COLUSA
LOCAL AGENCY FORMATION COMISSION

GLENN VALLEY WATER DISTRICT

MUNICIPAL SERVICE REVIEW
AND
SPHERE OF INFLUENCE

Adopted
March 5, 2015

Service Review Adopted Resolution 2015-0003

Sphere of Influence Adopted Resolution 2015-0004

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1 INTRODUCTION

1.1 Municipal Services Review Legislation

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 requires LAFCO review and update SOIs not less than every five years and to review municipal services before updating SOIs. The requirement for service reviews arises from the identified need for a more coordinated and efficient public service structure to support California's anticipated growth.

The service review provides LAFCO with a tool to study existing and future public service conditions comprehensively and to evaluate organizational options for accommodating growth, preventing urban sprawl, and ensuring that critical services are provided efficiently. Effective January 1, 2008, Government Code §56430 requires LAFCO to conduct a review of municipal services provided in the county by region, sub-region or other designated geographic area, as appropriate, for the service or services to be reviewed, and prepare a written statement of determination with respect to each of the following topics:

1. Growth and population projections for the affected area
2. Present and planned capacity of public facilities and adequacy of public services, including infrastructure needs or deficiencies
3. Financial ability of agencies to provide services
4. Status of, and opportunities for shared facilities
5. Accountability for community service needs, including governmental structure and operational efficiencies

As of July 1st, 2012, SB 244 signed by the governor on October 7, 2011 requires an additional written statement of determination to be included in a municipal service review regarding:

The Location and Characteristics of Disadvantaged Unincorporated Communities Within or Contiguous to the Agency's SOI.

In addition, for those agencies that provide water wastewater and/or structural fire protection the new law mandates the determination on the present and planned capacity of public facilities, adequacy of public services and infrastructure needs or deficiencies to include needs or deficiencies related to sewers, municipal and industrial water, and structural fire protection in any disadvantaged unincorporated community within or contiguous to the sphere of influence.

1.2 Municipal Services Review Process

For local agencies, the MSR process involves the following steps:

1. Outreach: LAFCO outreach and explanation of the project
2. Data Discovery: provide documents and respond to LAFCO questions
3. Map Review: research, review and verification of LAFCO draft map of the agency's boundary and sphere of influence
4. Profile Review: internal review and comment on LAFCO draft profile of the agency
5. Public Review Draft MSR: review and comment on LAFCO draft MSR
6. LAFCO Hearing: attend and provide public comments on MSR

MSRs are usually considered exempt from California Environmental Quality Act (CEQA) pursuant to §15262 (feasibility or planning studies) or §15306 (information collection) of the CEQA Guidelines. LAFCO's actions to adopt MSR determinations are not considered "projects" subject to CEQA.

The MSR process does not require LAFCO to initiate changes of organization based on service review findings, only that LAFCO identify potential government structure options. However, LAFCO, other local agencies, and the public may subsequently use the determinations to analyze prospective changes of organization or reorganization or to establish or amend SOIs.

Within its legal authorization, LAFCO may act with respect to a recommended change of organization or reorganization on its own initiative (e.g., certain types of consolidations), or in response to a proposal (i.e., initiated by resolution or petition by landowners or registered voters).

Once LAFCO has adopted the MSR determinations, LAFCO determines and adopts the spheres of influence for each agency. A CEQA determination is made by LAFCO on a case- by-case basis for each sphere of influence action and each change of organization, once the proposed project characteristics are sufficiently identified to assess environmental impacts.

2 COLUSA COUNTY BACKGROUND

2.1 Colusa County History

The following is a brief introduction to Colusa County History. Additional information can be found on the Coulsa County Website.

> *Colusi County, which was the original name of Colusa County, was first organized by the California Legislature on February 9, 1850. It was made up for the most part of the present Colusa and Glenn Counties and that part of Tehama County as far north as Red Bluff.*
>
> *In 1855, the State Legislature passed a bill reducing the county area to the present northern boundary of Glenn County. The area taken away was thirty-six miles wide and included the city of Red Bluff. At this time the eastern boundary of the county was extended beyond the Sacramento River to Butte Creek and ended a few miles north of Butte City. In 1891, the county was again divided and Glenn County was formed, the latter being named after its more illustrious citizen, Dr. Hugh Glenn, the world's greatest wheat producer.*
>
> *John Bidwell is one of the first white men who has recorded as being in the county as early as 1843. He says he saw at least ten thousand Indians here at that time.*
>
> *The first settler in the county was Bryant, at the mouth of Stony Creek; the next, John S. Williams, at what is now the Boggs place, south of Princeton; the next, Charles B. Sterling, William's successor in the employ of Larkin; the next, Swift and Sears, on the south side of Stony Creek, and some twelve or fifteen miles from the Sacramento River. The number of white people living in the county at the time gold was discovered could have been counted on both hands.*
>
> *It was during the years 1850 and 1851 that a number of ranches sprang into being to help supply the needs of the miners who passed through Colusa County in a steady stream to the northern mines. Barley, oats and hay were in great demand for the horses. Cattle, sheep, hogs, and chickens were needed for the tables of the hotels at the stage stops. Thus, the county led in the production of agricultural products early in the settlement of the Sacramento Valley.*[1]

[1] Colusa County, http://countyofcolusa.org/index.aspx?nid=215, September 30, 2014.

2.2 Colusa County Communities and Population

There are two incorporated cities in Colusa County: Colusa and Williams.
There are seven census-designated places within the County: Arbuckle, College City, Grimes, Lodoga, Maxwell, Princeton and Stonyford. As of the 2010 census, the Colusa County population was 21,419.

The following tables show the Colusa County population and income compared to the State of California.

COLUSA COUNTY POPULATION[2]

	Colusa County	State of California
Population, 2013 estimate	21,358	38,332,521
Population, 2010 (April 1) estimates base	21,419	37,253,959
Population, percent change, April 1, 2010 to July 1, 2013	-0.3%	2.9%

COLUSA COUNTY HOUSEHOLD INCOME AND POVERTY[3]

	Colusa County	State of California
Median household income, 2008-2012	$52,165	$61,400
Persons below poverty level, percent, 2008-2012	15.2%	15.3%

Eighty percent of the State Median Household Income of $61,400 is $49,120 so with a median income of $52,165; Colusa County as a whole does not qualify as disadvantaged.

2.3 Colusa County Agriculture

According to the Colusa County Department of Agriculture 2013 Crop Report, agriculture is the major industry in Colusa County with a 2013 gross production of $920,110,930. This represents an increase of $208,342,830 or 29% when compared to the 2012 value of $711,768,100.[4]

[2] US Census Bureau, http://quickfacts.census.gov/qfd/states/06/06011.html, August 12, 2014.
[3] US Census Bureau, http://quickfacts.census.gov/qfd/states/06/06011.html, August 12, 2014.
[4] Colusa County Department of Agriculture, Joseph J. Damiano, Agricultural Commissioner/Sealer of Weights and Measures, 100 Sunrise Blvd, Suite F, Colusa CA 95931, Phone: 530-458-0580, "Colusa County Department of Agriculture Annual Crop Report 2013."

The ten leading farm commodities in Colusa County for 2013 and 2012 are shown below:

COLUSA COUNTY TEN LEADING FARM COMMODITIES 2013			
Crop	**Amount**	**2013 Rank**	**2012 Rank**
Rice	$285,461,000	1	1
Almonds-Meats	$285,038,000	2	2
Bearing Walnuts-English	$93,877,000	3	4
Tomatoes-Processing	$50,112,000	4	3
Rice-Seed	$21,857,000	5	5
Cattle and Calves	$17,449,000	6	7
Hay-Alfalfa	$16,096,000	7	6
Sunflower-Seed	$13,198,000	8	10
Wine Grapes	$13,032,000	9	8
Wheat	$13,012,000	10	12

The Crop Report notes that Colusa County exported 44 different commodities to 69 different countries in 2013.

2.4 Tehama-Colusa Canal

The Tehama-Colusa Canal is part of the Central Valley Project (CVP). The Tehama-Colusa Canal was built by the US Bureau of Reclamation and is now operated by the Tehama-Colusa Canal Authority which describes itself as follows:

> *The Tehama-Colusa Canal Authority (TCCA) is a Joint Powers Authority comprised of 17 Central Valley Project water contractors. The service area spans four counties (Tehama, Glenn, Colusa, and Yolo) along the west side of the Sacramento Valley, providing irrigation water to farmers growing a variety of permanent and annual crops. TCCA operates and maintains the 140 mile Tehama-Colusa and Corning canals irrigation water supply system. The service area is approximately 150,000 acres, producing over $250 million in crops per year, and contributing $1 billion to the regional economy annually.*[5]

[5] Tehama-Colusa Canal Authority, http://tccanal.com/about.php, September 22, 2014

3 GLENN VALLEY WATER DISTRICT BACKGROUND

The Glenn Valley Water District was formed March 7, 1979. A map of the District is shown at the end of this report.

3.1 Contact Information

Contact information for the Glenn Valley Water District is as follows:

Mail: Glenn Valley Water District, 4165 LaGrande Road, Williams CA 95987
E-Mail: kara@frontiernet.net
Phone: 530-870-2711 or 530-473-2790

The Glenn Valley Water District is managed by the following people:

Manager: John Alvernaz
Secretary: Patti Turner
Bookkeeper: Kara Alvernaz
Attorney: Mark Atlas

3.2 Glenn Valley Water District Board of Directors

The Board of Directors for the Glenn Valley Water District is as follows:

Title	Name	Term Ends
President	Robert J. Alvernaz	12/4/2015
Vice-President	John D. Alvernaz	12/1/2017
Director	Patti A. Turner	12/1/2017
Director	Alan E. Alvernaz	12/4/2015
Director	Glorietta Alvernaz	12/4/2015

The Board of Directors meets as needed. The meetings are held at 2506 Davis Road, Williams.

