



Community Facilities Element Technical Background Report

Provision of Services in Marin County

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February 2003

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EXECUTIVE SUMMARY

The Community Facilities Element is an optional general plan element that was added in 1994. This technical report presents information about provision of four major community services and facilities: police, fire, water and sewer. In addition, other community facilities are described: school facilities, hospital care, solid and hazardous waste disposal, child care, libraries, gas and electric services, jails, and telecommunications.

Two water districts serve the City Centered Corridor: the Marin Municipal Water District (MMWD) and the North Marin Water District (NMWD). MMWD identified a supply deficiency in the early 1990's. It secured sources of supply and a bond measure was passed that could provide funding to accommodate the projected growth within its system. This additional supply is incremental in nature with additional phases developed as needed.

The NMWD estimates that it will need an additional 8.7 million gallons per day of peak month service capacity by the year 2025. A new Master Water Supply Agreement (Amendment 11) has been negotiated with the Sonoma County Water Agency to obtain this capacity. Sufficient water to meet the District's needs already exists in storage reservoirs on the Russian River (Lake Mendocino and Lake Sonoma). The District is working cooperatively with Sonoma County Water Agency and the cities and districts served by the Agency to bring additional aqueduct capacity on-line as soon as possible.

In West Marin, the Bolinas Community Public Utility District (BCPUD) has a moratorium in place because the current water capacity is insufficient to meet existing demand without voluntary rationing by consumers. The District will be constructing improvements to the system in order to alleviate this problem. The other West Marin water service agencies appear to have sufficient water supply to serve existing and projected population, although capacity may be restricted in peak demand periods.

Many of the sewer systems have been upgraded in recent years, though problems persist with infiltration in some of the older systems. Storm water and seawater intrusion often overwhelms the BCPUD's sewage treatment facility during winters of above average rainfall. Similarly, high periods of rainfall can sometimes overload the sewers and pumping facilities of the San Rafael Sanitation District. Other districts have modified their treatment plants to handle additional wet weather flows.

Some sanitary districts will need to undertake major plant expansion projects in order to accommodate development potential. In particular, the Las Gallinas Sanitary District will need to expand in order to serve potential development of the St. Vincent's/Silveira property, while Sanitary District #5 would require major improvements of the small secondary treatment plant near Paradise Cove to handle future development of the Trestle Glen area. Demands placed on the BCPUD's system from the summer tourist population and the waste from resident's septic systems, which are pumped and hauled to the treatment plant for disposal, reduces the plant's available capacity to serve present and future sewer service connections. On the other hand, while the majority of the districts have performed improvements to improve capacity, development potential is limited as many areas are built out.



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Fire protection services are generally adequate; however, in some areas the narrow winding roads make access difficult. Fire sprinklers are required in all new construction and substantial remodels uniformly across all fire jurisdictions in Marin. Police protection services are also adequate and can be expanded as the population grows. Several of the fire and police departments have signed on to the Marin Emergency Radio Authority (MERA) which will come online in three phases over the next two years.

School facilities are adequate and have been expanded as the need has arisen. However, child care facilities such as day care have not kept pace with the increase in demand that has occurred since 1990.

Other community services such as the library system, solid and hazardous waste collection, hospital, and communication are adequate and can be expanded as the population grows. This technical report examines the availability of community facilities in Marin County.



COMMUNITY FACILITIES BACKGROUND REPORT

I. PURPOSE

Although a community facilities element is not required under State law, a local government may emphasize its interest in the provision of services by adopting a community facilities element. It is particularly important to include this element in the Countywide Plan because the availability of facilities and services may influence future levels and locations of development. This technical report examines current supply and demand and also estimates the future availability of service. The Community Facilities Element is based on the information contained in this technical report.

II. AUTHORITY FOR COMMUNITY FACILITY PLANNING

The authority for including optional elements in a general plan is found in the California Government Code, Section 65303, which states:

The general plan may include any other elements or address any other subjects which, in the judgment of the legislative body, relate to the physical development of the county or city.

In addition, the California Government Code, Section 65302(a), requires that all public buildings be shown in the general plan. The Code states:

A land use element which designates the proposed general distribution and general location and extent of the uses of the land for housing, business, industry, open space including agriculture, natural resources, recreation, and enjoyment of scenic beauty, education, public buildings and grounds, solid and liquid waste disposal facilities, and other categories of public and private uses of land.

Although the location of public buildings and grounds is often included in the land use element, Marin County has chosen to include this information as part of the Community Facilities Element.



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III. MARIN COUNTY WATER SERVICES

Table 1 summarizes water availability in Marin County.

Table 1. Water Availability

Water District	1987 Supply (Acre-Feet/Year)	1987 Demand (Acre-Feet/Year)	2000 Supply (Acre-Feet/Year)	2000 Demand (Acre-Feet/Year)
Marin Municipal Water District	30,000	33,000	29,300	30,425
North Marin Water District	12,000	9,803	16,100	10,784
Stinson Beach County Water District	323	184	323	185
Bolinas Public Utility District	175	175	150	175
Inverness Public Utility District	392	95	124	95

