

## **4.6 TRANSPORTATION AND TRAFFIC**

This section evaluates the impacts of the proposed Project on the local circulation system. This discussion is based on information from the Apple Valley General Plan and associated Environmental Impact Report (including the comprehensive traffic analysis performed in 2008 in support of this analysis), aerial imagery from Google Earth, and standard trip generation assumptions.

### **4.6.1 Setting**

#### **a. Existing Street Network**

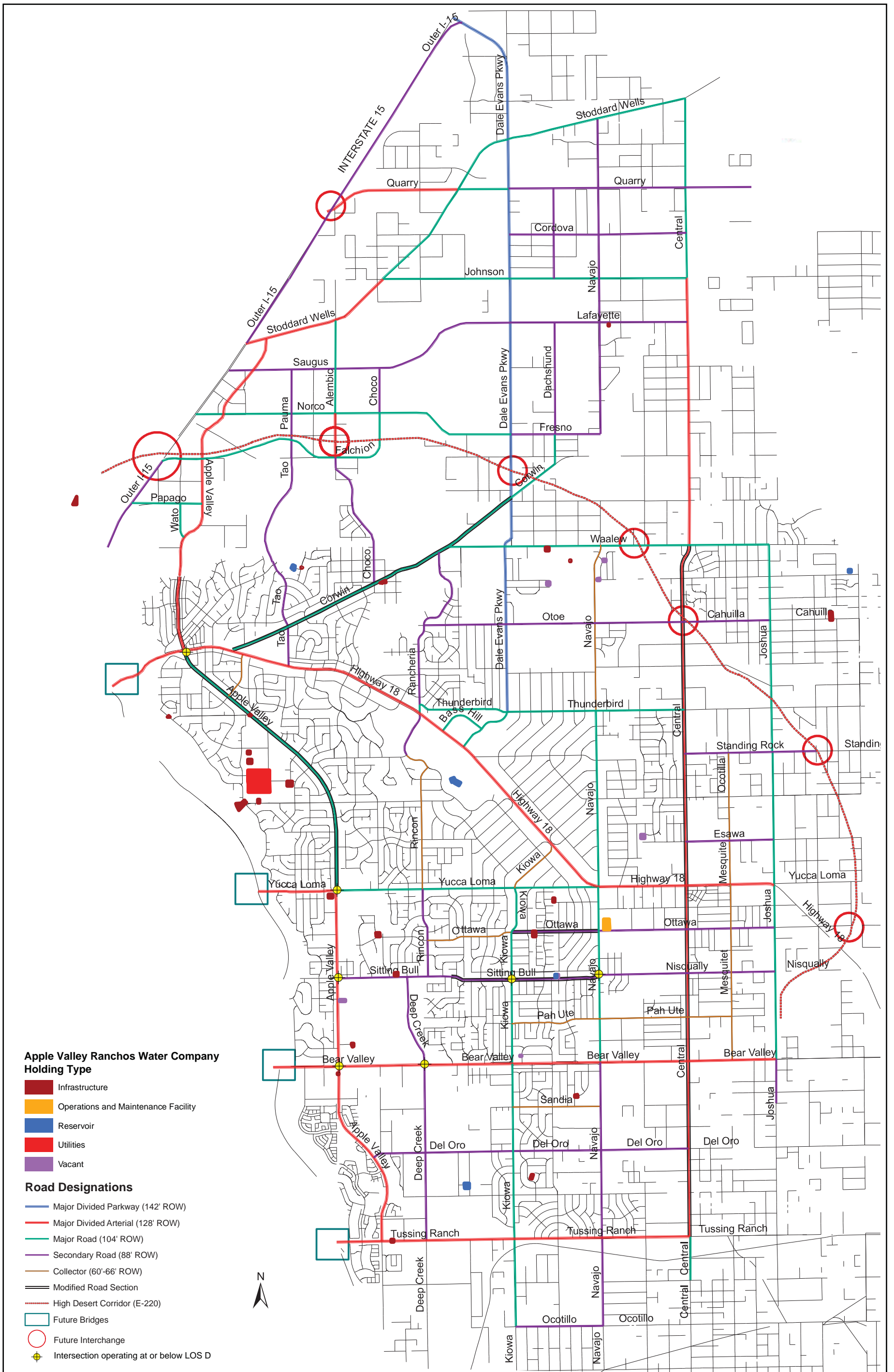
The circulation network in Apple Valley currently is comprised of approximately 500 miles of paved roadways on a one-mile grid framework, with approximately 80 percent of these roads being local streets that serve existing residential neighborhoods. In 2012, the Town of Apple Valley completed its most recent plan for the future of the transportation network, which shows existing roads as well as future additions, extensions, and expansions (Figure 4.6-1). Currently, the town can be accessed via two regionally significant roadways and also contains major local roadways for cross-town access; brief descriptions of these roadways are provided below (Town of Apple Valley, 2009).

*Regional Roadways.* Regional access to the Project Area is provided by U.S. Interstate 15 (I-15) and the State Route 18 (Happy Trails Highway).

- **U.S. Interstate 15 (I-15).** I-15 is a major transportation corridor that provides the high desert region and Apple Valley with inter-regional and inter-state access. It connects the high desert with Las Vegas, Salt Lake City, and markets to the north. In the vicinity of the Project Area, I-15 includes 3-lanes in each direction. There are two freeway interchanges in the town; these occur at Dale Evans Parkway and at Stoddard Wells Road.
- **State Route 18 (SR-18 or Happy Trails Highway).** This highway is designated a Divided Major Arterial Roadway in the Town's adopted General Plan and runs generally southeast-to-northwest through the town. The portion of this highway that runs through the town is a 4-lane divided highway along which substantial portions of the town's existing commercial development and pockets of residential development are situated.

*Major Local Roadways.* The town is linked by a network of major local roadways that provide access between different areas of town as well as connection to the regional network. In its General Plan, the Town classifies each major roadway based on its design and the minimum width of its planned right-of-way. Major roadways designations and the town's roadways that qualify under each are discussed below.





Future Apple Valley Street System Plan

Figure 4.6-1

Base drawing source: Town of Apple Valley General Plan, 2012.

*Major Divided Parkway.* The Town classifies a Major Divided Parkway as a roadway with a minimum 142-foot right-of-way, a 20-foot median, and 15-foot parkways on each side of the roadway. These roadways include three lanes of traffic in each direction; bike or parking lanes in each direction; and curbs, gutters, and sidewalks. The only road that carries this designation in the town is Dale Evans Parkway, described below.

- **Dale Evans Parkway** is a north-south roadway that is designated as a Major Divided Parkway from I-15 to Thunderbird Road, and a Major Road (see below) south of Thunderbird Road. Currently it is a two-lane undivided roadway for most of the distance from I-15 to Otoe Road, a 2-lane divided roadway with a center turn lane from Otoe Road to Thunderbird Road, and a four-lane divided roadway between Otoe Road and SR-18. The roadway is signalized at the following intersections: SR-18, Westlund Way, and Bass Hill Road.

*Major Divided Arterials.* This roadway classification connects freeways to major and secondary arterials. Major Divided Arterials have a minimum 128-foot right-of-way, and include six traffic lanes; two ten-foot-wide bike or parking lanes; a twelve-foot-wide center left turn lane or median; and curbs, gutters, and sidewalks. Roads that carry this designation are described below.