3.3 Glenn Valley Water District Land and Soils

The US Bureau of Reclamation notes that there are several ways to determine the number of acres within the Glenn Valley Water District as follows:

GLENN VALLEY WATER DISTRICT[6]	
USBR Definition	**Number of Acres**
Contract Acres	854
Gross Acres	1976
Arable Acres	899
Irrigable Acres	854
Productive Acres	811

[6] USBR, Bon Scott McElroy, Water and Lands Assistant, U.S. Bureau of Reclamation, Northern California Area Office Willows, CA 95988, (530) 934-1327, bmcelroy@usbr.gov, September 10, 2014.

GLENN VALLEY WATER DISTRICT SOILS

Soil Number and Name	Acres
102 Capay clay loam, 0 to 1 percent slopes	211.84
127 Mallard clay loam, 0 to 2 percent slopes	59.82
144 Hillgate clay loam, 0 to 2 percent slopes	14.64
155 Alcapay clay, 0 to 1 percent slopes	92.59
200 Clear Lake clay, 0 to 2 percent slopes, occasionally flooded	33.34
204 Clear Lake clay, 0 to 3 percent slopes, occasionally flooded	50.76
205 Capay clay, 0 to 3 percent slopes	130.02
206 Capay clay,k 5 to 9 percent slopes	19.05
211Corval clay loam, 0 to 3 percent slopes	246.46
213 Ayar clay, 15 to 30 percent slopes	112.13
215 Altamont-Sehorn complex, 15 to 30 percent slopes	74.00
216 Altamont-Sehorn complex, 9 to 15 percent slopes	128.38
218 Sehorn-Altamont complex, 30 to 50 percent slopes	181.32
253 Millsholm-Altamont-Rock outcrop complex, 5 to 15 percent slopes	466.58
257 Millsholm-Capay complex, 3 to 9 percent slopes	133.67
652 Water	13.15
Grand Total	**1,967.76**

3.4 Glenn Valley Water District Crops

According to the Glenn Valley Water District, the crops grown in the District include almonds, rice, wheat and alfalfa.[7]

3.5 Water Supply and Service Provision

The Glenn Valley Water District has an allocation of 1730 acre feet from the Tehama-Colusa Canal but as shown in the table below, the District may get less than the full amount of water depending on the amount of precipitation.

US Bureau of Reclamation Water Allocation for Glenn Valley Water District[8]		
Year	Agricultural	Municipal and Industrial (M&I)
2010	100%	100%
2011	100%	100%
2012	100%	100%
2013	75%	100%
2014	0%	50%

[7] Glenn Valley Water District, Colusa LAFCO Questionnaire, September 23, 2014.
[8] USBR, Bon Scott McElroy, Water and Lands Assistant, U.S. Bureau of Reclamation, Northern California Area Office Willows, CA 95988, (530) 934-1327, bmcelroy@usbr.gov, September 10, 2014.

All land within the Glenn Valley Water District is owned by the Robert J. Alvernaz et al Partnership. The Partnership paid the cost of installing all pipelines from the Tehama-Colusa Canal Authority to all fields within the District, also the cost of the two return systems and the cost of the pipe and water meters. All these facilities are owned by the Partnership and the District does not own any facilities. In 2013-14 the water cost $62 per acre-foot. In 2014-15 the water allocation was 0 so the District purchased water from other sources for the almond orchard which cost over $325 per acre foot.[9]

3.6 Glenn Valley Water District Audit

The Glenn Valley Water District had an audit performed by the Colusa County Auditor-Controller for the year ended June 30, 2013. The District uses an account at the Umpqua Bank for all funds. As of June 30, 2013, the District had a balance of $8,676.

The statement of cash receipts, cash disbursements and cash balances for the fiscal year ended June 30, 2013 is as follows:

GLENN VALLEY WATER DISTRICT STATEMENT OF CASH RECEIPTS, CASH DISBURSEMENTS, AND CASH BALANCES FOR THE FISCAL YEAR ENDED JUNE 30, 2013[10]		
Cash on deposit, July 1, 2012		13,472
REVENUE		
Water Sales	81,370	
Interest	0	
Total Receipts		$81,370
DISBURSEMENTS		
Election Expenses	0	
Legal and Accounting	2,119	
Office Expenses	127	
Maintenance and operation	-	
Bureau of Reclamation Expenses	269	
SWRCB Permits	1,077	
Water Purchase-Bureau of Reclamation	66,622	
Water Transmission and Distribution-TCCA Assessment	15,952	
Total Disbursements		86,166
Excess of Receipts over Disbursements		(4,796)
Cash on deposit, June 30, 2013		$8,676

[9] Glenn Valley Water District, Colusa LAFCO Questionnaire, September 23, 2014.
[10] Colusa County Auditor-Controller, Janet S. Dawley, Deputy Auditor-Controller/Special District Auditor, Annual Audit for Fiscal Year Ended June 30, 2013, Glenn Valley Water District, June 25, 2014.

4 GLENN VALLEY WATER DISTRICT MUNICIPAL SERVICE REVIEW

4.1 Growth and Population Projections for the Glenn Valley Water District Area

Purpose: To evaluate service needs based on existing and anticipated growth patterns and population projections.

4.1.1 Glenn Valley Water District Area Population Projections

There are three homes and nine residents within the Glenn Valley Water District.[11] The area in the Glenn Valley Water District is zoned for agriculture and designated for agricultural use on the Colusa County General Plan as shown on the maps at the end of this report. The District does not want to encourage population growth within the District Boundary because this would cause conflicts with the agricultural uses.

4.1.2 MSR Determinations on Growth and Population Projections for the Glenn Valley Water District Area

1-1) It is expected that the population within the Glenn Valley Water District will remain small and no new homes will be constructed.

1-2) The population projections for Colusa County and for Williams are found in the Colusa County and City of Williams general plans. Population growth within the District boundaries will be minimal since the Glenn Valley Water District is not in the urban water business.

1-3) The District should maintain an active relationship with Colusa County and City of Williams planning departments to make sure that the District goals are considered when land use changes and land use regulations are made.

4.2 Location and Characteristics of any Disadvantaged Unincorporated Communities (DUC) within or Contiguous to Glenn Valley Water District

Purpose: To comply with the State Law to examine any unincorporated areas which could be provided with better services by annexing to an adjacent city.

4.2.1 Determination of Glenn Valley Water District Area Disadvantaged Unincorporated Community Status

The Glenn Valley Water District does not include any Disadvantaged Unincorporated Communities.

[11] Glenn Valley Water District, E-Mail: kara@frontiernet.net, November 15, 2014.

4.2.2 MSR Determinations on Disadvantaged Unincorporated Communities near Glenn Valley Water District

2-1) The Glenn Valley Water District does not include any Disadvantaged Unincorporated Communities.

4.3 Capacity and Infrastructure

Purpose: To evaluate the infrastructure needs and deficiencies in terms of supply, capacity, condition of facilities and service quality.

4.3.1 Infrastructure

The Glenn Valley Water District pays for maintenance of the Tehama-Colusa Canal and participates in the Tehama-Colusa Canal Authority. The infrastructure within the District is the minimum needed to deliver the water from the T-C Canal to the fields. The District strives to maintain service levels within the changing dynamics of population growth in the surrounding area, escalating costs, limited funding and increasing water demands for limited Northern California water.

4.3.2 MSR Determinations on Infrastructure for Glenn Valley Water District

3-1) The infrastructure of the Glenn Valley Water District is adequate to accomplish the task of the District which is to provide US Bureau of Reclamation water to the growers.

4.4 Financial Ability to Provide Services

Purpose: To evaluate factors that affect the financing of needed improvements and to identify practices or opportunities that may help eliminate unnecessary costs without decreasing service levels.

4.4.1 Financial Considerations for Glenn Valley Water District

The Glenn Valley Water District is self-taxing and collects the funds as required by the US Bureau of Reclamation and the Tehama-Colusa Canal Authority.

4.4.2 MSR Determinations on Financing for Glenn Valley Water District

4-1) The Glenn Valley Water District controls costs to the extent possible.

4-2) The Glenn Valley Water District must pay the water rates set by the USBR and the TCCA.

4-3) The Glenn Valley Water District has sound financial management.

4-4) The financial position of the District is better when the District can supply the maximum amount of water allowed by the water-rights agreement with the US Bureau of Reclamation.

4-5) The District contributes to the local economy through salaries and equipment purchases.

4-6) The District's budget is designed to cut costs where possible.

4-7) The District cooperates with other water districts to build and maintain water supply.

4-8) The Glenn Valley Water District rates must allow the growers to irrigate and grow the crops at a reasonable cost or they will not be able to stay in business and purchase water in the future.

4.5 Status of and Opportunities for Shared Facilities

4.5.1 Glenn Valley Water District Facilities

The District shares the facilities and the costs of Shasta Dam, the Red Bluff Diversion Dam and the Tehama-Colusa Canal. There are many reasons that it would not be feasible for the District to be combined with other similar districts in Colusa County. Even though there are other districts which obtain water from the Tehama-Colusa Canal; these districts may have different enabling acts, different contracts with the Bureau of Reclamation, and different means of financing their water conveyance infrastructure.[12] The cost of combining the Districts would far exceed any benefit derived.

