

4.2 Agriculture and Forestry Resources

The purpose of this Section is to identify existing agriculture and forest resources within the Project area, analyze potential agriculture and forest resources associated with the development of the proposed Project, and identify mitigation measures that would avoid or reduce the significance of any identified impacts. This Section also addresses potential conflicts between the proposed Project and ongoing agricultural activities on and around the Project site.

Information presented in this Section is based on site photographs and field visits, local planning documentation, and operational data from ongoing agricultural operations. Thresholds of significance for the impact analysis are derived from Appendix G of the 2011 *CEQA Guidelines*. In 2010, the *CEQA Guidelines* were amended to change the title of the “Agricultural Resources” Section to “Agriculture and Forestry Resources,” and the thresholds were expanded to include potential impacts on forest land and timberland. While these thresholds are listed in Section 4.2.3 (Significance Threshold Criteria), the Project site does not contain forest or timberland-related resources.

4.2.1 Environmental Setting

State

More than one-quarter of California’s landmass is used for agriculture. Just over half of the 27.6 million acres of agricultural land is pasture and rangeland and about 40 percent is cropland.¹ Agriculture in California generated nearly 36.6 billion in cash receipts in 2007. California has been the nation’s top agricultural state in terms of cash receipts every year since 1948 and has gradually increased its share of U.S. farm cash receipts from 9.5 percent in 1960 to 12.8 percent in 2007. Including multiplier effects, California farms and closely related processing industries generate 7.3 percent of the State’s private sector labor force and account for 5.6 percent of the State labor income (2002). For every \$1 billion in farm sales, there are 18,000 jobs created in the State, about 11,000 in the farm sector itself plus about 7,000 in other industries. Agricultural employment has been reduced in recent years as result of the current recession as well as by fluctuations in the availability of water for irrigation and the conversion of agricultural land to other developed uses. In 2009 the State’s Employment Development Department (EDD) estimated that agriculture employed a seasonally adjusted average of 375,800 people, compared to 390,900 in 2008.²

¹ Agricultural Issues Center, University of California Davis, *The Measure of California Agriculture*, August 2009, page 1.

² California Employment Development Department, Labor Market Information Division, *Detailed Agricultural Employment and Earnings Data 2009*, www.edd.ca.gov, accessed June 2010; California Employment Development Department, Labor Market Information Division, *California’s Agricultural Employment Report 2008*, www.edd.ca.gov, accessed June 2010.

Regional

The Project is located in the southeastern portion of California, in the County of San Bernardino County. The County estimates that approximately 90 percent of the County's land area is desert.³ Agriculture accounts for approximately 41,793 acres, or 2.32 percent, of County land area and has decreased over time. Despite the small land area devoted to agriculture, in 2009, the value of agricultural production in San Bernardino County was approximately \$355,379,500, and its top five crops (milk, eggs, cattle and calves, alfalfa, and replacement heifers) generated approximately \$94,785,670.⁴ The San Bernardino National Forest, located more than 70 miles southwest of the Project site, covers approximately 823,000 acres in the southwestern region of the County. The San Bernardino National Forest contains wilderness areas, visitor centers, recreation residences, campgrounds, resorts, and target shooting ranges and is home to 71 threatened, endangered, or sensitive animal species and 85 plant species.⁵

Local

The San Bernardino County General Plan agricultural land use designations for the Project area and the surrounding areas are shown in **Figure 4.2-1**. All of the lands within the Project site and vicinity are designated in the San Bernardino County General Plan as Resource Conservation (RC) areas with the exception of 9,600 acres in the northern portion of the Cadiz Property near Cadiz, California which are designated as Agriculture (AG). For a discussion of the applicability of the County General Plan and Development Code policies to the Project, please see Section 4.10.3 (*Consistency with Land Use Plans*) of the Land Use and Planning Section. The AG designation provides for commercial agricultural operations, agricultural support services, rural residential uses, open space and recreation uses, and similar and compatible uses. The AG designation in Cadiz, California was made in 1993 upon approval by the County of San Bernardino Board of Supervisors of the 9,600-acre Cadiz Valley Agricultural Development Project.⁶ Active agricultural cultivation at the Cadiz AG-designated lands currently covers 1,600 acres (Sections 21, 27, and 33) (see **Table 4.2-1**).

