 | 0.027 | OI  |  |  |  |  | 0.15 |
| 4.917 | 0.37 | 0.26 | 0.028 | OI  |  |  |  |  | 0.15 |
| 5.000 | 0.37 | 0.27 | 0.029 | OI  |  |  |  |  | 0.15 |
| 5.083 | 0.32 | 0.27 | 0.029 | OI  |  |  |  |  | 0.16 |
| 5.167 | 0.28 | 0.27 | 0.029 | O   |  |  |  |  | 0.16 |
| 5.250 | 0.28 | 0.27 | 0.030 | O   |  |  |  |  | 0.16 |
| 5.333 | 0.30 | 0.27 | 0.030 | O   |  |  |  |  | 0.16 |
| 5.417 | 0.32 | 0.28 | 0.030 | OI  |  |  |  |  | 0.16 |
| 5.500 | 0.32 | 0.28 | 0.030 | OI  |  |  |  |  | 0.16 |
| 5.583 | 0.35 | 0.28 | 0.031 | OI  |  |  |  |  | 0.16 |
| 5.667 | 0.37 | 0.29 | 0.031 | OI  |  |  |  |  | 0.17 |
| 5.750 | 0.37 | 0.29 | 0.032 | OI  |  |  |  |  | 0.17 |
| 5.833 | 0.37 | 0.30 | 0.032 | OI  |  |  |  |  | 0.17 |
| 5.917 | 0.37 | 0.30 | 0.033 | OI  |  |  |  |  | 0.17 |
| 6.000 | 0.37 | 0.31 | 0.033 | OI  |  |  |  |  | 0.18 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |  |     |  |  |  |  |  |      |
|--------|------|------|-------|--|-----|--|--|--|--|--|------|
| 6.083  | 0.39 | 0.31 | 0.033 |  | OI  |  |  |  |  |  | 0.18 |
| 6.167  | 0.41 | 0.32 | 0.034 |  | OI  |  |  |  |  |  | 0.18 |
| 6.250  | 0.41 | 0.32 | 0.035 |  | OI  |  |  |  |  |  | 0.19 |
| 6.333  | 0.41 | 0.33 | 0.035 |  | OI  |  |  |  |  |  | 0.19 |
| 6.417  | 0.41 | 0.33 | 0.036 |  | OI  |  |  |  |  |  | 0.19 |
| 6.500  | 0.41 | 0.34 | 0.036 |  | OI  |  |  |  |  |  | 0.20 |
| 6.583  | 0.44 | 0.34 | 0.037 |  | O I |  |  |  |  |  | 0.20 |
| 6.667  | 0.46 | 0.35 | 0.038 |  | O I |  |  |  |  |  | 0.20 |
| 6.750  | 0.46 | 0.36 | 0.039 |  | O I |  |  |  |  |  | 0.21 |
| 6.833  | 0.46 | 0.36 | 0.039 |  | O I |  |  |  |  |  | 0.21 |
| 6.917  | 0.46 | 0.37 | 0.040 |  | O I |  |  |  |  |  | 0.21 |
| 7.000  | 0.46 | 0.37 | 0.040 |  | OI  |  |  |  |  |  | 0.22 |
| 7.083  | 0.46 | 0.38 | 0.041 |  | OI  |  |  |  |  |  | 0.22 |
| 7.167  | 0.46 | 0.38 | 0.042 |  | OI  |  |  |  |  |  | 0.22 |
| 7.250  | 0.46 | 0.39 | 0.042 |  | OI  |  |  |  |  |  | 0.23 |
| 7.333  | 0.48 | 0.39 | 0.043 |  | OI  |  |  |  |  |  | 0.23 |
| 7.417  | 0.50 | 0.40 | 0.043 |  | O I |  |  |  |  |  | 0.23 |
| 7.500  | 0.51 | 0.41 | 0.044 |  | O I |  |  |  |  |  | 0.24 |
| 7.583  | 0.53 | 0.41 | 0.045 |  | O I |  |  |  |  |  | 0.24 |
| 7.667  | 0.55 | 0.42 | 0.046 |  | O I |  |  |  |  |  | 0.24 |
| 7.750  | 0.55 | 0.43 | 0.046 |  | O I |  |  |  |  |  | 0.25 |
| 7.833  | 0.58 | 0.44 | 0.047 |  | O I |  |  |  |  |  | 0.25 |
| 7.917  | 0.60 | 0.45 | 0.048 |  | O I |  |  |  |  |  | 0.26 |
| 8.000  | 0.60 | 0.46 | 0.049 |  | O I |  |  |  |  |  | 0.27 |
| 8.083  | 0.65 | 0.47 | 0.050 |  | O I |  |  |  |  |  | 0.27 |
| 8.167  | 0.69 | 0.48 | 0.052 |  | O I |  |  |  |  |  | 0.28 |
| 8.250  | 0.69 | 0.49 | 0.053 |  | O I |  |  |  |  |  | 0.29 |
| 8.333  | 0.69 | 0.50 | 0.054 |  | O I |  |  |  |  |  | 0.29 |
| 8.417  | 0.69 | 0.52 | 0.056 |  | O I |  |  |  |  |  | 0.30 |
| 8.500  | 0.69 | 0.53 | 0.057 |  | O I |  |  |  |  |  | 0.31 |
| 8.583  | 0.71 | 0.54 | 0.058 |  | O I |  |  |  |  |  | 0.31 |
| 8.667  | 0.73 | 0.55 | 0.059 |  | O I |  |  |  |  |  | 0.32 |
| 8.750  | 0.74 | 0.56 | 0.061 |  | O I |  |  |  |  |  | 0.33 |
| 8.833  | 0.76 | 0.57 | 0.062 |  | O I |  |  |  |  |  | 0.33 |
| 8.917  | 0.78 | 0.58 | 0.063 |  | O I |  |  |  |  |  | 0.34 |
| 9.000  | 0.78 | 0.60 | 0.064 |  | O I |  |  |  |  |  | 0.35 |
| 9.083  | 0.83 | 0.61 | 0.066 |  | O I |  |  |  |  |  | 0.35 |
| 9.167  | 0.87 | 0.62 | 0.067 |  | O I |  |  |  |  |  | 0.36 |
| 9.250  | 0.87 | 0.64 | 0.069 |  | O I |  |  |  |  |  | 0.37 |
| 9.333  | 0.90 | 0.65 | 0.071 |  | O I |  |  |  |  |  | 0.38 |
| 9.417  | 0.92 | 0.67 | 0.072 |  | O I |  |  |  |  |  | 0.39 |
| 9.500  | 0.92 | 0.69 | 0.074 |  | O I |  |  |  |  |  | 0.40 |
| 9.583  | 0.94 | 0.70 | 0.076 |  | O I |  |  |  |  |  | 0.41 |
| 9.667  | 0.96 | 0.72 | 0.077 |  | O I |  |  |  |  |  | 0.42 |
| 9.750  | 0.97 | 0.73 | 0.079 |  | O I |  |  |  |  |  | 0.43 |
| 9.833  | 0.99 | 0.75 | 0.081 |  | O I |  |  |  |  |  | 0.43 |
| 9.917  | 1.01 | 0.76 | 0.082 |  | O I |  |  |  |  |  | 0.44 |
| 10.000 | 1.01 | 0.78 | 0.084 |  | O I |  |  |  |  |  | 0.45 |
| 10.083 | 0.84 | 0.79 | 0.085 |  | OI  |  |  |  |  |  | 0.46 |
| 10.167 | 0.70 | 0.79 | 0.085 |  | IO  |  |  |  |  |  | 0.46 |
| 10.250 | 0.69 | 0.78 | 0.084 |  | IO  |  |  |  |  |  | 0.45 |
| 10.333 | 0.69 | 0.77 | 0.084 |  | IO  |  |  |  |  |  | 0.45 |
| 10.417 | 0.69 | 0.77 | 0.083 |  | IO  |  |  |  |  |  | 0.45 |
| 10.500 | 0.69 | 0.76 | 0.083 |  | IO  |  |  |  |  |  | 0.44 |
| 10.583 | 0.81 | 0.76 | 0.083 |  | OI  |  |  |  |  |  | 0.44 |
| 10.667 | 0.91 | 0.77 | 0.083 |  | O I |  |  |  |  |  | 0.45 |
| 10.750 | 0.92 | 0.78 | 0.084 |  | O I |  |  |  |  |  | 0.45 |
| 10.833 | 0.92 | 0.79 | 0.085 |  | O I |  |  |  |  |  | 0.46 |
| 10.917 | 0.92 | 0.80 | 0.086 |  | O I |  |  |  |  |  | 0.46 |
| 11.000 | 0.92 | 0.80 | 0.087 |  | OI  |  |  |  |  |  | 0.47 |
| 11.083 | 0.89 | 0.81 | 0.088 |  | OI  |  |  |  |  |  | 0.47 |
| 11.167 | 0.87 | 0.81 | 0.088 |  | OI  |  |  |  |  |  | 0.47 |
| 11.250 | 0.87 | 0.82 | 0.088 |  | OI  |  |  |  |  |  | 0.48 |
| 11.333 | 0.87 | 0.82 | 0.089 |  | OI  |  |  |  |  |  | 0.48 |
| 11.417 | 0.87 | 0.82 | 0.089 |  | OI  |  |  |  |  |  | 0.48 |
| 11.500 | 0.87 | 0.83 | 0.089 |  | OI  |  |  |  |  |  | 0.48 |
| 11.583 | 0.82 | 0.83 | 0.090 |  | O   |  |  |  |  |  | 0.48 |
| 11.667 | 0.78 | 0.83 | 0.089 |  | IO  |  |  |  |  |  | 0.48 |
| 11.750 | 0.78 | 0.82 | 0.089 |  | IO  |  |  |  |  |  | 0.48 |
| 11.833 | 0.81 | 0.82 | 0.089 |  | O   |  |  |  |  |  | 0.48 |
| 11.917 | 0.83 | 0.82 | 0.089 |  | O   |  |  |  |  |  | 0.48 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |  |   |   |   |   |  |      |
|--------|------|------|-------|--|---|---|---|---|--|------|
| 12.000 | 0.83 | 0.82 | 0.089 |  |   | O |   |   |  | 0.48 |
| 12.083 | 1.01 | 0.83 | 0.090 |  |   | O | I |   |  | 0.48 |
| 12.167 | 1.17 | 0.84 | 0.091 |  |   | O |   | I |  | 0.49 |
| 12.250 | 1.18 | 0.86 | 0.094 |  |   | O |   | I |  | 0.50 |
| 12.333 | 1.23 | 0.86 | 0.096 |  |   | O |   | I |  | 0.51 |
| 12.417 | 1.27 | 0.86 | 0.099 |  |   | O |   | I |  | 0.53 |
| 12.500 | 1.28 | 0.87 | 0.101 |  |   | O |   | I |  | 0.54 |
| 12.583 | 1.36 | 0.87 | 0.105 |  |   | O |   | I |  | 0.55 |
| 12.667 | 1.44 | 0.87 | 0.108 |  |   | O |   | I |  | 0.57 |
| 12.750 | 1.45 | 0.87 | 0.112 |  |   | O |   | I |  | 0.59 |
| 12.833 | 1.50 | 0.88 | 0.116 |  |   | O |   | I |  | 0.61 |
| 12.917 | 1.54 | 0.88 | 0.121 |  |   | O |   | I |  | 0.63 |
| 13.000 | 1.54 | 0.88 | 0.125 |  |   | O |   | I |  | 0.65 |
| 13.083 | 1.76 | 0.88 | 0.130 |  |   | O |   | I |  | 0.68 |
| 13.167 | 1.94 | 0.89 | 0.137 |  |   | O |   | I |  | 0.71 |
| 13.250 | 1.96 | 0.89 | 0.144 |  |   | O |   | I |  | 0.74 |
| 13.333 | 1.96 | 0.90 | 0.152 |  |   | O |   | I |  | 0.78 |
| 13.417 | 1.97 | 0.90 | 0.159 |  |   | O |   | I |  | 0.81 |
| 13.500 | 1.97 | 0.91 | 0.166 |  |   | O |   | I |  | 0.84 |
| 13.583 | 1.51 | 0.91 | 0.172 |  |   | O |   | I |  | 0.87 |
| 13.667 | 1.12 | 0.91 | 0.175 |  |   | O |   | I |  | 0.88 |
| 13.750 | 1.09 | 0.91 | 0.176 |  |   | O |   | I |  | 0.89 |
| 13.833 | 1.10 | 0.92 | 0.177 |  |   | O |   | I |  | 0.90 |
| 13.917 | 1.10 | 0.92 | 0.179 |  |   | O |   | I |  | 0.90 |
| 14.000 | 1.11 | 0.92 | 0.180 |  |   | O |   | I |  | 0.91 |
| 14.083 | 1.28 | 0.92 | 0.182 |  |   | O |   | I |  | 0.92 |
| 14.167 | 1.42 | 0.92 | 0.185 |  |   | O |   | I |  | 0.93 |