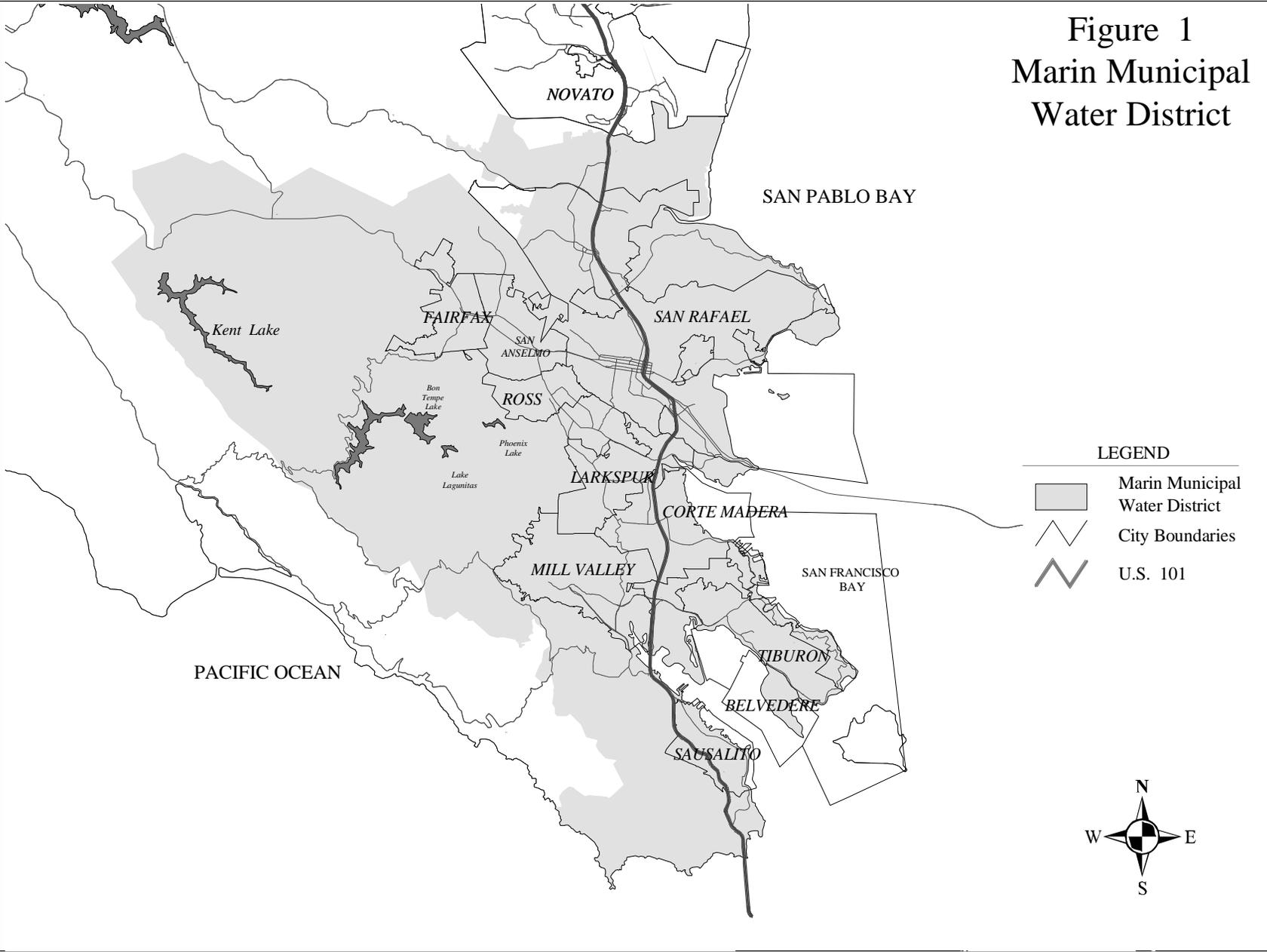
A. MARIN MUNICIPAL WATER DISTRICT

I. Water Demand

The Marin Municipal Water District (MMWD), in operation since 1912, serves a population that was 185,000 in the year 2000. The District has 59,180 service connections within a 146 square mile area in southern and central Marin County (see Figure 1).

Although annual water production dropped precipitously during the 1976-77 drought when rationing was imposed, it rebounded and then gradually rose to exceed pre-drought levels by 1986. Consumption dropped with the onset of the drought of the late 1980s and early 1990s but slowly rebounded during the 1990s. Water conservation has played a key role in keeping demand below the levels experienced in the early 1970s and the mid 1980s in spite of a continued slow growth in the number of services and population. Table 2 illustrates the annual water production for the MMWD during the 1970s and 1980s.

Figure 1
Marin Municipal
Water District





MARIN COUNTYWIDE PLAN

**Table 2. Marin Municipal Water District:
Annual Water Production**

Fiscal Year	Acre-Feet	Fiscal Year	Acre-Feet
1974-75	32,275	1987-88	32,845
1975-76	29,066	1988-89	28,555
1976-77	17,663	1989-90	29,392
1977-78	15,042	1990-91	25,210
1978-79	24,363	1991-92	23,078
1979-80	26,604	1992-93	23,459
1980-81	28,577	1993-94	26,951
1981-82	28,255	1994-95	26,261
1982-83	28,357	1995-96	28,194
1983-84	31,295	1996-97	29,736
1984-85	31,989	1997-98	27,401
1985-86	32,566	1998-99	29,718
1986-87	33,056	1999-00	30,425

The MMWD estimates that the population of 185,000 that it served in the year 2000 will grow to 198,846 by the year 2020 (ABAG Projections 2000). This population has a potential non-conserving annual water demand of 41,400 acre-feet. The District's potable water demand totals in the year 2000 have decreased to approximately 31,000 acre feet, because of the increased use of recycled water. In addition, there has been a reduction in water use of about 25 percent due to combined conservation efforts.

2. Water Supply

The MMWD obtains its water from seven reservoirs on four watersheds and from an intertie line to the Russian River. The storage reservoirs have a combined capacity of 79,885 acre-feet and are replenished with runoff from the watershed lands.

The MMWD uses local surface water for about 75 percent its supply. Its local watershed includes the headwaters of the Lagunitas Creek watershed at Mount Tamalpais as well as the watershed surrounding Nicasio Reservoir. Nicasio Creek eventually joins Lagunitas Creek, which empties into Tomales Bay. Outlying watersheds are also located on Walker Creek in West Marin, which supplies Soulajule Reservoir. Phoenix Lake is supplied by Ross Creek, which drains through Corte Madera Creek and into San Pablo Bay. Some additional facts on the District's reservoirs:

- ◆ Lagunitas Lake was built in 1873 and is the district's oldest reservoir. It has a capacity of 390 acre-feet. This is not an active supply and is held in storage for emergency purposes.



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- ◆ Phoenix Lake was built in 1905 and has a capacity of 527 acre-feet. This is not an active supply and is also used as storage for emergency purposes.
- ◆ Alpine Lake was constructed in 1918. The dam has been raised twice since then. It has a capacity of 8,900 acre-feet.
- ◆ Bon Tempe Reservoir was constructed in 1948 and has a capacity of 4,300 acre-feet.
- ◆ Nicasio Reservoir was constructed in 1960 and has a capacity of 22,000 acre-feet.
- ◆ Kent Lake was first constructed in 1953 and enlarged in 1983. It presently has a capacity of 32,900 acre-feet.
- ◆ Soulajule Reservoir was finished in 1979 and has a capacity of 10,700 acre-feet.

The MMWD has a total of 79,566 acre-feet of storage, with approximately 70,000 acre-feet accessible for use.

The more recent additions to the MMWD water supply are provided by the Sonoma County Water Agency (SCWA). This source is piped from the deep well pumps located on the Russian River at Wohler and Mirabel. The MMWD / SCWA water supply agreement gives the MMWD 10,000 acre-feet of firm supply in addition to its initial contract of 4,300 acre-feet. In 2000 the MMWD received 7,907 acre-feet from the Russian River intertie.

The MMWD can currently safely supply 29,300 acre-feet annually from its reservoirs and the Russian River intertie. This “operational yield” is the water demand which can be met with a 25 percent overall reduction in use during a period of drought equal to that of the 1970's with 10,000 acre-feet maintained in storage at the end of the drought.

The MMWD secured 10,000 acre-feet of water from the Sonoma County Water Agency (SCWA) in 1992. The MMWD has incrementally increased its annual take from this supply which is delivered on an “as available basis” through a pipeline that is owned by the North Marin Water District (NMWD). During high demand periods this pipeline is not large enough to deliver the necessary amount for both agencies and it is projected that the MMWD must reduce its supply from existing facilities in future years. This amount of reduction is presently calculated to be approximately 1,500 acre-feet per year and is slowly increasing as the NMWD demands increase within its service area.

In 1992 the voters approved Measure V, a bond measure which included funding for a dedicated MMWD pipeline to deliver the supply it had already secured from the SCWA. The pipeline and its associated infrastructure were planned to be constructed in phases, as needed. The MMWD empowered a citizen's advisory committee to study the balance between supply and demand and make a recommendation as to when the pipeline construction phase should be implemented. In 2000 the committee recommended not to proceed with construction of the pipeline, and to instead focus more attention on water conservation as a method to reduce the overdraft of available supply.