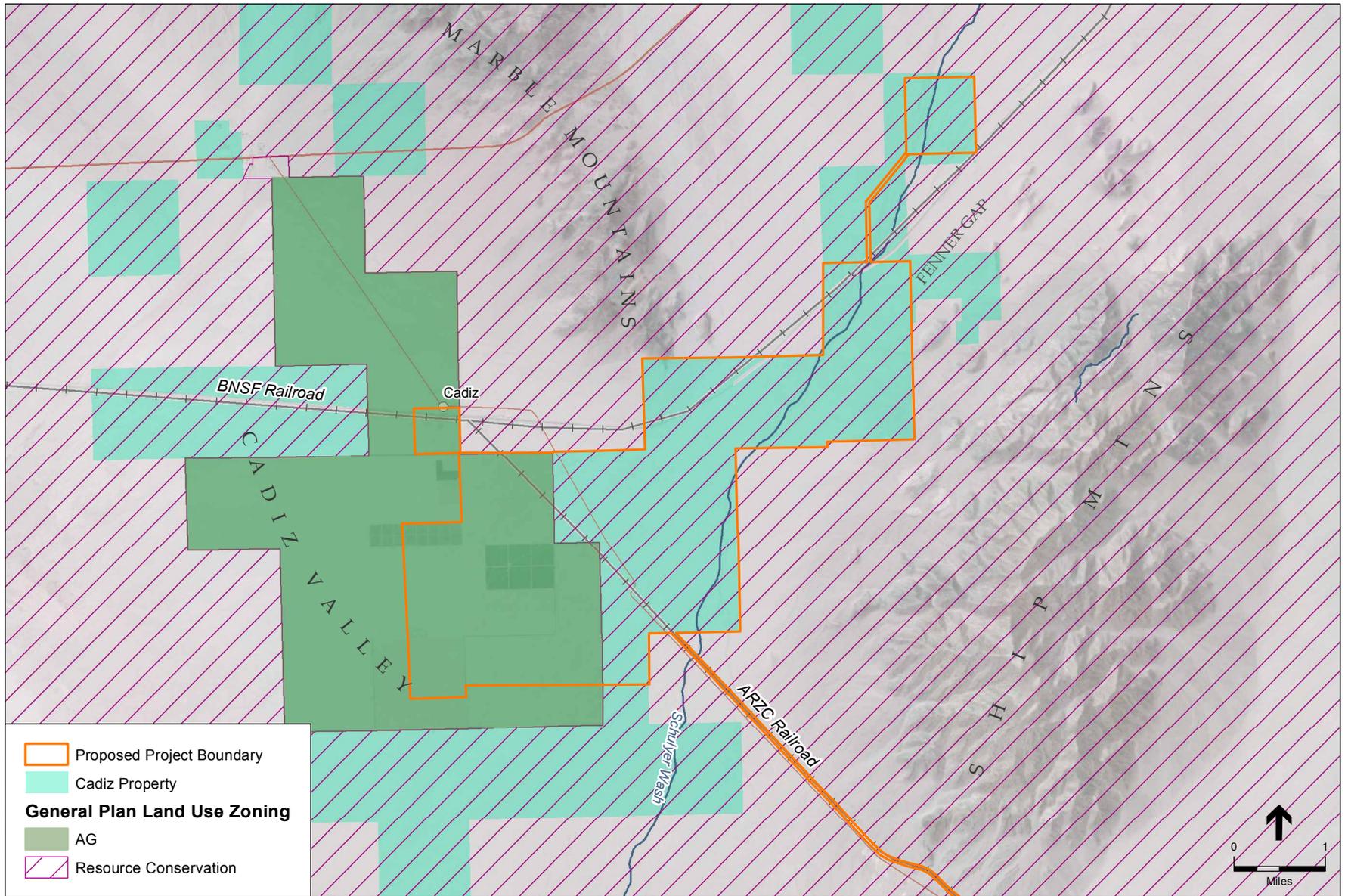
Approximately 2,295 acres of the 9,600 acres of AG-designated lands are located within the proposed wellfield. Only 240 acres located within the proposed wellfield development area are engaged in active agricultural cultivation as of November 2011.

³ County of San Bernardino, *San Bernardino County 2007 General Plan Program Final Program Environmental Impact Report*, February 2007, page VI-1.

⁴ California Farm Bureau Federation, *San Bernardino County Farm Bureau*, <http://www.cfbf.com/counties/?id=36>, accessed October 2010.