| 14.250 | 1.44 | 0.92 | 0.188 |  |   | O |   | I |  | 0.95 |
| 14.333 | 1.40 | 0.92 | 0.192 |  |   | O |   | I |  | 0.96 |
| 14.417 | 1.37 | 0.93 | 0.195 |  |   | O |   | I |  | 0.98 |
| 14.500 | 1.37 | 0.93 | 0.198 |  |   | O |   | I |  | 0.99 |
| 14.583 | 1.37 | 0.93 | 0.201 |  |   | O |   | I |  | 1.01 |
| 14.667 | 1.38 | 0.93 | 0.204 |  |   | O |   | I |  | 1.02 |
| 14.750 | 1.38 | 0.93 | 0.207 |  |   | O |   | I |  | 1.04 |
| 14.833 | 1.34 | 0.94 | 0.210 |  |   | O |   | I |  | 1.05 |
| 14.917 | 1.31 | 0.94 | 0.213 |  |   | O |   | I |  | 1.06 |
| 15.000 | 1.31 | 0.94 | 0.215 |  |   | O |   | I |  | 1.07 |
| 15.083 | 1.27 | 0.94 | 0.218 |  |   | O |   | I |  | 1.09 |
| 15.167 | 1.24 | 0.94 | 0.220 |  |   | O |   | I |  | 1.10 |
| 15.250 | 1.24 | 0.94 | 0.222 |  |   | O |   | I |  | 1.11 |
| 15.333 | 1.20 | 0.95 | 0.224 |  |   | O |   | I |  | 1.11 |
| 15.417 | 1.17 | 0.95 | 0.225 |  |   | O |   | I |  | 1.12 |
| 15.500 | 1.17 | 0.95 | 0.227 |  |   | O |   | I |  | 1.13 |
| 15.583 | 1.01 | 0.95 | 0.228 |  |   | O | I |   |  | 1.13 |
| 15.667 | 0.88 | 0.95 | 0.228 |  |   | O | I |   |  | 1.13 |
| 15.750 | 0.87 | 0.95 | 0.227 |  |   | O | I |   |  | 1.13 |
| 15.833 | 0.87 | 0.95 | 0.227 |  |   | O | I |   |  | 1.13 |
| 15.917 | 0.87 | 0.95 | 0.226 |  |   | O | I |   |  | 1.13 |
| 16.000 | 0.87 | 0.95 | 0.226 |  |   | O | I |   |  | 1.12 |
| 16.083 | 0.51 | 0.95 | 0.224 |  | I | O |   |   |  | 1.12 |
| 16.167 | 0.21 | 0.94 | 0.220 |  | I | O |   |   |  | 1.10 |
| 16.250 | 0.18 | 0.94 | 0.215 |  | I | O |   |   |  | 1.07 |
| 16.333 | 0.18 | 0.94 | 0.210 |  | I | O |   |   |  | 1.05 |
| 16.417 | 0.18 | 0.93 | 0.205 |  | I | O |   |   |  | 1.02 |
| 16.500 | 0.18 | 0.93 | 0.199 |  | I | O |   |   |  | 1.00 |
| 16.583 | 0.16 | 0.93 | 0.194 |  | I | O |   |   |  | 0.98 |
| 16.667 | 0.14 | 0.92 | 0.189 |  | I | O |   |   |  | 0.95 |
| 16.750 | 0.14 | 0.92 | 0.184 |  | I | O |   |   |  | 0.93 |
| 16.833 | 0.14 | 0.92 | 0.178 |  | I | O |   |   |  | 0.90 |
| 16.917 | 0.14 | 0.91 | 0.173 |  | I | O |   |   |  | 0.87 |
| 17.000 | 0.14 | 0.91 | 0.168 |  | I | O |   |   |  | 0.85 |
| 17.083 | 0.19 | 0.91 | 0.162 |  | I | O |   |   |  | 0.83 |
| 17.167 | 0.23 | 0.90 | 0.158 |  | I | O |   |   |  | 0.80 |
| 17.250 | 0.23 | 0.90 | 0.153 |  | I | O |   |   |  | 0.78 |
| 17.333 | 0.23 | 0.90 | 0.148 |  | I | O |   |   |  | 0.76 |
| 17.417 | 0.23 | 0.89 | 0.144 |  | I | O |   |   |  | 0.74 |
| 17.500 | 0.23 | 0.89 | 0.139 |  | I | O |   |   |  | 0.72 |
| 17.583 | 0.23 | 0.89 | 0.135 |  | I | O |   |   |  | 0.70 |
| 17.667 | 0.23 | 0.88 | 0.130 |  | I | O |   |   |  | 0.67 |
| 17.750 | 0.23 | 0.88 | 0.126 |  | I | O |   |   |  | 0.65 |
| 17.833 | 0.21 | 0.88 | 0.121 |  | I | O |   |   |  | 0.63 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |    |   |   |  |  |  |      |
|--------|------|------|-------|----|---|---|--|--|--|------|
| 17.917 | 0.19 | 0.88 | 0.116 | I  |   | O |  |  |  | 0.61 |
| 18.000 | 0.18 | 0.87 | 0.112 | I  |   | O |  |  |  | 0.59 |
| 18.083 | 0.18 | 0.87 | 0.107 | I  |   | O |  |  |  | 0.57 |
| 18.167 | 0.18 | 0.87 | 0.102 | I  |   | O |  |  |  | 0.54 |
| 18.250 | 0.18 | 0.86 | 0.098 | I  |   | O |  |  |  | 0.52 |
| 18.333 | 0.18 | 0.86 | 0.093 | I  |   | O |  |  |  | 0.50 |
| 18.417 | 0.18 | 0.82 | 0.088 | I  |   | O |  |  |  | 0.47 |
| 18.500 | 0.18 | 0.78 | 0.084 | I  |   | O |  |  |  | 0.45 |
| 18.583 | 0.16 | 0.74 | 0.080 | I  |   | O |  |  |  | 0.43 |
| 18.667 | 0.14 | 0.70 | 0.076 | I  |   | O |  |  |  | 0.41 |
| 18.750 | 0.14 | 0.67 | 0.072 | I  |   | O |  |  |  | 0.39 |
| 18.833 | 0.11 | 0.64 | 0.069 | I  |   | O |  |  |  | 0.37 |
| 18.917 | 0.09 | 0.60 | 0.065 | I  |   | O |  |  |  | 0.35 |
| 19.000 | 0.09 | 0.57 | 0.062 | I  |   | O |  |  |  | 0.33 |
| 19.083 | 0.12 | 0.54 | 0.059 | I  |   | O |  |  |  | 0.32 |
| 19.167 | 0.14 | 0.52 | 0.056 | I  |   | O |  |  |  | 0.30 |
| 19.250 | 0.14 | 0.49 | 0.053 | I  |   | O |  |  |  | 0.29 |
| 19.333 | 0.16 | 0.47 | 0.051 | I  | O |   |  |  |  | 0.27 |
| 19.417 | 0.18 | 0.45 | 0.049 | I  | O |   |  |  |  | 0.26 |
| 19.500 | 0.18 | 0.44 | 0.047 | I  | O |   |  |  |  | 0.25 |
| 19.583 | 0.16 | 0.42 | 0.045 | I  | O |   |  |  |  | 0.24 |
| 19.667 | 0.14 | 0.40 | 0.044 | I  | O |   |  |  |  | 0.23 |
| 19.750 | 0.14 | 0.39 | 0.042 | I  | O |   |  |  |  | 0.23 |
| 19.833 | 0.11 | 0.37 | 0.040 | I  | O |   |  |  |  | 0.22 |
| 19.917 | 0.09 | 0.35 | 0.038 | I  | O |   |  |  |  | 0.21 |
| 20.000 | 0.09 | 0.34 | 0.037 | I  | O |   |  |  |  | 0.20 |
| 20.083 | 0.12 | 0.32 | 0.035 | I  | O |   |  |  |  | 0.19 |
| 20.167 | 0.14 | 0.31 | 0.034 | I  | O |   |  |  |  | 0.18 |
| 20.250 | 0.14 | 0.30 | 0.033 | I  | O |   |  |  |  | 0.18 |
| 20.333 | 0.14 | 0.29 | 0.031 | I  | O |   |  |  |  | 0.17 |
| 20.417 | 0.14 | 0.28 | 0.030 | I  | O |   |  |  |  | 0.16 |
| 20.500 | 0.14 | 0.27 | 0.029 | I  | O |   |  |  |  | 0.16 |
| 20.583 | 0.14 | 0.26 | 0.029 | I  | O |   |  |  |  | 0.15 |
| 20.667 | 0.14 | 0.26 | 0.028 | I  | O |   |  |  |  | 0.15 |
| 20.750 | 0.14 | 0.25 | 0.027 | I  | O |   |  |  |  | 0.14 |
| 20.833 | 0.11 | 0.24 | 0.026 | I  | O |   |  |  |  | 0.14 |
| 20.917 | 0.09 | 0.23 | 0.025 | I  | O |   |  |  |  | 0.14 |
| 21.000 | 0.09 | 0.22 | 0.024 | I  | O |   |  |  |  | 0.13 |
| 21.083 | 0.12 | 0.22 | 0.023 | I  | O |   |  |  |  | 0.13 |
| 21.167 | 0.14 | 0.21 | 0.023 | IO |   |   |  |  |  | 0.12 |
| 21.250 | 0.14 | 0.21 | 0.022 | IO |   |   |  |  |  | 0.12 |
| 21.333 | 0.11 | 0.20 | 0.022 | I  | O |   |  |  |  | 0.12 |
| 21.417 | 0.09 | 0.20 | 0.021 | I  | O |   |  |  |  | 0.11 |
| 21.500 | 0.09 | 0.19 | 0.020 | I  | O |   |  |  |  | 0.11 |
| 21.583 | 0.12 | 0.18 | 0.020 | IO |   |   |  |  |  | 0.11 |
| 21.667 | 0.14 | 0.18 | 0.020 | I  | O |   |  |  |  | 0.10 |
| 21.750 | 0.14 | 0.18 | 0.019 | I  | O |   |  |  |  | 0.10 |
| 21.833 | 0.11 | 0.17 | 0.019 | IO |   |   |  |  |  | 0.10 |
| 21.917 | 0.09 | 0.17 | 0.018 | IO |   |   |  |  |  | 0.10 |
| 22.000 | 0.09 | 0.17 | 0.018 | IO |   |   |  |  |  | 0.10 |
| 22.083 | 0.12 | 0.16 | 0.017 | IO |   |   |  |  |  | 0.09 |
| 22.167 | 0.14 | 0.16 | 0.017 | I  | O |   |  |  |  | 0.09 |
| 22.250 | 0.14 | 0.16 | 0.017 | I  | O |   |  |  |  | 0.09 |
| 22.333 | 0.11 | 0.16 | 0.017 | IO |   |   |  |  |  | 0.09 |
| 22.417 | 0.09 | 0.15 | 0.017 | IO |   |   |  |  |  | 0.09 |
| 22.500 | 0.09 | 0.15 | 0.016 | IO |   |   |  |  |  | 0.09 |
| 22.583 | 0.09 | 0.15 | 0.016 | IO |   |   |  |  |  | 0.08 |
| 22.667 | 0.09 | 0.14 | 0.015 | IO |   |   |  |  |  | 0.08 |
| 22.750 | 0.09 | 0.14 | 0.015 | IO |   |   |  |  |  | 0.08 |
| 22.833 | 0.09 | 0.14 | 0.015 | IO |   |   |  |  |  | 0.08 |
| 22.917 | 0.09 | 0.13 | 0.014 | IO |   |   |  |  |  | 0.08 |
| 23.000 | 0.09 | 0.13 | 0.014 | IO |   |   |  |  |  | 0.08 |
| 23.083 | 0.09 | 0.13 | 0.014 | IO |   |   |  |  |  | 0.07 |
| 23.167 | 0.09 | 0.13 | 0.014 | IO |   |   |  |  |  | 0.07 |
| 23.250 | 0.09 | 0.12 | 0.013 | IO |   |   |  |  |  | 0.07 |
| 23.333 | 0.09 | 0.12 | 0.013 | IO |   |   |  |  |  | 0.07 |
| 23.417 | 0.09 | 0.12 | 0.013 | IO |   |   |  |  |  | 0.07 |
| 23.500 | 0.09 | 0.12 | 0.013 | IO |   |   |  |  |  | 0.07 |
| 23.583 | 0.09 | 0.12 | 0.013 | IO |   |   |  |  |  | 0.07 |
| 23.667 | 0.09 | 0.12 | 0.012 | IO |   |   |  |  |  | 0.07 |
| 23.750 | 0.09 | 0.11 | 0.012 | IO |   |   |  |  |  | 0.07 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore ATTACHMENT D – Detention Basin Routing