- **SR-18**, or the Happy Trails Highway, runs generally southeast-northwest across the town. It is a 2-lane undivided roadway between Joshua Road and Central Road on the east side of the town, and a 4-lane divided roadway through the remainder of the town. Some portions of the roadway include 2-lane feeder/frontage roads on either side that parallel the main highway. SR-18 is signalized at 12 major intersections: Apple Valley Road, Kasota Road, Corwin Road, Tao Road, Rancherias Road, Bass Hill Road, Dale Evans Parkway, Flathead Road, Kiowa Road, Navajo Road, Quinnault Road, and Central Road.
- **Bear Valley Road** is an east-west roadway that traverses the town and intersects with SR-18 east of the town limits. Between the eastern boundary of the town and Central Road it is a 2-lane undivided highway with occasional turn lanes, expanding to 3-lanes between Central Road and Quinnault Road, and then to a 4-lane divided roadway from Quinnault Road to Apple Valley Road. From there it becomes a 6-lane divided roadway and exits the town as it crosses the all-weather bridge over the Mojave River. Bear Valley is signalized at eight of its intersections: Jess Ranch Parkway, Reata Road, Apple Valley Road, an access road east of Apple Valley Road, Deep Creek Road, Kiowa Road, Navajo Road, and Central Road.
- **Tussing Ranch Road** is an east-west roadway that forms a portion of the town's southern boundary. It is currently a 2-lane undivided road in the town, with stop signs controlling westbound traffic at its intersections with Central Road and Kiowa Road.
- **Central Road** is a north-south road that forms a portion of the town's eastern boundary. It is designated a Major Divided Arterial through most of the town (south of Johnson Road and north of Tussing Ranch Road) and as a Major Road (see below) at the northern and southern ends. It is 2-lanes undivided throughout the town, with the exception of one roadway segment north of Cahuilla Road where it is a 3-lane undivided roadway. Central Road crosses the Mojave Northern Mining Railroad line at Quarry Road and has

three signalized intersections at the following crossroads: Bear Canyon Road, SR-18, and Esaws Avenue.

- **Apple Valley Road** runs generally north-south between Verbena Street at the south end of the town and Falchion Road north of the developed portion of the town. Through most of the town, Apple Valley Road is classified as a Major Divided Arterial roadway, with the portion between Yucca Loma Road and SR-18 being classified as a Major Road (see below). Currently, the roadway varies from being a 6-lane divided roadway between Pimlico Road and Bear Valley Road; a 4-lane divided roadway along most of the distance between Yucca Loma Road and Verbena Street; a 2-lane divided roadway with a center turn lane for most of the distance between Yucca Loma Road and Ohna Road; and a 2-lane undivided road north of Ohna Road. Apple Valley Road is signalized at the following nine intersections: SR-18, Bear Valley Road, Pimlico Road, Sitting Bull Road, Sitting Bull Road, Yucca Loma Road, Shoshonee Road, Seneca Road, Mandan Road, and Mondamon Road.
- **Quarry Road, Stoddard Wells Road, and Yucca Loma Road** are all roadways with the western portion having the designation as a Major Divided Arterial while the rest of these roadways carry other designations, such as Major Road (see below).

*Major Roads.* This classification requires a minimum 104-foot right-of-way, and includes four traffic lanes; two bike or parking lanes; a twelve-foot wide center left turn lane or median; curbs, gutters, and sidewalks. As described above, portions of Dale Evans Parkway, Apple Valley Road, and Central Road are classified as Major Divided Parkway or Major Divided Arterial roadways; however, certain segments of these roadways are also classified as Major Roads. Additionally, the following roadways are designated primarily or entirely as Major Roads in the local circulation network:

- *Kiowa Road* (north-south);
- *Navajo Road* (north-south);
- *Joshua Road* (north-south);
- *Quarry Road* (east-west);
- *Stoddard Wells Road* (east-west);
- *Johnson Road* (east-west);
- *Waalew Road* (east-west);
- *Thunderbird Road* (east-west); and
- *Yucca Loma Road* (east-west).

*Secondary Roads, Collector Streets, Local Industrial/Commercial Streets, and Local Streets.* A number of Secondary Roads and Collector Streets in the town connect major roads and serve to carry local traffic to larger streets. Secondary Roads have a minimum 88-foot right-of-way and include two travel lanes in each direction and a bike or parking lane. Collector streets have a 66-foot right-of-way, one lane of travel in each direction, a bike or parking lane, and a 10- to 11-foot wide parkway. Local Industrial/Commercial Streets also require a 66-foot right-of-way, and accommodate trips associated with industrial areas, including the turning radius needed by delivery trucks. Local Industrial/Commercial Streets transport local traffic from commercial and industrial areas to higher volume, higher speed roadways. Most of the streets in residential neighborhoods throughout the town are designated as Local Streets. This designation requires a



60-foot right-of-way with two traffic lanes, parking lanes in each direction, curbs and gutters; sidewalks may be provided within the 10-foot, non-paved right-of-way.

**b. Existing Traffic Conditions**

The most recent comprehensive traffic analysis for the town was performed in November 2008 for the traffic study in support of the Town’s General Plan EIR. This study included traffic counts on roadways throughout the town, including 60 roadway segments (Table 4.6-1).

**Table 4.6-1:  
Traffic Counts Along Selected Roadway Segments**

| No.      | Roadway Segment   | Road Type <sup>1</sup> | Capacity <sup>2</sup> | Daily Count   | Date of Count   |
|----------|---|------------------------|-----------------------|---------------|-----------------|
| 1        | Apple Valley Road n/o SR-18                                     | 4D                     | 40,500                | 4,200         | 04/09/08        |
| <b>2</b> | <b>Apple Valley Road between SR-18 &amp; Yucca Loma Road</b>    | <b>2D</b>              | <b>17,300</b>         | <b>18,700</b> | <b>04/10/08</b> |
| 3        | Apple Valley Road between Yucca Loma Road & Sitting Bull Road   | 4D                     | 40,500                | 21,600        | 10/02/07        |
| 4        | Apple Valley Road between Sitting Bull Road & Bear Valley Road  | 4D                     | 40,500                | 25,400        | 04/14/08        |
| 5        | Apple Valley Road between Bear Valley Road & Tussing Ranch Road | 4D                     | 40,500                | 5,300         | 04/15/08        |
| 6        | Deep Creek Drive between Bear Valley Road & Tussing Ranch Road  | 2U                     | 12,700                | 4,300         | 04/15/08        |
| 7        | Deep Creek Drive s/o of Rock Springs Road                       | 2U                     | 12,700                | 1,500         | 04/15/08        |
| 8        | Kiowa Road between SR-18 & Yucca Loma Road                      | 2U                     | 12,700                | 7,600         | 04/10/08        |
| 9        | Kiowa Road between Yucca Loma Road & Sitting Bull Road          | 2U                     | 12,700                | 7,700         | 04/14/08        |
| 10       | Kiowa Road between Sitting Bull Road & Bear Valley Road         | 2U                     | 12,700                | 10,100        | 04/14/08        |
| 11       | Kiowa Road between Bear Valley Road & Tussing Ranch Road        | 2U                     | 12,700                | 8,000         | 04/15/08        |
| 12       | Dale Evans Parkway s/o I-15 Freeway                             | 2U                     | 12,700                | 3,400         | 04/09/08        |
| 13       | Dale Evans Parkway n/o Fresno Road                              | 2U                     | 12,700                | 3,200         | 04/09/08        |
| 14       | Dale Evans Parkway between Corwin Road & Waalew Road            | 2U                     | 12,700                | 2,200         | 04/09/08        |
| 15       | Dale Evans Parkway between Waalew Road & Thunderbird Road       | 2U                     | 12,700                | 3,500         | 04/10/08        |
| 16       | Dale Evans Parkway between Thunderbird Road & SR-18             | 2U                     | 12,700                | 6,500         | 04/10/08        |
| 17       | Navajo Road between Thunderbird Road & SR-18                    | 2U                     | 12,700                | 4,100         | 04/14/08        |
| 18       | Navajo Road between SR-18 & Nisqually Road                      | 4D                     | 40,500                | 15,100        | 04/14/08        |
| 19       | Navajo Road between Nisqually Road & Bear Valley Road           | 4D                     | 40,500                | 12,800        | 04/15/08        |
| 20       | Navajo Road between Bear Valley Road & Tussing Ranch Road       | 2U                     | 12,700                | 3,500         | 04/15/08        |
| 21       | Central Road n/o Waalew Road                                    | 2U                     | 12,700                | 900           | 04/14/08        |
| 22       | Central Road between Waalew Road & Thunderbird Road             | 2U                     | 12,700                | 4,500         | 12/04/07        |
| 23       | Central Road between Thunderbird Road & SR-18                   | 2U                     | 12,700                | 5,600         | 04/14/08        |
| 24       | Central Road between SR-18 & Nisqually Road                     | 2U                     | 12,700                | 5,900         | Estimated       |
| 25       | Central Road between Nisqually Road & Bear Valley Road          | 2U                     | 12,700                | 7,800         | 04/14/08        |
| 26       | Central Road between Bear Valley Road & Tussing Ranch Road      | 2U                     | 12,700                | 3,100         | 04/14/08        |
| 27       | Stoddard Wells Road e/o I-15 Freeway                            | 2U                     | 12,700                | 2,200         | 04/09/08        |
| 2-a      | Corwin Road between SR-18 & Tao Road                            | 2U                     | 12,700                | 5,100         | 04/09/08        |
| 29       | Corwin Road between Tao Road & Waalew Road                      | 2U                     | 12,700                | 4,600         | 04/09/08        |
| 30       | Corwin Road between Waalew Road & Dale Evans Parkway            | 2U                     | 12,700                | 600           | 04/09/08        |



