

## 4.3 AGRICULTURAL RESOURCES

### 4.3.1 INTRODUCTION

This section provides information regarding existing agricultural resources within and adjacent to each of the proposed reclaimed water use areas. Following an overview of the regional and existing setting in **Section 4.3.2** and the relevant federal, state, and local regulations in **Section 4.3.3**, project-related impacts and recommended mitigation measures are presented in **Section 4.3.4**.

As explained in **Section 1.0**, the discussion and analyses in this SEIR tier from the information and conclusions included within the 2006 City of Hollister Domestic Wastewater System Improvement (DWSI) and San Benito County Water District Recycled Water Project (RWP) EIR (2006 EIR). The 2006 EIR described, in general, what potential environmental effects to agricultural resources may be expected from the development of reclaimed water irrigation sites and the extension of water distribution pipelines, and how these impacts are to be addressed and/or mitigated. The 2006 EIR anticipated no significant and unavoidable impacts to agricultural resources resulting from implementation of the DWSI and RWP. Potential impacts to agricultural resources were found to be less than significant through implementation of mitigation measures. This section expands on the discussion of impacts to agricultural resources in the 2006 EIR as it relates specifically to the development of reclaimed water irrigation sites.

### 4.3.2 ENVIRONMENTAL SETTING

Environmental setting information for the DWTP and larger project area is incorporated by reference from Chapter 4.1.2 of the 2006 EIR (refer to Section 1.3 of this SEIR).

#### Regional Setting

The project area is located within the inland agricultural region of Northern San Benito County. According to the Department of Conservation (DOC) Farmland Mapping and Monitoring Program (FMMP) in 2004, the total important farmland in San Benito County consisted of 71,563 acres. Agricultural land uses in the project area vicinity include irrigated row crops, orchards, and rangeland. Although agricultural related operations continue to be one of the primary economic activities in the region, the pattern of urban development in the area has resulted in the incremental loss of agricultural land.

#### *Agricultural Lands Classification*

As discussed in the regulatory section of the 2006 EIR, incorporated by reference as discussed below, the FMMP identifies and inventories important farmlands in California. This program delineates Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land. As defined by the FMMP, Prime Farmland is land that has the best combination of physical and chemical characteristics for producing crops. Farmland of Statewide Importance is land other than Prime Farmland that has a good combination of physical and chemical characteristics for the production of crops. Unique Farmland is farmland that does not meet the criteria for Prime and Statewide Importance, however has the potential to be used for the production of high quality and high yield crops when managed according to current farming methods. The FMMP 2004 Important Farmland Map for the project area is shown in **Figure 4.3-1**.

Insert Figure 4.3-1

### **Land Use**

In order to be shown on FMMP's Important Farmland Maps as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland, land must have been used for agricultural production at some time during the four years prior to the Important Farmland Map date. FMMP staff determines irrigated land use by analyzing current aerial photos, local comment letters, and related GIS data, supplemented with field verification (DOC, 2007).

### **Soil Quality**

Soil quality is one of the leading factors when determining under the FMMP if agricultural land can be designated as either Prime Farmland or Farmland of Statewide Importance. To be categorized as such, soils must meet physical and chemical criteria established by the United States Department of Agriculture (USDA) Natural Resource Conservation Service as they relate to physical and chemical factors such as salinity. The salinity of the soils is of prime importance when proposing to use reclaimed water for irrigation of farmland. High concentrations of salts (saline) in soil interfere with plant cells ability to absorb water, as the salt prevents water from passing through cell walls (differential of osmotic pressures). Additionally, high salinity levels interfere with the exchange of nutrients from the soils to plant cells, resulting in nutritional deficiencies of associated crops. The potential impact of saline soils is dependent upon the type of crop as crop species have varying tolerances to saline soils. One crop may flourish in saline soils, while another will dehydrate or become nutrient deficient. If the salts in irrigation waters contain high level of sodium, soil structure will become compromised. Sodium displaces calcium and magnesium, minerals that help create pore structures in soil that allow for water infiltration. Sodium causes soil particles to swell and fill in the pore spaces that were created by calcium and magnesium. This dispersion of soil particles can reduce the efficacy of soils to be used as farmland. Soil dispersion may cause soils to run together, crust easier, and limit water infiltration. In extreme cases, high sodium levels in clay soils can cause soil pores to close altogether resulting in cement like material (FAO, 1994).