In order to supplement the increasing deficit, provide reliability and reduce the dependence on water from outside its service area, the MMWD chose to explore the use of desalinated water produced from the San Francisco Bay by using reverse osmosis technology. It began the environmental review process for the project in July 2003, and should complete the Environmental Impact Report by late 2004. The proposed project would produce up to 15 million gallons per day.



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3. Treatment

Before distribution, water is treated in one of the three treatment plants maintained by the MMWD. Water treated at the Bon Tempe Water Treatment Plant is distributed primarily to southern Marin. Water treated at the San Geronimo Water Treatment Plant is consumed in central Marin. Water from the Intertie at Ignacio is adjusted for corrosion control and monitored for quality before being accepted into the northern portion of the service area.

4. Distribution

The MMWD maintains 132 water tanks with a storage capacity of 76,478,000 gallons. In addition, it has five tanks dedicated to recycled water with a storage capacity of 1,675,000 gallons. Because of the County's varied and steep topography, supplying water to the MMWD's customers requires a tremendous amount of pumping. Storage tanks are needed at 200-foot intervals of elevation in order to assure adequate water pressure and fireflow. Developers are required to install all new facilities (pipes, pumps, and tanks) to serve proposed developments or provide in-lieu fees for facility development. A developer proposing to extend service into a new undeveloped area with further development potential is required to size the facilities to accommodate the ultimate development potential of the area. The tanks and main lines are then deeded to the MMWD, which owns and maintains the entire distribution system up to the property line.

The MMWD has no gaps within its service area for those customers who elect to be served. Areas that have no customers generally will have no infrastructure, such as piping, tanks and pumps until it is needed. New services will include the appropriate facilities to provide the water with the new customers bearing the cost.

Since its inception in 1913 the MMWD has absorbed the infrastructure of 27 water entities within its current service area. Some piping from these systems is over 120 years old. Other lines have an above-average maintenance cost because they lie on steep slopes, in bay mud, and in landslide-prone areas. Maintenance and replacement of water lines are ongoing concerns of the MMWD and are financed through the sale of water. Large-scale capital improvements have been funded through bond issues and one-time charges. The total length of piping owned and maintained by the MMWD is about 900 miles. A maintenance/replacement program is ongoing and currently averages \$7 million dollars per year for approximately 11 miles of replacement piping and related facilities.

5. Proposed Improvements and Conservation Measures

Table 3 shows the MMWD's long-term water demand projections and known sources of water supply and water saving programs.



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**Table 3. Marin Municipal Water District:
Water Demand Projections for the Year 2025**

Supply	Acre-Feet/Year
Projected Water Demand (year 2020)	41,400
Projected Operational Yield (current facilities)	28,000
Conservation (currently in place)	7,300
Recycled Water (currently in place)	700
Amount Required Through Additional Conservation, Recycling and Supply	5,400

In 1992 and 1994, the MMWD Board of Directors adopted a long-term facilities improvement program to replace outdated facilities, improve operational efficiency of the distribution system, increase the District's water reclamation operations, and increase the reliability of the water supply for existing and future consumers. The components of the program are presented in the District's 15-year capital projects report, in its water supply master plan, and in its integrated water supply program. In addition, the District has implemented a variety of water-conservation and demand reduction measures. These efforts will narrow, but not close, the gap between long-term projected demand and supply.

In response to the 1976-77 drought, the MMWD developed a number of programs to encourage water conservation. These programs include media campaigns, educational materials, and training seminars to inform the public about different ways to reduce water usage, including low-flow plumbing devices, low water-use landscaping materials, and landscape irrigation methods. In addition, the District has implemented ordinances that require water-saving devices to be used in new structures and which also restrict the amount of turf in landscape areas to no more than 25 percent.

The District's efforts in the mid-1980s to achieve a 15 percent reduction in water use through voluntary conservation were not completely successful. A review in 1991 found that an 11 percent overall reduction through conservation had been achieved. The MMWD's data on per capita water consumption shows a 19 percent increase between the periods of 1979/80 and 1986/87. New water hookups, including residential, office, and commercial space, account for roughly half the increase in per capita consumption. An increase in daily water usage by residential customers accounts for the other half.

The decade of the 1990s witnessed the development of greater sophistication in water conservation measures. A water conservation master plan was developed in 1994 and a number of programs were funded. One of the most vigorous programs targeted the replacement of toilets with ultra-low flow models. A total of 42,000 toilets were replaced through the MMWD programs. There are a number of discrete programs currently in place, including:

- ◆ **Toilet Retrofit Programs.** The MMWD is attempting to replace all toilets in its service area with 1.6 gallon water conserving models. This program consisted of two parts. The first was a toilet rebate program that offered residential customers a contribution of \$75.00 off the price of a 1.6 gallon flush toilet when purchased to replace a higher water use toilet. The success of this program began to diminish and it was determined that most of the willing participants had been reached. The program was terminated on June 30, 2002. The second part is a commercial and institutional



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retrofit program, which offers a complete, no-cost initial replacement of toilets to qualified accounts with reimbursement to the MMWD from savings achieved through the water bill, until the initial cost is recovered.

- ◆ On July 1, 2002, the MMWD started its new toilet program, pursuant to Ordinance 394, which requires the installation of low water use plumbing fixtures at the time of real property transfer. The MMWD determined that the time of resale of homes is the most effective point at which to require ultra low flush toilets to be installed without being too intrusive on property owners who did not take advantage of the previous rebate program.
- ◆ Recycled Water Program. The MMWD offers recycled water at reduced rates for certain large Tumble-Action Washing Machine Rebates. A \$75.00 rebate is available for the purchase of a qualifying tumble action washing machine.
- ◆ Conservation Assistance Program (CAP). On-site water use consultations are offered to large single family accounts (generally those using 149,600 gallons or more per year), and multi-family, commercial/institutional, and landscape accounts. A CAP site evaluation identifies ways to reduce water consumption both inside the building and for outside landscaping. Based on the findings, the MMWD may offer financial incentives to help defray the cost of implementing water saving recommendations.
- ◆ Water Efficient Landscaper (WEL) Program. This is a half-day course designed specifically for the landscape professional. It covers the MMWD billing policies, troubleshooting and repairing of system components, and the fundamentals of water management, such as proper irrigation scheduling. A listing of landscape professionals who have successfully completed the WEL Program is available from the MMWD.
- ◆ Landscape Seminars. A series of free water-efficient gardening seminars is offered to the public. Three topics are currently available: Irrigation System Basics, Understanding Drip Irrigation, and Low-Water Use Plants.
- ◆ Water-wise Landscape Contest. This contest, which has several different categories, recognizes customers who use water conserving plants and efficient irrigation methods to create beautiful landscapes.
- ◆ School Education Program. Water education materials for grades K - 12 are available at no cost to all teachers in the MMWD service area.
- ◆ Speaking Engagements. MMWD employees engage in various speaking opportunities throughout the community on the subject of water conservation.
- ◆ Recycled Water Program. The MMWD offers recycled water at reduced rates for certain large Tiered Rate Structure. The MMWD has developed an inclined block structure of pricing for each billing period. Three blocks, or tiers, are in place. Each tier has a different rate structure. The cost rises as water consumption increases.
- ◆ Recycled Water Program. The MMWD offers recycled water at reduced rates for certain large landscape accounts or for commercial activities with high water use, such as car washes. This



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supply is presently located at the Las Gallinas Sanitation District Plant and is offered in selected areas within the northern San Rafael and Terra Linda area.