| No.       | Roadway Segment  | Road Type <sup>1</sup> | Capacity <sup>2</sup> | Daily Count   | Date of Count   |
|-----------|--|------------------------|-----------------------|---------------|-----------------|
| 31        | Waalew Road Between Corwin Road & Dale Evans Parkway                     | 2U                     | 12,700                | 4,000         | 04/09/08        |
| 32        | Waalew Road e/o Dale Evans Parkway                                       | 2U                     | 12,700                | 4,800         | 04/09/08        |
| 33        | Waalew Road w/o Central Road   | 2U                     | 12,700                | 4,800         | 04/09/08        |
| <b>34</b> | <b>SR-18 w/o Apple Valley Road</b>                                       | <b>4D</b>              | <b>40,500</b>         | <b>47,700</b> | <b>04/10/08</b> |
| 35        | SR-18 between Apple Valley Road & Corwin Road                            | 4D                     | 40,500                | 31,400        | 04/09/08        |
| 36        | SR-18 between Corwin Road & Tao Road                                     | 4D                     | 40,500                | 25,800        | 04/14/08        |
| 37        | SR-18 between Tao Road & Rancherias Road                                 | 4D                     | 40,500                | 28,600        | 04/10/08        |
| 38        | SR-18 between Rancherias Road & Dale Evans Parkway                       | 4D                     | 40,500                | 29,800        | 04/10/08        |
| 39        | SR-18 between Dale Evans Parkway & Kiowa Road                            | 4D                     | 40,500                | 27,400        | 04/10/08        |
| 40        | SR-18 between Kiowa Road & Navajo Road                                   | 4D                     | 40,500                | 18,900        | 04/10/08        |
| 41        | SR-18 between Navajo Road & Central Road                                 | 4D                     | 40,500                | 11,700        | 04/14/08        |
| 42        | SR-18 between Kiowa Road & Navajo Road                                   | 2U                     | 12,700                | 7,300         | 04/15/08        |
| 43        | SR-18 between Joshua Road & Bear Valley Road                             | 2U                     | 12,700                | 5,100         | 12/04/07        |
| 44        | SR-18 e/o Bear Valley Road   | 2D                     | 17,300                | 11,500        | 04/15/08 ,      |
| 45        | Thunderbird Road between Rancherias Road & Dale Evans Parkway            | 2U                     | 12,700                | 5,400         | 04/10/08        |
| 46        | Thunderbird Road between Dale Evans Parkway & Navajo Road                | 2U                     | 12,700                | 5,100         | 04/14/08        |
| 47        | Thunderbird Road between Navajo Road & Central Road                      | 2U                     | 12,700                | 2,800         | 04/14/08        |
| 48        | Yucca Loma Road w/o Apple Valley Road                                    | 2U                     | 12,700                | 3,600         | 04/10/08        |
| 49        | Loma Road between Apple Valley Road & Rincon Road                        | 2U                     | 12,700                | 8,100         | 10/02/07        |
| 50        | Yucca Loma Road between Rincon Road & Kiowa Road                         | 2U                     | 12,700                | 6,200         | 04/10/08        |
| 51        | Yucca Loma Road between Kiowa Road & SR-18                               | 2U                     | 12,700                | 3,400         | 02/10/07        |
| 52        | Sitting Bull Road between Apple Valley Road & Kiowa Road                 | 2U                     | 12,700                | 8,200         | 04/14/08        |
| 53        | Bear Valley Road n/o Apple Valley Road                                   | 6D                     | 69,300                | 43,700        | 04/09/08        |
| <b>54</b> | <b>Bear Valley Road between Apple Valley Road &amp; Deep Creek Drive</b> | <b>4D</b>              | <b>40,500</b>         | <b>34,800</b> | <b>04/14/08</b> |
| <b>55</b> | <b>Bear Valley Road between Deep Creek Drive &amp; Kiowa Road</b>        | <b>4D</b>              | <b>40,500</b>         | <b>35,500</b> | <b>04/14/08</b> |
| 56        | Bear Valley Road between Kiowa Road & Navajo Road                        | 4D                     | 40,500                | 25,800        | 04/14/08        |
| 57        | Bear Valley Road between Navajo Road & Central Road                      | 4D                     | 40,500                | 14,600        | 04/14/08        |
| 58        | Bear Valley Road between Central Road & SR-18                            | 2U                     | 12,700                | 8,500         | 04/15/08        |
| 59        | Rincon Road between SR-18 & Yucca Loma Road                              | 2U                     | 12,700                | 5,400         | Estimated       |
| 60        | Rock Springs Road between Deep Creek Drive & Kiowa Road                  | 2U                     | 12,700                | 7,100         | 04/15/08        |

<sup>1</sup> Road Types: U = Undivided; D = Divided; # = Number of Travel Lanes

<sup>2</sup> Capacity (in vehicles per day): 2U = 12,700; 2D = 17,300; 4U = 25,500; 4D = 40,500; 6D = 69,300

Bold indicates segments that are at or approaching capacity

Source: Town of Apple Valley, 2008.

Based on the analysis from the Traffic Study, the following segments are potentially exceeding or approaching capacity:

- Potentially exceeding capacity:
  - Apple Valley Road between SR-18 & Yucca Loma Road (No. 2)
  - SR-18 w/o Apple Valley Road (No. 34)



- Approaching Capacity
  - Bear Valley Road between Apple Valley Road & Deep Creek Drive (No. 54)
  - Bear Valley Road between Deep Creek Drive & Kiowa Road (No. 55)

The traffic analysis also included a review of traffic volumes at 37 of the town’s intersections during peak hours, including the existing level of service (LOS) at each of these intersections (Table 4.6-2). LOS is described as a range of alphabetical connotations, A through F, which are used to characterize roadway operating conditions, with LOS A representing the best conditions (free flowing traffic) and LOS F indicating the worst conditions (system failure). The LOS for each intersection was evaluated based on the average delay during AM peak hour traffic (between 7 a.m. and 9 a.m.) and PM peak hour traffic (from 4 p.m. to 6 p.m.). These measurements were performed between October 2007 and April 2008.