[12] Tehama-Colusa Canal Authority, J. Mark Atlas, Attorney, 134 West Sycamore Street, Willows, CA 95988, 530-934-5416, jma@jmatlaslaw.com, E-Mail: January 9, 2009.

4.5.2 MSR Determinations on Shared Facilities for Glenn Valley Water District

5-1) The District works with other districts and agencies whenever it is legally and physically possible.

5-2) The District receives water flowing through Shasta Dam and diverted from the Sacramento River so the water use must be coordinated by the US Bureau of Reclamation.

4.6 Accountability for Community Service Needs, Government Structure and Operational Efficiencies

Purpose: To consider the advantages and disadvantages of various government structures that could provide public services, to evaluate the management capabilities of the organization and to evaluate the accessibility and levels of public participation associated with the agency's decision-making and management processes.

4.6.1 Glenn Valley Water District Government Structure

The Glenn Valley Water District has a five-member Board of Directors. A Water District is a landowner voter District. The District was open to providing the information requested by Colusa LAFCO.

4.6.2 MSR Determinations on Local Accountability and Governance for Glenn Valley Water District

6-1) The Water District is the most suitable form of organization for the Glenn Valley Water District.

6-2) The Board meets as needed.

6-3) The District has an elected Board.

6-4) The District Boundary should remain the same.

6-5) The District has a limited ability to expand or to combine with another District because of US Bureau of Reclamation rules and regulations regarding water supply.

5 GLENN VALLEY WATER DISTRICT SPHERE OF INFLUENCE UPDATE

5.1 SOI Requirements

5.1.1 LAFCO's Responsibilities

The Commission is charged with developing and updating the Sphere of Influence (SOI) for each city and special district within the county.[13] An SOI is a LAFCO-approved plan for the probable physical boundaries and service area of a local agency.[14] Spheres are planning tools used to provide guidance for individual boundary change proposals and to encourage efficient provision of organized community services and to prevent duplication of service delivery.

Territory cannot be annexed by LAFCO to a city or district unless it is within that agency's sphere. The purposes of the SOI include the following: to ensure the efficient provision of services, discourage urban sprawl and premature conversion of agricultural and open space lands, and prevent overlapping jurisdictions and duplication of services. LAFCO cannot directly regulate land use, dictate internal operations or administration of any local agency, or set rates. LAFCO is empowered to enact policies that indirectly affect land use decisions.

On a regional level, LAFCO promotes logical and orderly development of communities as it considers and decides individual proposals. LAFCO has a role in reconciling differences between agency plans so that the most efficient urban service arrangements are created for the benefit of current and future area residents and property owners. The Cortese-Knox-Hertzberg (CKH) Act requires to develop and determine the SOI of each local governmental agency within the county and to review and update the SOI every five years.

LAFCOs are empowered to adopt, update and amend the SOI. They may do so with or without an application although any interested person may submit an application proposing an SOI amendment. While SOIs are required to be updated every five years, as necessary, this does not necessarily define the planning horizon of the SOI. The term or horizon of the SOI is determined by each LAFCO. LAFCO may recommend government reorganizations to particular agencies in the county, using the SOIs as the basis for those recommendations. In determining the SOI, LAFCO is required to complete an MSR and adopt the six determinations shown previously discussed.

[13] The initial statutory mandate, in 1971, imposed no deadline for completing sphere designations. When most LAFCOs failed to act, 1984 legislation required all LAFCOs to establish spheres of influence by 1985.
[14] Government Code Section 56076

5.1.2 SOI Determinations

In addition, in adopting or amending a SOI, LAFCO must make the following determinations:

* Present and planned land uses in the area, including agricultural and open-space lands;

* Present and probable need for public facilities and services in the area;

* Present capacity of public facilities and adequacy of public service that the agency provides or is authorized to provide;

* Existence of any social or economic communities of interest in the area if the Commission determines these are relevant to the agency; and

* Present and probable need for public facilities and services of any disadvantaged unincorporated communities within the existing Sphere of Influence for those agencies that provide water, wastewater and/or structural fire protection.

The CKH Act stipulates several procedural requirements in updating SOIs. It requires that special districts file written statements on the class of services provided and that LAFCO clearly establish the location, nature and extent of services provided by special districts. By statute, LAFCO must notify affected agencies 21 days before holding the public hearing to consider the SOI and may not update the SOI until after that hearing. The LAFCO Executive Officer must issue a report including recommendations on the SOI amendments and updates under consideration at least five days before the public hearing.

5.1.3 SOI Update Process

The Colusa LAFCO adopted policies and procedures related to Spheres of Influence on February 5, 2004.

The LAFCO proceedings are subject to the provisions of California's open meeting law, the Ralph M. Brown Act (Government Code Sections 54950 et seq.) The Brown Act requires advance posting of meeting agendas and contains various other provisions designed to ensure that the public has adequate access to information regarding the proceedings of public boards and commissions. Colusa LAFCO complies with the requirements of the Brown Act.

SOI policies have been adopted by the Colusa LAFCO. Colusa LAFCO has discussed and considered the SOI process in open session, and has adopted a schedule for completing the various municipal service reviews and sphere of influence updates for Colusa County. Each Sphere of Influence will be prepared as a draft, and will be subject to public and agency comment prior to final consideration by the Colusa LAFCO.

5.1.4 Possible Approaches to the SOI

SPHERE TYPE	DEFINITION
Growth sphere	Contains territory beyond the jurisdictional boundaries of the local agency and is an indication that the need for public services in the area has been established and the agency has the ability to effectively and efficiently extend the full spectrum of services provided by the agency.
Coterminous sphere	Coincides with the jurisdictional boundaries of the local agency and is an indication that the agency is landlocked, that there is no anticipated need for the agency's services outside of its existing boundaries, or the agency lacks the capacity or ability to serve additional territory or there is insufficient information to make such a determination.
Zero sphere	A zero sphere contains no territory and indicates that the Commission has determined that one or more of the public service functions of the agency are either non-existent, inadequate, no longer needed, or should be reallocated to some other agency of government. Adoption of a zero sphere indicates the agency should ultimately be reorganized or dissolved. The Commission may initiate dissolution of an agency as the law allows.
Smaller-than-agency sphere	Contains less territory than the jurisdictional boundary of the local agency. The smaller-than-agency sphere indicates that territory within the local agency, but not within its sphere, should be detached and either transferred to another local agency or not served by any agency.
Overlapping sphere	If more than one agency appears equally qualified to serve an area, and if fiscal considerations and community input do not clearly favor a specific agency, an overlapping sphere may be appropriate.
Provisional sphere	A designation indicating that LAFCO has identified in its most recent municipal service review the need for an agency to address organizational issues. Agencies given a provisional sphere will be encouraged to discuss reorganization options or alternatives to existing service provision or governmental structure and to provide LAFCO with written results of their discussions and/or studies.
Service specific zone within a sphere	To accommodate situations where territory within an agency's jurisdiction may require some, but not all of the services that the agency is authorized to provide, the LAFCO may designate an area within an SOI to which it may attach specific policies, including limiting the types of services authorized in that area. The intent of a service specific zone is to limit the types of services provided in a defined area and is not intended in any way to circumvent annexation.

5.1.5 SOI Amendments and CEQA

LAFCO has the discretion to limit SOI updates to those that it may process without unnecessarily delaying the SOI update process or without requiring its funding agencies to bear the costs of environmental studies associated with SOI expansions. Any local agency or individual may file a request for an SOI amendment. The request must state the nature of and reasons for the proposed amendment, and provide a map depicting the proposal.

LAFCO may require the requester to pay a fee to cover LAFCO costs, including the costs of appropriate environmental review under CEQA. LAFCO may elect to serve as lead agency for such a review, may designate the proposing agency as lead agency, or both the local agency and LAFCO may serve as co-lead agencies for purposes of an SOI amendment.

Local agencies are encouraged to consult with LAFCO staff early in the process regarding the most appropriate approach for the particular SOI amendment under consideration.

Certain types of SOI amendments are likely exempt from CEQA review. Examples are SOI expansions that include territory already within the bounds or service area of an agency, SOI reductions, and zero SOIs.

SOI expansions for limited purpose agencies that provide services (e.g., fire protection, levee protection, cemetery, and resource conservation) needed by both rural and urban areas are typically not considered growth-inducing and are likely exempt from CEQA. Similarly, SOI expansions for districts serving rural areas (e.g., irrigation water) are typically not considered growth-inducing.

Remy et al. write

> *In City of Agoura Hills v. Local Agency Formation Commission (2d Dist.1988) 198 Cal.App.3d480, 493-496 [243 Cal.Rptr.740] (City of Agoura Hills), the court held that a LAFCO's decision to approve a city's sphere of influence that in most respects was coterminous with the city's existing municipal boundaries was not a "project" because such action did not entail any potential effects on the physical environment.*[15]

Since the recommendation is to keep the Sphere of Influence for the Glenn Valley Water District the same as the Boundary of the District there will be no environmental impacts from the adoption of the Sphere and no environmental document is required.

[15] Remy, Michael H., Tina A. Thomas, James G. Moose, Whitman F. Manley, Guide to CEQA, Solano Press Books, Point Arena, CA, February 2007, page 111.

5.1.6 Recommendation for Sphere of Influence

Information contained in this Sphere of Influence is only current as of the date of adoption. LAFCO Policy 3.3 (e) calls for an updated Master Services Element at the time a proposal is made. Policy 2.14 essentially requires an updated Master Services Element anytime conversion of agricultural land meeting the definition contained in the California Government Code Section 56064 is proposed.