⁵ U.S. Department of Agriculture, Forest Service, San Bernardino National Forest, *About the Forest*, www.fs.fed.us/r5/sanbernardino/, accessed October 2010.

⁶ Metropolitan Water District of Southern California and Bureau of Land Management, *Cadiz Groundwater Storage and Dry-Year Supply Program Final Environmental Report and Final Environmental Impact Statement, Volume I*, September 2001, page 5-1.



SOURCE: Bing Maps, 2010; ESRI, 2010; Cadiz Inc., 2010; San Bernardino Co., 2010; and ESA, 2010

Cadiz Valley Water Conservation, Recovery, and Storage Project

Figure 4.2-1

Agricultural Zoning in the Project Area

Cadiz agricultural operations receive water from seven existing wells within the AG lands. An extensive irrigation system consisting of pipes and hoses delivers water directly to each individual plant or tree. The grapes/raisins and row crops are irrigated with water-saving drip systems, and the citrus trees are irrigated with microspray emitters. Generally, agricultural production responds to market conditions such as changes in the demand for specific agricultural products at specific times of the year.

**TABLE 4.2-1
CURRENT AGRICULTURAL CULTIVATION IN THE PROJECT AREA**

Crop	Acres
Black Seedless Grapes	35
Red Flame Seedless Grapes	125
Lisbon and Eureka Lemons	370
Row Crops/ Fallow	1,070
TOTAL	1,600

SOURCE: Cadiz Inc., 2011.

4.2.2 Regulatory Framework

Federal

U.S. Forest Service—Department of Agriculture

Under authority of the Department of Agriculture, the U.S. Forest Service manages the majority of federal lands within the mountain regions of San Bernardino County. These are mostly located within the Angeles and San Bernardino National Forests along the southwestern boundary of San Bernardino County. No U.S. Forest Service lands are located in the Project vicinity.

Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) of 1981 is intended to minimize the unnecessary conversion of farmland into nonagricultural uses. The FPPA established the Farmland Protection Program (FPP) and a Land Evaluation and Site Assessment (LESA) system. The Natural Resources Conservation Service administers the FPP, which is a voluntary program that provides funds to help purchase development rights to keep productive farmland in agricultural use. The program provides matching funds to state, local, and tribal government entities and nongovernmental organizations with existing farmland protection programs to purchase conservation easements. Participating landowners agree not to convert the land to nonagricultural uses and to retain all property rights for future agriculture. A minimum 30-year term is required for conservation easements and priority is given to applications with perpetual easements. The

Natural Resources Conservation Service provides up to 50 percent of the fair market value of the easements.⁷

State

California Important Farmland Inventory System and Farmland Mapping and Monitoring Program

The California Department of Conservation, Farmland Mapping and Monitoring Program (FMMP) identifies lands that have agricultural value and maintains a statewide map of agricultural lands in its Important Farmlands Inventory (IFI). IFI classifies land based upon its productive capabilities, which is based on many characteristics, including fertility, slope, texture, drainage, depth, salt content, and availability of water for irrigation. The State employs a variety of classification systems to determine the suitability of soils for agricultural use. The two most widely used systems are the Capability Classification System and the Storie Index. The Capability Classification System classifies soils from Class I to Class VIII based on their ability to support agriculture with Class I being the highest quality soil. The Storie Index considers other factors such as slope and texture to arrive at a rating.

The California Department of Conservation, Division of Land Resource Protection maintains the FMMP and monitors the conversion of farmland to and from agricultural use through its Important Farmland Inventory System. Farmlands are divided into the following categories based on their suitability for agriculture:

Prime Farmland. This land has the best combination of physical and chemical characteristics for crop production. When treated and managed, its soil quality, growing season, and irrigation supply produce sustained high crop yields.

Unique Farmland. This land does not meet the criteria for Prime Farmland or Farmland of Statewide Importance, but has produced specific crops with high economic value.

Farmland of Statewide Importance. This is land that does not qualify as Prime Farmland but has a good combination of irrigation and physical and chemical characteristics for crop production.

Farmland of Local Importance. This land is either currently producing crops or has the capability to produce crops, but does not meet the criteria of the categories above.

Grazing Land. This is land with vegetation that is suitable for grazing livestock.

Other Lands. This land does not meet the criteria of any of the other categories.