**Table 4.6-2:  
 Level of Service at Selected Intersections throughout Apple Valley**

| No.       | Intersection   | Traffic Control | Delay (in sec) |             | LOS      |          |
|-----------|--|-----------------|----------------|-------------|----------|----------|
|           |  |                 | AM             | PM          | AM       | PM       |
| 1         | 1-15 SB Ramps (NS) at Dale Evans Pkwy. (EW)          | CSS             | 9.2            | 9.9         | A        | A        |
| 2         | 115 NB Ramps (NS) at Dale Evans Pkwy. (EW)           | CSS             | 9.1            | 9.5         | A        | A        |
| 3         | Dale Evans Pkwy. (NS) at Quarry Rd. (EW)             | CSS             | 10.3           | 10.2        | B        | B        |
| 5         | Dale Evans Pkwy. (NS) at Corwin Rd. (EW)             | CSS             | 10.1           | 11.1        | B        | B        |
| 6         | Corwin Rd. (NS) at Waalew Rd. (EW)                   | CSS             | 10.5           | 10.0        | B        | B        |
| 7         | Dale Evans Pkwy. (NS) at Waalew Rd. West (EW)        | CSS             | 10.4           | 13.0        | B        | B        |
| 8         | Dale Evans Pkwy. (NS) at Waalew Rd. East (EW)        | CSS             | 11.2           | 12.3        | B        | B        |
| 9         | Central Rd. (NS) at Waalew Rd. (EW)                  | AWS             | 8.1            | 8.5         | A        | A        |
| <b>10</b> | <b>Apple Valley Rd. (NS) at Highway 18 (EW)</b>      | <b>TS</b>       | <b>46.8</b>    | <b>41.2</b> | <b>D</b> | <b>D</b> |
| 11        | Corwin Rd. (NS) at Highway 18 (EW)                   | TS              | 12.7           | 8.1         | B        | A        |
| 12        | Rancherias Rd. (NS) at Highway 18 (EW)               | TS              | 33.1           | 26.6        | C        | C        |
| 13        | Dale Evans Rd. (NS) at Thunderbird Rd. (EW)          | AWS             | 12.3           | 11.4        | B        | B        |
| 14        | Navajo Rd. at Thunderbird Rd. (EW)                   | AWS             | 9.4            | 10.3        | A        | B        |
| 15        | Central Rd. (NS) at Thunderbird Rd. (EW)             | CSS             | 13.2           | 11.7        | B        | B        |
| 16        | Dale Evans Pkwy. (NS) at Highway 18 (EW)             | TS              | 20.1           | 23.0        | C        | C        |
| 17        | Kiowa Rd. (NS) at Highway 18 (EW)                    | TS              | 19.1           | 18.0        | B        | B        |
| <b>18</b> | <b>Apple Valley Rd. (NS) at Yucca Loma Rd. (EW)</b>  | <b>TS</b>       | <b>36.7</b>    | <b>38.1</b> | <b>D</b> | <b>D</b> |
| 19        | Kiowa Rd. (NS) at Yucca Loma Rd. (EW)                | AWS             | 9.5            | 12.8        | A        | B        |
| 20        | Navajo Rd. (NS) at Highway 18 (EW)                   | TS              | 17.5           | 19.0        | B        | B        |
| 21        | Central Rd. (NS) at Highway 18 (EW)                  | TS              | 15.7           | 16.1        | B        | B        |
| 22        | Joshua Rd. (NS) at Highway 18 (EW)                   | CSS             | 14.9           | 22.5        | B        | C        |
| <b>23</b> | <b>Apple Valley Rd. (NS) at Bear Valley Rd. (EW)</b> | <b>TS</b>       | <b>32.8</b>    | <b>35.9</b> | <b>C</b> | <b>D</b> |
| <b>24</b> | <b>Deep Creek Rd. (NS) at Bear Valley Rd. (EW)</b>   | <b>CSS</b>      | <b>80.0</b>    | <b>--</b>   | <b>F</b> | <b>F</b> |
| 25        | Kiowa Rd. (NS) at Bear Valley Rd. (EW)               | TS              | 32.5           | 33.8        | C        | C        |
| 26        | Navajo Rd. (NS) at Bear Valley Rd. (EW)              | TS              | 23             | 28.0        | C        | C        |
| 27        | Central Rd. (NS) at Bear Valley Rd. (EW)             | TS              | 25.8           | 25.3        | C        | C        |
| <b>28</b> | <b>Highway 18 (NS) at Bear Valley Rd. (EW)</b>       | <b>CSS</b>      | <b>8.3</b>     | <b>28.9</b> | <b>A</b> | <b>D</b> |



| No.       | Intersection  | Traffic Control | Delay (in sec) |             | LOS      |          |
|-----------|---|-----------------|----------------|-------------|----------|----------|
|           |   |                 | AM             | PM          | AM       | PM       |
| 29        | Central Rd. (NS) at Tussing Ranch Rd. (EW)            | CSS             | 10.0           | 9.8         | B        | A        |
| 30        | Deep Creek Rd. (NS) at Rock Springs Rd. (EW)          | TS              | 15.4           | 15.5        | B        | B        |
| 31        | 1-15 SB Ramps (NS) at Stoddard Wells Rd. (EW)         | CSS             | 8.7            | 9.2         | A        | A        |
| 32        | 1-15 NB Ramps (NS) at Stoddard Wells Rd. (EW)         | CSS             | 9.4            | 11.3        | A        | B        |
| 33        | Outer Highway 15 (NS) at Stoddard Wells Rd. (EW)      | CSS             | 19.4           | 24.4        | C        | C        |
| 43        | Tao Rd. (NS) at Highway 18 (EW)                       | TS              | 19.2           | 20.0        | B        | C        |
| <b>44</b> | <b>Apple Valley Rd. (NS) at Sitting Bull Rd. (EW)</b> | <b>TS</b>       | <b>36.4</b>    | <b>39.0</b> | <b>D</b> | <b>D</b> |
| <b>45</b> | <b>Kiowa Rd. (NS) at Sitting Bull Rd. (EW)</b>        | <b>AWS</b>      | <b>12.8</b>    | <b>37.1</b> | <b>B</b> | <b>E</b> |
| <b>46</b> | <b>Navajo Rd, (NS) at Nisqually Rd. (EW)</b>          | <b>TS</b>       | <b>39.4</b>    | <b>33.6</b> | <b>D</b> | <b>C</b> |

*Traffic Control: CSS = Cross Street Stop; AWS = All Way Stop; TS = Traffic Signal*  
*Note: Existing measurements were not included in the study for intersections 34 through 42.*  
*Bold indicates intersections that are operating at LOS D or worse during AM and/or PM peak hours*  
*Source: Town of Apple Valley, 2008.*

The LOS criteria (i.e., the minimum allowable LOS) defined by the Town for all of these intersections has historically been LOS C; however, the Town’s General Plan indicates that some intersections will not be able to be maintained at these levels, especially under projected growth estimates. The intersections that are currently operating at LOS D during AM and/or PM peak hours include (Figure 4.6-1) the following:

- Apple Valley Rd. (NS) at Highway 18 (EW) (No. 10)
- Apple Valley Rd. (NS) at Yucca Loma Rd. (EW) (No. 18)
- Apple Valley Rd. (NS) at Bear Valley Rd. (EW) (No. 23)
- Highway 18 (NS) at Bear Valley Rd. (EW) (No. 28)
- Apple Valley Rd. (NS) at Sitting Bull Rd. (EW) (No. 44)
- Navajo Rd, (NS) at Nisqually Rd. (EW) (No. 46)

As a result of LOS measurements and projections in the traffic study, the Town updated its requirement for the minimum LOS, with the General Plan now requiring that intersections be maintained at LOS D or better. At the time of the traffic study, the following two intersections were operating below this threshold during AM and/or PM peak hours:

- Kiowa Rd. (NS) at Sitting Bull Rd. (EW) (No. 45)
- Deep Creek Rd. (NS) at Bear Valley Rd. (EW) (No. 24)

Since the time of the General Plan EIR, however, a traffic signal has been constructed at the intersection of Deep Creek Road and Bear Valley Road, pursuant to the Town’s fair share fee program. This signal has substantially improved the performance at that intersection and reduced traffic delay. Similarly, other traffic improvements have been identified to improve the intersection at Kiowa Road and Sitting Bull Road, and likewise will be funded through the Town’s fair share fee program and constructed as any future development occurs.