|        |      |      |       |    |  |  |  |  |      |
|--------|------|------|-------|----|--|--|--|--|------|
| 23.833 | 0.09 | 0.11 | 0.012 | IO |  |  |  |  | 0.07 |
| 23.917 | 0.09 | 0.11 | 0.012 | IO |  |  |  |  | 0.06 |
| 24.000 | 0.09 | 0.11 | 0.012 | IO |  |  |  |  | 0.06 |
| 24.083 | 0.04 | 0.11 | 0.012 | IO |  |  |  |  | 0.06 |
| 24.167 | 0.00 | 0.10 | 0.011 | IO |  |  |  |  | 0.06 |
| 24.250 | 0.00 | 0.10 | 0.010 | IO |  |  |  |  | 0.06 |
| 24.333 | 0.00 | 0.09 | 0.010 | IO |  |  |  |  | 0.05 |
| 24.417 | 0.00 | 0.08 | 0.009 | IO |  |  |  |  | 0.05 |
| 24.500 | 0.00 | 0.08 | 0.009 | IO |  |  |  |  | 0.05 |
| 24.583 | 0.00 | 0.07 | 0.008 | IO |  |  |  |  | 0.04 |
| 24.667 | 0.00 | 0.07 | 0.008 | IO |  |  |  |  | 0.04 |
| 24.750 | 0.00 | 0.07 | 0.007 | IO |  |  |  |  | 0.04 |
| 24.833 | 0.00 | 0.06 | 0.007 | O  |  |  |  |  | 0.04 |
| 24.917 | 0.00 | 0.06 | 0.006 | O  |  |  |  |  | 0.03 |
| 25.000 | 0.00 | 0.05 | 0.006 | O  |  |  |  |  | 0.03 |
| 25.083 | 0.00 | 0.05 | 0.005 | O  |  |  |  |  | 0.03 |
| 25.167 | 0.00 | 0.05 | 0.005 | O  |  |  |  |  | 0.03 |
| 25.250 | 0.00 | 0.04 | 0.005 | O  |  |  |  |  | 0.03 |
| 25.333 | 0.00 | 0.04 | 0.005 | O  |  |  |  |  | 0.02 |
| 25.417 | 0.00 | 0.04 | 0.004 | O  |  |  |  |  | 0.02 |
| 25.500 | 0.00 | 0.04 | 0.004 | O  |  |  |  |  | 0.02 |
| 25.583 | 0.00 | 0.03 | 0.004 | O  |  |  |  |  | 0.02 |
| 25.667 | 0.00 | 0.03 | 0.004 | O  |  |  |  |  | 0.02 |
| 25.750 | 0.00 | 0.03 | 0.003 | O  |  |  |  |  | 0.02 |
| 25.833 | 0.00 | 0.03 | 0.003 | O  |  |  |  |  | 0.02 |
| 25.917 | 0.00 | 0.03 | 0.003 | O  |  |  |  |  | 0.02 |
| 26.000 | 0.00 | 0.03 | 0.003 | O  |  |  |  |  | 0.01 |
| 26.083 | 0.00 | 0.02 | 0.003 | O  |  |  |  |  | 0.01 |
| 26.167 | 0.00 | 0.02 | 0.002 | O  |  |  |  |  | 0.01 |
| 26.250 | 0.00 | 0.02 | 0.002 | O  |  |  |  |  | 0.01 |
| 26.333 | 0.00 | 0.02 | 0.002 | O  |  |  |  |  | 0.01 |
| 26.417 | 0.00 | 0.02 | 0.002 | O  |  |  |  |  | 0.01 |
| 26.500 | 0.00 | 0.02 | 0.002 | O  |  |  |  |  | 0.01 |
| 26.583 | 0.00 | 0.02 | 0.002 | O  |  |  |  |  | 0.01 |
| 26.667 | 0.00 | 0.02 | 0.002 | O  |  |  |  |  | 0.01 |
| 26.750 | 0.00 | 0.01 | 0.002 | O  |  |  |  |  | 0.01 |
| 26.833 | 0.00 | 0.01 | 0.001 | O  |  |  |  |  | 0.01 |
| 26.917 | 0.00 | 0.01 | 0.001 | O  |  |  |  |  | 0.01 |
| 27.000 | 0.00 | 0.01 | 0.001 | O  |  |  |  |  | 0.01 |
| 27.083 | 0.00 | 0.01 | 0.001 | O  |  |  |  |  | 0.01 |
| 27.167 | 0.00 | 0.01 | 0.001 | O  |  |  |  |  | 0.01 |
| 27.250 | 0.00 | 0.01 | 0.001 | O  |  |  |  |  | 0.01 |
| 27.333 | 0.00 | 0.01 | 0.001 | O  |  |  |  |  | 0.01 |
| 27.417 | 0.00 | 0.01 | 0.001 | O  |  |  |  |  | 0.00 |
| 27.500 | 0.00 | 0.01 | 0.001 | O  |  |  |  |  | 0.00 |
| 27.583 | 0.00 | 0.01 | 0.001 | O  |  |  |  |  | 0.00 |
| 27.667 | 0.00 | 0.01 | 0.001 | O  |  |  |  |  | 0.00 |
| 27.750 | 0.00 | 0.01 | 0.001 | O  |  |  |  |  | 0.00 |
| 27.833 | 0.00 | 0.01 | 0.001 | O  |  |  |  |  | 0.00 |
| 27.917 | 0.00 | 0.01 | 0.001 | O  |  |  |  |  | 0.00 |
| 28.000 | 0.00 | 0.01 | 0.001 | O  |  |  |  |  | 0.00 |
| 28.083 | 0.00 | 0.01 | 0.001 | O  |  |  |  |  | 0.00 |
| 28.167 | 0.00 | 0.00 | 0.001 | O  |  |  |  |  | 0.00 |
| 28.250 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |
| 28.333 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |
| 28.417 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |
| 28.500 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |
| 28.583 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |
| 28.667 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |
| 28.750 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |
| 28.833 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |
| 28.917 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |
| 29.000 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |
| 29.083 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |
| 29.167 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |
| 29.250 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |
| 29.333 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |
| 29.417 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |
| 29.500 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |
| 29.583 | 0.00 | 0.00 | 0.000 | O  |  |  |  |  | 0.00 |

# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT D – Detention Basin Routing

```
*****HYDROGRAPH DATA*****
Number of intervals = 355
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.949 (CFS)
Total volume = 0.997 (Ac.Ft)
Status of hydrographs being held in storage
Stream 1 Stream 2 Stream 3 Stream 4 Stream 5
Peak (CFS) 0.000 0.000 0.000 0.000 0.000
Vol (Ac.Ft) 0.000 0.000 0.000 0.000 0.000
*****
```

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Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT D – Detention Basin Routing

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**ATTACHMENT E**  
**Rational Method**  
**Off-site Drainage Area to new Nichols Road**  
**Area D: 10-year and 100-year storm**

# **Rational Method**

# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT E – Rational Method, Off-site Areas to new Nichols Road

### Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989 - 2005 Version 7.1  
Rational Hydrology Study Date: 12/18/17 File: nichrd10.out

Nichols Road Project - Tract 37305  
Off-site Hydrology Drainage Area D  
Proposed Nichols Road  
10-year storm

#### \*\*\*\*\* Hydrology Study Control Information \*\*\*\*\*

English (in-lb) Units used in input data file

Program License Serial Number 4029

Rational Method Hydrology Program based on  
Riverside County Flood Control & Water Conservation District  
1978 hydrology manual

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)  
For the [ Elsinore-Wildomar ] area used.  
10 year storm 10 minute intensity = 2.320 (In/Hr)  
10 year storm 60 minute intensity = 0.980 (In/Hr)  
100 year storm 10 minute intensity = 3.540 (In/Hr)  
100 year storm 60 minute intensity = 1.500 (In/Hr)

Storm event year = 10.0  
Calculated rainfall intensity data:  
1 hour intensity = 0.980 (In/Hr)  
Slope of intensity duration curve = 0.4800

+++++  
Process from Point/Station 20.000 to Point/Station 21.000  
\*\*\*\* INITIAL AREA EVALUATION \*\*\*\*

Initial area flow distance = 950.000 (Ft.)  
Top (of initial area) elevation = 1630.000 (Ft.)  
Bottom (of initial area) elevation = 1365.000 (Ft.)  
Difference in elevation = 265.000 (Ft.)  
Slope = 0.27895 s(percent) = 27.89  
 $TC = k(0.530) * [(length^3) / (elevation\ change)]^{0.2}$   
Initial area time of concentration = 10.623 min.  
Rainfall intensity = 2.250 (In/Hr) for a 10.0 year storm  
UNDEVELOPED (poor cover) subarea  
Runoff Coefficient = 0.821  
Decimal fraction soil group A = 0.000  
Decimal fraction soil group B = 0.000  
Decimal fraction soil group C = 1.000  
Decimal fraction soil group D = 0.000  
RI index for soil (AMC 2) = 86.00  
Pervious area fraction = 1.000; Impervious fraction = 0.000  
Initial subarea runoff = 8.494 (CFS)  
Total initial stream area = 4.600 (Ac.)

# **Tract 37305, Nichols South Specific Plan – Lake Elsinore** **ATTACHMENT E – Rational Method, Off-site Areas to new Nichols Road**

Pervious area fraction = 1.000

+++++  
 Process from Point/Station 21.000 to Point/Station 22.000  
 \*\*\*\* IMPROVED CHANNEL TRAVEL TIME \*\*\*\*

---

Upstream point elevation = 1365.000(Ft.)  
 Downstream point elevation = 1360.500(Ft.)  
 Channel length thru subarea = 240.000(Ft.)  
 Channel base width = 1.000(Ft.)  
 Slope or 'Z' of left channel bank = 2.000  
 Slope or 'Z' of right channel bank = 2.000  
 Estimated mean flow rate at midpoint of channel = 10.408(CFS)  
 Manning's 'N' = 0.015  
 Maximum depth of channel = 2.000(Ft.)  
 Flow(q) thru subarea = 10.408(CFS)  
 Depth of flow = 0.642(Ft.), Average velocity = 7.101(Ft/s)  
 Channel flow top width = 3.567(Ft.)  
 Flow Velocity = 7.10(Ft/s)  
 Travel time = 0.56 min.  
 Time of concentration = 11.19 min.