The Sphere of Influence for the Glenn Valley Water District in Colusa County will stay the same as the present boundary of the District. The current and planned development of properties within the proposed Spheres of Influence will continue to require irrigation water from the Tehama-Colusa Canal.

5.2 Present and Planned Land Uses in the Glenn Valley Water District Area, Including Agricultural and Open Space Lands

5.2.1 County General Plan for Glenn Valley Water District SOI Area

The Colusa County General Plan and Zoning for the Glenn Valley Water District area are shown on maps at the end of this report. The General Plan Designations are General Agriculture and Upland Agriculture which are defined in the Colusa County General Plan as follows:

> ***Agriculture General***
> *The Agriculture General (AG) designation identifies areas to be retained for agriculture and/or uses that are complementary to existing or nearby agricultural uses. This designation includes lands under agricultural preservation and/or conservation contracts and easements; land having present or future potential for agricultural production, and contiguous or intermixed smaller parcels on which non-compatible uses could jeopardize the long-term agricultural use of nearby agricultural lands. Lands designated Agriculture General are planned to be preserved for agricultural uses and the intent of the designation is to preserve such lands for existing and future agricultural use and protect these lands from the pressures of development.*[16]
>
> ***Agriculture Upland***
> *The Agriculture Upland (AU) designation is used to identify agricultural areas suitable for cattle and sheep grazing, areas with undeveloped, uninhabited forests, chaparral and grasslands, and intermixed areas suitable for crop production. Soils range from very good soils to those that are less suitable for crop production, but are suitable for livestock and other agricultural activities. Land divisions for non-agricultural purposed are discouraged in these areas to prevent conflicts with ranching and to minimize exposure to natural hazards.* [17]

[16] Colusa County General Plan, Adopted July 31, 2012 Page 8-3.
[17] Colusa County General Plan, Adopted July 31, 2012 Pages 8-3 and 8-4.

The zoning Designations are Agriculture Preserve (80 acre minimum parcel size) and Exclusive Agriculture (40 acre minimum parcel size).

5.2.2 SOI Determinations on Present and Planned Land Use for the Glenn Valley Water District Area

1-1] The Sphere of Influence for the Glenn Valley Water District will be the same as the District Boundary.

1-2] There are no conflicts with the Glenn Valley Water District and existing or proposed land uses in the area because the Colusa County General Plan designates the area for agricultural land use.

1-3] The Glenn Valley Water District has water-rights and water to serve the land within the present boundary but does not have the capacity to substantially expand.

1-4] There are no logical areas for expansion of the Glenn Valley Water District since other districts serve most of the surrounding land.

1-5] If the Glenn Valley Water District proposes an annexation or detachment in the future a revised Municipal Service Review and Sphere of Influence will be required.

5.3 Present and Probable Need for Public Facilities and Services in the Glenn Valley Water District Area

5.3.1 Municipal Service Background

The lands within the Glenn Valley Water District need the services that are provided. There is no additional water to provide service for more land. Therefore, the Sphere of Influence for the Glenn Valley Water District will be the same as the District Boundary.

5.3.2 SOI Determinations on Facilities and Services Present and Probable Need for Glenn Valley Water District

2-1] The land within the Glenn Valley Water District will need irrigation water as long as agriculture is a profitable business in Northern California.

2-2] The Glenn Valley Water District makes a valuable contribution to the local economy for Colusa County by providing water for agriculture. This generates jobs.

5.4 Present Capacity of Public Facilities Present and Adequacy of Public Services

5.4.1 Glenn Valley Water District Capacity Background

The Glenn Valley District's water-rights are established by agreements with the US Bureau of Reclamation. However, if there is not sufficient water stored at Shasta Dam (due to lack of precipitation) the District could still face a cut in the water supply.

5.4.2 SOI Determinations on Public Facilities Present and Future Capacity for Glenn Valley Water District

3-1] The Glenn Valley Water District has adequate water rights to provide irrigation water to the landowners as it is available from the USBR for the foreseeable future.

3-2] The District promotes water conservation and the use of technology to prevent waste.

5.5 Social or Economic Communities of Interest for Glenn Valley Water District

5.5.1 Glenn Valley Water District Community Background

The Glenn Valley Water District does not serve a community in the traditional sense of the word because there are only a few residents within the District. There is an economic community of landowners who formed the District and who benefit from the agricultural water service provided.

5.5.2 SOI Determinations on Social or Economic Communities of Interest for Glenn Valley Water District

4-1] The landowners for the Glenn Valley Water District live within the District and within the surrounding communities.

5.6 Disadvantaged Unincorporated Community Status

5.6.1 Disadvantaged Unincorporated Communities

There are nine residents within the Glenn Valley Water District.

5.6.2 Glenn Valley Water District Disadvantaged Unincorporated Community Status

5-1] There are nine residents and no DUCs within the Glenn Valley Water District.

ABBREVIATIONS

AB	Assembly Bill
AF	Acre-foot (of water)
CKH Act	Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000
CEQA	California Environmental Quality Act
cfs	cubic feet per second
CVP	Central Valley Project
District	Glenn Valley Water District
EIR	Environmental Impact Report (California)
EIS	Environmental Impact Statement (US)
FWS	U.S. Fish and Wildlife Service
I-5	Interstate 5
LAFCO	Local Agency Formation Commission
MSR	Municipal Service Review (LAFCO)
NMFS	National Marine Fisheries Service
RRA	Reclamation Reform Act of 1982
SOI	Sphere of Influence (LAFCO)
TCC	Tehama-Colusa Canal
TCCA	Tehama-Colusa Canal Authority
USBR	United States Bureau of Reclamation

DEFINITIONS

Acre-foot: The amount of water needed to cover an acre of land one foot deep, or 325,851 gallons.

Bureau of Reclamation: Federal government agency, part of the Interior Department that oversees the Central Valley Project and 180 other federal water projects in 17 Western states.

Central Valley Project Improvement Act (CVPIA): 1992 law by Rep. George Miller of California aimed at reforming the CVP's operations and reducing its impact on fish and wildlife habitat. Instituted pricing reforms and restricted contracts to 25 years in length.

Drip irrigation: Drip irrigation, also known as trickle irrigation or micro-irrigation is an irrigation method that minimizes the use of water and fertilizer by allowing water to drip slowly to the roots of plants, either onto the soil surface or directly onto the root zone, through a network of valves, pipes, tubing, and emitters. Modern drip irrigation has arguably become the most important innovation in agriculture since the invention of the impact sprinkler in the 1930s, which replaced wasteful flood irrigation. Drip irrigation may also use devices called micro-spray heads, which spray water in a small area, instead of dripping emitters. These are generally used on tree and vine crops with wider root zones.[18]

Exempt land: Irrigation land in a district to which the acreage limitation and pricing provisions of Reclamation law do not apply.[19]

"Full cost" price: Water rate calculated by the Bureau of Reclamation each year for each CVP contractor. Includes full operation and maintenance charges, payments towards capital costs, and interest on these costs calculated from 1982.

Gravity flow: flow of water in a pipe on a descending path.

Irrigate: To supply (dry land) with water by means of ditches, pipes, or streams; water artificially.

Irrigation system: a complete set of system components including the water source, the water distribution network, and the general irrigation equipment.

Lateral: a pipe line other than the main water pressure line used to move water to the various delivery devices.

Operations and maintenance costs: The ongoing, repetitive costs of operating and maintaining a water system.

Pumping plant: Facility that lifts water up and over hills.

Pumplift (pumping lift): The vertical distance that a pump will raise waters. Distance water must be lifted in a well from the pumping level to the ground surface.

Recipient (or contractor): A farm or water user organization (water district, irrigation district or mutual water company) that contracts with the Bureau of Reclamation for CVP water.

Reclamation Reform Act (RRA): 1982 law intended to limit the amount of federally subsidized water that any one farm could receive. Applied not only to the CVP, but to all federal water projects in the West.

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[18] http://en.wikipedia.org/wiki/Drip_irrigation
[19] http://www.usbr.gov/library/glossary/#hmr

State Water Project: Large, state-run project that provides water for agricultural and urban users in California. The State Water Project parallels the CVP in some areas but charges much higher prices for its water.

Tehama-Colusa Canal Authority: The Tehama-Colusa Canal Authority (TCCA) is a Joint Powers Agency of irrigation districts which operates and maintains the Tehama-Colusa and Corning Canals of the federal Central Valley Project (CVP) under a long-term contract with the Department of the Interior. Through these canals, the TCCA delivers CVP water to 17 districts which serve approximately 300,000 acres of farmland in Tehama, Glenn, Colusa and Yolo Counties.[20]

Water district: A water user organization — water district, irrigation district or private mutual water company — that contracts with the Bureau of Reclamation for Central Valley Project water.

Water transfers: Selling or exchanging water or water rights among individuals or agencies. Artificial conveyance of water from one area to another.

Water user: Any individual, district, association, government agency, or other entity that uses water supplied from a Reclamation project.

Water year (WY): Period of time beginning October 1 of one year and ending September 30 of the following year and designated by the calendar year in which it ends. A calendar year used for water calculations. The US Bureau of Reclamation water year is March 1st to February 28th and October 1st to September 30th is the water account year.