## 4.6.2 Impact Analysis

### a. Methodology and Significance Thresholds

This analysis estimates traffic associated with existing and future operation of the proposed Project, and evaluates potential impacts to the Apple Valley transportation network. The existing water supply system is fully functional and would not require any additional new infrastructure as a result of the proposed Project. Therefore, the proposed Project would not involve physical construction of new facilities and associated traffic, and this activity is not discussed further.

*Methodology.* This analysis considers potential changes in traffic and circulation associated with the proposed Project, including vehicle trips from employees traveling to and from the operation and maintenance (O&M) facility (generally at peak hours) as well as vehicle trips throughout the town and wider service area associated with operation and maintenance of the water supply system (generally throughout the day). The system would maintain its existing size and capacity, including approximately 23 groundwater wells with a total capacity of 37 million gallons per day, 11 storage tanks with a total capacity of 11.7 million gallons, 16 emergency generators, 8 booster pump stations, 22,431 service connections, 469 miles of pipelines. Therefore, system operation is expected to continue to require a staff of approximately 39 employees, including approximately 20 office workers and 19 technical and field staff. As discussed in Section 2.0, Project Description, the Town would operate the system out of the existing O&M facility at 21760 Ottawa Road, and therefore there would be little to no change in the length, distribution, or number of truck trips required to operate and maintain the system.

This analysis assumes that the 39 employees would continue to generate the same number of vehicle trips to and from the O&M facility, which are estimated to be a total of approximately 154 trips per day, with 39 occurring during both the AM and PM peak hours. This number of trips is based on the following:

- Each of the 39 employees contributes two vehicles trips per day to the circulation network, one to the O&M facility during the AM peak and one leaving the O&M facility during the PM peak hour. Total trips: 39 AM peak and 39 PM peak.
- Each of the 19 field workers contributes an additional four vehicle trips per day, leaving the facility twice per day to perform work in the field; these trips occur during the day and would not contribute to peak hour trips. Total trips: 76 (not during peak hours).

*Significance Thresholds.* In accordance with the Town's CEQA Checklist and Appendix G of the State CEQA Guidelines, a significant traffic impact would occur if the proposed Project would:

- a. Conflict with an applicable plan, ordinance or policy establishing a measure of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to



intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit;

- b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment);
- e. Result in inadequate emergency access; or
- f. Conflict with adopted policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities.

The Initial Study for the proposed Project (Appendix A) found that the proposed Project would not result in a change in air traffic patterns; substantially increase hazards due to a design feature; result in inadequate emergency access; or conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. Therefore, Significance Thresholds c, d, e, and f are not discussed further in this section.

Under the Town's General Plan, Program 1.A.4 states that the Town shall require all intersections maintain a minimum of LOS D during both the morning and evening peak hour; while Policy 1.H requires that new development proposals pay their fair share for the improvement of streets within and surrounding their projects on which they have an impact, including roadways, bridges, and traffic signals. This analysis considers the proposed Project's potential impacts to the LOS at critical intersections and to the roadways, bridges, and traffic signals in the AVR System service area. Additionally, under Section 9.16.090 of the Town's Municipal Code, any project requiring a Special or Conditional Use Permit must show that traffic improvements and/or mitigation measures are provided in a manner adequate to maintain the existing service level of LOS C or better on arterial roads and are consistent with the Circulation Element of the General Plan.



## b. Project Impacts and Mitigation Measures

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| Threshold: | <i>Conflict with an applicable plan, ordinance or policy establishing a measure of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?</i> |
| Threshold: | <i>Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?</i>   |

### **Impact T-1**

**Operation of the AVR System by the Town following acquisition would contribute to continued trips on the local street network; however, given that operation and maintenance activities would be similar to those performed under existing operations and no expansion of the system is proposed, the proposed Project would result in little to no increase in traffic and would not degrade LOS at any intersection when compared to baseline conditions. Therefore, these impacts would be Class III, less than significant.**

Maintenance activity would be required in order to operate and maintain the water supply system; therefore, the proposed Project would result in continued vehicle trips throughout the Project Area in order to operate and maintain the water supply system. The system would continue to be operated out of the existing AVR System O&M facility, and no change to the system's existing size and coverage is included as part of the proposed Project. Given that operation and maintenance activities would be similar to existing activities under the current ownership, the proposed Project would not increase the length, distribution, or number of truck trips required to operate and maintain the water supply system, and therefore would not result in increased traffic on local roadways and at existing intersections.

The continuation of existing activities would include the continuation of an estimated 154 vehicle trips per day to and from the O&M facility to locations throughout the town. These trips would be spread throughout the day and across the Project Area's street system, rather than concentrated on any one roadway in any one hour. The roadways and intersections in close proximity to the maintenance and operation facility would experience the most trips from this activity, with most vehicles traveling through the intersection of Navajo Road at Ottawa Road, traveling north or south on Navajo Road, and then traveling in various directions from there. The segment of Navajo Road between SR-18 and Nisqually Road currently supports 15,100 trips and has a capacity of 40,500 trips, and therefore has ample capacity to accommodate vehicle trips associated with operation and maintenance of the system.

The closest intersection to the O&M facility with a LOS D or lower is Navajo Road at Nisqually Road, which operates at LOS D during the AM peak hour. As less than half of the service area



and AVR System facilities are south of the O&M facility, this intersection is expected to experience less than half of the number of trips that arrive to and depart from the facility each day, amounting to a maximum total of approximately 77 vehicle trips through this intersection throughout the day, with a maximum of 20 trips occur during AM peak, i.e. half of the employee trips to the site. As these trips are currently occurring under existing conditions, the proposed Project is not expected to contribute to an increase in traffic at this or any other intersections. Even assuming that all of the vehicle trips to and from the O&M facility were new to the street system, and that half of employee arrival trips (20 trips) passed through the intersection of Navajo Road at Nisqually Road during the AM peak hour, and that the first 19 service trips back out of the O&M facility occurred during the AM peak, the total increase would amount to a maximum of 39 vehicles trips per day during the AM peak at this intersection. Given that the equivalent of 1,498 passenger vehicles currently passes through this intersection during the AM peak, this would amount to an increase of 2.6 percent, which would not be sufficient to result in a decrease in LOS at this intersection during the AM peak hour (Town of Apple Valley, 2008).<sup>3</sup> Therefore, and even making a worst-case scenario assumption that all operational trips are “new” and generated by the Project, the proposed Project would still not result in traffic impacts that would degrade the LOS at any intersections when compared to baseline conditions or conflict with an applicable plan, ordinance or policy, and this impact would be less than significant.