Sub-Channel No. 1 Critical depth = 0.891(Ft.)  
 ' ' ' Critical flow top width = 4.563(Ft.)  
 ' ' ' Critical flow velocity= 4.202(Ft/s)  
 ' ' ' Critical flow area = 2.477(Sq.Ft)

Adding area flow to channel  
 UNDEVELOPED (poor cover) subarea  
 Runoff Coefficient = 0.819  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 1.000  
 Decimal fraction soil group D = 0.000  
 RI index for soil(AMC 2) = 86.00  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Rainfall intensity = 2.195(In/Hr) for a 10.0 year storm  
 Subarea runoff = 3.775(CFS) for 2.100(Ac.)  
 Total runoff = 12.269(CFS) Total area = 6.700(Ac.)  
 Depth of flow = 0.694(Ft.), Average velocity = 7.409(Ft/s)

Sub-Channel No. 1 Critical depth = 0.969(Ft.)  
 ' ' ' Critical flow top width = 4.875(Ft.)  
 ' ' ' Critical flow velocity= 4.311(Ft/s)  
 ' ' ' Critical flow area = 2.846(Sq.Ft)

+++++  
 Process from Point/Station 22.000 to Point/Station 23.000  
 \*\*\*\* IMPROVED CHANNEL TRAVEL TIME \*\*\*\*

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Upstream point elevation = 1360.500(Ft.)  
 Downstream point elevation = 1337.500(Ft.)  
 Channel length thru subarea = 440.000(Ft.)  
 Channel base width = 2.000(Ft.)  
 Slope or 'Z' of left channel bank = 2.000  
 Slope or 'Z' of right channel bank = 2.000  
 Estimated mean flow rate at midpoint of channel = 25.146(CFS)  
 Manning's 'N' = 0.035  
 Maximum depth of channel = 2.000(Ft.)  
 Flow(q) thru subarea = 25.146(CFS)  
 Depth of flow = 0.946(Ft.), Average velocity = 6.834(Ft/s)  
 Channel flow top width = 5.782(Ft.)  
 Flow Velocity = 6.83(Ft/s)  
 Travel time = 1.07 min.  
 Time of concentration = 12.26 min.

Sub-Channel No. 1 Critical depth = 1.172(Ft.)  
 ' ' ' Critical flow top width = 6.688(Ft.)

# **Tract 37305, Nichols South Specific Plan – Lake Elsinore** **ATTACHMENT E – Rational Method, Off-site Areas to new Nichols Road**

```

'      '      '      Critical flow velocity=      4.940(Ft/s)
'      '      '      Critical flow area =          5.090(Sq.Ft)

Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.816
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2) = 86.00
Pervious area fraction = 1.000; Impervious fraction = 0.000
Rainfall intensity = 2.100(In/Hr) for a 10.0 year storm
Subarea runoff = 25.697(CFS) for 15.000(Ac.)
Total runoff = 37.966(CFS) Total area = 21.700(Ac.)
Depth of flow = 1.156(Ft.), Average velocity = 7.618(Ft/s)

```

```

Sub-Channel No. 1 Critical depth = 1.438(Ft.)
'      '      '      Critical flow top width = 7.750(Ft.)
'      '      '      Critical flow velocity= 5.418(Ft/s)
'      '      '      Critical flow area = 7.008(Sq.Ft)

```

```

+++++
Process from Point/Station 23.000 to Point/Station 24.000
**** IMPROVED CHANNEL TRAVEL TIME ****

```

---

```

Upstream point elevation = 1337.500(Ft.)
Downstream point elevation = 1301.000(Ft.)
Channel length thru subarea = 760.000(Ft.)
Channel base width = 2.000(Ft.)
Slope or 'Z' of left channel bank = 2.000
Slope or 'Z' of right channel bank = 2.000
Estimated mean flow rate at midpoint of channel = 41.368(CFS)
Manning's 'N' = 0.035
Maximum depth of channel = 2.000(Ft.)
Flow(q) thru subarea = 41.368(CFS)
Depth of flow = 1.229(Ft.), Average velocity = 7.550(Ft/s)
Channel flow top width = 6.916(Ft.)
Flow Velocity = 7.55(Ft/s)
Travel time = 1.68 min.
Time of concentration = 13.94 min.

```

```

Sub-Channel No. 1 Critical depth = 1.500(Ft.)
'      '      '      Critical flow top width = 8.000(Ft.)
'      '      '      Critical flow velocity= 5.516(Ft/s)
'      '      '      Critical flow area = 7.500(Sq.Ft)

```

```

Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.811
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2) = 86.00
Pervious area fraction = 1.000; Impervious fraction = 0.000
Rainfall intensity = 1.975(In/Hr) for a 10.0 year storm
Subarea runoff = 6.726(CFS) for 4.200(Ac.)
Total runoff = 44.692(CFS) Total area = 25.900(Ac.)
Depth of flow = 1.275(Ft.), Average velocity = 7.703(Ft/s)

```

```

Sub-Channel No. 1 Critical depth = 1.563(Ft.)
'      '      '      Critical flow top width = 8.250(Ft.)
'      '      '      Critical flow velocity= 5.581(Ft/s)
'      '      '      Critical flow area = 8.008(Sq.Ft)

```

```

End of computations, total study area = 25.90 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

```

Tract 37305, Nichols South Specific Plan – Lake Elsinore  
ATTACHMENT E – Rational Method, Off-site Areas to new Nichols Road

Area averaged pervious area fraction ( $A_p$ ) = 1.000  
Area averaged RI index number = 86.0

# Tract 37305, Nichols South Specific Plan – Lake Elsinore

## ATTACHMENT E – Rational Method, Off-site Areas to new Nichols Road

### Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989 - 2005 Version 7.1  
Rational Hydrology Study Date: 12/18/17 File: nichrd100.out

Nichols Road Project - Tract 37305  
Off-site Hydrology Drainage Area D  
Proposed Nichols Road  
100-year storm

#### \*\*\*\*\* Hydrology Study Control Information \*\*\*\*\*

English (in-lb) Units used in input data file

Program License Serial Number 4029

Rational Method Hydrology Program based on  
Riverside County Flood Control & Water Conservation District  
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)

For the [ Elsinore-Wildomar ] area used.

10 year storm 10 minute intensity = 2.320 (In/Hr)

10 year storm 60 minute intensity = 0.980 (In/Hr)

100 year storm 10 minute intensity = 3.540 (In/Hr)

100 year storm 60 minute intensity = 1.500 (In/Hr)

Storm event year = 100.0

Calculated rainfall intensity data:

1 hour intensity = 1.500 (In/Hr)

Slope of intensity duration curve = 0.4800

\*\*\*\*\*  
Process from Point/Station 20.000 to Point/Station 21.000  
\*\*\*\* INITIAL AREA EVALUATION \*\*\*\*

Initial area flow distance = 950.000 (Ft.)

Top (of initial area) elevation = 1630.000 (Ft.)

Bottom (of initial area) elevation = 1365.000 (Ft.)

Difference in elevation = 265.000 (Ft.)

Slope = 0.27895 s(percent) = 27.89

TC =  $k(0.530) * [(length^3) / (elevation\ change)]^{0.2}$

Initial area time of concentration = 10.623 min.

Rainfall intensity = 3.443 (In/Hr) for a 100.0 year storm

UNDEVELOPED (poor cover) subarea

Runoff Coefficient = 0.847

Decimal fraction soil group A = 0.000

Decimal fraction soil group B = 0.000

Decimal fraction soil group C = 1.000

Decimal fraction soil group D = 0.000

RI index for soil (AMC 2) = 86.00

Pervious area fraction = 1.000; Impervious fraction = 0.000

Initial subarea runoff = 13.411 (CFS)

Total initial stream area = 4.600 (Ac.)

Pervious area fraction = 1.000

\*\*\*\*\*

# **Tract 37305, Nichols South Specific Plan – Lake Elsinore** **ATTACHMENT E – Rational Method, Off-site Areas to new Nichols Road**

Process from Point/Station                    21.000 to Point/Station                    22.000  
 \*\*\*\* IMPROVED CHANNEL TRAVEL TIME \*\*\*\*

---

Upstream point elevation = 1365.000(Ft.)  
 Downstream point elevation = 1360.500(Ft.)  
 Channel length thru subarea = 240.000(Ft.)  
 Channel base width = 1.000(Ft.)  
 Slope or 'Z' of left channel bank = 2.000  
 Slope or 'Z' of right channel bank = 2.000  
 Estimated mean flow rate at midpoint of channel = 16.436(CFS)  
 Manning's 'N' = 0.015  
 Maximum depth of channel = 2.000(Ft.)  
 Flow(q) thru subarea = 16.436(CFS)  
 Depth of flow = 0.795(Ft.), Average velocity = 7.988(Ft/s)  
 Channel flow top width = 4.179(Ft.)  
 Flow Velocity = 7.99(Ft/s)  
 Travel time = 0.50 min.  
 Time of concentration = 11.12 min.

Sub-Channel No. 1 Critical depth = 1.109(Ft.)  
 ' ' ' Critical flow top width = 5.438(Ft.)  
 ' ' ' Critical flow velocity= 4.603(Ft/s)  
 ' ' ' Critical flow area = 3.571(Sq.Ft)

Adding area flow to channel  
 UNDEVELOPED (poor cover) subarea  
 Runoff Coefficient = 0.846  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 1.000  
 Decimal fraction soil group D = 0.000  
 RI index for soil(AMC 2) = 86.00  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Rainfall intensity = 3.368(In/Hr) for a 100.0 year storm  
 Subarea runoff = 5.980(CFS) for 2.100(Ac.)  
 Total runoff = 19.391(CFS)                    Total area = 6.700(Ac.)  
 Depth of flow = 0.857(Ft.), Average velocity = 8.333(Ft/s)

Sub-Channel No. 1 Critical depth = 1.203(Ft.)  
 ' ' ' Critical flow top width = 5.813(Ft.)  
 ' ' ' Critical flow velocity= 4.732(Ft/s)  
 ' ' ' Critical flow area = 4.098(Sq.Ft)

\*\*\*\*\*  
 Process from Point/Station                    22.000 to Point/Station                    23.000  
 \*\*\*\* IMPROVED CHANNEL TRAVEL TIME \*\*\*\*

---

Upstream point elevation = 1360.500(Ft.)  
 Downstream point elevation = 1337.500(Ft.)  
 Channel length thru subarea = 440.000(Ft.)  
 Channel base width = 2.000(Ft.)  
 Slope or 'Z' of left channel bank = 2.000  
 Slope or 'Z' of right channel bank = 2.000  
 Estimated mean flow rate at midpoint of channel = 39.915(CFS)  
 Manning's 'N' = 0.035  
 Maximum depth of channel = 2.000(Ft.)  
 Flow(q) thru subarea = 39.915(CFS)  
 Depth of flow = 1.184(Ft.), Average velocity = 7.718(Ft/s)  
 Channel flow top width = 6.736(Ft.)  
 Flow Velocity = 7.72(Ft/s)  
 Travel time = 0.95 min.  
 Time of concentration = 12.07 min.

