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4.1 LAND USE

This section discusses the consistency of the Project with existing and planned land uses and existing zoning. The section also discusses impacts on public open space and planning designations for mineral, aggregate, or geothermal resources. To provide a basis for this evaluation, the setting section provides information on regional land use patterns, General Plans of the jurisdictions within the study area, and existing and planned land uses within the vicinity of Project components.

IMPACTS EVALUATED IN OTHER SECTIONS

The Land Use Section covers only issues specifically related to land use planning. It does not cover associated topics such as agricultural land, noise, traffic, housing, or visual impacts. The following items are related to the Land Use Section but are evaluated in other sections of this document:

- **Public Policies.** This Land Use Section evaluates consistency of the Project with General Plans and other public policy documents regarding land use issues only. Public policies regarding, for example, biological or visual resources are treated in the Biological Resources or Visual Resources sections of this document.
- **Growth Inducement.** The issue of growth inducement resulting from the Project is addressed in Chapter 5 of this document.
- **Conversion of Agricultural Land.** Construction of Project facilities could result in the conversion of agricultural land and/or the cancellation of Williamson Act contracts covering existing agricultural operations. These potential impacts are discussed in Section 4.2, Agriculture. Impacts related to changes in type of agricultural operations resulting from the availability of reclaimed water for irrigation (e.g., conversion of grazing land to viticulture) are discussed in Section 4.18, Socio-economics.
- **Viewsheds and Scenic Corridors.** Construction of Project facilities including dams, pump stations, electrical service, and roadways could impact existing views and the visual quality of scenic roads and corridors. Impacts of the proposed Project facilities on visual resources are discussed in Section 4.14, Visual Resources.
- **Loss of Dwelling Units.** Construction of storage reservoirs would cause the loss of dwelling units. This impact is evaluated in Section 4.18, Socio-economics.

AFFECTED ENVIRONMENT (SETTING)

Jurisdictions potentially affected by the Project alternatives include the counties of Sonoma and Marin; the cities of Santa Rosa, Rohnert Park, Cotati, Sebastopol, and Petaluma; and the Town of Windsor. The City of Healdsburg's planning jurisdiction is located three miles from the nearest Project component and therefore would not be affected.

Planning Jurisdictions

All of the jurisdictions potentially affected by the Project alternatives have adopted General Plans, which include land use goals, objectives, and policies as well as a Land Use Plan map showing future land use designations (see Figure 4.1-1).

Sonoma County

The Sonoma County General Plan (1989, revised 1991) is applicable to the unincorporated areas of Sonoma County and is intended to guide decisions regarding future growth, development, and conservation of resources through the year 2005. The General Plan divides the County into nine Planning Areas (also termed Sub-county Planning Regions) each with its own goals, objectives, and policies (see Figure 4.1-2).

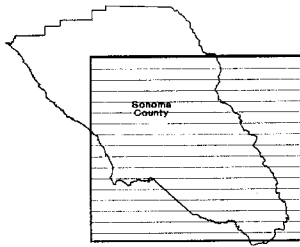
Marin County

The Marin Countywide Plan (1994) applies to the unincorporated areas of Marin County and is intended to define a countywide character and development pattern, and establish a framework for coordinated planning and growth management in the County for the period of 1990-2010. The Community Development Element of the Plan divides the County into six Planning Areas, with more detailed objectives and policies for each area. The West Marin Planning Area includes the portion of the County potentially affected by Project alternatives.

Santa Rosa

Santa Rosa is the county seat of Sonoma County and, with a population of about 126,000, is the largest city in the County. The Santa Rosa General Plan (1991, amended 1994) is intended to provide for the orderly development of the City and the conservation of its natural and historical resources through the year 2010. The Land Use Element of the Plan includes land use policies and land use designations applicable to the area within the present city limits and also to areas outside the present limits but within a future urban boundary designated in the Plan. Outside the urban boundary, the Plan defines a planning area, within which the City has no existing or future jurisdiction (see Figure 4.1-1).

Vicinity



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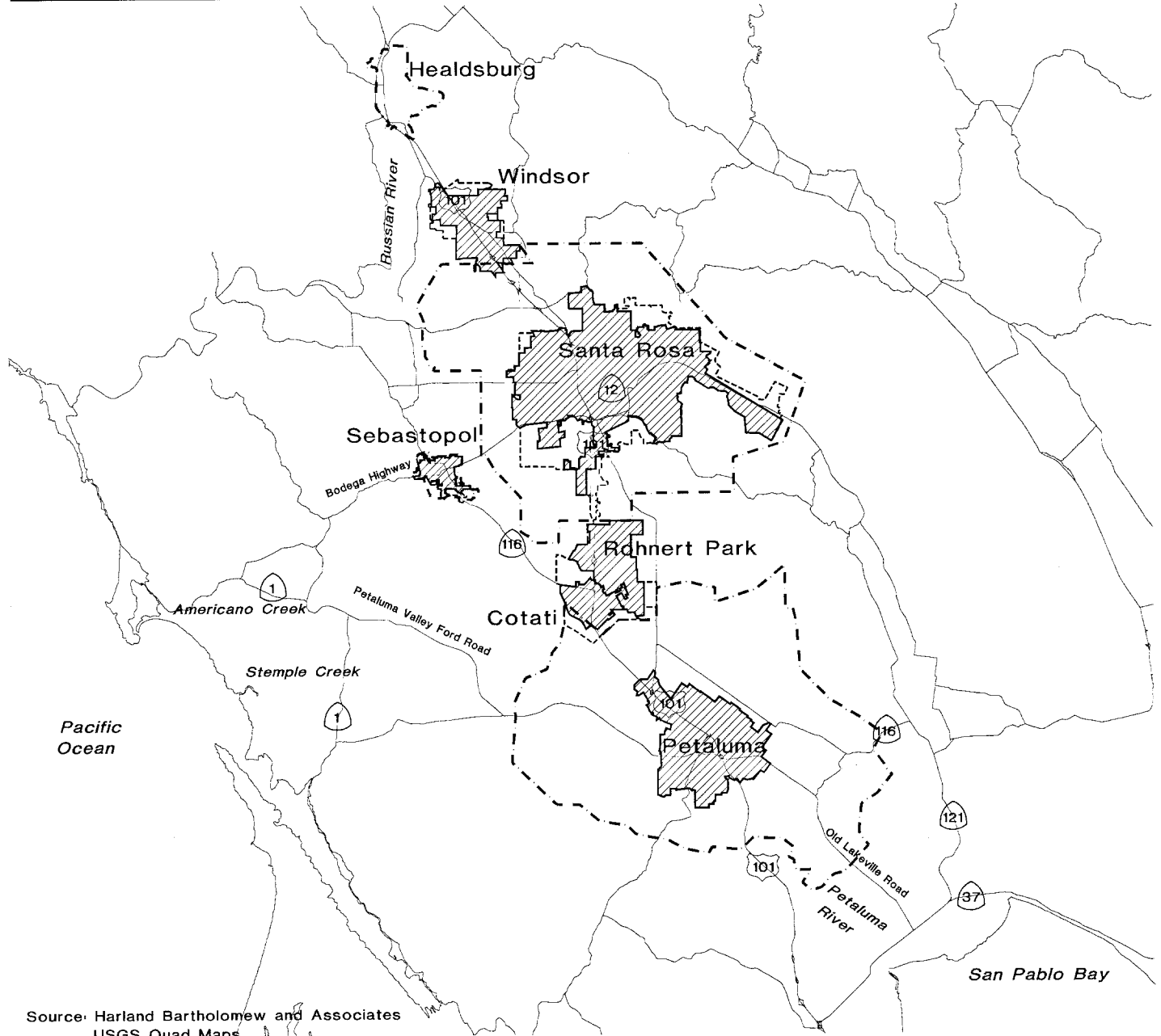
CITY LIMITS



SPHERE OF INFLUENCE



GENERAL PLAN AREA



Source: Harland Bartholomew and Associates
USGS Quad Maps

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Santa Rosa

Subregional Long-Term
Wastewater Project

MUNICIPAL
PLANNING JURISDICTIONS

Figure 4.1-1

Sebastopol

Sebastopol is located west of Santa Rosa on rolling land between the Laguna de Santa Rosa on the east and Atascadero Creek and functions as a market center for western Sonoma County from the Russian River south to Marin County. The Sebastopol General Plan (1994) establishes the City's environmental, social, and economic goals, as well as the location and intensity of different land uses for a 20-year period from 1994 to 2014. The General Plan is applicable within the city limits and the adjoining unincorporated areas within the City's sphere of influence (see Figure 4.1-1).

Rohnert Park

Rohnert Park is located half way between Santa Rosa and Petaluma on flat land with a gentle downslope to the northwest and is immediately adjacent to Cotati. Rohnert Park, founded in 1956, is one of the newest communities in Sonoma County, and its land use patterns were generally guided by the original master plan for the community. The Rohnert Park General Plan (1995) provides guidelines for the physical development of the City and is applicable within the city limits and the adjoining unincorporated areas within the City's sphere of influence. The General Plan also identifies a larger planning area extending beyond the sphere of influence (see Figure 4.1-1).