## **Project Site Setting**

### **Site 1 – Hollister Municipal Airport**

#### *Existing Agricultural Uses*

On the airport property, open space fields areas located north and south of the runways are currently privately leased for the production of hay grass. Adjacent private property located in the western portion of Site 1 consists of agricultural parcels that are periodically rotated between irrigated and non-irrigated crops. Currently, one of the parcels is being used for the cultivation of artichokes. Adjacent private property located in the eastern portion of Site 1 consists of agricultural parcels currently cultivated for the production of hay grass. As shown **Figure 4.3-1**, the western agricultural parcels are designated as Prime Agricultural Farmland, and the eastern agricultural parcels are designated as Farmland of Statewide Importance. Adjacent land uses surrounding Site 1 are also used for agricultural production and designated as important farmlands.

#### *Agricultural Soil Quality*

Site 1 is comprised primarily of 60 percent Pacheco silty clay (Pe) and 30 percent Clear Lake clay (Ch) soil map units. These soil map units comprise a majority of the areas on Site 1 that are designated as Prime Farmland. The Pe map unit is poorly drained and limited for use as irrigated lands by slow water

movement through the soil. The Pe map unit on Site 1 is considered non-saline to slightly saline soil. The Ch map unit consists of poorly drained soils limited for use as irrigation lands by slow water movement. These soils are also considered non-saline to slightly saline.

### **Site 2 – Brookhollow Ranch**

#### *Existing Agricultural Uses*

The areas identified for reclaimed water irrigation at Site 2 (sub-areas A and B) are non-irrigated pasturelands currently used for cattle grazing. As shown in **Figure 4.3-1**, these areas are not designated as important farmland by the FMMP. Lands to the east of sub-area A are irrigated and used for more intensive agricultural uses, such as vegetable row crops, and lands to the north, south, and west are used as dry grazing areas. As shown in the figure, a portion of lands adjacent to Sub-area A are designated as Prime Farmland.

#### *Agricultural Soil Quality*

Site 2, Sub-area A is comprised primarily of 70 percent Cropley clay (CwC) and 28 percent Sorrento silty clay loam (SrA) soil map units. The CwC map unit is poorly drained and limited for use as irrigated lands by slow water movement through the soil. The CwC map unit on Site 2, sub-area A, is considered non-saline soil. The SrA map unit consists of moderately well drained soils that are not limited for use as irrigation lands, as the soil map unit has a moderate water movement rate through the soil. These soils are also considered non-saline.

Site 2, Sub-area B is comprised primarily of 55 percent Cotati loam (CvC) and 22 percent Soper sandy loam (SmE2). The CvC map unit is poorly drained and severely limited for use as irrigation lands due to erosion potential. The CvC map unit on Site 2 sub-area B is considered non-saline. The SmE2 soil map unit is poorly drained and severely limited due to erosion potential. This map unit is also considered non-saline.

### **Site 3 – Riverside Park**

#### *Existing Agricultural Uses*

Agricultural uses on the majority of the site consist of pastureland used for livestock grazing. This land is not designated as important farmland. Agricultural uses in the vicinity of the site consist of dry grazing land to the south, and a walnut orchard to the east, which is designated as Prime Farmland. Approximately 2.3 acres of the adjacent walnut orchard is located within the northwestern site boundaries. This area is designated on the 2004 FMMP Important Farmland Map as Prime Farmland. However, because the site has not been in agricultural production for over 5 years, it no longer meets the qualifications for the Prime Farmland designation.

#### *Agricultural Soil Quality*

Site 3 is comprised primarily of 70 percent Reiff sandy loam (ReA) and 22 percent Meetz gravelly sandy loam (MgA). The ReA map unit is well drained and has no limits for use as irrigation lands. This soil map unit is considered non-saline. The MgA map unit is somewhat excessively drained and limited for irrigation by a low nutrient filtering capacity, flooding frequency, and droughtiness. This soil map unit is also considered non-saline.

**Site 4 – Pacific Sod Farm***Existing Agricultural Uses*

Site 4 is a commercial sod farm, of which approximated 84 percent of the site irrigated. The majority of the site is designated as Prime Farmland, with approximately 10 acres along the northern boundary designated as Unique Farmland (**Figure 4.3-1**).

*Agricultural Soil Quality*

Site 3 is comprised primarily of 70 percent Metz sandy loam (MeA) and 22 percent Reiff sandy loam (ReA). The MeA map unit is somewhat excessively drained that is limited for use as irrigation lands by a low nutrient filtering capacity, flooding frequency, and drought potential during summer months. This soil map unit is considered non-saline to slightly saline. The ReA map unit has the same parameters as discussed above under Site 3.