Sub-Channel No. 1 Critical depth = 1.477(Ft.)  
 ' ' ' Critical flow top width = 7.906(Ft.)  
 ' ' ' Critical flow velocity= 5.458(Ft/s)  
 ' ' ' Critical flow area = 7.314(Sq.Ft)

Adding area flow to channel

# **Tract 37305, Nichols South Specific Plan – Lake Elsinore** **ATTACHMENT E – Rational Method, Off-site Areas to new Nichols Road**

UNDEVELOPED (poor cover) subarea  
 Runoff Coefficient = 0.843  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 1.000  
 Decimal fraction soil group D = 0.000  
 RI index for soil(AMC 2) = 86.00  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Rainfall intensity = 3.238(In/Hr) for a 100.0 year storm  
 Subarea runoff = 40.970(CFS) for 15.000(Ac.)  
 Total runoff = 60.361(CFS) Total area = 21.700(Ac.)  
 Depth of flow = 1.440(Ft.), Average velocity = 8.591(Ft/s)

Sub-Channel No. 1 Critical depth = 1.813(Ft.)  
 ' ' ' Critical flow top width = 9.250(Ft.)  
 ' ' ' Critical flow velocity= 5.921(Ft/s)  
 ' ' ' Critical flow area = 10.195(Sq.Ft)

+++++  
 Process from Point/Station 23.000 to Point/Station 24.000  
 \*\*\*\* IMPROVED CHANNEL TRAVEL TIME \*\*\*\*

---

Upstream point elevation = 1337.500(Ft.)  
 Downstream point elevation = 1301.000(Ft.)  
 Channel length thru subarea = 760.000(Ft.)  
 Channel base width = 2.000(Ft.)  
 Slope or 'Z' of left channel bank = 2.000  
 Slope or 'Z' of right channel bank = 2.000  
 Estimated mean flow rate at midpoint of channel = 65.794(CFS)  
 Manning's 'N' = 0.035  
 Maximum depth of channel = 2.000(Ft.)  
 Flow(q) thru subarea = 65.794(CFS)  
 Depth of flow = 1.529(Ft.), Average velocity = 8.511(Ft/s)  
 Channel flow top width = 8.114(Ft.)  
 Flow Velocity = 8.51(Ft/s)  
 Travel time = 1.49 min.  
 Time of concentration = 13.56 min.

Sub-Channel No. 1 Critical depth = 1.875(Ft.)  
 ' ' ' Critical flow top width = 9.500(Ft.)  
 ' ' ' Critical flow velocity= 6.103(Ft/s)  
 ' ' ' Critical flow area = 10.781(Sq.Ft)

Adding area flow to channel  
 UNDEVELOPED (poor cover) subarea  
 Runoff Coefficient = 0.840  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 1.000  
 Decimal fraction soil group D = 0.000  
 RI index for soil(AMC 2) = 86.00  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Rainfall intensity = 3.063(In/Hr) for a 100.0 year storm  
 Subarea runoff = 10.810(CFS) for 4.200(Ac.)  
 Total runoff = 71.172(CFS) Total area = 25.900(Ac.)  
 Depth of flow = 1.585(Ft.), Average velocity = 8.684(Ft/s)

Sub-Channel No. 1 Critical depth = 1.953(Ft.)  
 ' ' ' Critical flow top width = 9.813(Ft.)  
 ' ' ' Critical flow velocity= 6.170(Ft/s)  
 ' ' ' Critical flow area = 11.536(Sq.Ft)

End of computations, total study area = 25.90 (Ac.)  
 The following figures may  
 be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 1.000  
 Area averaged RI index number = 86.0

# **As-built Drawings**

A cross-section diagram of a 20-foot wide road. The diagram shows a 5-foot minimum shoulder on each side, a 1-foot curb and gutter, and a 0.3-foot rough grade. The total width is 20 feet. The diagram is labeled with 'PAD ELEV' on the left and right, 'R/W' for Right of Way, 'T/C ELEV' for Top of Curb Elevation, and 'CURB & GUTTER' and 'ROUGH GRADE' for the respective sections.

SECTION B-B

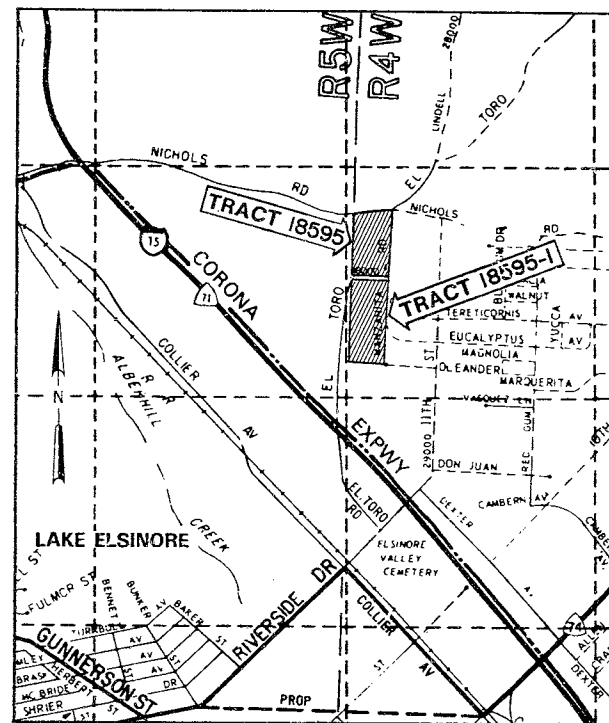
Diagram showing a cross-section of a road construction. The existing natural ground is shown as a dashed line. The proposed road construction is shown as a solid line. The road has a 2% slope. The diagram includes labels for 'EXIST NAT GROUND', 'TOP OF SLOPE', 'TYP LOT DEPTH', '100 MIN', 'R/W', and 'EXIST NAT GROUND'. The road width is indicated as 'R/W'.

Diagram illustrating a continuous concrete cap and beam structure. The structure consists of a vertical section (6 x 8 x 16 CONC. BLK.) and a horizontal base (TOP OF SLOPE). The vertical section is labeled with a height of 6'-0" and a width of 8'-0". The horizontal base is labeled with a width of 8'-0" and a height of 1'-0". The base is divided into two sections, 1 and 2, with a total width of 8'-0". A 2:1 slope is indicated on the left side of the base. The structure is supported by a #4 CONT. BOND BEAM and a #4 CONT. RETE CAP.

NOTES FOR CONCRETE BLOCK WALL

1. ALL CELLS TO BE GROUTED WHERE REINFORCEMENT IS REQUIRED.
2. MINIMUM LAP OF REINFORCING BARS SHALL BE 50 x DIAMETER OF BAR.

**SPECIAL NOTE FROM PRIVATE ENGINEER TO CONTRACTOR**  
CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT "THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM THE SILENT NEGLIGENCE OF THE OWNER OR THE ENGINEER."



SEC. 25 T15S R24E  
SEC. 30 T15S R24E

FUTURE R/W

NICHOLS ROAD

14 13

100' DRAINAGE EASEMENT

15 12

16

TRACT 18595

SEE SHEET NO. 3

6 8 9 10

EL TORO ROAD

FUTURE R/W

EUCALYPTUS TRACT MB 6/75

FUTURE R/W

EL TORO COURT

E 1/4 COR SEC 25

FUTURE R/W

ROAD

5 4 3 2 1

1 5 6

2

3 4 7

TERETICORNIS COURT

8 AVE

12 13 14

TRACT 18595-1

SEE SHEET NO. 2

15 16 17 18 19

CARMELA COURT

24 23 22 21

TRACT NO 11414-1

KIMBERLY SUB CT.