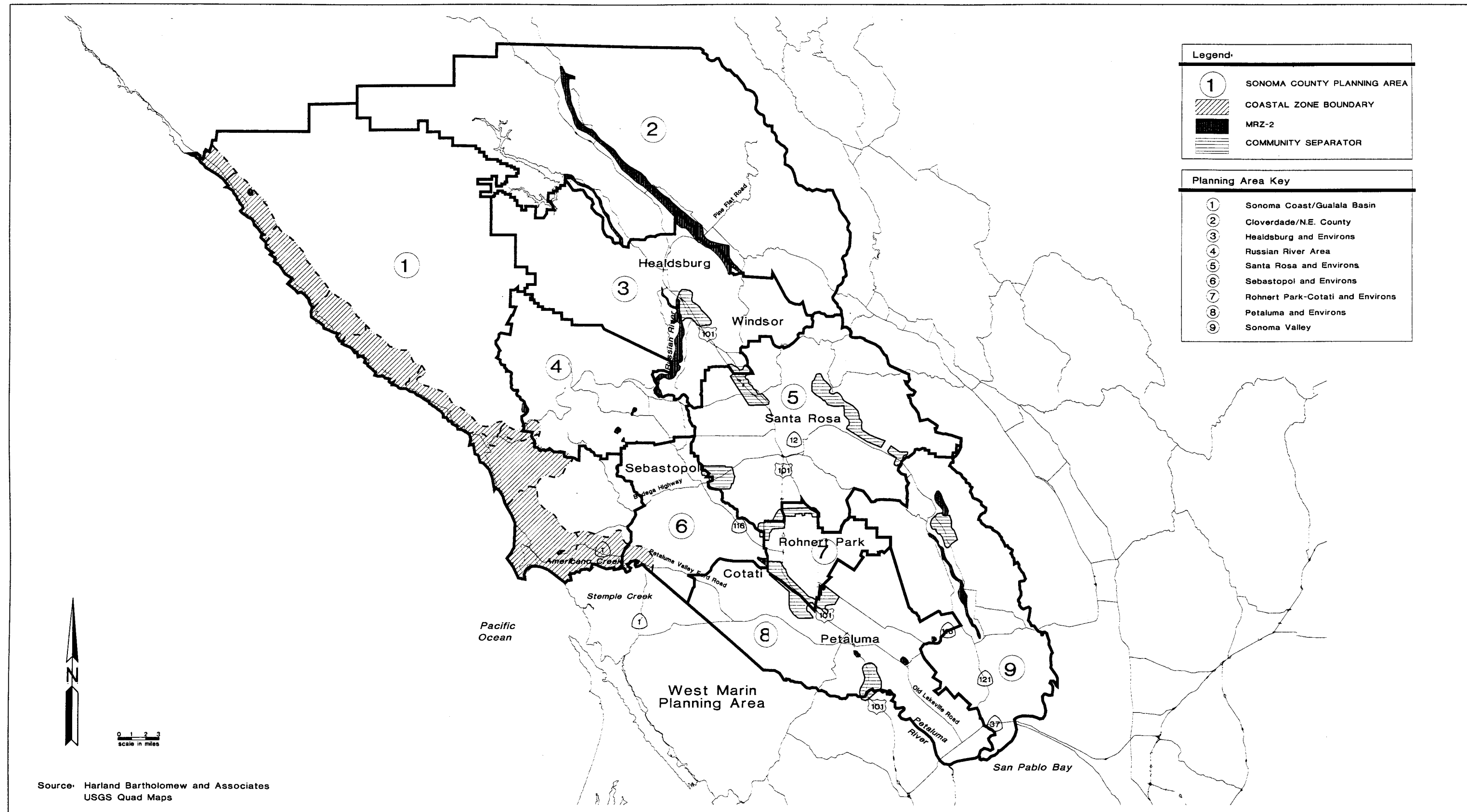
Cotati

Cotati is located at the southern end of the Santa Rosa Valley, in gently rolling hills immediately adjacent to Rohnert Park and separated from Petaluma by Meacham Hill.

The Cotati General Plan (1989) provides guidelines for the growth and development of the City in the period 1985 to 2005. The General Plan is applicable within the city limits and the adjoining unincorporated areas within the City's sphere of influence (see Figure 4.1-1).

Petaluma

Petaluma is located in the southern portion of Sonoma County, and lies in a bowl defined by Sonoma Mountain on the east and the low coastal foothills on the west. The City is divided by Highway 101 and the Petaluma River. The East Side, developed since the 1960s, is characterized by tract subdivisions and a marked contrast with adjacent agricultural lands, while the West Side, which includes the downtown area, is more varied in character, with residential areas becoming more rural in character west of the City. The Petaluma General Plan (1987, revised 1993) identifies development policies for the City and its planning referral area for the period 1987 to 2005. The Planning Referral Area, delineated as the



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General Plan Area on Figure 4.1-1 encompasses the area within the Petaluma River watershed. An urban limit line is also established by the General Plan.

Windsor

The Town of Windsor, located between Santa Rosa and Healdsburg, was incorporated in 1992 and adopted its first General Plan in March 1996. Windsor is a predominantly residential community centered around U.S. 101 and Old Redwood Highway. A mix of land uses is found along Old Redwood Highway, with several new commercial centers changing the character of the area. The more recent residential development is visually distinct from the older residential areas and is characterized by tract subdivisions that are generally enclosed by walls. Industrial development in the Town includes portions of the Airport Business Park along Shiloh Road. Hills and ridges to the east, west, and north enclose the Town's relatively level terrain at the northern end of the Santa Rosa Plain. The General Plan Planning Area is generally bounded by the Russian River to the west, a ridgeline to the north, PG&E transmission lines to the east, and Airport Creek to the south (See Figure 4.1-1).

Regional Land Use Patterns

Existing Land Use

Existing land use patterns in Sonoma County are generally characterized by city- and community-centered growth, with areas of agricultural use and other open space separating the cities and communities. The study area includes the unincorporated communities of Graton, Valley Ford, Bloomfield, Two Rock, and Penngrove. These communities consist of rural residential development intermixed with grazing, farming, and other agricultural activities. Some communities such as Graton, Valley Ford, and Penngrove also have small commercial centers providing services for the local area. Within the city and community areas, there exists a wide variety of density of development, ranging from highly urban to semi-rural, typically with larger lots around the fringe of the incorporated areas and in the unincorporated communities.

Agriculture is an important land use in the County, with a diversity of agricultural operations, including vineyards, orchards, dairies, forage crops, specialty crops, and livestock. Other natural resource uses, such as timberlands and the mining of aggregates, are also important elements of the overall land use patterns in portions of the County. Along the Pacific Coast, fishery uses are significant, while major recreation and tourism uses occur along the coast and the Russian River.

In western Marin County, land use patterns are related to the coastal-recreation and inland-rural corridors defined in the Countywide Plan. Agricultural and natural resource related uses predominate within the Project area.

Planned Land Use

Planned land uses which may be affected by the Project are those designated in the adopted General Plans of the Counties of Sonoma and Marin, the Cities of Santa Rosa, Rohnert Park, Cotati, Sebastopol, and Petaluma and the Town of Windsor. In addition, the Sonoma Coastal Plan and Marin Coastal Program identify recommended land uses and policies for lands within the designated Coastal Zone.

Generally, the planned land use patterns at the countywide level reflect existing development patterns. In Sonoma County, planned land uses are based upon focused growth within relatively compact city and community areas, with community separators to maintain the separate identities of the major cities in the County. Outside the planned urban growth areas, land uses within the County are also planned to be of low intensity, with emphasis upon protection of agriculture and preservation of scenic or biotic resources.

Planned land use in western Marin County is also predominantly agriculture or conservation. Along the northern border adjoining Sonoma County, planned land uses are agricultural, typically with a density of one dwelling unit per 30 to 60 acres, consistent with the character of the inland-rural corridor through this part of the County (see Figures 4.1-3a, b, c).

Project Area Land Use

The Project components encompass a large geographic area in Sonoma County and a portion of northern Marin County. Project components extend from the lower elevations of the Sonoma Mountains on the east to Valley Ford on the west, and from the geysers on the north to the Chileno Valley and the San Pablo Bay Flats on the south. Specific geographic areas within the study area are described in the following sections.

Santa Rosa Plain

This portion of the Project area, located between the City of Santa Rosa's urban boundary on the east and the Laguna de Santa Rosa on the west and south and extending north to Mark West Creek, is primarily agricultural in character, the easterly portions, which are rural residential in character, are located within close proximity to urban development in Santa Rosa and Rohnert Park (see Figures 4.1-3a, b, c).

Agricultural uses in the vicinity of Project components are varied, with grazing predominant, but also including viticulture, row cropping, and diverse specialty agriculture. These agricultural areas vary in size, with many smaller parcel sizes interspersed among the larger holdings. Also scattered among the agricultural areas are rural residential uses and residential uses associated with agricultural operations. More extensive areas of rural residential use are located to the east of

the agricultural areas along Stony Point Road and Wright Road, as well as in the vicinity of Guerneville and Olivet Roads.

Other land uses are public/semi-public or recreational uses and a limited number of industrial and commercial uses adjacent to Highway 12 between the Laguna and Llano Road. A small local commercial area is located at the intersection of Stony Point Road and Todd Road. The major public use in the area is the Laguna Plant located on Llano Road, while other public/semi-public uses (such as schools and religious buildings) are scattered within the rural development. The Santa Rosa Country Club is located south of Hall Road.

Planned land uses in the vicinity of Project components generally maintain the existing land use patterns, and zoning classifications are consistent with the planned land use designations. Areas within unincorporated Sonoma County are designated primarily for non-urban uses under the Sonoma County General Plan, including Agricultural and Rural Residential. Future land use designations for the City of Santa Rosa's Planning Area outside the Urban Boundary are non-urban and consistent with the Sonoma County General Plan.

Fountaingrove Area

Existing land use in the Fountaingrove area consists of a wide variety of uses, including residential, commercial, recreational and industrial. Existing land uses on the proposed urban irrigation sites are predominantly public facilities, except for the Fountaingrove sites, where the uses consist of a private golf course, offices and related uses. Uses at the Cloverleaf Ranch site, located north of the Fountaingrove development along Old Redwood Highway in unincorporated Sonoma County, consist of a youth camp, riding academy, and daycare facilities.

Planned land uses in the vicinity of Project components exhibit the diverse existing character of development, with a variety of urban designations under the City of Santa Rosa General Plan. The Cloverleaf Ranch site is designated as Resources and Rural Development under the Sonoma County General Plan.

Bennett Valley/East Santa Rosa Area

Existing land use in the vicinity of Project components in this area, located generally along the Highway 12 corridor and Bennett Valley Road, is primarily residential. A major community commercial area, including Montgomery Village, is located west of the Montgomery High School site. The Luther Burbank Gardens are located just south of the Santa Rosa central business district. Other major public land uses are the Sonoma County Fairgrounds and the Bennett Valley Golf Course.

Planned land use in the vicinity of Project components in this area exhibits the diverse existing character of development, with a variety of urban designations under the City of Santa Rosa General Plan.

Rohnert Park/Cotati Urban Area

Existing land use patterns within Rohnert Park and Cotati are typified by compact urban development. Residential uses, along with local commercial areas and public and institutional uses (schools, parks, and churches) predominate outside the Highway 101 corridor. More intensive commercial and industrial development is found along the Highway 101 corridor.