[20] http://www.delta.dfg.ca.gov/afrp/acronym_template.asp?code=371

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APPENDIX A

102 Capay clay loam, 0 to 1 percent slopes

General location: On the west side of the Colusa Basin near the towns of Williams and Maxwell
Map unit geomorphic setting: Basin floor
Elevation: 25 to 140 feet (9 to 43 meters)
Mean annual precipitation: 14 to 16 inches (355 to 405 millimeters)
Mean annual air temperature: 61 to 63 degrees F. (16 to 17 degrees C.)
Frost-free period: 225 to 250 days

Capay clay loam—90 percent Minor components: 10 percent

Major Component Description Capay clay loam
Component geomorphic setting: Basin floor
Parent material: Alluvium
Typical vegetation: Irrigated cropland

Component Properties and Qualities
Slope: 0 to 1 percent
Runoff: Very low
Surface features: None noted.
Percent area covered by surface coarse fragments: None noted.
Depth to restrictive feature: None noted
Slowest permeability class: Very slow
Salinity: Not saline
Sodicity: Not sodic
Available water capacity: About 9.9 inches (High)

Component Hydrologic Properties
Present flooding: Rare
Present ponding: None
Current water table: Present
Natural drainage class: Moderately well drained

Altered hydrology:
Water tables have been lowered by rice drainage ditches. Most of these areas were rarely or occasionally flooded under natural conditions. There are no soil redoximorphic features above 36 inches.

Interpretive Groups: Land capability irrigated: 2s-5
Land capability nonirrigated: 4s-5

127—Mallard clay loam, 0 to 1 percent slopes

General location: Near the towns of Arbuckle and Williams
Map unit geomorphic setting: Alluvial fan
Elevation: 45 to 140 feet (15 to 43 meters)
Mean annual precipitation: 14 to 16 inches (355 to 405 millimeters)
Mean annual air temperature: 61 to 63 degrees F. (16 to 17 degrees C.)
Frost-free period: 225 to 250 days

Mallard clay loam—85 percent
Minor components: 15 percent

Major Component Description Mallard clay loam
Component geomorphic setting: Lower alluvial fan
Parent material: Alluvium
Typical vegetation: Irrigated cropland

Component Properties and Qualities
Slope: 0 to 1 percent
Runoff: Very low
Surface features: None noted

Percent area covered by surface coarse fragments: None noted
Depth to restrictive feature: None noted
Slowest permeability class: Slow
Salinity: Not saline
Sodicity: Not sodic
Available water capacity: About 10.4 inches (Very high)

Component Hydrologic Properties
Present flooding: Rare
Present ponding: None
Current water table: Present
Natural drainage class: Somewhat poorly drained
Altered hydrology: Water tables have been lowered by rice drainage ditches.

Interpretive Groups
Land capability irrigated: 2w-3
Land capability nonirrigated: 4w-3

144—Hillgate clay loam, 0 to 2 percent slopes

Map Unit Setting

General location:	Western margins of the Sacramento Valley, west of Williams and north to the Glenn County boundary
Map unit geomorphic setting:	Terrace
Elevation:	130 to 450 feet (40 to 138 meters)
Mean annual precipitation:	14 to 16 inches (355 to 405 millimeters)
Mean annual air temperature:	61 to 63 degrees F. (16 to 17 degrees C.)
Frost-free period:	225 to 250 days

Hillgate clay loam—85 percent Minor components: 15 percent

Major Component Description	Hillgate clay loam
Component geomorphic setting:	Terrace
Parent material:	Alluvium
Typical vegetation:	Irrigated cropland

Component Properties and Qualities

Slope:	0 to 2 percent
Runoff:	Very low
Surface features:	None noted.
Percent area covered by surface coarse fragments:	None noted.
Depth to restrictive feature:	Abrupt textural change—19 inches
Slowest permeability class:	Slow
Salinity:	Not saline
Sodicity:	Not sodic
Available water capacity:	About 3.6 inches (Low)

Component Hydrologic Properties

Present flooding:	None
Present ponding:	None
Current water table:	None noted
Natural drainage class:	Well drained

Interpretive Groups: Land capability irrigated: 2s-3
Land capability nonirrigated: 4s-3

155—Alcapay clay, 0 to 1 percent slopes

General location: North of Maxwell, near Bagley Road and east of Williams
Geomorphic setting: Basin floors
Elevation: 45 to 110 feet (14 to 35 meters)
Mean annual precipitation: 14 to 16 inches (355 to 405 millimeters)
Mean annual air temperature: 61 to 63 degrees F (16 to 17 degrees C)
Frost-free period: 225 to 250 days

Composition
Alcapay clay—90 percent Minor components—10 percent

Major Component Description: Alcapay clay
Geomorphic setting: Basin floors
Parent material: Alluvium
Typical vegetation: Irrigated crops

Properties and qualities
Slope: 0 to 1 percent
Runoff rate: Very low
Percentage of the surface covered by rock fragments: None
Slowest permeability class: Slow
Salinity: Saline within a depth of 40 inches
Sodicity: Sodic within a depth of 40 inches
Available water capacity: About 8.9 inches (high)

Hydrologic properties
Present flooding: Rare
Present ponding: None
Current water table: Present
Natural drainage class: Somewhat poorly drained

Altered hydrology: Water tables have been lowered by drainage ditches used in the production of rice.

Land capability classification
Irrigated: 3w-5 Nonirrigated: 4w-5
Major use: Irrigated crops

200—Clear Lake clay, 0 to 2 percent slopes, occasionally flooded

General location: Small areas in foothill basins
Geomorphic setting: Basins
Elevation: 175 to 1,360 feet (54 to 415 meters)
Mean annual precipitation: 14 to 20 inches (355 to 510 millimeters)
Mean annual air temperature: 57 to 63 degrees F (14 to 17 degrees C)
Frost-free period: 185 to 250 days

Composition
Clear Lake clay, occasionally flooded—90 percent
Minor components—10 percent

Major Component Description Clear Lake clay, occasionally flooded
Geomorphic setting: Basin floors
Parent material: Alluvium
Typical vegetation: Annual grasses and forbs

Properties and qualities
Slope: 0 to 2 percent
Runoff rate: Very low
Percentage of the surface covered by rock fragments: None
Slowest permeability class: Slow
Salinity: Not saline
Sodicity: Not sodic
Available water capacity: About 8.9 inches (high)

Hydrologic properties
Present flooding: Occasional
Present ponding: None
Current water table: Present
Natural drainage class: Poorly drained
Altered hydrology: Flood-control structures on the Sacramento River have changed flooding frequency and duration and lowered water tables. The soil has been drained by stream incisement.

Land capability classification
Irrigated: 3w-5
Nonirrigated: 4w-5

Major use: Livestock grazing.

204—Capay clay, 0 to 3 percent slopes, occasionally flooded

General location:	Small areas in foothill basins
Geomorphic setting:	Basin
Elevation:	175 to 350 feet (54 to 107 meters)
Mean annual precipitation:	16 to 22 inches (405 to 560 millimeters)
Mean annual air temperature:	57 to 61 degrees F. (14 to 16 degrees C.)
Frost-free period:	225 to 250 days

Capay clay, occasionally flooded—90 percent
Minor components: 10 percent

Major Component Description Capay clay, occasionally flooded

Component geomorphic setting:	Basin floor
Parent material:	Alluvium
Typical vegetation:	Annual grasses and forbs

Component Properties and Qualities

Slope:	0 to 3 percent
Runoff:	High
Surface features:	Polygonal surface cracking; polygons are approximately 24 inches in diameter
Percent area covered by surface coarse fragments:	None noted.
Depth to restrictive feature:	None noted
Slowest permeability class:	Very slow
Salinity:	Not saline
Sodicity:	Not sodic
Available water capacity:	About 8.9 inches (High)

Component Hydrologic Properties

Present flooding:	Occasional
Present ponding:	None
Current water table:	Present
Natural drainage class:	Moderately well drained

Interpretive Groups

Land capability irrigated: 2w-5
Land capability nonirrigated: 4w-5

205—Capay clay, 0 to 3 percent slopes

General location: Foothill basins
Geomorphic setting: Basins
Elevation: 175 to 1,200 feet (54 to 366 meters)
Mean annual precipitation: 16 to 28 inches (405 to 710 millimeters)
Mean annual air temperature: 57 to 61 degrees F (14 to 16 degrees C)
Frost-free period: 225 to 250 days

Composition
Capay clay—90 percent
Minor components—10 percent

Major Component Description Capay clay
Geomorphic setting: Basin floors
Parent material: Alluvium
Typical vegetation: Annual grasses and forbs

Properties and qualities
Slope: 0 to 3 percent
Runoff rate: High
Surface features: Polygonal surface cracking; polygons are approximately 24 inches in diameter.
Percentage of the surface covered by rock fragments: None
Slowest permeability class: Very slow
Salinity: Not saline
Sodicity: Not sodic
Available water capacity: About 8.9 inches (high)

Hydrologic properties
Present flooding: Rare
Present ponding: None
Current water table: Present
Natural drainage class: Moderately well drained

Land capability classification
Irrigated: 2s-5 Nonirrigated: 4s-5

Use and Management
Major use: Livestock grazing

206—Capay clay, 5 to 9 percent slopes

General location: Foothill basins
Geomorphic setting: Basins
Elevation: 175 to 400 feet (54 to 122 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Mean annual air temperature: 57 to 61 degrees F (14 to 16 degrees C)
Frost-free period: 225 to 250 days

Composition
Capay clay—90 percent Minor components—10 percent

Major Component Description: Capay clay

Geomorphic setting: Toeslopes
Parent material: Alluvium
Typical vegetation: Annual grasses and forbs

Properties and qualities
Slope: 5 to 9 percent
Runoff rate: Very low
Surface features: Polygonal surface cracking; polygons are approximately 24 inches in diameter.
Percentage of the surface covered by rock fragments: None
Slowest permeability class: Very slow
Salinity: Not saline
Sodicity: Not sodic
Available water capacity: About 8.9 inches (high)