**Mitigation Measures.** No mitigation is required.

**Significance After Mitigation.** Impacts would be less than significant without mitigation.

### **c. Cumulative Impacts.**

Cumulative development in Apple Valley and surrounding jurisdictions would add residential and non-residential development and resulting traffic to local roads and intersections. The EIR for the Town’s General Plan includes a region-based analysis of potential traffic impacts to roadways and intersections in the Town as a result of full buildout of the General Plan as well as development under the General Plans of the surrounding jurisdictions. This analysis considers both projected increases in traffic as well as proposed improvements to the circulation system. The analysis found that under the cumulative development scenario, required levels of service would be maintained at all intersections except Dale Evans Parkway and Corwin Road, which would operate at LOS E at buildout during the AM peak without future mitigation from development in the area. However, the General Plan requires that all intersections operate at LOS D or better and that mitigation be incorporated for any new development that would potentially contribute to a loss of service at an impacted intersection; therefore, this intersection would be maintained at an acceptable level of service. The one intersection that is currently operating below LOS D, Kiowa Road at Sitting Bull Road, is projected to improve to LOS C during the AM and PM peak hours under full buildout of the General Plan. Additionally, the Town is currently planning to construct a traffic signal at this intersection, using funds from the

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<sup>3</sup> The traffic study for the Town’s General Plan EIR evaluated traffic volumes based on Passenger Car Equivalents (PCE), which were calculated by applying a PCE factor of 1.5 for light-duty trucks, 2.0 for medium-duty trucks with three axles, and , 3.0 for heavy-duty trucks with four or more axles.



Town's fair share fee program as new development is approved in the vicinity of the intersection.

As no new development would occur as a result of the proposed Project, it would contribute the same number of vehicle trips to the local road network as under existing conditions. Therefore, it would not contribute any additional traffic to these intersections or any other intersections or roadways in the town. Thus, the proposed Project would not result in a cumulatively considerable contribution to cumulatively significant traffic impacts under either existing or future conditions in the Project Area.



## **4.7 UTILITIES & SERVICE SYSTEMS**

This section discusses potential impacts to utilities, including water supply, wastewater collection and treatment, and stormwater conveyance facilities. Impacts to public services such as police and fire protection and schools are discussed in Section XIV, *Public Services*, of the Initial Study (see Appendix A).

### **4.7.1 Setting**

#### **a. Water Supply**

The Apple Valley Ranchos Water Company provides water to the Project Area. As described in Section 2.4.1, *Water Supply Source*, of this EIR, the Apple Valley Ranchos Water Company obtains its water supply from local groundwater resources in the Mojave Groundwater Basin (Upper Mojave River Valley Groundwater Basin), as well as imported State Water Project (SWP) surface water purchased from the Mojave Water Agency (MWA), which is used to supplement produced groundwater supplies, when available, and ensure consistency with the standing Adjudication Judgment (discussed in Section 4.3, *Hydrology and Water Quality*). The California Department of Water Resources (DWR) allocates 85,800 acre-feet per year (AFY) of “Table A” SWP water to the MWA (MWA, 2014). Table A water is the annual portion of SWP water allocated to a SWP contractor, although the actual amount of SWP delivered depends upon factors such as climate and other SWP obligations. The variability in SWP water supplies affects the ability of MWA to meet overall water supply needs in MWA’s service area; however, the Apple Valley Ranchos Water Company has the option to use SWP water, when available, to recharge the local groundwater basin in both wet and dry years, in order to provide water supply stability to the adjudicated basin (Apple Valley Ranchos Water Company, 2010).

Over the last decade, annual water supply for the Town of Apple Valley has varied greatly. The maximum amount of water Apple Valley Ranchos Water Company delivered in a single year was approximately 17,600 acre-feet in the 2006/07 water year; however, in the 2013/14 water year production was down to approximately 10,500 acre-feet. The reduction in water supply can be attributed to a combination of the economic downturn following 2007, as well as the effects of ongoing drought and conservation efforts in the State of California (Apple Valley Ranchos Water Company, 2010; Mohave Water Agency, 2015).

#### **b. Wastewater Collection and Treatment**

The Town of Apple Valley owns, operates, and maintains its own wastewater collection system. Wastewater is collected via force main lines and gravity sewer lines, which convey flow to the Victor Valley Waste Water Reclamation Authority (VWVRA) treatment plant in Victorville via two regional intercept lines. The VWVRA is a joint powers authority that includes the Town of Apple Valley, City of Hesperia, City of Victorville, and San Bernardino County (Town of Apple Valley, 2009).

The Town of Apple Valley maintains its sewer system per a Sewer System Master Plan Update, which includes a “Long-Term Routine Maintenance Program” including specifications for testing, inspections, and repairs, and also accounting for projected growth in the area. The



Sewer System Master Plan Update indicates that the existing sewer system has adequate capacity to convey flows during dry-weather conditions, but that future build-out in the area will require system expansion to accommodate the need for additional sewer connections, as currently only about 30 percent of development in the area is connected to sewer facilities, with remaining development served by on-lot septic systems (Town of Apple Valley, 2013).

### **c. Stormwater Conveyance**

The Town maintains local stormwater management facilities throughout Apple Valley, including lined and unlined drainage channels. There are also several existing flood control channels within the town, and several more proposed. Stormwater conveyance facilities also include a number of all-weather road crossings, which are considered critical structures because they provide access in case of emergency. The existing stormwater conveyance system is maintained under a Master Plan of Drainage (Town of Apple Valley, 2009).

### **d. Regulatory Setting**

The regulatory setting for Utilities and Service Systems is comprised of policies defined in the Apple Valley General Plan (2009), as listed below.

*Water.* Chapter III, *Environmental Resources*, of the Apple Valley General Plan (2009) includes the following policies relevant to water supply.

**Policy 1.A** The Town shall coordinate with the various domestic water service providers to ensure that local and regional domestic water resources and facilities are protected from over-exploitation and contamination.

**Policy 1.B** To ensure that overall and per capita water demand from new development is reduced, the Town shall continue to require the use of drought-tolerant, low water consuming landscaping, intelligent irrigation controllers, and other water-conserving strategies and technologies in irrigated areas.

**Policy 1.C** The Town shall continue to coordinate with the Building Industry Association and other members of the building industry to encourage the use of faucets, showerheads and appliances that exceed Titles 20 and 24 water efficiency requirements.

**Policy 1.D** To the greatest extent practicable, the Town shall direct new development to provide irrigation systems that are able to utilize reclaimed water, when available, for use in common area and streetscape landscaping.

**Policy 1.H** The Town shall confer with appropriate water agencies and purveyors, as necessary, to assure adequate review and mitigation of potential impacts of proposed development on local water resources.

**Policy 1.I** Existing development shall be encouraged to institute water conservation measures, including the reduction in turf areas and increased use of



native and drought-tolerant planting materials, as well as the installation of efficient irrigation systems and controllers.

*Wastewater Collection and Treatment.* Chapter V, *Public Services and Facilities*, of the Apple Valley General Plan (2009) includes the following policy relevant to stormwater conveyance.

**Policy 1.B** The Town shall continue to require sewer connection where feasible at the time that a lot is developed, or when service becomes available.

In addition, Chapter III, *Environmental Resources*, of the Apple Valley General Plan (2009) includes the following policy relevant to wastewater collection and treatment.

**Policy 1.E** To the greatest extent practicable, the Town shall continue to require new development to connect to the community sewer system. Where sewer service is not available and lots are created of less than one (1) acre in size, the Town shall require the installation of “dry sewers” and the payment of connection fees for future sewer main extensions.

*Stormwater Conveyance.* Chapter IV, *Environmental Hazards*, of the Apple Valley General Plan (2009) includes the following policies relevant to stormwater conveyance.

**Policy 1.A** Upgrade the Town's local and regional drainage system through proactive planning and coordination with other responsible agencies.