Planned land uses within the cities of Rohnert Park and Cotati consist of residential uses, local and community commercial centers, and public and semi-public use areas.

East of Rohnert Park and Cotati

Existing land use in the vicinity of Project components in this area is mixed low density residential and agricultural. Agricultural uses include both crops and grazing. Adjacent to this area is the unincorporated community of Penngrove, which is primarily residential with a small commercial area on Main Street south of Adobe Road. Also to the east of Project agricultural irrigation areas, going up the west slope of Sonoma Mountain are areas of rural residential use. Other residential uses in the area are associated with agricultural operations. Major public land uses in the vicinity are Sonoma State University and Crane Creek Regional Park.

Planned land use and zoning classifications within the study area exhibit the existing character of development, with Diverse Agriculture and Rural Residential designations under the Sonoma County General Plan (see Figures 4.1-3a, b, c).

North of Petaluma

Existing land use in the vicinity of Project agricultural irrigation areas north of Petaluma is mixed low density residential and agricultural. Agricultural uses include both crops and grazing. Adjacent to this area is the commercial/industrial area at Stony Point Road and North Petaluma Boulevard, just west of the Highway 101/Old Redwood Highway interchange.

Planned land use and zoning classifications exhibit the existing character of development, with a combination of Land Extensive Agriculture, Diverse Agriculture, and Rural Residential designations under the Sonoma County General Plan. This area also is within the City of Petaluma's Planning Referral Area and adjacent to the City's Urban Limit Line. Within the Petaluma Urban Limit Line, the City's General Plan designates land adjacent to Project agricultural irrigation areas as Agricultural, providing a transition to more intensive industrial, residential, and commercial designations.

Petaluma Urban Area

The existing development within the Petaluma area is well established and defined by the urban separator, a visible band of open space, which is continuous on the east side, parallel to Adobe Road. Downtown Petaluma, west of the Petaluma River, is the primary commercial and cultural center, while higher intensity development including other commercial centers and industrial uses follows the Highway 101 and Lakeville Highway corridors. Development to the east of these corridors is primarily residential, with interspersed public/semi-public uses (such as schools and parks) and a limited number of local retail centers. Along the eastern edge of this urban development, between Washington Street and Casa Grande Road, is the Petaluma Municipal Airport, which is the major public use in the eastern part of the City. Along the western side of the City are areas of lower density suburban and rural residential uses.

Planned land uses in the Petaluma General Plan maintain the existing established pattern of development, with higher intensity uses in the downtown area and along the Highway 101 and Lakeville Highway corridors. There is a continuous Urban Separator designation maintaining a band of open space along the eastern border of the urban area. There is also an intermittent Urban Separator designation along the western border of the area from Western Avenue to South Petaluma Boulevard.

Adobe Road Area

Existing land use is mixed low-density residential and agricultural, with agricultural uses consisting primarily of grazing operations. Areas to the west of Adobe Road are also predominantly agricultural, and urban development in the City of Petaluma extends westerly from the Municipal Airport.

Planned land use maintains the existing character of development, with primarily Extensive Agriculture and Rural Residential designations under the Sonoma County General Plan (see Figures 4.1-3a, b, c).

Lakeville Area

Existing land use is predominantly agricultural, including both crops and grazing. Residential uses typically are associated with the agricultural operations. There are scattered, isolated commercial uses along Lakeville Highway; generally, these uses are also associated with agricultural operations. To the north of Stage Gulch Road on the west side of Lakeville Highway is the City of Petaluma's wastewater treatment facility.

Planned land use and zoning classifications exhibit the existing character of development, with both Diverse Agriculture and Land Extensive Agriculture designations under the Sonoma County General Plan (see Figure 4.1-3).

West of Sebastopol

Existing land use is a mixture of rural residential and agricultural uses with diverse crops (including vineyards and orchards). The area surrounds the community of Graton, which contains more intensive residential development as well as industrial and limited commercial uses. Non-residential uses outside of Graton, such as those in the Barlow and Molino areas along Occidental Road, are typically associated with the agricultural economy of the area. Lands to be considered for agricultural irrigation within this area are generally in agricultural use, although some land is not currently being cropped.

Planned land use and zoning classifications exhibit the existing character of development, with Diverse Agriculture and Rural Residential designations under the Sonoma County General Plan (see Figures 4.1-3a, b, c).

Stemple Creek and Americano Creek Area

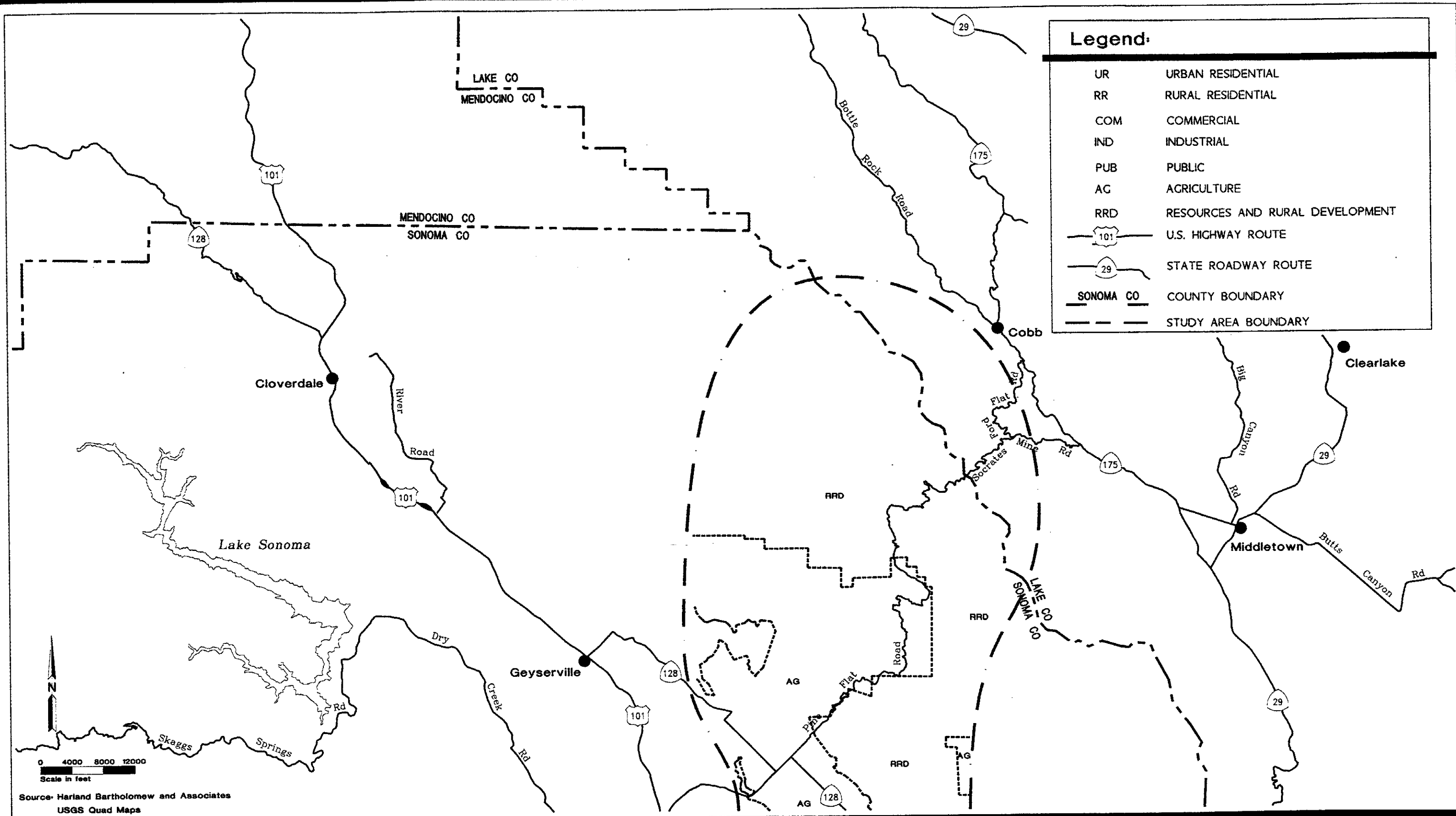
Existing land use is primarily agricultural, with most agricultural lands devoted to grazing. Within this area is the unincorporated community of Bloomfield, which is residential with a small commercial area on Bloomfield Road. Areas to the north on English Hill are low-density rural residential in character. Major public land uses in the vicinity are the Sonoma County landfill site on Meacham Road and the Coast Guard Training Center on Tomales Road.

Planned land use and zoning classifications exhibit the existing character of development, with Land Extensive Agriculture designations under the Sonoma County General Plan (see Figures 4.1-3a, b, c). Land use designations under the Marin County General Plan (Northwest Marin County Land Use Policy Map) are Agricultural.

Russian River Area

Existing land use along the Russian River between Mark West Creek and Windsor Station Road is predominantly agricultural with a combination of viticulture, row crops, and grazing. There are scattered residences in the area generally associated with the agricultural operations. Downstream from the proposed discharge location are the Russian River resort communities extending from Mirabel Park to Monte Rio.