- ◆ **Public Outreach.** The MMWD offers a variety of public information activities, including free low-flow showerheads, booths at the Marin County Fair and Home Show, and informational brochures and bill inserts. The MMWD web site also contains information relating to water conservation.

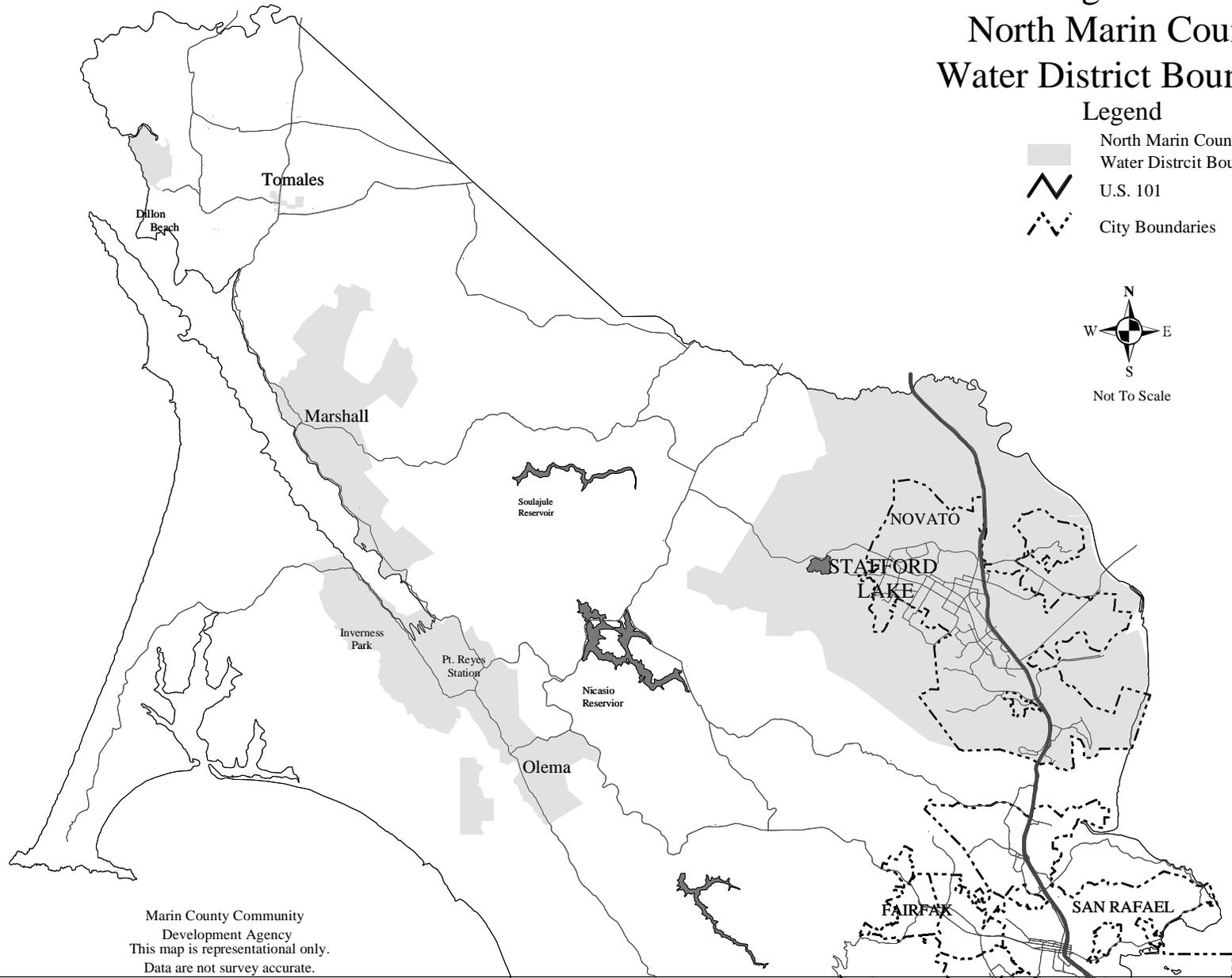
- ◆ The MMWD is also a member of the California Urban Water Conservation Council (CUWCC). As a member the MMWD is obligated to carry out 13 of 14 best management practices (BMPs) developed by the CUWCC. Most of the BMP's are reflected in the conservation programs listed above. These BMP's include:
 1. Water survey programs for single-family residential and multi-family residential customers.
 2. Residential plumbing retrofit program.
 3. System water audits, leak detection, and repair.
 4. Metering with commodity rates for all new connections and retrofit of existing connections.
 5. Large landscape conservation programs and incentives.
 6. High-efficiency washing machine rebate programs.
 7. Public information programs.
 8. School education programs.
 9. Conservation programs for commercial, industrial, and institutional accounts.
 10. Wholesale agency assistance programs (which are not applicable to the MMWD).
 11. Conservation pricing.
 12. Hiring of a conservation coordinator (and support staff as needed).
 13. Water waste prohibition.
 14. Residential ultra-low flow toilet replacement programs.

B. NORTH MARIN WATER DISTRICT

I. Water Demand

The North Marin Water District (NMWD) was formed in 1948 to provide water to Novato and surrounding areas. Today the NMWD serves a population of 56,000 in Novato in addition to approximately 1,750 residents in West Marin. The NMWD Novato service area is approximately 75 square miles (see Figure 2) while the West Marin service area is approximately 24 square miles.

Figure 2 North Marin County Water District Boundary



Marin County Community
Development Agency
This map is representational only.
Data are not survey accurate.



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Respective annual water production rates for the NMWD's Novato and West Marin service areas during fiscal year 2001 were 10,969 acre-feet and 372 acre-feet (see Table 4). The two service areas have separate sources of supply and are not interconnected. Annual water production for the NMWD's Novato service area in 1986/87 was 9,803 acre-feet.

Table 4. Water Production for NMWD's Novato Service Area

Fiscal Year	Acre-Feet	Average Day of Peak Month (MGD) *
1980-1981	8,507	12.33
1981-1982	8,183	11.58
1982-1983	8,125	11.06
1983-1984	9,253	12.05
1984-1985	9,436	12.75
1985-1986	9,351	12.70
1986-1987	9,803	12.81
1987-1988	9,892	12.57
1988-1989	9,549	12.44
1989-1990	9,543	13.09
1990-1991	10,069	12.92
1991-1992	9,446	11.50
1992-1993	9,121	12.25
1993-1994	9,831	13.18
1994-1995	9,779	13.59
1995-1996	10,328	13.49
1996-1997	10,639	13.92
1997-1998	9,211	14.08
1998-1999	10,119	13.67
1999-2000	10,784	14.68
2000-2001	10,969	14.55

*MGD = million gallons per day

Water demand in the District has risen steadily by 27 percent since 1980 largely due to growth in the Novato area. The NMWD uses the Marin Countywide Plan and City of Novato General Plan development projections in conjunction with its own data on past trends in usage and types of users to project future levels of water demand. Based upon regression analysis and projection of historical consumption trends from 1981 to the present, the NMWD projects a Novato Service Area annual water demand of 14,155 acre-feet and a peak month demand of 19.05 million gallons per day (MGD) by the year 2025.