30' DRAINAGE EASEMENT

MANZANITA ST

Blk 2 MB 13/16-17 MB 6/75

PMB 17/26

OLEANDER ST

PMB 22/24

EUCALYPTUS TRACT

FOREST NO 1 ELSINORE

T.D. TOP DIKE ELEVATION  
F.L. FLOWLINE ELEVATION  
F.G. FINISH GRADE ELEVATION  
F.S. FINISH PAVING GRADE ELEVATION  
P.E. PAD ELEVATION  
  
(57.6) EXISTING GRADE OR ELEVATION  
  
T.W. TOP OF WALL  
6' GARDEN WALL

| EXCAVATION                     | CUBIC YARDS |
|--------------------------------|-------------|
| GROSS                          | 20,000      |
| SUBSIDENCE ( 7.1 AC. @ 0.20' ) | (-2,300)    |
| TOTAL EXCAVATION               | 17,700      |

| EMBANKMENT       | CUBIC YARD |
|------------------|------------|
| GROSS            | 13,000     |
| SHRINKAGE (25%)  | (+) 3,200  |
| TOTAL EMBANKMENT | 16,200     |

| EXCAVATION                   | CUBIC YARDS |
|------------------------------|-------------|
| GROSS                        | 10,000      |
| SUBSIDENCE (5.0 AC. @ 0.20') | (-) 1,610   |
| TOTAL EXCAVATION             | 8,390       |

| EMBANKMENT       | CUBIC YARDS |
|------------------|-------------|
| GROSS            | 8600        |
| SHRINKAGE (25%)  | (+) 2150    |
| TOTAL EMBANKMENT | 10750       |

1. ALL GRADING SHALL CONFORM TO THE UNIFORM BUILDING CODE, CHAPTER 70, AS AMENDED BY ORDINANCE 457.
2. MINIMUM BUILDING PAD AND DRAINAGE SHALE SLOPE = 1" IF CUT OR FILL IS LESS THAN 1' = 2" IF CUT OR FILL IS GREATER THAN 1'. DRAINAGE SHALES SHALL BE A MINIMUM OF 0.3 DEEP AND BE CONSTRUCTED A MINIMUM OF 2' FROM THE TOP OF CUT OR FILL SLOPES.
3. MAXIMUM CUT AND FILL SLOPES = 2:1.
4. PROVIDE 5' WIDE BY 1' HIGH BERM OR EQUIVALENT ALONG THE TOP OF ALL FILL SLOPES OVER 5' HIGH.
5. ALL GRADING SHALL BE DONE UNDER THE SUPERVISION OF A COMPETENT SOILS ENGINEER WHO SHALL CERTIFY THAT ALL FILL HAS BEEN PROPERLY PLACED AND WHO SHALL SUBMIT A FINAL CERTIFICATION REPORT FOR ALL FILLS OVER 1' DEEP.
6. A REGISTERED CIVIL ENGINEER SHALL SUBMIT TO THE BUILDING AND SAFETY DEPARTMENT WRITTEN CERTIFICATION OF COMPLETION OF ROUGH GRADING IN ACCORDANCE WITH THE APPROVED GRADING PLAN PRIOR TO ISSUANCE OF THE BUILDING PERMIT. CERTIFICATION SHALL BE TO LINE, GRADE, ELEVATION AND LOCATION OF CUT FILL SLOPES.
7. ALL GRADING SHALL BE DONE IN CONFORMANCE WITH RECOMMENDATIONS OF THE PRELIMINARY SOILS INVESTIGATION BY INLAND FOUNDATION ENGINEERS, INC DATED JANUARY 13, 1981. TWO (2) SETS OF THE FINAL COMPACTORY REPORT SHALL BE SUBMITTED TO THE BUILDING AND SAFETY DEPARTMENT WHICH SHALL INCLUDE FOUNDATION DESIGN RECOMMENDATIONS AND CERTIFICATION THAT GRADING HAS BEEN DONE IN CONFORMANCE WITH THE RECOMMENDATIONS OF THE PRELIMINARY SOILS REPORT.
8. THE CONTRACTOR SHALL NOTIFY THE BUILDING AND SAFETY DEPARTMENT, 4080 LEMON STREET, RIVERSIDE, TELEPHONE 787-6146, AT LEAST 24 HOURS IN ADVANCE REQUESTING FINISH LOT GRADE AND DRAINAGE INSPECTION UPON COMPLETION OF ROUGH GRADING.
9. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS.
10. REFER TO TRACT 11414-1 IMPROVEMENT PLANS FOR CONSTRUCTION OF CONCRETE LINED CHANNEL BETWEEN LOTS 21 22, 16-18, AND ALONG THE EAST TRACT BOUNDARY.
11. CUT SLOPES EQUAL TO OR GREATER THAN 3' IN VERTICAL HEIGHT AND FILL SLOPES EQUAL TO OR GREATER THAN 3' IN VERTICAL HEIGHT SHALL BE PLANTED WITH GRASS OR GROUND COVER TO PROTECT THE SLOPE FROM EROSION AND INSTABILITY IN ACCORDANCE WITH ORDINANCE NO. 457 PRIOR TO THE APPROVAL OF FINAL INSPECTION.
12. DUST SHALL BE CONTROLLED BY WATERING OR OTHER APPROVED METHODS.
13. ALL EXISTING DRAINAGE COURSES ON THE PROJECT SITE MUST CONTINUE TO FUNCTION, ESPECIALLY DURING STORM CONDITIONS. PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS MUST BE USED TO PROTECT ADJOINING PROPERTIES DURING GRADING OPERATIONS.

REVISIONS:

|   |                                                |                                 |
|---|------------------------------------------------|---------------------------------|
| 1 | REVISED EARTHWORK QUANTITIES FOR TRACT 18595-1 | James E. Maffei<br>DATE 5/31/85 |
| 2 | REVISED EARTHWORK QUANTITIES FOR TRACT 18595   | James E. Maffei<br>DATE 5/31/85 |

APPROVED BY:

DATE: 9/22/82

APPROVED BY:

[illegible]

1

DATE- 12-25

Willie R Shewatto

WILLIAM R SHOWALTER RCE 26634

\_\_\_\_\_

11

Joseph C. Yeaster

FOR ROAD COMMISSIONER, RIVERSIDE CO.

 CONSULTING ENGINEERS  
**W.R. SHOWALTER & ASSOCIATES, INC.**

12150 LA CROSSE AVENUE • COLTON CALIFORNIA 92324  
(714) 825-2087

|        |             |
|--------|-------------|
| SCALE: | BENCH MARK: |
|--------|-------------|

AS SHOWN

AS SHOWN LOCATED AT THE SW'LY Q  
OF INTERSECTION OF I-2

|                 |                                 |
|-----------------|---------------------------------|
| DATE: JUNE 1981 | EL TORO ROAD.<br>ELEVATION 1285 |
|-----------------|---------------------------------|