**Site 5 – San Juan Oaks***Existing Agricultural Uses*

Site 5 is not currently used for agricultural purposes and is not designated as important farmland by the FMMP. Lands immediately adjacent to Site 5 consist of dry grazing lands, while areas located further north in San Juan Valley are used for more intensive agricultural purposes and are designated as Prime Farmland and Farmland of Statewide Importance.

*Agricultural Soil Quality*

Site 5 is comprised of 40 percent Salinas clay loam (SaA), 32 percent Diablo clays of differing slope (DaD and DaE2), and 27 percent Clear Lake clay (Ch). The SaA map unit is well drained and has no limitations for use as irrigation lands. This soil map unit is considered non-saline. The DaD and DaE2 map units are well drained and limited for use as irrigation lands due to grade (steepness) and slow water movement through the soils. These soil map units are considered non-saline to slightly saline. The Ch map unit consists of poorly drained soils that are limited for irrigation by slow internal water movement. This soil map unit is considered non-saline to slightly saline.

**4.3.3 REGULATORY SETTING**

A description of the regulatory setting is incorporated by reference from Section 4.1.1 the 2006 EIR (refer to **Section 1.3** for a discussion of teiring). Section 4.1.1 of the 2006 EIR provides a description of the following:

- California Farmland Mapping and Monitoring Program
- California Land Conservation Act (Williamson Act)
- San Benito County Storie Index
- City of Hollister General Plan
- San Benito County General Plan

Supplemental regulatory information applicable to the development of the proposed reclaimed water irrigation sites is provided below.

### ***California Land Conservation Act (Williamson Act)***

The Land Conservation Act (LCA) or Williamson Act authorizes counties to establish agricultural preserves by entering into contracts with landowners. Under LCA contracts, properties are committed to agricultural or other compatible uses for a minimum of ten years and, in exchange, the landowner receives property tax advantages. The stated purposes of the LCA are to maintain the agricultural economy of the state and to prevent premature and unnecessary conversion of land from agricultural uses. There are approximately 584,331 acres in San Benito County under LCA contracts (DOC, 2006). Williamson Act lands within the project area are shown in **Figure 4.3-2**. As shown in the figure, potential reclaimed water use areas at Site 2 and Site 3 are currently under Williamson Act contracts.

### ***San Benito County General Plan***

County General Plan land use designation for the proposed reclaimed water sites are illustrated in **Figure 4.1-1**. As shown in this figure, portions of Sites 1 and 3, and all of Sites 2, 4, and 5 are designated for agricultural uses. Land Use Policy 3 of the San Benito County General Plan states that Grade 1 soils are given the highest priority for protection. Within the project area, Grade 1 soils are generally found in the western portion of the Hollister Valley and the east portion of the San Juan Valley (SBCWD & WRASBC, 2004b).

### ***Hollister General Plan***

The City of Hollister General Plan land use designations for the proposed reclaimed water sites are illustrated in **Figure 4.1-2**. As shown in this figure, Site 1 is the only proposed reclaimed water use area located within the sphere of influence of the City, and is not designated for agricultural uses.

## **4.3.4 IMPACT ANALYSIS**

### **Thresholds of Significance**

Criteria for determining the significance of impacts to agricultural resources have been developed based on Appendix G of the CEQA guidelines. For the purposes of this EIR, impacts to agricultural resources are considered significant if the proposed project 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 nonagricultural use;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract; and/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;

Insert Figure 4.3-2

## Methods and Assumptions

Impacts to agricultural resources are analyzed based on an examination of the proposed project sites, surrounding land uses, adopted land use plans, and the results of the agronomic analysis included as **Appendix H**. Effects that were determined to be less than significant in the Initial Study (**Appendix B**) do not warrant further analysis and are not discussed within this SEIR.

Mitigation measures identified in the 2006 EIR are assumed to be implemented as a component of the proposed project. The 2006 EIR identified one mitigation measure applicable to the development of reclaimed water projects that would reduce potential impacts to agricultural resources. This measure is described in detail in **Appendix C** and is briefly summarized below:

- **2006 EIR MM 4.2.5:** To reduce impacts associated with reduced soil productivity as a result of irrigation with high salinity treated effluent, a sprayfield management plan shall be developed by the City of Hollister in cooperation with the San Benito County Water District. The sprayfield management plan shall identify agricultural best management practices (BMPs) that ensure that sprayfields do not adversely impact structure and crop capability of soils. The sprayfield management plan shall be reviewed and updated annually.