2. Water Supply

The NMWD's Novato service area has two sources of water supply: Stafford Lake and Russian River water imported from the Sonoma County Water Agency (SCWA). Water from the SCWA is treated before it is pumped to the NMWD. Water from Stafford Lake is purified at the Stafford Lake



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treatment plant located near the lake. Stafford Lake, a reservoir located within the NMWD boundaries, has a storage capacity of 4,400 acre-feet. The lake provides a historical annual yield of 2,000 acre-feet, which is approximately 20 percent of the NMWD's total annual demand. The balance of the NMWD's annual demand is obtained through a master water supply agreement with the SCWA. The safe long-term annual yield of Stafford Lake is 1,750 acre-feet. Water can be produced from the lake throughout most of the year but emphasis is placed on summer time operation in order to optimize the lake's peak month yield

As for the Russian River source, the NMWD is restricted in how much it can take from the SCWA by its peak month entitlement in the Russian River aqueduct system. The 11th Amendment to the master water supply agreement specifies that the District has a peak month entitlement of 19.9 MGD. However, because of delays in improvements needed to meet the SCWA's total water delivery obligations, the SCWA has declared a temporary impairment of its transmission system. The NMWD and other public agencies receiving Russian River water from SCWA have agreed to a memorandum of understanding regarding water transmission system capacity allocation during temporary impairment (impairment MOU) that became effective in March 2001 and expires in September 2005. The impairment MOU allocates summer month water deliveries at specified rates for the next five years through the North Marin aqueduct. Apportionment of these deliveries to the NMWD and the MMWD is governed by an intertie agreement between the two water districts. The 2001 summer month allocation to the North Marin aqueduct is 18.1 MGD, which increases to 20.1 MGD in 2005.

In fiscal year 2001, the NMWD's annual demand was 10,969 acre-feet, resulting in an annual average daily demand of 9.79 MGD and peak month average daily demand of 14.41 MGD. With the local Stafford Lake treatment plant summer month production averaging 3.34 MGD over the past three years, the NMWD expects to meet all water obligations during period of the temporary impairment MOU until 2005.

To meet ultimate buildout demands through the year 2025, the 11th Amendment to the SCWA agreement (executed in January 2001) provides the NMWD with an average day peak month entitlement of 19.9 MGD and an annual allotment of 14,100 acre-feet.

West Marin Service Area

Water for the West Marin communities of Point Reyes Station, Olema, Inverness Park, and Paradise Ranch Estates is supplied through one interconnected supply and distribution system. The NMWD's Point Reyes water system is completely separated from water facilities in the Novato service area.

The NMWD also serves the Point Reyes National Seashore Headquarters at Bear Valley, Silver Hills, the U.S. Coast Guard Housing Facility in Point Reyes Station and two West Marin dairies. The Point Reyes Water System has been undergoing gradual expansion and improvements since the original system, serving Point Reyes Station and Inverness Park, was acquired by the NMWD in 1971.

The source of water for the Point Reyes system is drawn from two wells at a site adjacent to Lagunitas Creek. The two primary wells are located on the U.S. Coast Guard property in Point Reyes Station. Additionally, a back-up water supply well, located at the Gallagher Ranch, has been developed for use during periods of low streamflow when salt water intrusion from tidal inflow can occur in the two



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downstream wells. The single well constructed at the Gallagher Ranch site does not have sufficient capacity to meet peak month water demands in the Point Reyes system area and is not yet interconnected to the West Marin distribution system.

Water supply to the wells is drawn from a gravel aquifer adjacent to Lagunitas Creek. The aquifer's water supply is dependent primarily on the amount of water flowing in the creek. Streamflow in the creek is regulated by releases from the MMWD storage reservoirs as required by the State Water Resources Control Board (SWRCB) Order WR 95-17 and greatly exceeds water needs to supply the Point Reyes system. Annual runoff to Tomales Bay from Lagunitas Creek, after upstream water diversions, averages 63,900 acre-feet per year (AFY) while system withdrawals, based on average daily consumption in fiscal year 2001, amounted to 372 AFY, or approximately 0.6 percent of average annual stream flow.

Order WR 95-17 required the NMWD to identify an alternate source of water during low flow months, usually July through October, of dry years. The District utilizes a water exchange program with the MMWD that was established in the 1993 Intertie Agreement to satisfy the requirements of the SWRCB. Under the agreement, stored water can be released by the MMWD into Lagunitas Creek from Kent Lake in exchange for an equal amount of water delivered to the MMWD from the NMWD's Novato water system. The intertie agreement includes this provision because, although the NMWD has adequate water in the Novato service area to handle both systems' needs, it does not have a pipeline to transport the water to West Marin. Therefore, it utilizes the MMWD's storage and transport facilities and receives the necessary water via Lagunitas Creek. The NMWD then repays the MMWD with Novato water derived from the Russian River.

The existing intertie agreement between the two water districts runs through 2014 and provides for a maximum of 250 acre-feet to be exchanged annually. This figure represents approximately 0.6 percent of the MMWD's total water production, which is 26,000 AFY. The NMWD has also entered into an agreement with the Giacomini Ranch in Point Reyes Station and acquired a portion of the property's appropriated water rights license to further satisfy requirements of the SWRCB. The recently acquired senior water right can be relied upon as the West Marin source of water during dry years. The NMWD is currently in the process of perfecting both the place and purpose of use for this water with the SWRCB.

The NMWD's West Marin water supplies are sufficient to meet forecasted buildout demands and the long-term needs of all other communities served by the District.

3. Proposed Improvements

The 11th Amendment to the master water supply agreement negotiated between the NMWD and the SCWA provides the NMWD with an additional daily water delivery entitlement of 8.7 MGD (19.9 - 11.2 = 8.7 MGD.) This entitlement increases the District's total peak month production capacity to 19.9 MGD and annual delivery entitlement to 14,100 acre-feet. Since the NMWD estimates that its service area may ultimately require 15,360 acre feet annually, the NWMD has implemented an aggressive demand management program aimed at reducing demand by ten percent through permanent conservation techniques.



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The District's service capability is currently limited by the peak month demand. Presently, the delivery capacity of the SCWA aqueduct transmission system is insufficient to meet the District's projected peak month demands. The District has been working with the Sonoma County Water Agency, cities, and other districts served by the SCWA to make additional improvements to the aqueduct system to meet the SCWA's total current obligation of 92 MGD and ultimate obligation of 149 MGD. These improvements include additional water production facilities and the construction of additional interconnecting aqueducts to make the existing system more efficient and to expand the system to meet future water delivery requirements.

C. STINSON BEACH COUNTY WATER DISTRICT

1. Water Demand

The Stinson Beach County Water District (SBCWD) was formed in 1962. The total area of the District is approximately 12 square miles of which 9.5 square miles is watershed and 2.5 square miles is service area (see Figure 3). The District presently serves water to 708 metered connections including residential, commercial and federal and state park recreational uses. The District's facilities include wells, water collection facilities, water distribution mains, water storage tanks, water booster stations, and a water treatment plant.