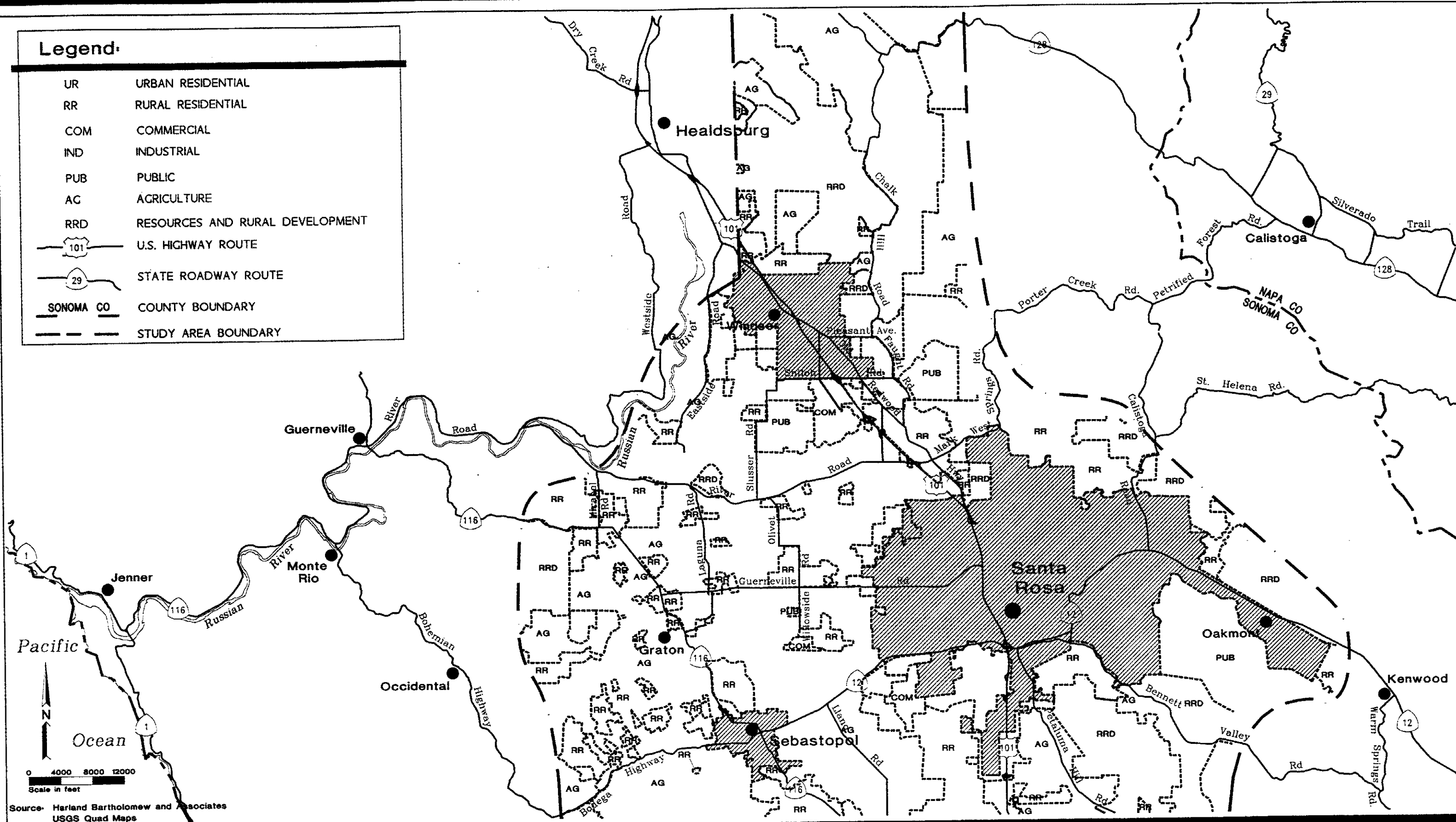
Planned land use in the vicinity of Project components along the Russian River is consistent with existing uses, consisting of the Resources and Rural Development designation under the Sonoma County General Plan (see Figures 4.1-3a, b, c).



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Legend:

UR	URBAN RESIDENTIAL
RR	RURAL RESIDENTIAL
COM	COMMERCIAL
IND	INDUSTRIAL
PUB	PUBLIC
AG	AGRICULTURE
RRD	RESOURCES AND RURAL DEVELOPMENT
	U.S. HIGHWAY ROUTE
	STATE ROADWAY ROUTE
	SONOMA CO COUNTY BOUNDARY
	STUDY AREA BOUNDARY



Source: Harland Bartholomew and Associates
USGS Quad Maps

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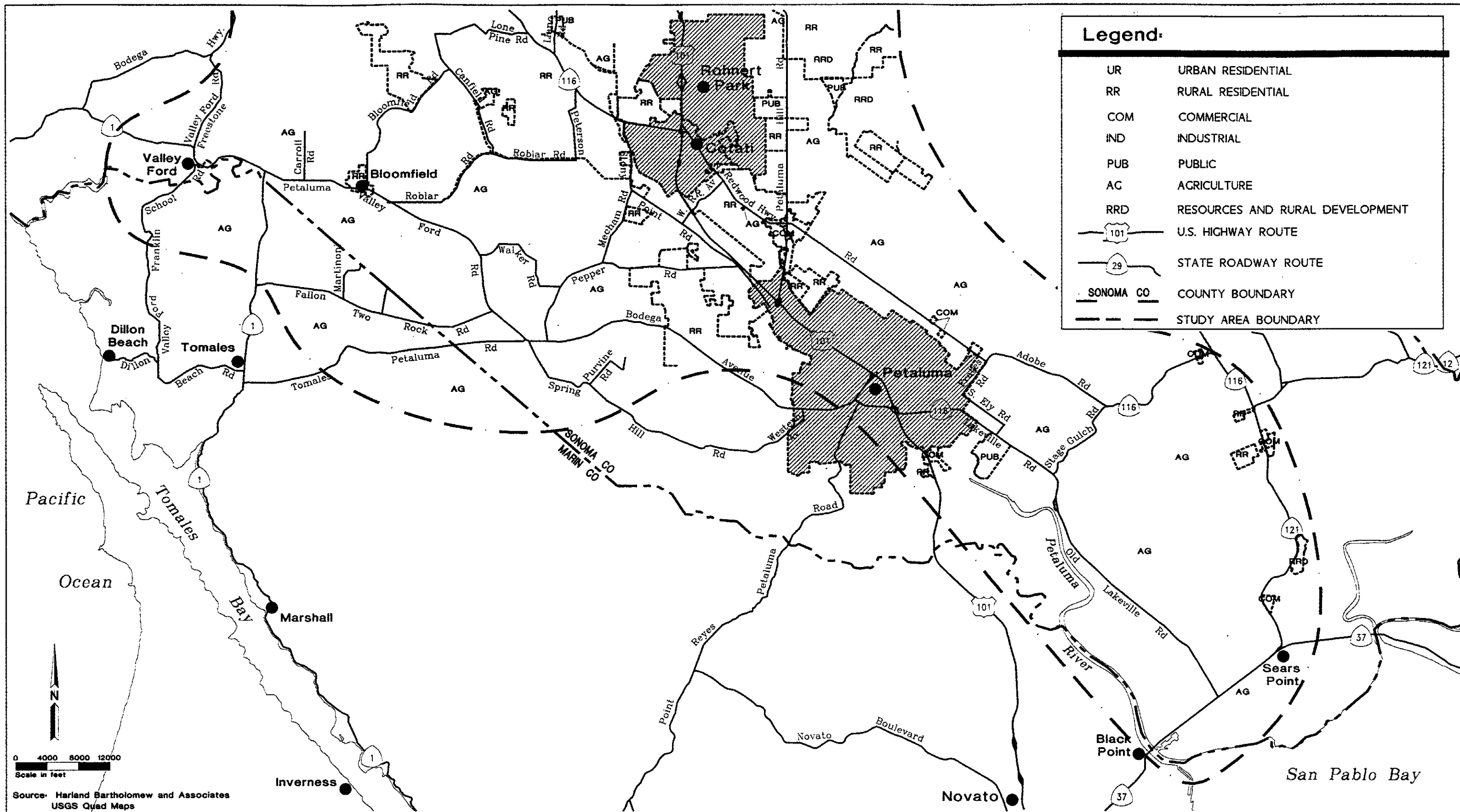
Santa Rosa

Subregional Long-Term
Wastewater Project

SONOMA COUNTY/
MARIN COUNTY
PLANNED LAND USE

Figure 4.1-3b

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Geysers Pipeline Area

Existing land use along the pipeline route from the Santa Rosa Plain to the geysers reflects the varied geographic character along the route. From Mark West Creek to the Sonoma County Airport, the land use pattern is primarily agricultural, with scattered residences associated with agricultural use. The route passes along the west side of the Sonoma County Airport, and there is a cluster of rural residential development to the northwest of the Airport along Mark West Springs Road. East of the Airport to Highway 101 is an area of mixed industrial and commercial use. From Highway 101 to Chalk Hill Road the route passes through the Town of Windsor, with urban residential uses predominating. Along Chalk Hill Road, from Windsor to Highway 128, uses are primarily resource-related, with viticulture, other agricultural uses, and scattered residential uses. Along Highway 128, through the Alexander Valley to Pine Flat Road, viticulture is the dominant use, again with scattered residential uses. Along Pine Flat Road to the geysers, the land is primarily undeveloped, although there are isolated residences and ranches.

Planned land uses and zoning along the pipeline route maintain the existing land use patterns, with a variety of designations under the Sonoma County General Plan (see Figures 4.1-3a, b, c). Within the Town of Windsor, urban residential uses predominate.

Geysers Steamfield

Existing land use in the geysers geothermal steamfield area is related to the operation of the existing geothermal steamfields, including facilities such as well heads, power plants, and electrical utility and communications facilities.

Planned land use in the geysers steamfield area is the Resources and Rural Development designation under the Sonoma County General Plan. The zoning classifications are consistent with this designation.

Community Separators

The Sonoma County General Plan identifies eight Community Separators to maintain community identity and prevent the merging of cities and communities into continuous areas of urban development without visual relief. These Community Separators are also incorporated into the land use policies and designations of the municipalities within the County. The separators are planned for low intensities of use which do not require urban services. Commercial and industrial uses in the separators are intended to be those related to agricultural and resource land use categories. The following Community Separators, shown in Figure 4.1-2, are potentially affected by the Project:

- Santa Rosa-Windsor Community Separator along Highway 101;

- Santa Rosa-Rohnert Park Community Separator along the northern boundary of the Rohnert Park urban service area;
- Petaluma-Rohnert Park Community Separator along Highway 101; and
- Sebastopol-Santa Rosa Community Separator along the Laguna de Santa Rosa.

The existing character of these areas is non-urban, with rural residential and agricultural uses predominating.