## Impact Statements and Mitigation Measures

**IMPACT 4.3-1. Direct changes in land use as a result of implementation of the proposed project could result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.**

**Sites 1-5** The development of off-site water storage tanks, pumping facilities, and related infrastructure necessary to support the development of reclaimed water irrigation at the project sites could result in the conversion of prime and important farmland. However, these facilities would be developed to provide reclaimed water irrigation and would support the continued use of the proposed project sites for agricultural related purposes. Additionally, the area required for development of these facilities would be relatively small, and resulting conversion of farmland would be negligible. Therefore, this impact is considered less than significant. **Less than Significant.**

**IMPACT 4.3-2. Implementation of the Proposed Project could conflict with existing zoning for agricultural use, or a Williamson Act contract.**

**Site 1** A portion of Site 1 consists of lands located within San Benito County that are designated as Agriculture Productive. The use of reclaimed water for irrigation on adjacent lands would restrict the existing agricultural uses to the production of crops not sensitive to high levels of salinity, such as grass hay. Although this would reduce the potential value of agricultural land uses on the site, it would still be consistent with allowable lands uses under the County's General Plan land use designation of Agriculture Productive. As shown in Figure 4.3-2, Site 1 is not subject to a Williamson Act contract. Because conflicts with existing zoning and

Williamson Act contracts are not anticipated, this impact is considered less than significant. **Less than Significant.**

**Site 2** At Site 2, implementation of the proposed project would result in the extension of a reclaimed water supply source, and the application of reclaimed water to lands currently used for dry cattle grazing. This would allow for more intensive agricultural uses, which would be consistent with the County's General Plan designation of Agriculture Productive as well as the existing Williamson Act contract on the property. Because conflicts with existing zoning and Williamson Act contracts are not anticipated, this impact is considered less than significant. **Less than Significant.**

**Sites 3** While the majority of Site 3 is not designated for agricultural purposes, approximately 2.3 acres located in the northwestern portion of the site (or approximately 4 percent of the site) consists of land located within San Benito County that is designated as Agriculture Productive. Under the proposed project, this portion of the site would be developed with parking lot and maintenance facilities for the irrigated turf areas on the remaining 47 acres of the project site. Although these uses conflict with a land use designation adopted by the County for the purposes of preserving agricultural resources, the resulting conversion in farmland would be relatively insignificant. Furthermore, this area has not been actively farmed for over 5 years, and proposed land uses would be compatible with adjacent agricultural operations. As required by Mitigation Measure 4.1-1, prior to implementation of the project, the City would be required to obtain condition use permits and fulfill other necessary procedural and compensatory requirements. Therefore, because land use conflicts are not expected to occur, and the resulting conversion of farmland would be relatively small, this impact is considered less than significant. **Less than Significant.**

**Site 4** Implementation of the proposed project at Site 4 would provide an additional irrigation supply source to support the continued use of the site for agricultural purposes. This would be consistent with the County's General Plan land use designation of Agriculture Productive, as well as the existing Williamson Act contract on the property. Because conflicts with existing zoning and Williamson Act contracts are not anticipated, this impact is considered less than significant. **Less than Significant.**

**Site 5** Site 5 is not designated for agricultural purposes or subject to a Williamson Act contract. Therefore, no impact would occur. **No Impact.**

**IMPACT 4.3-3. Irrigation with reclaimed water, with an anticipated initial salt concentration of approximately 1,200 mg/l and initial sodium level of approximately 250 mg/l, could adversely impact the agricultural productivity of soils, subsequently resulting the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.**

**Site 1** The proposed Airport site, including the airport property and adjacent land identified for potential future reclaimed water irrigation, contains both Prime Farmland and Farmland of Statewide Importance. As discussed in the 2006 EIR (Impact 4.2.5, hereby incorporated by

reference), application of reclaimed water with salt and sodium concentrations of approximately 1,200 mg/l and 250 mg/l, respectively, could adversely impact soil quality resulting in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses. Projected salt and sodium concentrations of the reclaimed water presents slight to moderate restrictions on use<sup>1</sup>, indicating special salinity treatment practices may be required for salt-sensitive crops. Agricultural crops have different levels of salt tolerances. If soil salinities increase with the use of reclaimed water on the site, the range of crops that may be grown would diminish. As discussed in Section 3, the airport reclaimed water irrigation areas would be used to grow turf grasses and grass hay, both of which have salt tolerant species. Although salt concentrations could increase over the criteria established by the NRCS for designations of Prime Farmland and Farmland of Statewide Importance, the sites would remain in use for agriculture.