**Policy 1.B** Consistent with their functional requirements, major drainage facilities shall be designed to maximize their use as multi-purpose recreational or open space sites. Major drainage facilities include the Mojave River, debris basins, the Apple Valley Dry Lake, and Master Plan flood control channels.

**Policy 1.D** All new development within the Town shall be required to incorporate adequate flood mitigation measures, including the adequate siting of structures located within flood plains, grading that prevents adverse drainage impacts to adjacent properties, and on-site retention of runoff.

**Policy 1.E** Assure that adequate access is maintained during major storm events, and that safe all-weather crossings over drainage facilities and flood control channels are provided where necessary.

In addition, Chapter III, *Environmental Resources*, of the Apple Valley General Plan (2009) includes the following policy relevant to stormwater conveyance.

**Policy 1.F** Consistent with community design standards and local and regional drainage plans, the Town shall provide development standards and guidelines for the construction of on-site storm water retention facilities.





## 4.7.2 Impact Analysis

### a. Methodology and Significance Thresholds

Based on the Town's CEQA Checklist and Appendix G of the State CEQA Guidelines, impacts to utilities and service systems would be considered potentially significant if the proposed Project would meet one of the following significance thresholds:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?
- Comply with federal, state, and local statutes and regulations related to solid waste?

As described in the Initial Study, provided as Appendix A, the proposed Project would not involve physical construction or increase the size of the existing water system and therefore, the Project itself would not result in an increase in solid waste generated by operation of the water supply system. In addition, the proposed Project is not expected to result in direct or indirect population growth, and would not increase solid waste generation. Therefore, significance thresholds (f) and (g) are not assessed in this EIR analysis.

### b. Project Impacts and Mitigation Measures.

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| <i>Threshold</i> | <i>Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.</i>   |
| <i>Threshold</i> | <i>Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.</i>                            |
| <i>Threshold</i> | <i>Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.</i> |



**Impact UTIL-1**    **The proposed Project would not change the nature or amount of water used or the amount of wastewater generated in the Project area, and would not result in the exceedance of Regional Water Quality Control Board wastewater treatment requirements. Because the proposed Project would not result in an increased demand for potable water or the generation of substantial additional wastewater, no increase in capacity of the existing water or wastewater conveyance and treatment system which serve the Project Area would be required. Impacts would be Class III, less than significant.**

As described in the Initial Study Section XVII, *Utilities and Service Systems* (see Appendix A), one of the objectives of the proposed Project is to provide greater local control over water pricing. Section 4.3, *Hydrology and Water Quality*, of this EIR describes that although water usage/demand may fluctuate in response to changes in water pricing, such fluctuations are not reasonably foreseeable and, ultimately, compliance with the Adjudication Judgment for the local ground water basin (Upper Mojave River Valley Groundwater Basin) would restrict the amount of groundwater that may be pumped, and would require the provision of Replacement water to offset any water supply required in excess of what is allowed per the Adjudication Judgment. In addition, laws and regulations such as the California Water Conservation Act of 2009 require specific goals to be set and milestones achieved towards reducing per capita water usage. With municipalization of the now privately-owned AVP System under the proposed Project, an Urban Water Management Plan (UWMP) would continue to be updated every five years, as required for an urban water supplier with 3,000 or more service connections or supplying 3,000 or more acre-feet of water per year. The existing UWMP includes goals, measures, procedures, and status reports for achieving reduced per capita water demand and ensuring water supply reliability. Future UWMPs for the AVR System, whether prepared by the current owner or the Town as proposed under this Project, would be required to provide the same information to demonstrate how the required per capita water usage reduction will be achieved. Therefore, as discussed in Section 4.3 of this EIR, water demand would not substantially increase as a result of the proposed Project.

As the proposed Project would continue to supply water to the same customer base for the same general purposes, it would not result in substantial changes to the way in which water is used in the service area and, therefore, would not directly influence the amount of wastewater generated in the service area. For example, residential customers would continue to dedicate roughly the same percentage of their water use to various activities such as watering plants, which does not result in wastewater flows, and washing dishes, which results in flows to the wastewater system. Therefore, the proportion of the water supply that is disposed of as wastewater after use would remain constant. Given that there would not be a substantial change to water demand and the proportion of water that enters the wastewater system would remain constant, wastewater generation also would not substantially increase as a result of the Project.

In addition, the Project does not propose any water treatment facilities, new water or sewer connections and would not alter the rates or characteristics of existing wastewater discharges in



the Project area; therefore the Project would not alter the status of compliance of existing wastewater discharges with wastewater treatment requirements of the Lahontan Regional Water Quality Board (RWQCB), and would not result in an exceedance of the capacity of a wastewater treatment provider. Similarly, because the Project would not substantially alter water supply demands or associated wastewater discharge rates, the proposed Project also would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. Potential impacts associated with water treatment and wastewater generation, quality, and treatment would be less than significant.

**Mitigation Measures.** No mitigation is required.

**Significance After Mitigation.** Impacts would be less than significant without mitigation.

*Threshold      Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.*

**Impact UTIL-2      The proposed Project would not necessitate upgrades to existing stormwater conveyance facilities. Impacts associated with stormwater generation and conveyance would be Class III, less than significant.**

As previously discussed, the proposed Project would not involve construction of a new or expanded water system or alteration of the existing water system. Ongoing operation and maintenance activities would continue under the proposed Project, using the same access roads and maintenance yards that are currently used to operate and maintain the system. As described in the Apple Valley General Plan (2009) and reflected in the policies listed above, the existing stormwater drainage system in the Project Area is operated and maintained to function appropriately with existing and anticipated load. The proposed Project would not discharge water to the ground surface or alter the rate, amount, or quality of existing stormwater discharge in the Project Area. In summary, the proposed Project would not substantially affect existing stormwater drainage patterns in the area, and would therefore not require the construction or expansion of stormwater drainage facilities. Impacts would be less than significant.

**Mitigation Measures.** No mitigation is required.

**Significance After Mitigation.** Impacts would be less than significant without mitigation.



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| <i>Threshold</i> | <i>Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.</i> |
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**Impact UTIL-3** The Apple Valley Ranchos Water Company has determined that there is sufficient water supply available to meet water demands in the Project Area through the year 2035. The proposed Project would not result in substantial new or increased water demands in the Project Area, and any new operator of the water system would be required to comply with the California Water Conservation Act of 2009 and requirements for decreased urban water consumption included therein. Therefore, the proposed Project would not require or result in the construction of new water facilities or expansion of existing facilities or require new or expanded entitlements. Potential impacts to water supply would be Class III, less than significant.

The Initial Study (Section XVII, *Utilities and Service Systems*) provided as Appendix A explains that certain types of projects that are subject to CEQA are required to prepare a Water Supply Assessment (WSA) which assesses water supply reliability under varying drought conditions over a 20-year horizon. Section 4.3, *Hydrology and Water Quality*, of this EIR further explains that projects located within an adjudicated groundwater basin are exempt from preparing a WSA, and the annual Watermaster reports required per the Adjudication Judgment fulfill the same purposes of a WSA. In addition, the 2010 UWMP for the Apple Valley Ranchos Water Company assesses water supply availability to the Project Area, accounting for local groundwater supplies as well as imported surface water supplies, and with consideration to varying climatic (drought) conditions over a 25-year planning horizon. The 2010 UWMP determined that there are adequate water supplies to meet demands in the Project area during average, single-dry, and multiple-dry years through the Year 2035 (Apple Valley Ranchos Water Company, 2010). Furthermore, as discussed in the preceding impact discussions as well as in Section 4.3, *Hydrology and Water Quality*, the proposed Project would not substantially increase water demand in the Project Area and thus would not require new or expanded water entitlements.