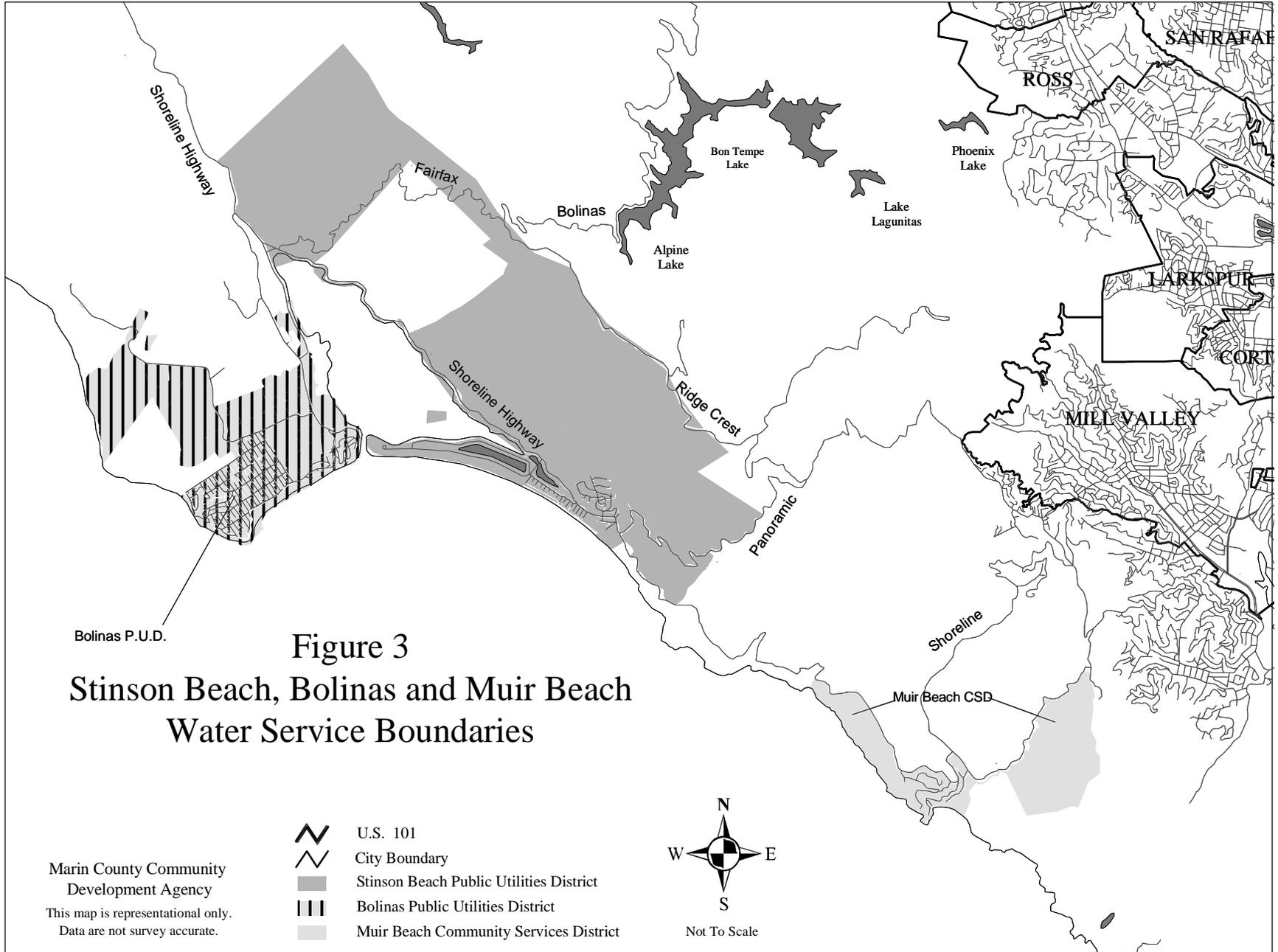
Summertime and weekend visitors greatly increase the District's normal water demands. The population of this small community can easily reach 10,000 visitors on any given weekend from July through October. Recreation areas at Stinson Beach include the beach with picnic areas, hiking trails in the Golden Gate National Recreation Area, and the state park hostel cabins located in Steep Ravine.

The District produced 185 acre-feet of water in 2000, which equates to approximately 230 gallons per day per dwelling unit. Production in 1987 was 184 acre feet. Growth potential is limited in Stinson Beach by the publicly owned lands surrounding the community. The District estimates that there may be potential for 60 additional lots to be developed before the town is built out.

2. Water Supply

Water supply sources for the Stinson Beach County Water District include three active wells and several catchment basins located within the watershed. The watershed is located on publicly owned State and Federal government lands. The watershed area produces a water supply estimated at 323 acre-feet, assuming normal rainfall conditions. Based on the SBCWD's water demands, these projections seem adequate, although the water supply can be constrained by drought and peak summertime water demand. The SBCWD treats the water before it is distributed to the community.

The District initiated a capital improvement plan in 1978 and installed a majority of the infrastructure between 1978 and 1984. The SBCWD has recently revised its capital improvement plan and has completed several projects. The completed projects include: a meter replacement program; construction of two new steel water tanks to increase water storage capacity; installation of approximately five miles of new pipeline, which replaced insufficient waterlines including service laterals and hydrants within a majority of the community's streets; rebuilding and revitalizing three existing wells; and rebuilding several water booster stations.





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3. Proposed Improvements

The District proposes to make several improvements to its system facilities. These improvements include: replacing old deteriorated pipelines, installing two new steel raw water tanks, replacing the two existing raw water tanks with four new steel tanks, installing a new booster station, replacing an existing well, and upgrading the water treatment plant. These items are included in the SBCWD's capital improvement plan over the next five years. A habitat/riparian restoration plan and water conservation plan is being prepared to meet the requirements of the federal Endangered Species Act.

D. BOLINAS COMMUNITY PUBLIC UTILITY DISTRICT

1. Water Demand

The Bolinas Community Public Utility District (BCPUD) provides water collection, treatment, and distribution services to 581 connections. Of these 581 connections, three are agricultural, nineteen are commercial, and the remainder are residential. The BCPUD serves approximately 1,500 residents. The District boundaries are shown in Figure 3. In 1987 the BCPUD produced 175 acre-feet of water. Total production in 2000 was 150 acre-feet. Average daily demand on an annual basis is 140,000 to 150,000 gallons per day.

2. Water Supply

The BCPUD has two sources of surface water supply: the Arroyo Hondo stream, which provides 135 acre-feet of water, and two storage reservoirs which have a combined net safe yield of 40 acre-feet. The BCPUD has one water treatment plant, constructed in 1996, that uses advanced microfiltration technology. The BCPUD also has two 430,000-gallon treated water storage tanks; two earthen reservoirs that capture runoff and hold 39 acre feet net safe yield; two catchment dams on the Arroyo Hondo stream, which supplies approximately 90 percent of the BCPUD 's total water supply; one pump station; and twenty miles of pipeline.