Mineral, Aggregate, and Geothermal Resource Areas

California Surface Mining and Reclamation Act

Under the California Surface Mining and Reclamation Act of 1975, the State Geologist classifies land in the State for its mineral resource potential according to various Mineral Resource Zone (MRZ) categories that reflect varying degrees of mineral potential. Within the study area, there are significant mineral resources identified in the Resource Conservation Element of the Sonoma County General Plan as Mineral Resource Deposits subject to resource conservation policy requirements under the MRZ-2 classification. The MRZ-2 classification includes areas where geologic data indicate significant measured, indicated, or inferred resources.

MRZ-2 designations are shown on Figure 4.1-2. The largest areas of such designations potentially affected by the Project consist of deposits along the Russian River in the Alexander Valley and south of Healdsburg and along Green Valley Creek northwest of Sebastopol. Other MRZ-2 areas are located along Highway 116 east of Petaluma and along Stony Point Road southeast of Sebastopol.

Sonoma County Aggregate Resources Management Plan

The Sonoma County Aggregate Resources Management (ARM) Plan establishes policies and standards for the management of the County's aggregate resources (County of Sonoma 1994). One of the objectives of the ARM Plan is to increase quarry production to provide a full range of uses and replace river terrace sources as the primary supply for future construction aggregate. The ARM Plan designates seven new quarry sites in the County as well as expansion areas for most existing quarries. Sites designated in the ARM Plan within the study are a are: the Walker Road site, a potential new quarry located Two Rock reservoir site; and the Ielmorini Quarry, a permitted, but undeveloped, quarry on the Adobe Road reservoir site.

The ARM Plan indicates that all designated new quarry sites and potential expansion areas shall be protected from incompatible uses by being considered in the review of all nearby development proposals; and that uses which would be

incompatible with future quarry development on designated sites shall not be permitted unless the public benefits of the proposed use outweigh the public benefits of the potential quarry development. The ARM Plan also identifies Potential Quarry Resource Areas. These Potential Quarry Resource Areas are for informational purposes only and do not restrict other uses allowed by zoning. The development review process need not consider potential quarry resources in these undesignated areas.

Sonoma County Geothermal Resources Management Plan

The Sonoma County Geothermal Resources Management Plan (1990) (GRMP) is intended to work in conjunction with the Resource Conservation Element of the Sonoma County General Plan and set policies and guidelines for the utilization and management of the County's geothermal resources, particularly the geysers Known Geothermal Resource Area (KGRA), while minimizing environmental and land use conflicts. Sonoma County's policy, reflected in the County's general plan, is to promote geothermal development within the primary resource area of the geysers, which consists of about 35,000 acres including the existing geysers operations. The Management Plan is based upon full-field development, which promotes development while protecting cultural and environmental values.

Under the Land Use section of the GRMP, lands within the GRMP area (which corresponds to the primary resource area of the geysers) are designated geothermal resources to protect and promote the management of resources. The Plan provides that the primary use of lands shall be geothermal management and production activities, including geothermal resource exploration activities, geothermal power generation facilities, and related transmission facilities.

Coastal Zone

The Sonoma County Coastal Zone includes portions of the Estero Americano extending east of Valley Ford, to a few hundred feet east of Highway 1 (see Figure 4.1-2). The Sonoma County Coastal Plan (1981) designates the portions of the Coastal Zone along the Estero for agricultural use, with the exceptions of residential and local commercial uses within the existing Valley Ford community. The Marin County Coastal Zone also includes portions of the Estero Americano and Estero de San Antonio extending east of Highway 1; however, none of the Project facilities are located within the Coastal Zone.

Land Use Goals, Objectives, and Policies

Table 4.1-1 identifies land use goals, objectives, and policies which provide guidance for future land use patterns. The table also indicates which Land Use evaluation criteria are responsive to each set of policies.

Table 4.1-1

General Plan Goals, Objectives, and Policies - Land Use

Adopted Plan Document	Document Section	Document Numeric Reference	Policy	Relevant Evaluation Criteria¹
Sonoma County General Plan	Land Use Element	Goal LU-5 Objective LU-5.1	Maintain Community Separators in open or natural character with low intensity of development	4,6
Sonoma County General Plan	Land Use Element	Goal LU-8 Objective LU-8.1 Objective LU-8.4 Objective LU-11.1 Objective LU-15.4 Policy LU-15h	Protect agricultural lands and avoid incompatible non-agricultural uses	1,4,5
Sonoma County General Plan	Land Use Element	Objective LU-11.5 Policy LU-11.1	Protect geothermal resources and avoid incompatible uses in the Known Geothermal Resource Area (geysers)	1,3,5
Marin Countywide Plan	Community Development Element	Policy CD-1.2	In the Inland Rural Corridor, emphasize agricultural land uses and other uses that are compatible with and enhance agricultural preservation	1
Santa Rosa General Plan	Growth Management Element; Land Use Element	Goal GM-1 Objective LUS-1c	Maintain a belt of open space around the city with agricultural and very low density uses, including Community Separators between Santa Rosa and neighboring communities	4,6,7
Santa Rosa General Plan	Land Use Element	Goal LUS-1 Objective LUS-1a	Protect and conserve open spaces and significant natural features from intrusion of degradation by inappropriate land uses	5,6,7
Rohnert Park General Plan	Land Use Element	Policy 3	Encourage the implementation of community separator policies in the County General Plan	4

Table 4.1-1

General Plan Goals, Objectives, and Policies - Land Use

Adopted Plan Document	Document Section	Document Numeric Reference	Policy	Relevant Evaluation Criteria ¹
Petaluma General Plan	Land Use Element	Policy 2 Policy 9 Policy 10	Maintain a permanent open space frame around the city to maintain its separateness and distinct character, and encourage the County to promote agricultural uses beyond the urban separator	4,6,7
Cotati General Plan	Community Identity Section	Policy 12.1.6	Establish area of community separators for preservation of open space adjacent to the city's western and southern boundaries	4,6
Windsor General Plan	Land Use Element	Policy B.4.7	Retain land beyond the proposed Sphere of Influence in County designated land use categories and oppose intensity/density increases in these areas.	1,4,6
Windsor General Plan	Land Use Element	Policy B.5 Policy B.5.2	Promote compatibility between adjacent land uses and protect residential neighborhoods from incompatible land uses	1

Source: Harland Bartholomew & Associates, Inc., 1995

Notes:

1 The Evaluation Criteria are found in Table 4.1-2.

EVALUATION CRITERIA WITH POINTS OF SIGNIFICANCE

Potential land use impacts may occur if:

- the Project results in a change in land use or
- the Project results in a loss of open space.

A change in land use is defined as a change from one land use type to another (e.g., from residential to industrial use). A loss of open space is defined as the permanent coverage of land by structures, roadways, parking areas, or other impervious surfaces.

Impacts may occur directly as a result of Project activities (e.g., conversion of land use on a site due to construction of a Project component) or indirectly within a larger geographic area over time as a result of implementing the Project (e.g., conversion of land uses within an area resulting from the land use change on the Project site.)

Table 4.1-2

Evaluation Criteria with Point of Significance - Land Use

Evaluation Criteria	As Measured by	Point of Significance	Justification
1. Will the Project be inconsistent with the land use plan map of an adopted General Plan or with an adopted Coastal Plan or Coastal Zone Management Program?	Acres of land	Greater than 0 acres of land	General Plans of Sonoma and Marin counties; cities of Cotati, Petaluma, Rohnert Park, Sebastopol and Santa Rosa; and Town of Windsor Sonoma County Local Coastal Plan and Marin County Local Coastal Program
2. Will the Project be inconsistent with zoning?	Acres of land	Greater than 0 acres of land	Zoning regulations of Sonoma and Marin counties; cities of Cotati, Petaluma, Rohnert Park, Sebastopol, and Santa Rosa; and Town of Windsor
3. Will the Project be an incompatible land use type in the MRZ-2 classification, the geysers Known Geothermal Resource Area (KGRA) or in a designated quarry area?	a. Acres of MRZ-2 land developed in incompatible uses	a. Greater than 0 acres of land	a. General Plans of Sonoma and Marin counties and the Mineral Land Classification of the Division of Mines and Geology (1989).
	b. Acres of quarry site designated by the ARM plan developed in incompatible uses	b. Greater than 0 acres of land	b. Sonoma County Aggregate Resources Management (ARM) Plan (1994).
	c. Acres of geysers KGRA developed in incompatible uses	c. Greater than 0 acres of land	c. Sonoma County Geothermal Resource Management Plan (1990).
4. Will the Project introduce inappropriate uses in a Community Separator?	Acres of land within Community Separators developed in inappropriate uses	Greater than 0 acres of land	Sonoma County General Plan

Table 4.1-2

Evaluation Criteria with Point of Significance - Land Use

Evaluation Criteria	As Measured by	Point of Significance	Justification
5. Will the Project increase potential for conflict as a result of incompatible land uses?	a. Lineal feet of incompatible uses b. Number of housing units of incompatible use	a. Greater than 0 lineal feet. b. Greater than 0 housing units.	General Plans of Sonoma and Marin counties; cities of Cotati, Petaluma, Rohnert Park, Sebastopol, and Santa Rosa; and Town of Windsor
6. Will the Project convert non-urban land to urban uses for Project facilities?	Acres of land converted	Greater than 0 acres of land	General Plans of Sonoma and Marin counties; cities of Cotati, Petaluma, Rohnert Park, Sebastopol, and Santa Rosa; and Town of Windsor
7. Will the Project convert public open space for Project facilities?	Acres of land converted	Greater than 0 acres of land	General Plans of Sonoma and Marin counties; cities of Cotati, Petaluma, Rohnert Park, Sebastopol, and Santa Rosa; and Town of Windsor

Source: Harland Bartholomew & Associates, Inc., 1995

METHODOLOGY

The adopted General Plan land use maps for the respective jurisdictions were used to determine planned land uses (other than uses in the Coastal Zone), mineral resources (other than aggregate resources), Community Separators, non-urban land, and public open space used as the basis for evaluation of impacts. Planned land uses in the Coastal Zone were determined from the adopted Coastal Plans of the respective counties. Existing land uses were determined from aerial photographs, supplemented by field observations in areas adjacent to Project facilities. Zoning regulations used as the basis of evaluation of consistency with existing zoning were obtained from the affected jurisdictions (as of June 1, 1995). Aggregate resources were defined in the Sonoma County Aggregate Resources Management Plan (1994). Geothermal resources were defined by the Sonoma County Geothermal Resources Management Plan (1990).