With provisions outlined in the 2006 EIR MM 4.2.5, soils salinity would be managed to ensure agricultural practices continue on Site 1 and lands are not converted to non-agricultural uses as a result on the proposed project. The 2006 EIR MM 4.2.5 recommended that a sprayfield management plan be developed to identify agricultural best management practices (BMPs) that would ensure reclaimed water irrigation does not adversely impact the structure and crop capability of soils. Mitigation Measure 4.3-3 has been recommended below to further define the required contents of the sprayfield management plan. To manage soil salinity with elevated irrigation water salinity, the fraction of irrigation water allowed to pass through rootzone to deeper soils is increased. In this process, referred to as leaching, water is applied in sufficient quantities to saturate the rootzone. The water infiltrates lower soil levels, carrying salt ions beyond the reach of plants. Increasing the leaching fraction can significantly reduce soil salinity. Based on general relationships between salinity in irrigation water and rootzone salinity, the salinity in the top one foot of the rootzone can be reduced 80 to 90 percent by intermittently applying one AF of water per acre of land (Grattan, 2002). After implementation of 2006 EIR MM 4.2.5, and recommended Mitigation Measure 4.3-3, this impact would be considered less than significant. **Less Than Significant with Mitigation.**

**Mitigation Measure 4.3-3. A reclaimed water irrigation management plan shall be developed specific to each site. In addition to the agricultural BMPs recommended in the 2006 EIR, the reclaimed water irrigation management plan shall require the following:**

- (a) Soil sampling, analysis and interpretation to monitor Ca, Mg and Na shall be conducted to maintain mineral balance and aid in irrigation scheduling.**
- (b) Excess sodium in the irrigation supply may be managed through the introduction of calcium and/or magnesium through irrigation water additions or soil amendments to avoid the potential for yield impacts.**

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<sup>1</sup> Based on "slight to moderate" range of 0.7 to 3.0 mmhos/cm EC<sub>w</sub> and 450-2,000 mg/L TDS identified in Westcot and Ayers, 1984.

**(c) Impact-head type sprinklers shall be utilized at reclaimed water irrigation sites to allow for sufficient leaching of salts and eliminate potential surface run-off.**

- Sites 2-3** Reclaimed water irrigation areas at Sites 2 and 3 are not considered Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. Although impacts to soil quality for Sites 2 and 3 would be similar to those described above for Site 1, increases in soil salinity and sodium content would not result in the conversion of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland to non-agricultural uses. Furthermore, soil salinity management practices as outlined in the 2006 EIR MM 4.2.5 would be employed to ensure adverse effects to soil quality do not occur. After implementation of 2006 EIR MM 4.2.5, and recommend Mitigation Measures 4.3-3, this impact would be considered less than significant. **Less than Significant with Mitigation.**
- Site 4** Site 4 contains Prime Farmland currently used for agricultural purposes. However, in order to maintain existing agricultural operations at the site, reclaimed water would be mixed with CVP water to achieve salinity levels capable of supporting the production of sod. Therefore, irrigation with reclaimed water at Site 4 is not anticipated to impact the soil quality of the Prime Farmland located on site. Furthermore, soil salinity management practices as outlined in the 2006 EIR MM 4.2.5 would be employed to ensure adverse effects to soil quality do not occur. After implementation of 2006 EIR MM 4.2.5, and recommend Mitigation Measures 4.3-3, this impact would be considered less than significant. **Less than Significant with Mitigation.**
- Site 5** Site 5 is not considered Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. Additionally, prior to application, reclaimed water would be mixed with CVP water to achieve a level of TDS at or below 500 mg/liter. Application of reclaimed water within these water quality parameters would not contribute to elevated soil salinity and sodium conditions that would result in the conversion of agricultural land. In the event that blending with CVP water is not utilized, soil salinity management practices as outlined in the 2006 EIR MM 4.2.5 would be employed to ensure adverse effects to soil quality do not occur. After implementation of 2006 EIR MM 4.2.5, and recommend Mitigation Measures 4.3-3, this impact would be considered less than significant. **Less than Significant with Mitigation.**