COUNTY OF RIVERSIDE

TRACT 18595-1 AND 18595  
GRADING PLAN

1

2

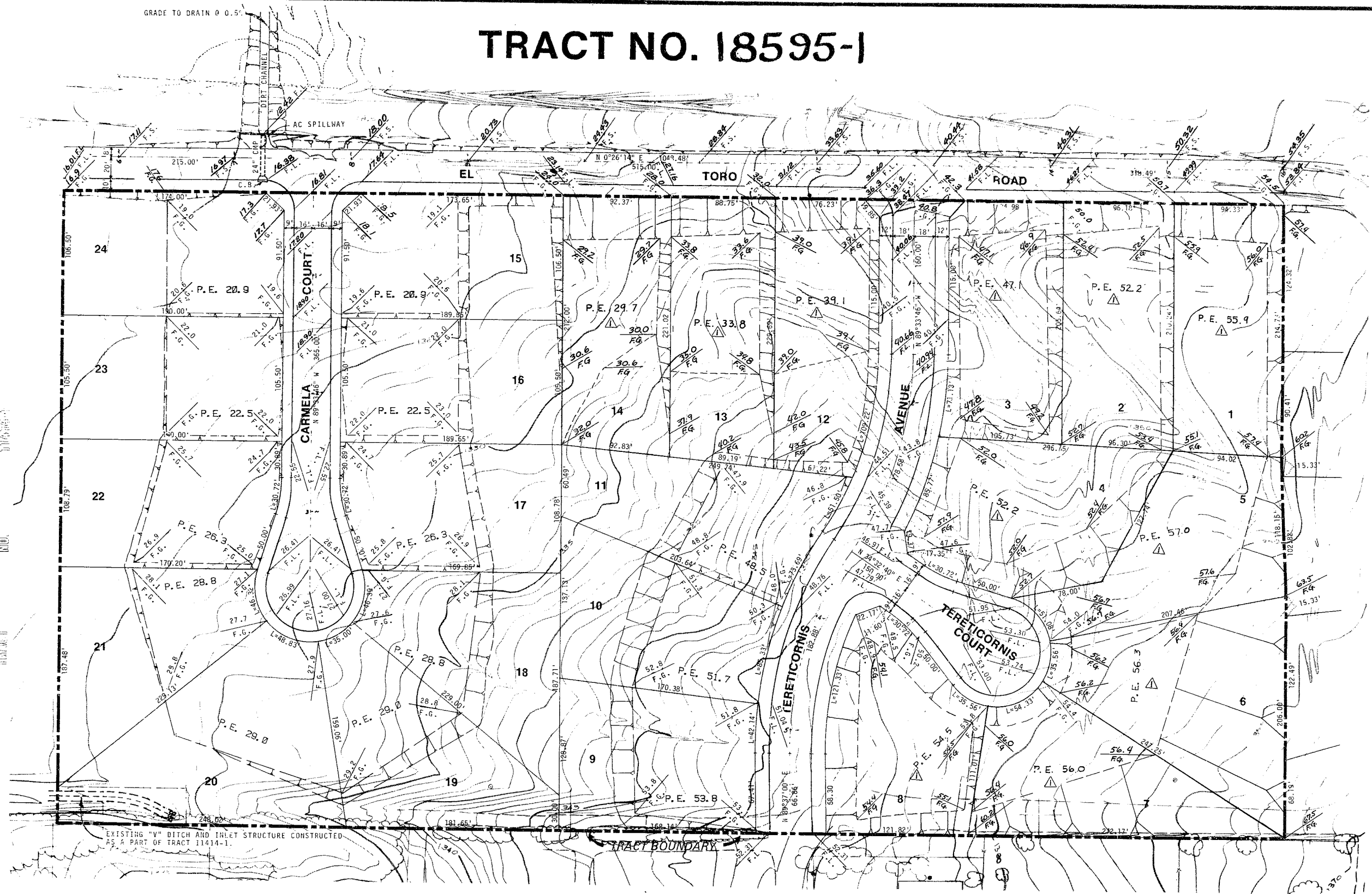
OF 3 SHEETS

**1**

DRAWING NO

77-29-GP-06

# TRACT NO. 18595-1



SEE SHEET NO. 3

Cal-Neva Construction

|                                                                                 |
|---------------------------------------------------------------------------------|
| REVISIONS:                                                                      |
| 1. REVISED GRADING FOR LOTS 1 THROUGH 8, 12, 13, 14 & EL TORO RD. DATE: 9/24/82 |
|                                                                                 |
|                                                                                 |
|                                                                                 |
|                                                                                 |

APPROVED BY:

DATE: 9/24/82

APPROVED BY:

DATE: 12-28-82

William R. Showalter  
CONSULTING ENGINEERS  
12150 LA CROSSE AVENUE • COLTON, CALIFORNIA 92324  
(714) 825-2097

Joseph C. Marshall  
FOR ROAD COMMISSIONER, RIVERSIDE COUNTY

W.R. SHOWALTER & ASSOCIATES, INC.  
12150 LA CROSSE AVENUE • COLTON, CALIFORNIA 92324  
(714) 825-2097

SCALE:  
AS SHOWN

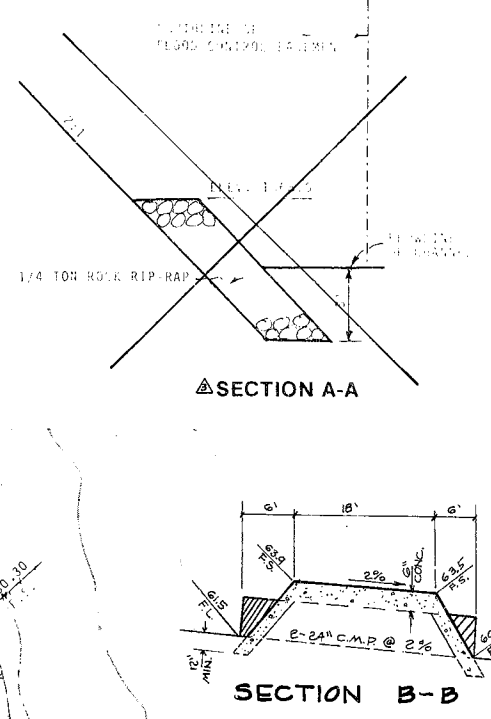
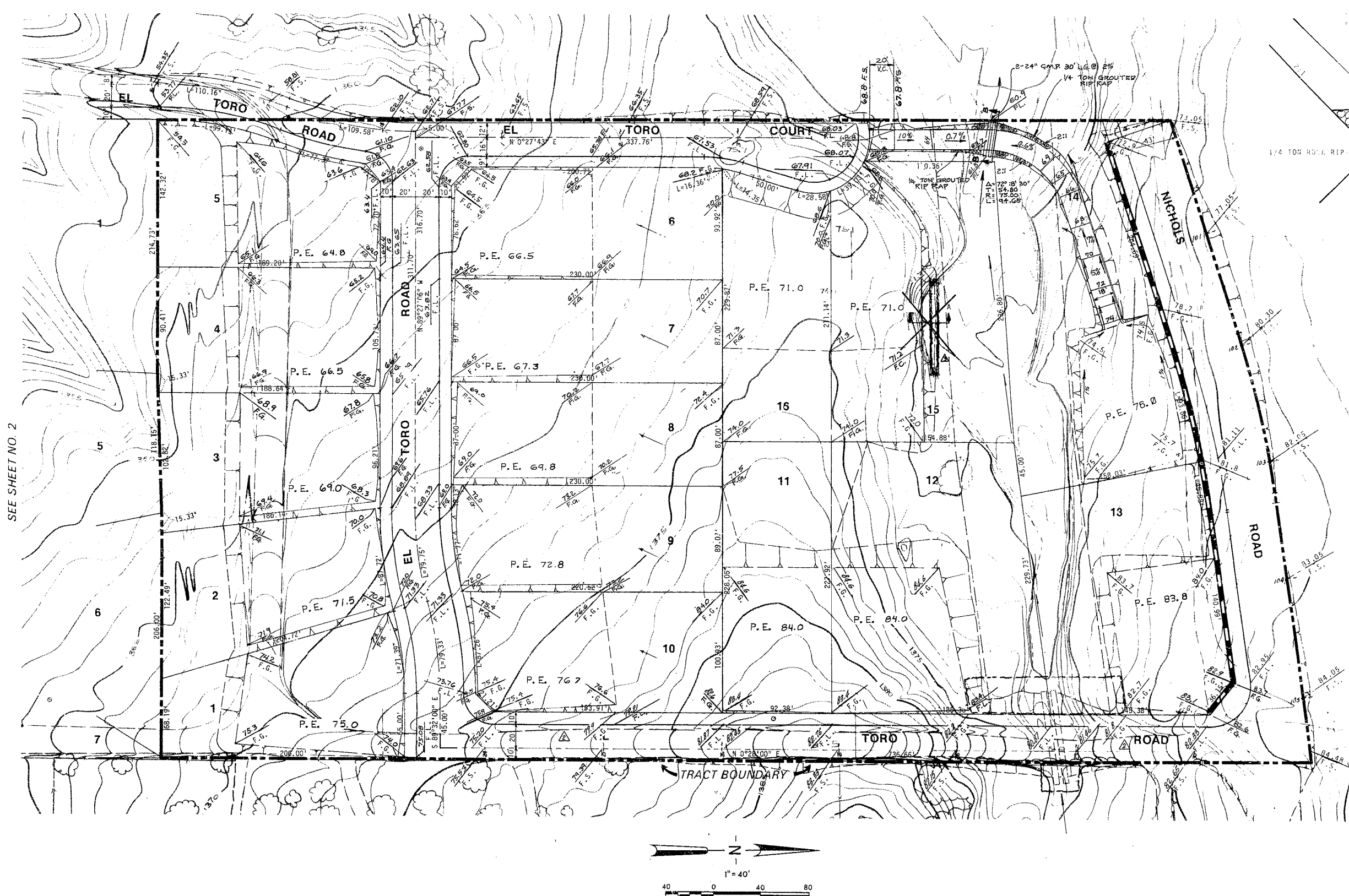
DATE: JUNE 1981

BENCH MARK:  
CAL-TRANS BM 8A-71  
LOCATED AT THE SW'LY QUAD  
OF INTERSECTION OF I-15 AND  
EL TORO ROAD  
ELEVATION 1285.43

|                                               |
|-----------------------------------------------|
| COUNTY OF RIVERSIDE                           |
| TRACT 18595-1 AND 18595                       |
| GRADING PLAN                                  |
| W.O.: 77-29-04 FOR: CAL NEVA CONSTRUCTION CO. |

|             |
|-------------|
| SHEET 2     |
| OF 3 SHEETS |
| DRAWING NO. |
| 77-29-04-07 |

TRACT NO. 18595



SEE SHEET NO. 2

MASTER BY: L.F. DATE: 12/12/82 TIME: 3 PM  
CHECKED BY: DATE:  
APPROVED BY: DATE:

DRAWING NO. 77-29-57-03  
DATE: 12/12/82  
BY: L.F.

Cal-Neva Construction

| REVISIONS |                                                        |
|-----------|--------------------------------------------------------|
| 1         | REVISED GRADES THROUGHOUT, EXCEPT NICHOLS RD. 10/20/83 |
| 2         | REVISED GRADES, STREET GRADES FOR 2013 TO 11/4/84      |
| 3         | ELIMINATE RIP-RAP SHOWN AS SECTION A-A 8/20/85         |

APPROVED BY: *William R. Showalter*  
DATE: 9/22/82  
APPROVED BY: *Joseph C. Smith*  
DATE: 12/28/82

CONSULTING ENGINEERS  
**W.R. SHOWALTER & ASSOCIATES, INC.**  
12150 LA CROSSE AVENUE • COLTON, CALIFORNIA 92314  
(714) 825-2097  
BENCH MARK:  
CAL-TRANS BM 8A-71  
LOCATED AT THE SWLY QUAD  
OF INTERSECTION OF I-15 AND  
EL TORO ROAD.  
ELEVATION 1285.43

COUNTY OF RIVERSIDE  
**TRACT 18595-1 AND 18595**  
**GRADING PLAN**  
SHEET 3  
OF 3 SHEETS  
DRAWING NO.  
77-29-57-08