Additional categories used in the FMMP mapping system are “urban and built-up lands,” and “lands committed to nonagricultural use.” The mapping system uses a minimum mapping unit size of 10 acres. FMMP classifications are based on soil quality and irrigation status.⁸ They differ

⁷ U.S. Department of Agriculture, Natural Resources Conservation Service, *Farmland Protection Policy Act*, <http://www.nrcs.usda.gov/programs/fppa/>, accessed October 2010.

⁸ California Department of Conservation, *Farmland Mapping & Monitoring Program*, <http://conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx>, accessed October 2010.

from general plan and zoning designations because they are used to evaluate the type and amount of farmlands, rather than to designate land-use type or place restrictions on development or use. Instead, the FMMP uses these designations as part of its neutral reporting program that classifies land based on its suitability for agriculture. The FMMP also produces a biannual report on the amount of land converted from agricultural to nonagricultural use. The U.S. Department of Agriculture Soil Conservation Service (SCS), now the Natural Resource Conservation Service (NRCS), has not mapped soils in the Project area; therefore no soils in the area are currently designated as agricultural soils. Similarly, the California Resources Agency's FMMP does not cover the Project area. None of the lands in the vicinity of the Project are designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

Williamson Act

The Williamson Act (California Land Conservation Act of 1965, Section 51200), was adopted in order to encourage the preservation of the State's agricultural lands and to discourage its conversion to urban uses. In order to preserve agricultural uses, this Act established an agricultural preserve contract procedure through which any county or city within the State taxes landowners of Agricultural Preserve contract land at a lower rate using a scale based on the actual use of the land for agricultural purposes, as opposed to its unrestricted market value. In return, the owners guarantee that these properties will remain under agricultural production for a 10-year period. This contract is renewed automatically unless a Notice of Non-Renewal is filed by the owner. In this manner, each agricultural preserve contract (at any given date) is always operable at least 9 years into the future.

Williamson Act contracts can be cancelled earlier than the 10-year period upon approval of the appropriate local jurisdiction, which must make findings that cancellation is in the public interest or is consistent with the purposes of the California Land Conservation Act. Generally, the landowner must also pay a fee equal to 12½ percent of the property value.⁹ Neither the Project site nor the surrounding areas are under Williamson Act contracts.

4.2.3 Impact and Mitigation Analysis

Significance Criteria

Based on the *CEQA Guidelines*, Appendix G, a project may be deemed to have a significant effect on the environment with respect to agricultural and forest resources if it would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- Conflict with existing zoning for agricultural use or a Williamson Act contract;

⁹ California Department of Conservation, *Williamson Act 2006*, <http://www.consrv.ca.gov/dlrp/lca/Pages/Index.aspx>, accessed October 2010.

- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g));
- Result in the loss of forest land or conversion of forest land to non-forest use; or
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

Methodology

The analysis identifies agriculture and forest land use designations in the Project area and assesses the Project's consistency with those designated land uses. The analysis also identifies the Project's potential to affect existing agricultural uses. The analysis does not employ the California Agricultural LESA Model developed by the Department of Conservation since no existing agricultural land or designated Prime or Important Farmland would be converted to non-agricultural uses.

Groundwater Conservation and Recovery Component

Farmland Conversion

Significance Threshold

Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Impact Analysis

Because the NRCS has not mapped soils in the Project area, no soils in the area have been designated as agricultural soils, and the FMMP of the California Resources Agency does not cover the Project area. Therefore, neither the Project site nor the surrounding areas have been designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. A soils study performed on part of the Project site in 1986 found the soils to be predominantly loamy sands and sandy loams. Shallow, naturally cemented soils known as caliche are not known to occur locally in the Project area.¹⁰ Therefore, the Groundwater Conservation and Recovery Component of the proposed Project would result in no impact to Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

Mitigation Measures

None required.

¹⁰ Metropolitan Water District of Southern California and Bureau of Land Management, *Cadiz Groundwater Storage and Dry-Year Supply Program Final Environmental Impact Report and Final Environmental Impact Statement Volume I*, September 2001, page 5-3.

Significance Conclusion

No impact.

Agricultural Zoning or Williamson Act Contract

Significance Threshold

Would the proposed Project conflict with existing zoning for agricultural use or a Williamson Act contract?