Hydrologic properties
Present flooding: None
Present ponding: None
Current water table: Present
Natural drainage class: Moderately well drained

Land capability classification
Irrigated: 2s-5 Nonirrigated: 4s-5

Use and Management
Major use: Livestock grazing

211—Corval clay loam, 0 to 3 percent slopes

General location:	West of Maxwell and foothill valleys
Geomorphic setting:	Flood plains and alluvial fans
Elevation:	85 to 1,400 feet (27 to 427 meters)
Mean annual precipitation:	14 to 22 inches (355 to 560 millimeters)
Mean annual air temperature:	57 to 63 degrees F (14 to 17 degrees C)
Frost-free period:	185 to 250 days

Composition
Corval clay loam—85 percent
Minor components—15 percent

Major Component Description:	Corval clay loam
Geomorphic setting:	Alluvial fans and flood plains
Parent material:	Alluvium
Typical vegetation:	Irrigated crops

Properties and qualities

Slope:	0 to 3 percent
Runoff rate:	Very low
Percentage of the surface covered by rock fragments:	None
Slowest permeability class:	Moderately slow
Salinity:	Not saline
Sodicity:	Not sodic
Available water capacity:	About 11.2 inches (very high)

Hydrologic properties

Present flooding:	Rare
Present ponding:	None
Current water table:	None noted
Natural drainage class:	Well drained

Land capability classification
Irrigated: 1 Nonirrigated: 4s

Use and Management

Major uses: Irrigated crops and livestock grazing.

213—Ayar clay, 15 to 30 percent slopes

General location: West of Maxwell, in the lower foothills and near Spring Valley
Geomorphic setting: Hills
Elevation: 150 to 505 feet (46 to 154 meters)
Mean annual precipitation: 14 to 18 inches (355 to 458 millimeters)
Mean annual air temperature: 61 to 63 degrees F (16 to 17 degrees C)
Frost-free period: 225 to 250 days

Composition
Ayar clay—85 percent
Minor components—15 percent

Major Component Description: Ayar clay

Geomorphic setting: Side slopes of hills
Parent material: Calcareous residuum weathered from sandstone
Typical vegetation: Annual grasses and forbs

Properties and qualities
Slope: 15 to 30 percent
Runoff rate: Medium
Surface features: Polygonal cracking pattern; polygons are approximately 24 inches in diameter.
Percentage of the surface covered by rock fragments: None
Depth to restrictive feature: Bedrock (paralithic)—60 to 80 inches

Slowest permeability class: Slow above the bedrock
Salinity: Not saline
Sodicity: Not sodic
Available water capacity: About 9.4 inches (high)

Hydrologic properties
Present flooding: None
Present ponding: None
Current water table: None noted
Natural drainage class: Well drained

Land capability classification
Irrigated: 4e-5 Nonirrigated: 4e-5

Use and Management
Major use: Livestock grazing

215—Altamont-Sehorn complex, 15 to 30 percent slopes

General location: Lower Coast Range foothills on steep ridges
Map unit geomorphic setting: Hill
Elevation: 200 to 800 feet (61 to 244 meters)
Mean annual precipitation: 14 to 18 inches (355 to 458 millimeters)
Mean annual air temperature: 61 to 63 degrees F. (16 to 17 degrees C.)
Frost-free period: 225 to 250 days

Altamont silty clay—45 percent
Sehorn silty clay—35 percent
Minor components: 20 percent

Major Component Description--Altamont silty clay
Component geomorphic setting: Lower sideslopes and north slopes of hill
Parent material: Residuum weathered from sandstone-shale
Typical vegetation: Annual grasses with scattered blue oak

Component Properties and Qualities
Slope: 15 to 30 percent
Runoff: Medium
Surface features: Polygonal cracking pattern, approximately 24 inches in diameter.
Percent area covered by surface coarse fragments: None noted.
Depth to restrictive feature: Bedrock (paralytic)—40 to 60 inches
Slowest permeability class: Slow above the bedrock
Salinity: Not saline
Sodicity: Not sodic
Available water capacity: About 7.9 inches (High)

Component Hydrologic Properties

Present flooding: None
Present ponding: None
Current water table: None noted.
Natural drainage class: Well drained

Interpretive Groups
Land capability irrigated: Not calculated
Land capability nonirrigated: 4e-5

216—Altamont-Sehorn complex, 9 to 15 percent slopes

General location:	Lower Coast Range foothills on steep ridges
Geomorphic setting:	Hill
Elevation:	200 to 800 feet (61 to 244 meters)
Mean annual precipitation:	14 to 18 inches (355 to 458 millimeters)
Mean annual air temperature:	61 to 63 degrees F. (16 to 17 degrees C.)
Frost-free period:	225 to 250 days

Altamont silty clay—45 percent
Sehorn silty clay—35 percent
Minor components: 20 percent

Major Component Description **Altamont silty clay**

Component geomorphic setting:	Lower sideslopes and north slopes of hill
Parent material:	Residuum weathered from sandstone-shale
Typical vegetation:	Annual grasses with scattered blue oak

Component Properties and Qualities

Slope:	9 to 15 percent
Runoff:	Medium
Surface features:	Polygonal cracking pattern, approximately 24 inches in diameter.
Percent area covered by surface coarse fragments:	None noted.
Depth to restrictive feature:	Bedrock (paralytic)—40 to 60 inches
Slowest permeability class:	Slow above the bedrock
Salinity:	Not saline
Sodicity:	Not sodic
Available water capacity:	About 7.9 inches (High)

Component Hydrologic Properties

Present flooding:	None
Present ponding:	None
Current water table:	None noted.
Natural drainage class:	Well drained

Interpretive Groups
Land capability irrigated: 3e-5
Land capability nonirrigated: 4e-5

218—Sehorn-Altamont complex, 30 to 50 percent slopes

General location: The lower Coast Range foothills on steep ridges
Geomorphic setting: Hills
Elevation: 200 to 800 feet (61 to 244 meters)
Mean annual precipitation: 14 to 18 inches (355 to 458 millimeters)
Mean annual air temperature: 61 to 63 degrees F (16 to 17 degrees C)
Frost-free period: 225 to 250 days

Composition
Sehorn silty clay—45 percent
Altamont silty clay—35 percent
Minor components—20 percent

Major Component Description: Sehorn silty clay
Geomorphic setting: Side slopes of hills
Parent material: Residuum weathered from sandstone and shale
Typical vegetation: Blue oak and annual grasses

Properties and qualities
Slope: 30 to 50 percent
Runoff rate: High
Surface features: Polygonal cracking pattern; the polygons are approximately 24 inches in diameter.
Percentage of the surface covered by rock fragments: None
Depth to restrictive feature: Bedrock (lithic)—20 to 40 inches
Slowest permeability class: Slow above the bedrock
Salinity: Not saline
Sodicity: Not sodic
Available water capacity: About 4.5 inches (low)

Hydrologic properties
Present flooding: None
Present ponding: None
Current water table: None noted
Natural drainage class: Well drained

Land capability classification
Irrigated: Not calculated Nonirrigated: 6e

Use and Management
Major use: Livestock grazing

253—Millsholm-Altamont-Rock outcrop complex, 5 to 15 percent slopes

General location:	Lower Coast Range foothills
Geomorphic setting:	Hill
Elevation:	180 to 350 feet (55 to 107 meters)
Mean annual precipitation:	14 to 18 inches (355 to 458 millimeters)
Mean annual air temperature:	61 to 63 degrees F. (16 to 17 degrees C.)
Frost-free period:	225 to 250 days

Millsholm loam—55 percent
Altamont silty clay—20 percent
Rock outcrop—15 percent
Minor components: 10 percent

Major Component Description	Millsholm loam
Component geomorphic setting:	Sideslopes of hill
Parent material:	Residuum weathered from sandstone-shale
Typical vegetation:	Annual grasses with scattered oak

Component Properties and Qualities

Slope:	5 to 15 percent
Runoff:	Low
Surface features:	None noted.
Percent area covered by surface coarse fragments:	None noted.
Depth to restrictive feature:	Bedrock (litchi)—10 to 20 inches
Slowest permeability class:	Moderate above the bedrock
Salinity:	Not saline
Sodicity:	Not sodic
Available water capacity:	About 2.1 inches (Very low)

Component Hydrologic Properties

Present flooding:	None
Present ponding:	None
Current water table:	None noted.
Natural drainage class:	Well drained

Interpretive Groups
Land capability irrigated: Not calculated Land capability nonirrigated: 6e

257—Millsholm-Capay complex, 3 to 9 percent slopes

General location:	Lower Coast Range foothills
Geomorphic setting:	Hill
Elevation:	25 to 400 feet (9 to 122 meters)
Mean annual precipitation:	14 to 18 inches (355 to 458 millimeters)
Mean annual air temperature:	61 to 63 degrees F. (16 to 17 degrees C.)
Frost-free period:	225 to 250 days

Millsholm loam—50 percent
Capay clay—35 percent
Minor components: 15 percent

Major Component Description	Millsholm loam
Component geomorphic setting:	Sideslopes of hill
Parent material:	Residuum weathered from sandstone-shale
Typical vegetation:	Annual grasses with scattered oak

Component Properties and Qualities

Slope:	3 to 9 percent
Runoff:	Medium
Surface features:	None noted.
Percent area covered by surface coarse fragments:	None noted.
Depth to restrictive feature:	Bedrock (lithic)—10 to 20 inches
Slowest permeability class:	Moderate above the bedrock
Salinity:	Not saline
Sodicity:	Not sodic
Available water capacity:	About 2.1 inches (Very low)