For six to seven months of the year sufficient water supplies can be drawn from the stream. During the dry season the storage ponds must augment this source. Maximum water production capacity, when allowances are made for routine downtime, is 190,000 gallons per day.

The age of the District's distribution system ranges from two to 63 years old. The District has replaced a substantial amount of older pipeline, which has reduced the amount of water lost due to leakage from 15 percent to approximately ten percent. In 1989 the cost of replacing the remaining older pipes and increasing pipeline capacity where needed was estimated at \$1.5 million. In 1988, the District established a modest reserve fund to continue this important pipeline replacement work. In 1996 the BCPUD spent \$1.3 million on a new treatment plant, a new pump station, and new transmission lines. An additional \$300,000 was spent between 1998 and 2000 for the rehabilitation of water storage tanks, while \$150,000 was spent between 1991 and 2000 for pipeline replacement.

Prior to the construction of the new treatment plant in 1996, increased stream water turbidity caused by heavy winter storms overloaded the capacity of the treatment plant. However, the new treatment plant has resolved this problem.



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In 1971, the community of Bolinas enacted a building moratorium because of the lack of adequate water storage capacity. Since that time, the BCPUD has constructed the two water storage facilities. However, the community continues to enforce the "water shortage emergency condition", which forbids new water hookups, because engineering studies indicate that present facilities may not be sufficient for future needs. An engineering study conducted for the BCPUD recommends that 80 to 120 acre-feet of storage capacity be built to accommodate present and future water demands. The BCPUD has maintained a moratorium on new water service connections because of chronic shortages in the dry season, particularly in drought years.

3. Proposed Improvements

The 1985 Bolinas Community Plan includes a policy for providing infrastructure improvements to the community's water and sewer systems. System improvements have included the rehabilitation of the BCPUD's two water storage tanks and replacement of pipeline. The BCPUD is considering a project to install a wind energy conversion system at the water treatment plant. The local electorate must first approve any system expansion plan.



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E. INVERNESS PUBLIC UTILITY DISTRICT

I. Water Demand

**Table 5. Inverness Public Utility District:
Annual Water Production**

Fiscal Year	Acre-Feet	Fiscal Year	Acre-Feet
1980-1981	77	1991-1992	89
1981-1982	77	1992-1993	91
1982-1983	86	1993-1994	97
1983-1984	89	1994-1995	86
1984-1985	92	1995-1996	94
1985-1986	87	1996-1997	102
1986-1987	93	1997-1998	85
1987-1988	92	1998-1999	96
1988-1989	90	1999-2000	103
1989-1990	88	2000-2001	101
1990-1991	95	2001-2002	97
		2002-2003	102

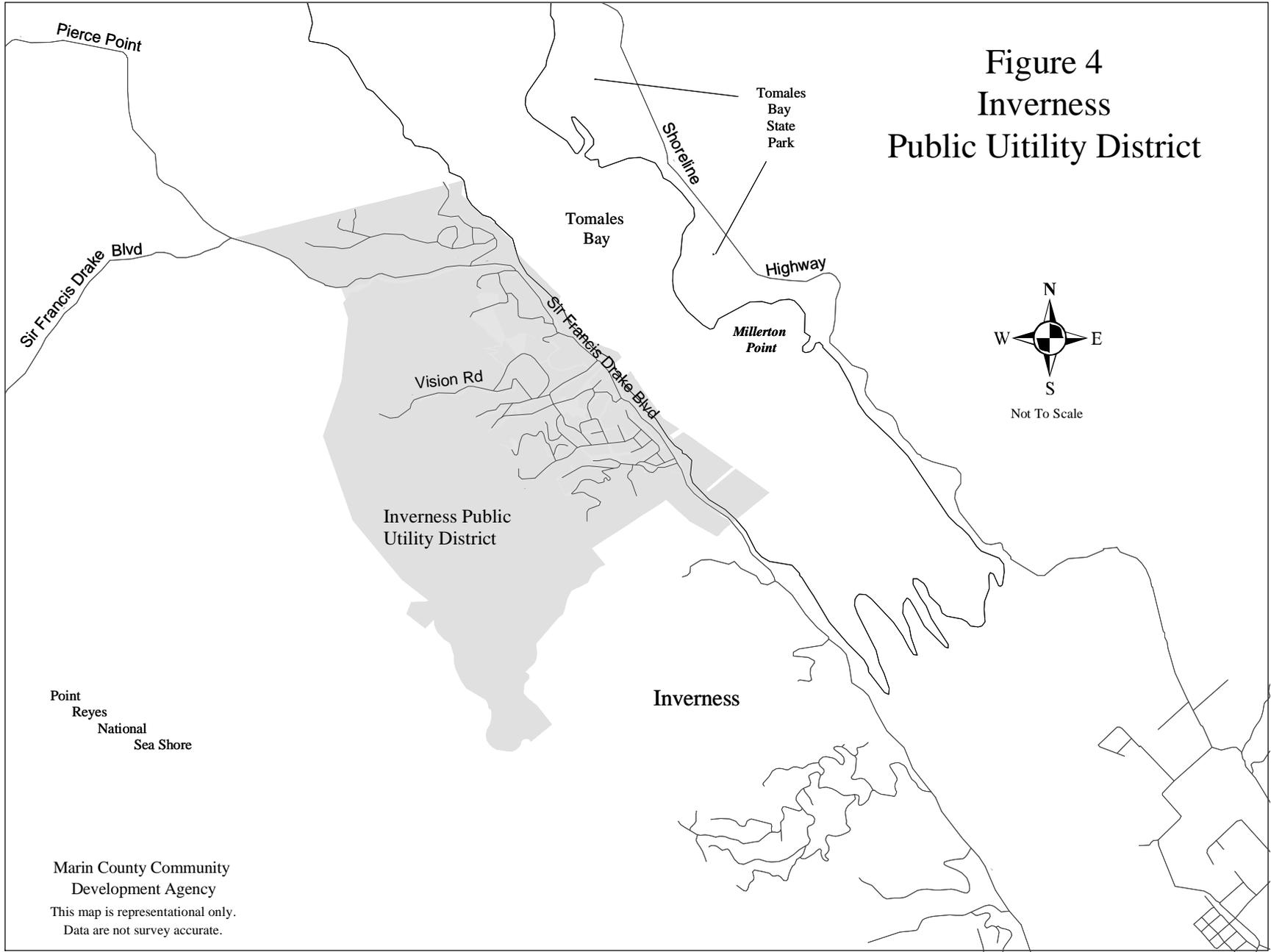
The Inverness Public Utility District (IPUD) serves 500 customer connections, or approximately 540 residential unit equivalents (RUEs). A RUE is a measurement that allows commercial and residential users to be grouped together. Of the 500 customer connections, 482 are residential services and 18 are nonresidential. The full time population of the District is estimated to be about 702 people (2000 U.S. Census). Of the 574 housing units in the District, only 367 (64 percent) are occupied on a full-time basis. The remaining 185 housing units (36 percent) in the Inverness area are vacation and weekend houses.