Impact Analysis

As described above, 9,600 acres of land in the Project vicinity and 2,295 acres of land within the Project boundaries are zoned for agriculture. The Project would construct extraction wells, pumps and motors, well piping and collector piping, access/maintenance roads, and power distribution facilities on a portion of the lands zoned as AG within the proposed Project site. The wells and the pipelines linking the Project wellfield would be placed outside of and along the edge of the cultivated sections to the maximum extent feasible, in order to avoid long-term impacts to agricultural lands. This is consistent with current zoning of the land and the irrigation system currently in place.

In general, construction of the underground piping and manifold system and power distribution facilities, with minor restrictions along the pipeline corridors to maintain access and for safety reasons, would not preclude lands zoned as AG from continuing to support active agricultural operations. Nor would the Project necessarily eliminate the existing agricultural activities. Agriculture operations may remain active so long as the total groundwater extraction is limited to the 50-year average of 50,000 AFY. Following construction, approximately 0.25 to 0.5 acre around each well would be kept clear for purposes of maintenance and operations, similar to any agricultural well. If agricultural operations are eliminated with implementation of the Project in order to minimize water extractions, or as a result of market conditions, this would not be inconsistent with the agricultural zoning of the property or the current entitlement, which governs the agricultural operation at the property. Therefore, construction and operation of the Project facilities would not conflict with the existing AG zoning.

The proposed Project site and the surrounding areas are not under Williamson Act contracts. Therefore, the Groundwater Conservation and Recovery Component of the proposed Project would not require the cancellation of any Williamson Act contracts.

Mitigation Measures

None required.

Significance Conclusion

Less than significant.

Forest Zoning

Significance Threshold

Would the proposed Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

Impact Analysis

The Project site is not located on or near any forest land, and the proposed Project would not conflict with any existing forest-land zoning. The Groundwater Conservation and Recovery Component of the Project would have no impact on existing zoning of forest land.

Mitigation Measures

None required.

Significance Conclusion

No impact.

Forest Land Conversion

Significance Threshold

Would the proposed Project result in loss of forest land or conversion of forest land to non-forest use?

Impact Analysis

As mentioned above, the proposed Project is not located on any forest land and would not result in the loss of forest land or convert forest land to non-forest use. Therefore, the Groundwater Conservation and Recovery Component of the Project would have no impact on forest land.

Mitigation Measures

None required.

Significance Conclusion

No impact.

Agricultural Uses

Significance Threshold

Would the proposed Project involve other changes in the existing environment which, due to their location or nature, could result in the conversion of Farmland to non-agricultural use or forest

land to non-forest use?

Impact Analysis

The majority of the Project area is undeveloped, with the exception of approximately 1,600 acres of active agricultural lands located in the northwest portion of the Cadiz Property (Sections 21, 27, and 33 of Township 5N, Range 14E). There are currently seven groundwater production wells located in the central portion of the Cadiz Property that supply irrigation water for the existing agricultural operation. The wells are located in Sections 21, 22, 27, 28, and 33 of Township 5N, Range 14E. Historically, approximately 5,000 to 6,000 acre-feet of water has been used on an annual basis to irrigate the agricultural operations. This annual usage was reduced beginning in 2007 in connection with the removal of approximately 500 acres of vineyard that had reached the end of its commercial life. Based on the current crop mix, the agricultural operations are using approximately 1,800 -1,900 acre-feet of water per year. For the Groundwater Conservation and Recovery Component of the Project, all seven wells would be upgraded and diesel engines currently used to power the wells would be converted to natural gas. Five of the seven wells would become part of the Project wellfield manifold system. The existing agricultural operations may be eliminated to ensure that no more than the 50-year average of 50,000 AFY is extracted. However, the agricultural lands would remain zoned for AG and could be returned to agricultural operations at the end of the Project term.

Curtailed agriculture could also result from various other factors, including the economic viability of agricultural products grown at the Cadiz Valley Agricultural Development site, the availability of a farm-worker labor force, climate conditions, and other agricultural considerations such as the presence or absence of pests. In the event agricultural acreage is removed from production, existing provisions contained in the County of San Bernardino Mitigation Monitoring and Compliance Program (SCH #890202) ensures such land is maintained to prevent soil erosion and any potential for wind-mobilized dust. If agricultural activities were curtailed, Cadiz would still be subject to the same soil erosion protection measures. Therefore, potential impacts to agricultural operations would be less than significant.

Mitigation Measures

None required.

Significance Conclusion

Less than significant.