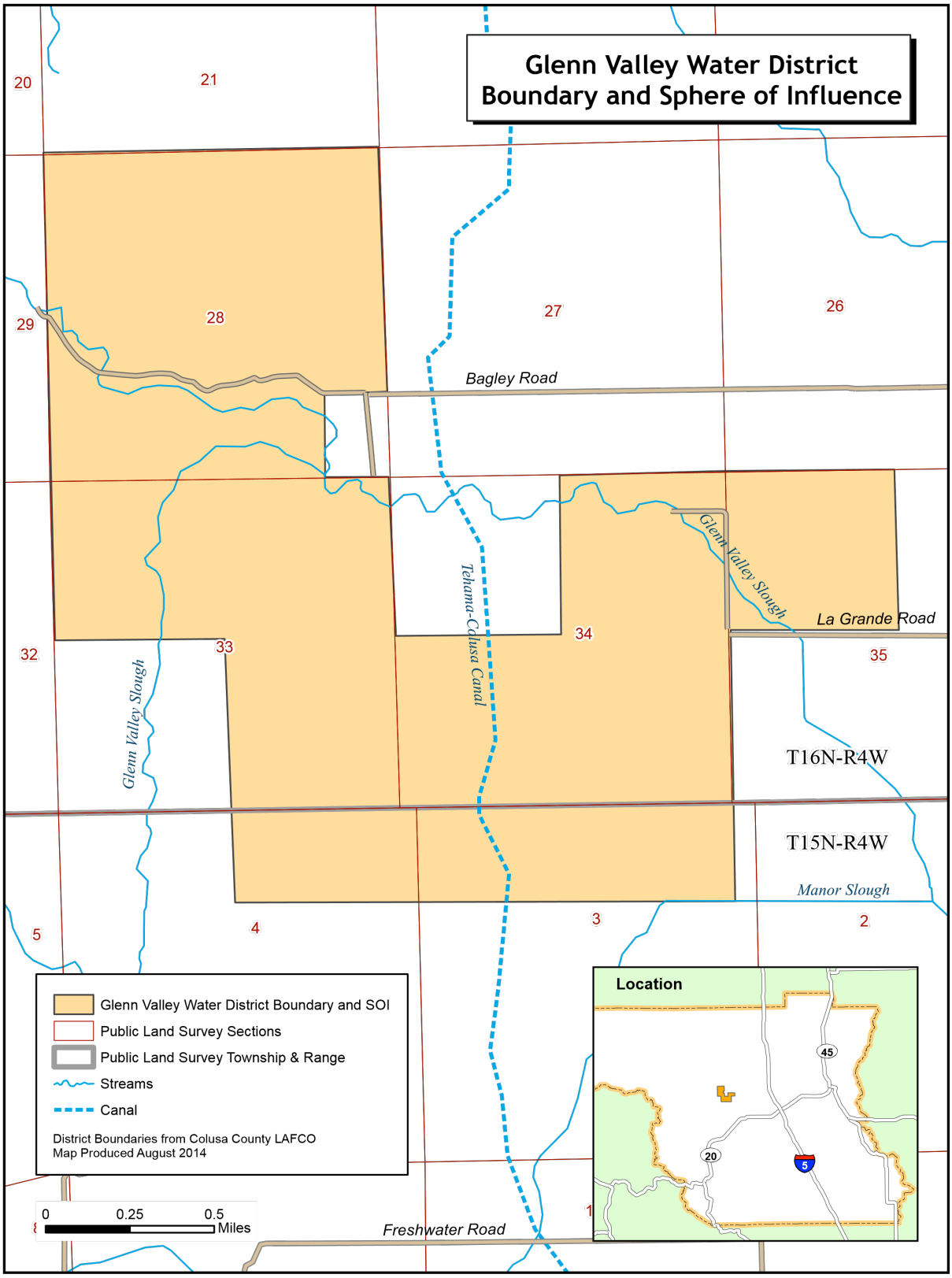
Component Hydrologic Properties

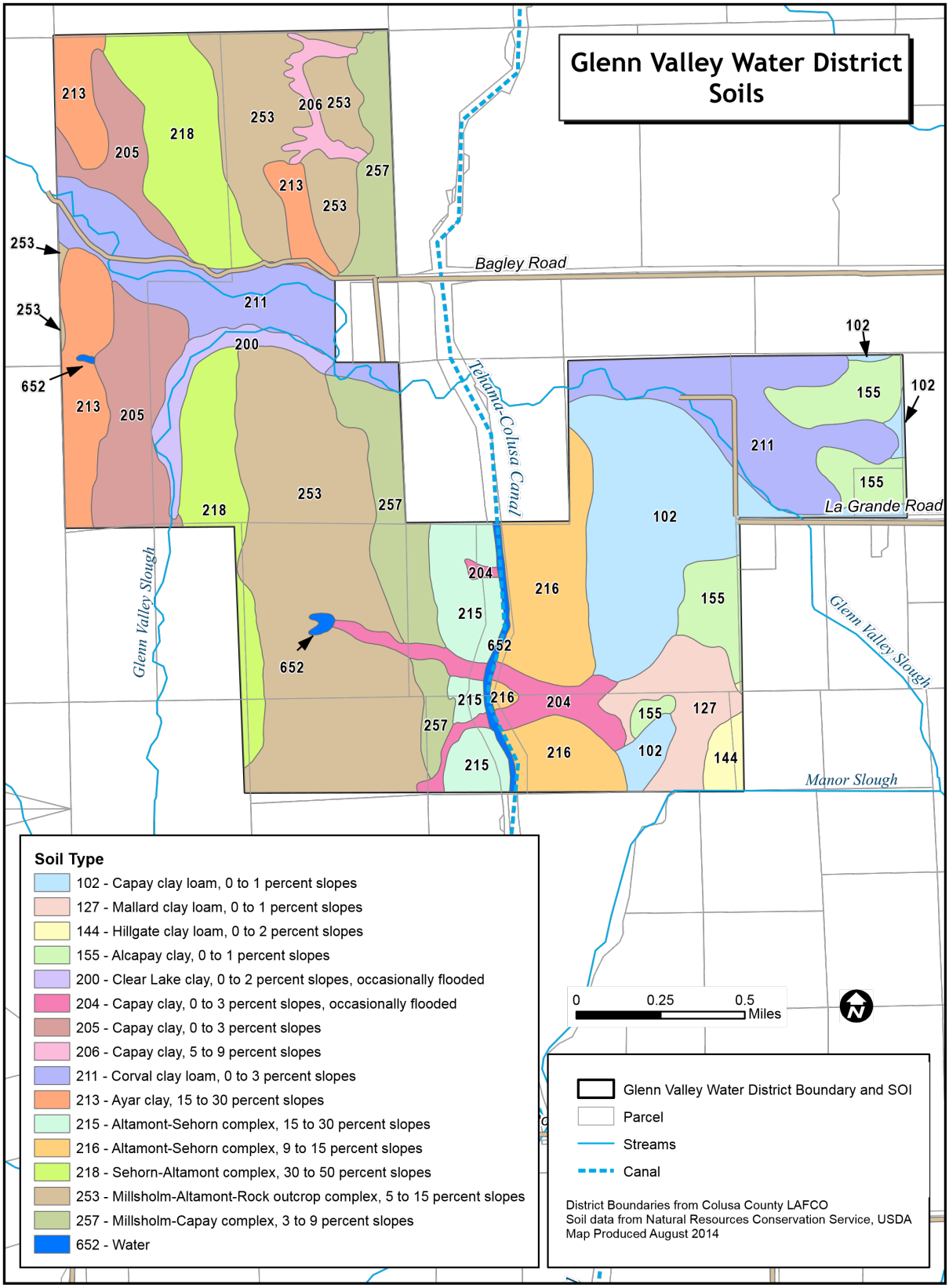
Present flooding:	None
Present ponding:	None
Current water table:	None noted.
Natural drainage class:	Well drained