Similarly, because the Project would not substantially alter water supply demands or approve any uses that might alter water supply demands, the proposed Project also would not require or result in the construction of new water treatment facilities or expansion of existing facilities. Operation and maintenance of the water system would require occasional repair or upgrade of existing facilities, but such actions are typical of the operation and maintenance of a water system, would be required regardless of the ownership of the system and would not constitute the construction or expansion of new or existing facilities. Potential impacts associated with water supply availability would be less than significant.

**Mitigation Measures.** No mitigation is required.

**Significance After Mitigation.** Impacts would be less than significant without mitigation.



### **c. Cumulative Impacts.**

Cumulative development in the Project Area would add residential and non-residential development to the Project Area, as discussed below by impact area.

*Water.* Cumulative buildout in the Project Area could introduce new and expanded water demands. These future water demands, including development projections based on allowable land uses in the Project Area, are accounted for in the current 2010 UWMP, which estimates that the Apple Valley Ranchos Water System's service area will grow at a rate of just over two percent per year from 2010 through 2035 (Apple Valley Ranchos Water Company, 2010). The 2010 UWMP determined that there is adequate water supply to the Project Area to meet demands through 2035, including under varying climatic (drought) conditions. As development in the Project Area expands as predicted, it will become necessary to add additional connections to the existing water system. The exact location and connection would need to be determined at the time development is proposed, and would be subject to subsequent environmental review. Compliance with Municipal Code and General Plan policies (including those listed above) would ensure that future connections to the water system are appropriately planned, designed, and implemented to avoid adverse effects. As discussed, the proposed Project would not contribute to future increases in demand for water in the Project Area; future increased water demands would occur as a result of cumulative developments, regardless of the proposed Project, i.e. transfer of ownership of the AVR System. Therefore, the proposed Project's contribution to cumulative impacts to water supply and water conveyance facilities would not be cumulatively significant.

*Wastewater.* Similar to how future cumulative development in the Project Area could increase water demands, wastewater generation may also increase, thereby introducing a need for new wastewater conveyance facilities. As described in Section 4.7.1, *Setting*, above, the Town of Apple Valley maintains its sewer system per a Sewer System Master Plan Update, which includes a "Long-Term Routine Maintenance Program" including specifications for testing, inspections, and repairs, and also accounting for projected growth in the area. The Sewer System Master Plan Update considered land use data from the 2009 Apple Valley General Plan and local Specific Plans that would be served by the Town in order to generate future flow predictions and buildout requirements. Based on the modeling results, hydraulic deficiencies for the projected growth were identified, and the need for new pipes to support growth projections was identified (Town of Apple Valley, 2013). Future upgrades to existing wastewater facilities would become necessary regardless of the transfer of water system ownership that would occur under the proposed Project. Compliance with Municipal Code and General Plan policies (including those listed above) would ensure that future connections to the wastewater system are appropriately planned, designed, and implemented to avoid adverse effects. The proposed Project would not contribute to any future increases in the need for wastewater treatment or conveyance. Therefore, the proposed Project's contribution to cumulative impacts to wastewater treatment and conveyance facilities would not be cumulatively considerable.

*Stormwater Conveyance.* Cumulative development resulting from buildout in the Project Area could increase the amount of impervious surfaces and increase the rate and quantity of stormwater runoff. Individual developments would be required to incorporate appropriate



drainage systems, in compliance with Municipal Code and General Plan policies. It is anticipated that future development in the Project Area would utilize existing stormwater conveyance infrastructure in the Project Area. The Apple Valley Master Plan of Drainage included in the 2009 Apple Valley General Plan (Chapter IV, Environmental Hazards) specifies future planned upgrades to the area's existing stormwater drainage facilities; as with water and wastewater facilities, stormwater drainage facilities in the Project Area would be expanded and upgraded regardless of the water system ownership transfer that would occur under the proposed Project. As discussed above, the proposed Project would not contribute to demands on stormwater conveyance infrastructure; therefore, the proposed Project's contribution to cumulative impacts to stormwater infrastructure would not be cumulatively considerable.



## 4.8 MANDATORY FINDINGS OF SIGNIFICANCE

CEQA requires preparation of an EIR when certain specified impacts may result from construction or implementation of a project. An EIR has been prepared for the proposed Project, which fully addresses all of the Mandatory Findings of Significance, as described below.

To determine whether a proposed project would have a significant impact with regard to a Mandatory Finding of Significance, Appendix G of the *State CEQA Guidelines* questions whether a project would:

- a. Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?
- b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current project, and the effects of probable future projects.)
- c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

As discussed in the Initial Study provided as Appendix A to this EIR, the proposed Project would not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. Therefore, the first threshold for Mandatory Finding of Significance listed above is not addressed further in this section.

Additionally, *State CEQA Guidelines* Section 15065(a) requires a finding of significance if a project "has the potential to substantially degrade the quality of the environment." In practice, this is the same standard as a significant effect on the environment, which is defined in *State CEQA Guidelines* Section 15382 as "a substantial or potentially substantial adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance."

This EIR, in its entirety, identifies and characterizes potential environmental effects associated with implementation of the proposed Project, including direct, indirect, and cumulative impacts in the following resource areas:

- Air Quality;
- Greenhouse Gas Emissions;
- Hydrology and Water Quality;
- Land Use and Planning;



- Noise;
- Transportation and Traffic; and
- Utilities and Service Systems.

This EIR discloses all potential environmental impacts associated with the Project and the level of significance of anticipated impacts. The Initial Study included as Appendix A to this EIR evaluated all environmental resource areas identified on the Town's CEQA Checklist and the CEQA Guidelines Appendix G Checklist, and determined that impacts associated with those resource areas listed above could be potentially significant and are therefore assessed in this EIR; the Initial Study determined that impacts associated with resource areas not listed above either would not occur, or would be less than significant.

According to the Initial Study (Section XVIII), the last two thresholds in the Mandatory Findings of Significance section would be evaluated in this EIR. That discussion is contained below.

#### **4.8.1 Cumulative Impacts**

Cumulative impact analyses are only provided for those resource areas listed above and analyzed in full in this EIR; cumulative impact analyses are not provided for those resource areas which the Initial Study determined would be affected by No Impact or Less Than Significant impacts as a result of the proposed Project.

*State CEQA Guidelines Section 15065* states that a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has potential environmental effects that are individually limited but cumulatively considerable. As defined in *State CEQA Guidelines Section 15065(a)(3)*, cumulatively considerable means "that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." Cumulative impacts are addressed for each of the environmental resource areas listed above, as provided in Sections 4.1 through 4.7 of this EIR. In total, those analyses determine that the proposed Project would not have environmental effects that are individually limited but cumulatively considerable. Therefore, the proposed Project would have a less than significant impact in this regard.

#### **4.8.2 Impacts on Human Beings**

As required by *State CEQA Guidelines Section 15065(a)(4)*, a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to cause substantial adverse effects on human beings, either directly or indirectly. Under this standard, a change to the physical environment that might otherwise be minor must be treated as significant if humans would be significantly affected. This factor relates to adverse changes to the environment of human beings generally, and not to effects on particular individuals. While changes to the environment that could indirectly affect human beings would be represented by all of the designated CEQA issue areas, those that could directly affect human beings include air quality, greenhouse gas emissions, hydrology and water quality, noise, transportation and traffic, and utilities and service systems, each of which is addressed in this EIR, as follows: Section 4.1 (Air Quality), Section 4.2 (Greenhouse Gas



Emissions), Section 4.3 (Hydrology and Water Quality), Section 4.4 (Noise), Section 4.5 (Transportation and Traffic), and Section 4.6 (Utilities and Service Systems). According to these analyses, the proposed Project would have less than significant impacts on human beings, and therefore would not have the potential to cause substantial adverse effects on human beings.