ENVIRONMENTAL CONSEQUENCES (IMPACTS) AND RECOMMENDED MITIGATION

No Action Alternative

Impact: 1.1.1-7. Will the No Action Alternative impact land use based on evaluation criteria 1 through 7?

Analysis: *No Impact; Alternative 1.*

Under the No Action Alternative, there will be no land use changes resulting from new Project facilities and therefore no land use impacts as defined by the evaluation criteria. The No Action Alternative is expected to result in a building moratorium preventing general plan buildout; there will be no direct land use impacts.

Mitigation: No mitigation is needed.

Headworks Expansion Component

Impact: 1.2.1-7. Will the headworks expansion component impact land use based on evaluation criteria 1 through 7?

Analysis: *No Impact; All Alternatives*

The expansion of the Laguna Plant's influent pumping capacity will not result in a change in land use or loss of open space, as the expanded facilities will be contained within the existing Laguna Plant site. There will be no land use impacts.

Alternative 1 does not have a headworks expansion component.

Mitigation: No mitigation is needed.

Urban Irrigation Component

Impact: 1.3.1-7. Will the urban irrigation component impact land use based on evaluation criteria 1 through 7?

Analysis: *No Impact; All Alternatives.*

Urban irrigation will not result in a land use change or loss of open space, as the transmission pipelines are all located in public rights-of-way, and the provision of reclaimed water for irrigation will not change the existing land uses on the proposed irrigation sites, which are predominantly public and semi-public uses. There will be no land use impacts.

Alternatives 1, 4, and 5 do not have an urban irrigation component.

Mitigation: No mitigation is needed.

Pipeline Component

Impact: **1.4.1-7. Will the pipeline component impact land use based on evaluation criteria 1 through 7?**

Analysis: *No Impact; All Alternatives.*

The reclaimed water pipelines will not result in land use impacts, as there will be no change in surface land use. All of the pipelines will be contained within existing public rights-of-way, except for short segments of the main transmission lines approaching the storage reservoirs or agricultural irrigation areas. Easements will be purchased as part of the Project to accommodate these pipeline segments. The easements will not change the use of land. The pipeline alignments will be adjusted within the existing right-of-way as necessary to avoid significant trees, fences, and other structures. There will be no land use impacts.

Alternatives 1 and 5B do not have a pipeline component.

Mitigation: No mitigation is needed.

Storage Reservoir Component

Table 4.1-3

Land Use Impacts by Component -Storage Reservoirs

Evaluation Criteria	Point of Significance	Impact	Type of Impact ¹	Level of Significance ²
1.5.1. Will the storage reservoir component be inconsistent with the land use plan map of an adopted General Plan or with an adopted Coastal Plan or Coastal Zone Management Program?	Greater than 0 acres	None	P	==
1.5.2. Will the storage reservoir component be inconsistent with the adopted zoning?	Greater than 0 acres	None	P	==
1.5.3. Will the storage reservoir component be an incompatible land use type in the MRZ-2 classification, geysers KGRA, or in a designated quarry area?	a. Greater than 0 acres of MRZ-2 land	None	P	==

Table 4.1-3

Land Use Impacts by Component - Storage Reservoirs

Evaluation Criteria	Point of Significance	Impact	Type of Impact ¹	Level of Significance ²
	b. Greater than 0 acres of quarry site designated by the ARM plan			
• Adobe Road Reservoir		8 ac	P	⊙
• Two Rock Reservoir		200 ac	P	●
• All other reservoirs		None	P	==
	c. Greater than 0 acres of geysers KGRA land	None	P	==
1.5.4. Will the storage reservoir component introduce inappropriate uses in a Community Separator?	Greater than 0 acres	None	P	==
1.5.5. Will the storage reservoir component increase potential for conflict as a result of incompatible land uses?	a. Greater than 0 lineal feet	None	P	==
	b. Greater than 0 housing units	None	P	==
1.5.6. Will the storage reservoir component convert non-urban land to urban uses for Project facilities?	Greater than 0 acres	None	P	==
1.5.7. Will the storage reservoir component convert public open space for Project facilities?	Greater than 0 acres	None	P	==

Source: Harland Bartholomew & Associates, Inc. 1996

Notes: 1. Type of Impact:

P Permanent

2. Level of Significance:

● Significant impact before and after mitigation

⊙ Significant impact before mitigation; less than significant impact after mitigation

== No impact

Impact: 1.5.1, 2, 4-7. Will the storage reservoir component impact land use based on evaluation criteria 1, 2, 4, 5, 6, and 7?

Analysis: *No Impact; All Alternatives.*

All reservoir sites are located within unincorporated Sonoma County. Storage reservoirs for agricultural irrigation are not specifically addressed in the Sonoma County General Plan or the Zoning Ordinance. However, such uses are an integral part of agricultural practices for pasture, row crops, and viticulture. In the vicinity of the reservoir sites, there are existing agricultural reservoirs and ponds located within the Land Extensive Agriculture category on the Sonoma County General Plan Land Use Maps and classified for agricultural use under existing Sonoma County zoning. While these reservoirs and ponds are considerably smaller in scale, they serve the same function as the proposed reservoirs in supplying water for agricultural use. Existing reservoirs and ponds operated as part of the Subregional System, although constructed prior to the adoption of the current Sonoma County General Plan, are also shown under the Land Extensive Agriculture category on the General Plan Land Use Maps. Based upon the function of the storage reservoirs as an integral part of agricultural production, they appear to be consistent with the Land Extensive Agriculture designations of the Sonoma County General Plan. Thus, the reservoirs could be consistent with the Land Extensive Agriculture designation of the Sonoma County General Plan.

None of the reservoir sites are located within the Sonoma County or Marin County Coastal Zone. None of the reservoir sites are within Community Separators as defined in the Sonoma County General Plan.

The change in land use on the reservoir sites from agricultural operations to facilities for the storage of reclaimed water will not result in a change of use from rural to urban. Water areas are considered to be open space under the Open Space Element of the Sonoma County General Plan.

The Bloomfield reservoir site includes portions of properties for which the Sonoma County Agricultural Preservation and Open Space District holds conservation easements. Ancillary facilities associated with the reservoir (such as roadways or pump stations) will not be located on these properties. Under the terms of the conservation easement, construction of a reservoir on this site will be allowed provided that approval is obtained from the District (Conveyance of Easement to Sonoma County Agricultural Preservation and Open Space District). Construction of the reservoir will not result in the conversion of public open space. No other reservoir site is located on or adjacent to public open space.

Alternatives 1, 4, and 5 do not have a storage reservoir component.

Mitigation: No mitigation is needed.

Impact: **1.5.3. Will the storage reservoir component be an incompatible land use type in the MRZ-2 classification, the geysers KGRA, or in a designated quarry area?**

Analysis: *Significant; Alternatives 2B and 3A.*

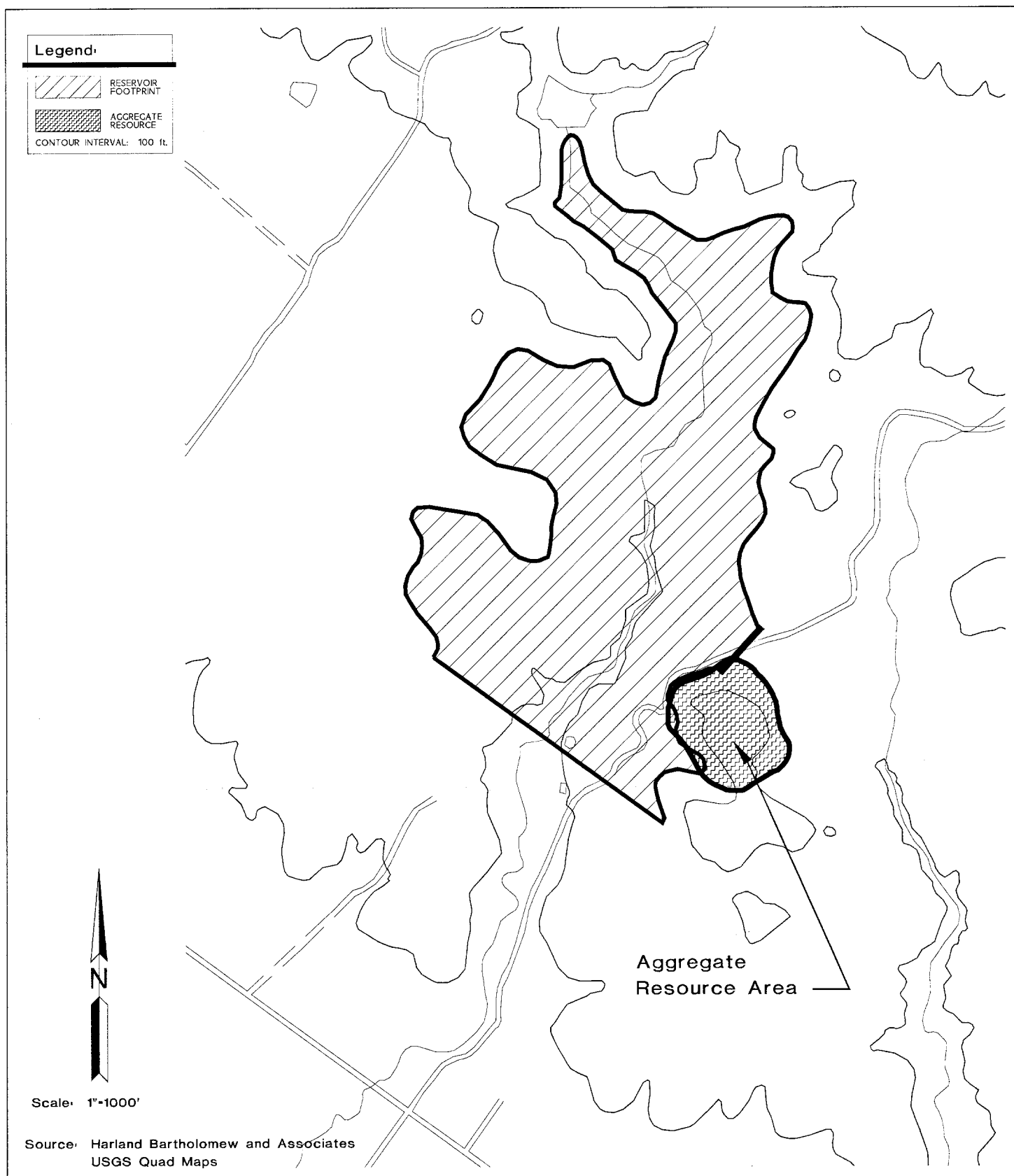
Portions of the Adobe Road (Alternative 2B) and Two Rock (Alternative 3A) sites are designated quarry sites in the Sonoma County Aggregate Resources Management (ARM) Plan (see Figures 4.1-4 and 4.1-5).