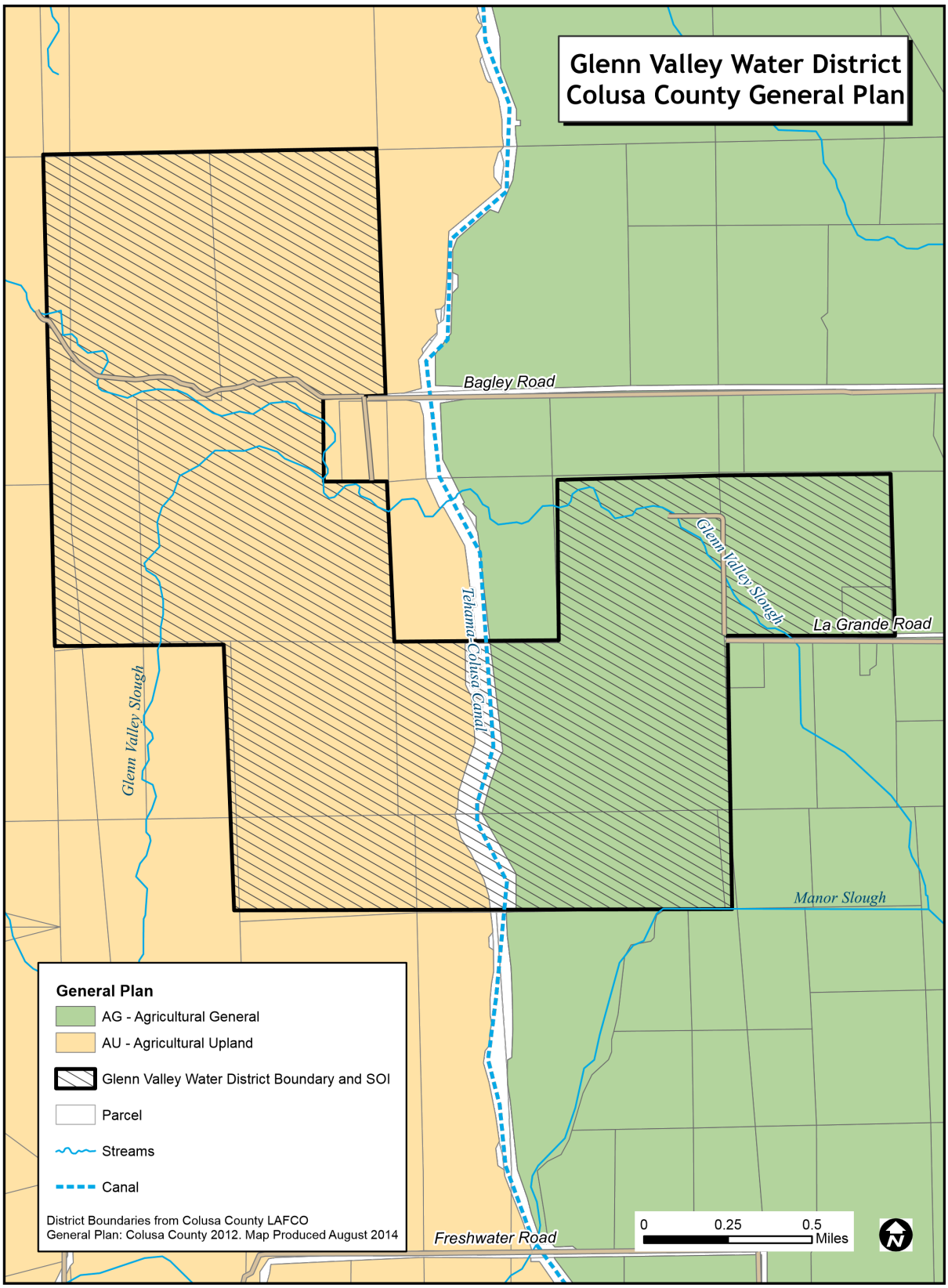
Interpretive Groups

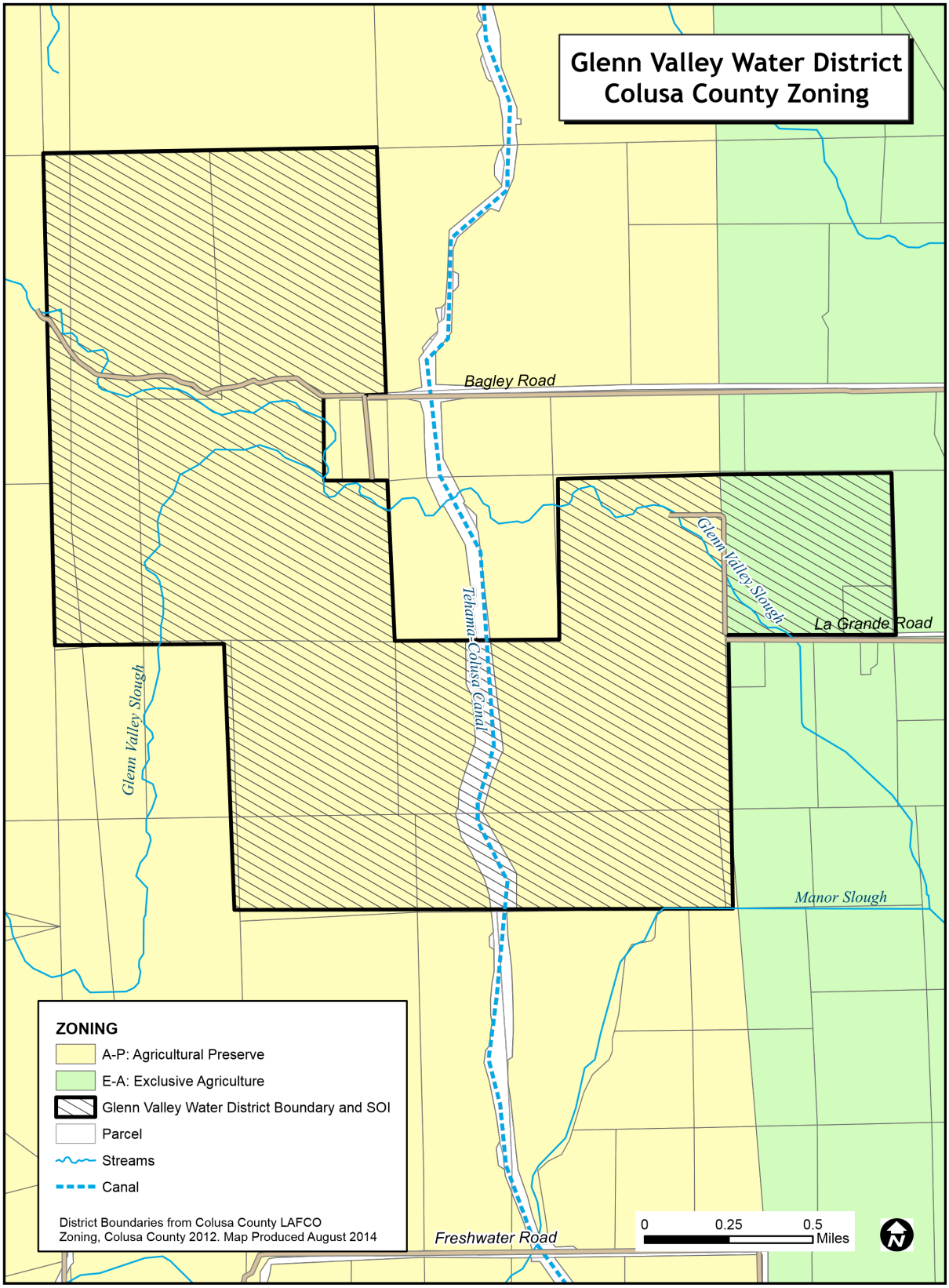
Land capability irrigated: 6e
Land capability nonirrigated: 6e

MAPS


Glenn Valley Water District
Boundary and Sphere of Influence
20
21
29
28
27
26
Bagley Road
32
33
34
35
Glenn Valley Slough
Tehama-Colusa Canal
Glenn Valley Slough
La Grande Road
T16N-R4W
T15N-R4W
Manor Slough
5
4
3
2
1
Freshwater Road
Glenn Valley Water District Boundary and SOI
Public Land Survey Sections
Public Land Survey Township & Range
Streams
Canal
District Boundaries from Colusa County LAFCO
Map Produced August 2014
0
0.25
0.5
Miles
Location
45
20
5


Glenn Valley Water District Soils
Bagley Road
La Grande Road
Tehama-Colusa Canal
Glenn Valley Slough
Glenn Valley Slough
Manor Slough
213
205
218
253
206 253
257
213
253
253
253
211
200
652
213
205
218
253
257
102
155
102
211
155
102
204
216
215
652
652
215
216
204
257
215
216
155
127
102
144
155
0
0.25
0.5
Miles
Soil Type
102 - Capay clay loam, 0 to 1 percent slopes
127 - Mallard clay loam, 0 to 1 percent slopes
144 - Hillgate clay loam, 0 to 2 percent slopes
155 - Alcapay clay, 0 to 1 percent slopes
200 - Clear Lake clay, 0 to 2 percent slopes, occasionally flooded
204 - Capay clay, 0 to 3 percent slopes, occasionally flooded
205 - Capay clay, 0 to 3 percent slopes
206 - Capay clay, 5 to 9 percent slopes
211 - Corval clay loam, 0 to 3 percent slopes
213 - Ayar clay, 15 to 30 percent slopes
215 - Altamont-Sehorn complex, 15 to 30 percent slopes
216 - Altamont-Sehorn complex, 9 to 15 percent slopes
218 - Sehorn-Altamont complex, 30 to 50 percent slopes
253 - Millsholm-Altamont-Rock outcrop complex, 5 to 15 percent slopes
257 - Millsholm-Capay complex, 3 to 9 percent slopes
652 - Water
Glenn Valley Water District Boundary and SOI
Parcel
Streams
Canal
District Boundaries from Colusa County LAFCO
Soil data from Natural Resources Conservation Service, USDA
Map Produced August 2014


Glenn Valley Water District
Colusa County General Plan
Bagley Road
Glenn Valley Slough
La Grande Road
Tehama Colusa Canal
Glenn Valley Slough
Manor Slough
Freshwater Road
General Plan
AG - Agricultural General
AU - Agricultural Upland
Glenn Valley Water District Boundary and SOI
Parcel
Streams
Canal
District Boundaries from Colusa County LAFCO
General Plan: Colusa County 2012. Map Produced August 2014
0
0.25
0.5
Miles
N


Glenn Valley Water District
Colusa County Zoning
Bagley Road
Glenn Valley Slough
La Grande Road
Tehama Colusa Canal
Glenn Valley Slough
Manor Slough
Freshwater Road
ZONING
A-P: Agricultural Preserve
E-A: Exclusive Agriculture
Glenn Valley Water District Boundary and SOI
Parcel
Streams
Canal
District Boundaries from Colusa County LAFCO
Zoning, Colusa County 2012. Map Produced August 2014
0
0.25
0.5
Miles
N