Imported Water Storage Component

This component is analyzed on a programmatic basis.

Farmland Conversion

Significance Threshold

Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Impact Analysis

NRCS has not mapped soils in the Project area, and no soils in the area have been designated as agricultural soils. Therefore, neither the Project site nor the surrounding areas have been designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The Imported Water Storage Component of the Project would have no impact on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

Mitigation Measures

None required.

Significance Conclusion

No impact.

Agricultural Zoning and Williamson Act Contract

Significance Threshold

Would the proposed Project conflict with existing zoning for agricultural use or a Williamson Act contract?

Impact Analysis

As described above, 9,600 acres of land in the Project vicinity and 2,295 acres of land within the Project site are zoned AG. The San Bernardino Development Code defines the AG land-use zoning designation as land that provides sites for commercial agricultural operations, agriculture support services, rural residential uses, and similar and compatible uses. The Imported Water Storage Component of the Project would expand the Project wellfield. Some of the wellfield area may be within lands zoned as AG. The wells and the pipelines linking the Project wellfield would be placed outside of and along the edge of the cultivated sections, to the maximum extent feasible, in order to avoid direct impacts to agricultural lands. Approximately 0.25 to 0.5 acre around each well would be kept clear for purposes of maintenance and operations. As with the Groundwater Conservation and Recovery Component, expansion of the wellfield under the Imported Water Storage Component would not preclude lands zoned as AG, with minor restrictions along the pipeline corridors to maintain access and for safety reasons, from continuing

to support active agricultural operations. The proposed spreading basins and most of the expanded wellfield would be located in areas that are not zoned AG. Therefore, construction and operation of the Project facilities would not conflict with the existing AG zoning.

The proposed Project site and the surrounding areas including along the existing natural gas pipeline alignment are not under Williamson Act contracts. Therefore, the Imported Water Storage Component of the proposed Project would not require the cancellation of any Williamson Act contracts.

Mitigation Measures

None required.

Significance Conclusion

Less than significant.

Forest Zoning

Significance Threshold

Would the proposed Project conflict with existing zoning for, or cause *re-zoning* of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

Impact Analysis

The proposed Project is not located on or near any forest land, and the Project would not conflict with any existing forest-land zoning. The Imported Water Storage Component of the Project would have no impact on existing zoning of forest land.

Mitigation Measures

None required.

Significance Conclusion

No impact.

Forest Land Uses

Significance Threshold

Would the proposed Project result in the loss of forest land or conversion of forest land to non-forest use?

Impact Analysis

As with forest zoning, the proposed Project is not located on any forest land and would not result in the loss of forest land or convert forest land to non-forest use. Therefore, the Imported Water Storage Component of the Project would have no impact on forest land.

Mitigation Measures

None required.

Significance Conclusion

No impact.

Agricultural Uses

Significance Threshold

Would the proposed Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use?

Impact Analysis

As described above, the majority of the Project area is undeveloped, with the exception of approximately 1,600 acres of active agricultural lands located in the northwest portion of the Cadiz Property (Sections 21, 27 and 33 of Township 5N, Range 14E). Approximately 240 acres of land within the Project site are currently farmed. The Imported Water Storage Component would not result in the conversion of any agricultural lands not affected by the Groundwater Conservation and Recovery Component. No additional impacts to agricultural lands beyond those discussed above under the Groundwater Conservation and Recovery Component would result during construction or operation of the Imported Water Storage Component. Impacts are considered less than significant.

Mitigation Measures

None required.

Significance Conclusion

Less than significant.

Mitigation Measure Summary Table

Table 4.2-2 presents the impacts and mitigation summary for Agriculture and Forestry Resources.

**TABLE 4.2-2
 IMPACTS AND MITIGATION SUMMARY**

Proposed Project Impact	Mitigation Measure	Significance
Groundwater Conservation and Recovery Component		
Farmland Conversion	None required	No impact
Agricultural Zoning and Williamson Act Contract	None required	Less than significant
Forest Zoning	None required	No impact
Forest Land Conversion	None required	No impact
Agricultural Uses	None required	Less than significant
Imported Water Storage Component		
Farmland Conversion	None required	No impact
Agricultural Zoning and Williamson Act Contract	None required	Less than significant
Forest Zoning	None required	No impact
Forest Land Conversion	None required	No impact
Agricultural Uses	None required	Less than significant