The Adobe Road site contains a permitted but yet-to-be operated borrow pit area known as the Ielmorini Quarry. This site contains an estimated 2.25 to 3.0 million tons of aggregate reserves. Expansion of the pit into the adjoining hillside as identified in the ARM Plan could produce additional reserves estimated at 3.0 to 3.5 million tons. The total area including the existing permitted operations is shown on Figure 4.1-4.

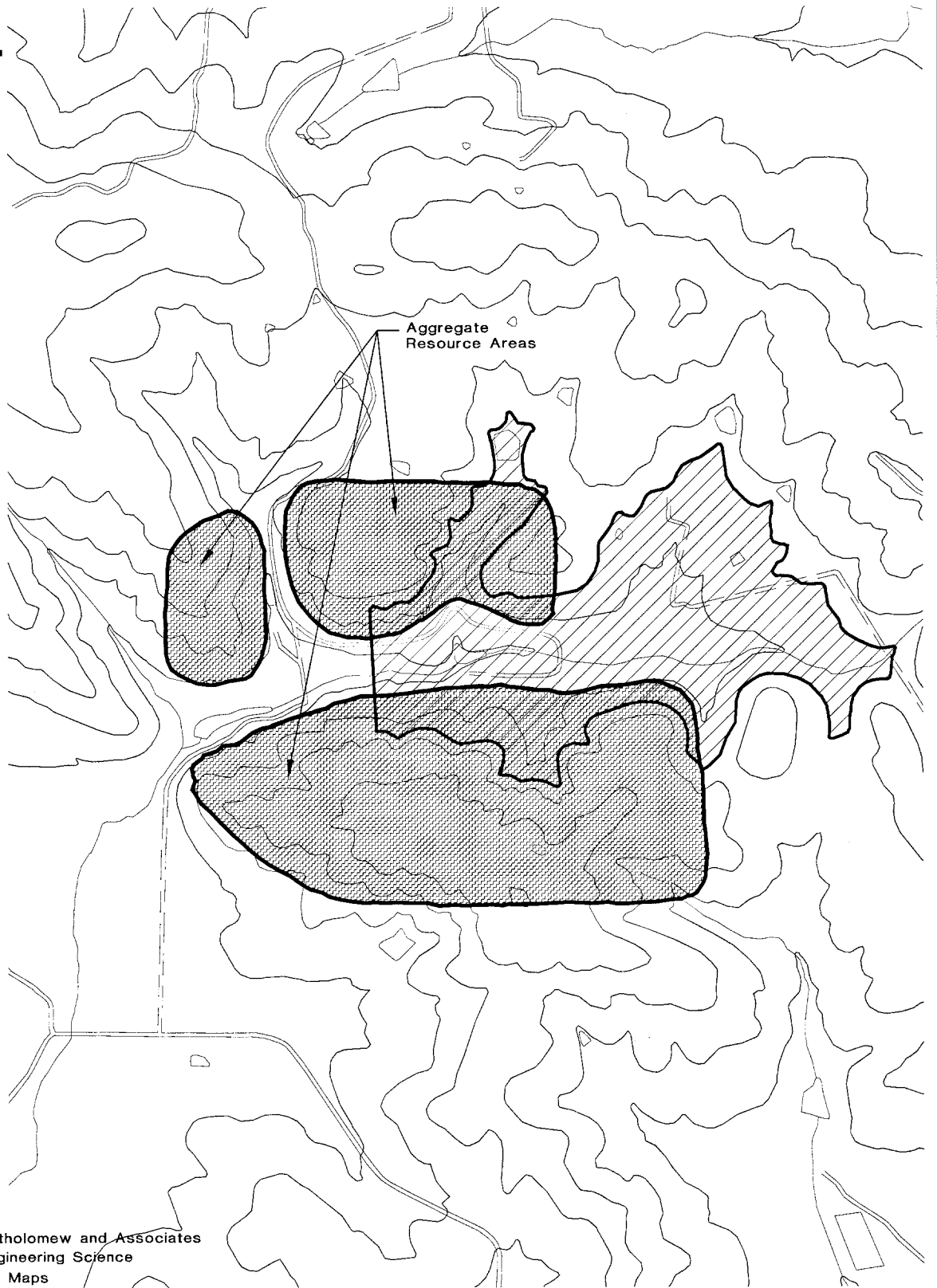
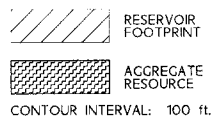
The Two Rock reservoir site contains a potential quarry site, identified as the Walker Road site in the ARM Plan. This potential quarry site contains an estimated 120 million tons of aggregate resource, of which an estimated minimum of 15 million tons is construction grade aggregate. The construction boundaries for the Two Rock site will cover approximately 30 to 40 percent of the area of aggregate resource identified in the ARM Plan.

The ARM Plan states that the designated quarry sites shall be protected from development of incompatible uses. The Plan identifies 14 to 16 existing quarry operations, along with 7 potential future sites. Loss of any one of these sites by itself will not necessarily deprive the County of the ability to provide sufficient aggregate resources in the future. However, the viability of these sites for future aggregate production is not assured for a variety of reasons, including potential encroachment of other uses, and replacement sites may not be available.

The loss of any of the identified future sites will therefore lessen the ability of the County to provide for long-term supply of aggregate material. For these reasons construction of the Adobe Road and Two Rock reservoirs, which will prevent the future development of portions of these sites for aggregate resources, is considered to be a significant impact. This is particularly important for the Two Rock site, because the estimated 15 million tons of construction grade aggregate for that site constitutes approximately 12 percent of the total future construction aggregate from the 30 quarry sources identified in the ARM Plan. Construction aggregate from these sources is a key element of the Plan, and is intended to provide a source of aggregate to replace additional river terrace mining in the County.



Legend:



Neither the Adobe Road or Two Rock site is located in an MRZ-2 area or in the geysers KGRA. The Lakeville Hillside reservoir site (Alternative 2B) is not located on or adjacent to a designated quarry site, an MRZ-2 area or the geysers KGRA.

No Impact; Alternatives 1, 2A, 2C, 2D, 3B, 3C, 3D, 3E, 4, and 5.

None of the reservoir sites in any of the other alternatives are located on or adjacent to a designated quarry site, an MRZ-2 area, or the geysers KGRA.

Alternatives 1, 4, and 5 do not have a storage reservoir component.

Mitigation: *Alternatives 2B and 3A.*

2.4.1. Removal of Aggregate Resources Prior to Construction.

Alternatives 1, 2A, 2C, 2D, 3B, 3C, 3D, 3E, 4, and 5. No mitigation is needed.

After

Mitigation: *Less than Significant. Alternative 2B.*

Mitigation Measure 2.4.1 reduces this impact to a level below significance by removal of the on-site material and by using it in the construction of the reservoir dams. Aggregate material is required for the construction of the Adobe Reservoir main dam, back dam and saddle dam, and the use of on-site material will eliminate the need for importation of aggregate material from other sites. Productive use of the entire amount of on-site material will thus replace the demand for an equivalent amount of off-site material, and preserve the off-site resources for other uses.

Significant. Alternative 3A.

Mitigation Measure 2.4.1 reduces this impact, but not to a level below significance. Construction of the Two Rock reservoir main dam will require aggregate material, which could be supplied from the on-site aggregate reserves. However, the amount of aggregate at the Two Rock site far exceeds the amount necessary for Project construction; only a fraction of the total amount will be used and the majority of the aggregate reserve will be inaccessible after construction of the reservoir. Therefore, the use of on-site aggregate resources will reduce the impact, but not to less than significant. No feasible mitigation has been identified to reduce the impact to less than significant.

Pump Station Component

Table 4.1-4

Land Use Impacts by Component - Pump Stations

Evaluation Criteria	Point of Significance	Impact	Type of Impact ¹	Level of Significance ²
1.6.1. Will the pump station component be inconsistent with the land use plan map of an adopted General Plan or with an adopted Coastal Plan or Coastal Zone Management Program?	Greater than 0 acres	None	P	==
1.6.2. Will the pump station component be inconsistent with the zoning?	Greater than 0 acres	None	P	==
1.6.3. Will the pump station component be an incompatible land use type in the MRZ-2 classification, geysers KGRA, or in a designated quarry area?	Greater than 0 acres	None	P	==
1.6.4. Will the pump station component introduce inappropriate uses in a Community Separator?	Greater than 0 acres	None	P	==
1.6.5. Will the pump station component increase potential for conflict as a result of incompatible land uses?	a. Greater than 0 Lineal Feet (LF)	None	P	==
	b. Greater than 0 housing units	None	P	==
1.6.6. Will the pump station component convert non-urban land to urban uses for Project facilities?	Greater than 0 acres	None	P	==
1.6.7. Will the pump station component convert public open space for Project facilities? • G-3 Geysers • All other pump stations	Greater than 0 acres			
		1 ac	P	⊙
		None	P	==

Source: Harland Bartholomew & Associates, Inc., 1995

Notes: 1. Type of Impact:

P Permanent

2. Level of Significance:

⊙ Significant impact before mitigation; less than significant impact after mitigation

== No impact

Impact: 1.6.1-6. Will the pump station component impact land use based on evaluation criteria 1, 2, 3, 4, 5, and 6?

Analysis: *No Impact; All Alternatives.*

All pump station sites are located within compatible land use designations under the Sonoma County and Santa Rosa General Plans. Pump Station FGB, located in the Fountaingrove area, is within a Planned Development designation under the Santa Rosa General Plan. Pump Station BVB, located at the Sonoma County Fairground; Pump Station G-1, located adjacent to Delta Pond south of Guerneville Road; and Pump Stations FGS and BVS, located at the West College Ponds near Stony Point Road are within Public and Semi-Public land use designations under the Santa Rosa General Plan. Pump Stations G-3 and G-4, located on Pine Flat Road leading to the geysers recharge area, are within Resource and Rural Development land use designations under the Sonoma County General Plan. Other pump stations are located within agricultural designations under the Sonoma County General Plan.

One pump station sites (WBPS-06) is located within the Sonoma County Coastal Zone. These pump stations, as public service uses supporting agricultural irrigation, will be consistent with the designation in the Sonoma County Coastal Zone of agricultural use. No pump station sites are located within the Marin County Coastal Zone.

Pump stations located in unincorporated Sonoma County could require a conditional use permit as public service uses. These uses will not require a change in zoning district classification as public service uses are allowed in all districts.

None of the pump station sites are located on or adjacent to a designated quarry site, in an MRZ-2 area.

Pump Station G-4 is located within the geysers Known Geothermal Resources Area (KGRA) as defined in the Sonoma County Geothermal Resources Management Plan. The pump station, as a public service use supporting the production of geothermal energy will be consistent with the Land Use provisions of the Plan.

None of the pump station sites are within Community Separators as defined in the Sonoma County General Plan.

The use of land for public service facilities at the pump station sites will not be incompatible with surrounding uses. Pump stations and other similar public service facilities are considered compatible with and allowed in agricultural, residential, and commercial land use classifications under the Santa Rosa and Sonoma County General Plans and existing Santa Rosa and Sonoma County zoning. Existing facilities of

this type are located adjacent to agricultural, residential, and commercial land uses within the Project area .

The use of land for public service facilities is allowed in agricultural and other non-urban land use classifications (e.g., Rural Residential) under the Sonoma County General Plan and Sonoma County zoning. Therefore such uses will not constitute a change from open space to urban use. Comparable existing public service facilities are located within non-urban land use classifications under the Sonoma County General Plan and Sonoma County zoning.

Alternatives 1 and 5 do not have a pump station component.

Mitigation: No mitigation is needed.

Impact: 1.6.7 Will the pump station component convert public open space for Project facilities?

Analysis: *Significant; Alternative 4.*

The site for Pump Station G-3 (Alternative 4) along Pine Flat Road is located on a property for which the Sonoma County Agricultural Preservation and Open Space District holds conservation easements (see Figure 4.1-6). Construction of a pump station on this site will potentially conflict with the status of the affected property as open space under the conservation easements and will result in a loss of open space. No other pumps stations for Alternative 4 are located on or adjacent to public open space.

No Impact; Alternatives 1, 2, 3, and 5.

None of the pump station sites for these alternatives are located on or adjacent to properties which are public open space or in which the Sonoma County Agricultural Preservation and Open Space District holds any interests.

Alternatives 1 and 5 do not have a pump station component.

Mitigation: *Alternative 4.*

2.3.1. Replacement of Open Space Easements.

Alternatives 1, 2 , 3 and 5. No mitigation is needed.

After

Mitigation: *Less than Significant after Mitigation; Alternative 4.*

Mitigation Measure 2.3.1 reduces this impact to a level below significance by providing funding to the Open Space District for the replacement on a one-for-one basis of existing acreage in open space easements. This will allow purchase of easements on new acreage in comparable areas identified by the Open Space District as a priority acquisition area.

Legend:



McCord
Ranch
Conservation
Easement

McCord Ranch
Conservation Easement

G3 Pump Station

Pine Flat Road
Geysers Pipeline

State Highway 128

Source: Harland Bartholomew and Associates, Inc.
USGS Quad Maps

HARLAND BARTHOLOMEW and ASSOCIATES, INC.

A UNIT OF PARSONS INFRASTRUCTURE and TECHNOLOGY GROUP INC.



Santa Rosa
Subregional Long-Term
Wastewater Project

PINE FLAT ROAD
CONSERVATION EASEMENT

Figure 4.1-6

The conveyance of funds to the District for the purchase of open space easements will ensure preservation of land as open space which is not now covered by open space easements and otherwise will not be assured of preservation as open space. Replacing existing acreage in conservation easements on a one-for one basis will mitigate the impact of Pump Station G-3 on regional open space to less than significant.

Agricultural Irrigation Component

Impact: 1.7.1-7. Will the agricultural irrigation component impact land use based on evaluation criteria 1 through 7?

Analysis: *No Impact; All Alternatives.*

Agricultural irrigation will not result in a land use change or loss of open space, as the construction of distribution pipelines and provision of reclaimed water for irrigation will result in the continuation of agricultural use. A discussion of the impact of irrigation on the type of agricultural crops and operations is contained in Section 4.18, Socio-economics, of this document.

Alternatives 1, 4, and 5 do not have an agricultural irrigation component.

Mitigation: No mitigation is needed.

Geysers Steamfield Component

Impact: 1.8.1-7. Will the geysers steamfield component impact land use based on evaluation criteria 1 through 7?

Analysis: *No Impact; All Alternatives.*

The recharge facilities are located within compatible land use and zoning designations (Resource and Rural Development) under the Sonoma County General Plan and Zoning Ordinance. The geysers steamfield is not located in the MRZ-2 classification, designated quarry area, or a community separator under the Sonoma County General Plan.

Conversion of existing geothermal extraction wells to injection wells and holding tanks are consistent with adjacent resource development character.

Construction of above ground distribution pipelines on presently vacant sites will result in a loss of open space, however, it will not constitute a change to urban use.

Facilities are not located on or adjacent to properties which are public open space or in which the Sonoma County Agricultural Preservation and Open Space District holds any interest.

Alternatives 1, 2, 3, and 5 do not have a geysers steamfield component.

Mitigation: No mitigation is needed.

Discharge Component

Impact: 1.9.1-7. Will the discharge component impact land use as based on evaluation criteria 1 through 7?

Analysis: *No Impact; All Alternatives.*

Use of the existing facilities for discharge of reclaimed water to the Laguna de Santa Rosa will not result in a land use change. A new outfall on the Russian River is located within a compatible land use designation (Resource and Rural Development) under the Sonoma County General Plan and is allowed under the Zoning District. The outfall could require a conditional use permit as a public service use.

The outfall is compatible with the adjacent agricultural and resource development uses; and is not located in an MRZ-2 area, a quarry site designated in the Sonoma County ARM Plan, the geysers KGRA, or a Community Separator as defined in the Sonoma County General Plan. Construction of above ground facilities associated with a new Russian River discharge will not change the non-urban character of the area, and the site is not located on or adjacent to public open space. Discharge of additional reclaimed water as part of the Contingency Plan will not result in a land use change or a loss of open space.

Mitigation: No mitigation is needed.

CUMULATIVE IMPACTS

There are two impacts -- either less than significant or significant -- identified in the Land Use section:

Impact: 1.3C. Will the Project plus cumulative projects be an incompatible land use type in a Mineral Resource Zone(MRZ), geysers KGRA or in a quarry area? Two Rock and Adobe Road storage reservoirs.

Analysis: A review of the general plans in the cumulative project study area and the cumulative projects list indicates three potentially cumulative projects. The Cloverdale General Plan Conservation and Open Space Element has a policy to discourage expansion of sand and gravel operations within their study area. Similarly, the Healdsburg General Plan indicates plans to develop some of their MRZ land. The Novato General Plan identifies one parcel which is designated for development on MRZ land. Impacts of the Long-Term Project at both Two Rock and Adobe Road have been found to be significant, and although there are other projects in the region which will increase the cumulative impact, such projects will not warrant a change in either the finding of significance or the mitigation proposed.

Alternatives 1, 2A, 2C, 2D, 3B, 3C, 3D, 3E, 4 and 5 do not have any incompatible land uses in a MRZ, geysers KGRA, or in a quarry.

Impact: 1.7C. Will the Project plus cumulative projects convert public open space for project facilities? Geysers pump station.

Analysis: A review of the general plans for jurisdictions near the geysers and the cumulative projects list indicates no similar projects in the geysers area.

Alternatives 1, 2, 3, and 5 will not convert public open space for project facilities.

SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Table 4.1-5

Summary of Significant Impacts and Mitigation Measures - Land Use

Impact	Level of Significance	Mitigation Measure
Storage Reservoir Component		
1.5.3. The storage reservoir component may be an incompatible land use type in a designated quarry area.	Alt 2B - ☉ Alt 3A - ●	2.4.1. Removal of aggregate resources prior to construction.
Pump Station Component		
1.6.7. The storage reservoir component may convert public open space for Project facilities.	Alt 4 - ☉	2.3.1. Replacement of open space easements.

Source: Harland Bartholomew and Associates, Inc., 1996

Notes:

- Significant impact before and after mitigation
- ☉ Significant impact before mitigation; less than significant impact after mitigation

SUMMARY OF IMPACTS BY ALTERNATIVE

Table 4.1-6

Summary of Impacts by Alternative - Land Use

Component	Alt 1	Alt 2A	Alt 2B	Alt 2C	Alt 2D	Alt 3A	Alt 3B	Alt 3C	Alt 3D	Alt 3E	Alt 4	Alt 5A	Alt 5B
No Action (No Project) Alternative	==	--	--	--	--	--	--	--	--	--	--	--	--
Headworks Expansion	--	==	==	==	==	==	==	==	==	==	==	==	==
Urban Irrigation	--	==	==	==	==	==	==	==	==	==	--	--	--
Pipelines	--	==	==	==	==	==	==	==	==	==	==	==	--
Storage Reservoirs	--	==	⊙	==	==	●	==	==	==	==	--	--	--
Pump Stations	--	==	==	==	==	==	==	==	==	==	⊙	--	--
Agricultural Irrigation	--	==	==	==	==	==	==	==	==	==	--	--	--
Geysers Steamfield	--	--	--	--	--	--	--	--	--	--	==	--	--
Discharge	--	==	==	==	==	==	==	==	==	==	==	==	==

Source: Harland Bartholomew & Associates, Inc., 1996

Notes: Level of Significance

-- Not applicable

● Significant impact before and after mitigation

== No impact

⊙ Significant impact; less than significant after mitigation

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References

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