The IPUD collects surface water from District and state-owned watershed lands. The District boundaries are shown in Figure 4. The District's facilities include two active water treatment plants, water catchments, mains, and storage tanks. In 1990, the IPUD replaced a 20,000-gallon storage tank with a 70,000-gallon tank, which increased the total storage capacity to 345,000 gallons. The District estimates that the current supply should be able to meet peak demand under normal conditions since this amount exceeds the highest demand levels recorded since it acquired the water system in 1980.

The IPUD produces an average of 95 acre-feet of water per year. Local users consume approximately 85 acre-feet and ten acre-feet are reserved for system overhead, unmetered use, and losses due to leakage.

Future growth within the District is limited by the Point Reyes National Seashore and Tomales Bay State Park, which surround the community. The IPUD estimates that ultimate development will be 600 RUE's, a 10 percent increase over present service demand.

Figure 4 Inverness Public Utility District



Point Reyes National Sea Shore

Marin County Community Development Agency
This map is representational only.
Data are not survey accurate.



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2. Water Supply

The IPUD's water supply consists of water obtained from streams in the surrounding watershed. Since there are no reservoirs within the District, there is no water being held in long term storage. The District is dependent for its water supply on the daily flows in the streams in the Inverness watershed area. It is estimated that under normal rainfall conditions, the network of three principal streams annually provides approximately 124 acre-feet of water. However, during late summer and fall (and until winter rains begin), the amount of water available in the streams sometimes gets very close to equaling the system's production demand. The volume of available water can range from more than 2,000,000 gallons per day (in winter during heavy rainfall periods) to 69,000 gallons per day (which occurred during August 1994, following the 1993/94 drought year). For perspective, the water system's all-time peak one-day demand, which occurred in 1996, was 170,000 gallons; during a typical summer peak demand period, production will be in the range of 150,000 to 155,000 gallons per day.

The IPUD believes that adequate water supplies exist for the next fifteen years under normal rainfall conditions. Water supply problems may arise during summer peak use periods and during drought conditions. The District has implemented a peak demand conservation program that reduced the weekly variation in customer demand from 48 percent to 12 percent. The District currently maintains an emergency water agreement with the North Marin Water District.

3. Treatment

The IPUD operates two water treatment plants. The main plant operates continuously year-round, while the small plant is used seasonally on an as-needed basis, which is generally from late spring through fall. Both plants provide micro-filtration and chlorination. The main plant (called F1) was upgraded in early 2002, and is now rated nominally at 100 gallons per minute (GPM) of treatment capacity, while the small plant (called F3) is rated nominally at 15 GPM of treatment capacity. Thus, the entire system has a maximum finished-water capacity of 115 GPM, which is equivalent to 165,600 gallons per day. However, the IPUD's realistic capacity on a sustained basis is only about 155,000 gallons per day (GPD). A new treatment unit, which was acquired in early 2002, is currently being installed, which will add approximately 85,000 GPD.

The only chemical added to the water is chlorine. Both plants are equipped with instrumentation for the continuous monitoring and recording of intake (raw) water turbidity, treated water turbidity, and chlorine residual. If an abnormality is detected, an autodialer begins automatically dialing a preprogrammed list of staff members to notify them of the event. If the abnormality reaches a critical point, the equipment automatically shuts the plant down. The F1 plant is also equipped with a permanently installed 35 kilowatt emergency power generator with an automatic transfer switch and a 500-gallon propane tank, which is sufficient to operate the plant for approximately one week.

4. Distribution

The District is deficient in water storage capacity. Total storage capacity at this time for finished water is only 325,000 gallons, of which 45,250 gallons are valved out as a fire reserve. The water is stored in redwood or steel tanks at four tank sites:



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- ◆ The Tenney site (at 146 Perth Way, near the F1 treatment plant) has one 60,000-gallon redwood tank erected in 1981 and one 10,000-gallon redwood tank of unknown age. A second 10,000-gallon redwood tank was dismantled in 2001 due to age.
- ◆ The Colby site (at 60 Perth Way) has one 100,000-gallon steel tank which was erected in 1960, plus three 10,000-gallon redwood tanks of unknown age. A fourth 10,000-gallon redwood tank was dismantled in 2001 due to age.
- ◆ The Seahaven site, at 225 Via de la Vista, has one 70,000-gallon steel tank that was erected in 1990 and one 15,000-gallon redwood tank that was built in 1982.
- ◆ The Stockstill site, at 591 Via de la Vista, has two 20,000-gallon redwood tanks that were erected in 1969.

At the time of a 1986 study prepared by Brelje & Race Civil Engineers, the amount of storage available was 295,000 gallons. The study recommended that the District would need to add 197,000 gallons of capacity by the time the number of customers served reached the approximate level it was in 2001.

5. Proposed Improvements

The current capital improvement program includes a major effort over the next few years to replace aging finished-water storage tanks and to increase finished-water storage capacity. The IPUD's top priorities for major capital improvements at this time are to increase the usable existing storage to its rated capacity of 345,000 gallons by replacing the removed tanks and to rehabilitate or replace deteriorating tanks that are still in use.

The IPUD does not anticipate much additional growth as there is no possibility for expanding the District's service boundaries. There is very little buildout potential within the existing service area because there is a limited number of undeveloped lots and those lots tend to have development or land use limitations, such as severe slope issues, septic limitations, and proximity to waterways. In addition, many of the undeveloped lots are in a type of ownership that effectively precludes development, or they do not constitute legal building sites.

F. MUIR BEACH COMMUNITY SERVICES DISTRICT

The Muir Beach Community Services District (MBCSD) serves approximately 150 residences. The District relies on groundwater pumped from wells located in the Frank Valley. Water supply is limited and conservation measures are implemented during severe droughts. The maximum community build out is limited to approximately 165 dwellings (depending on the number of lots privately reserved for view preservation) because the community is surrounded by national and state park lands and agricultural preserves.

G. DILLON BEACH COMMUNITY

The community of Dillon Beach relies on groundwater for drinking water supplies. Water service in Dillon Beach is provided by two privately owned water companies: California Water Service Company and Estero Mutual Water Company, which operate a stream diversion and storage system. Estero Mutual has two wells that together supply approximately 10,000 gallons per day (GPD). In addition, Estero Mutual has the facilities and necessary permits to divert up to 400 GPM from a stream tributary



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of Estero de San Antonio. Diverted flows are stored in a small reservoir with a capacity of 16 million gallons, or 49 acre-feet.

The Coast Springs Water Company has 200 service connections and serves up to 240 households in the old part of Dillon Beach. Water demand per unit for average and peak use in 1985 was recorded at 96 GPD and 170 GPD respectively. Coast Springs water supply comes from three sources: (1) a large well located in the channel of Dillon Creek Gulch capable of producing 18,000 GPD, depending on creek flow; (2) six vertical wells; and (3) an infiltration tunnel. These three sources combined are capable of providing a sustained yield of 33 GPM.



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IV. MARIN COUNTY WASTEWATER SERVICES

A. SEWERAGE AGENCY OF SOUTHERN MARIN (SASM)

The SASM includes the following agencies (see Figure 5): Richardson Bay Sanitary District, City of Mill Valley, Tamalpais Community Services District, Alto Sanitary District, Almonte Sanitary District, and Homestead Sanitary District. SASM serves approximately 25,000 residents.

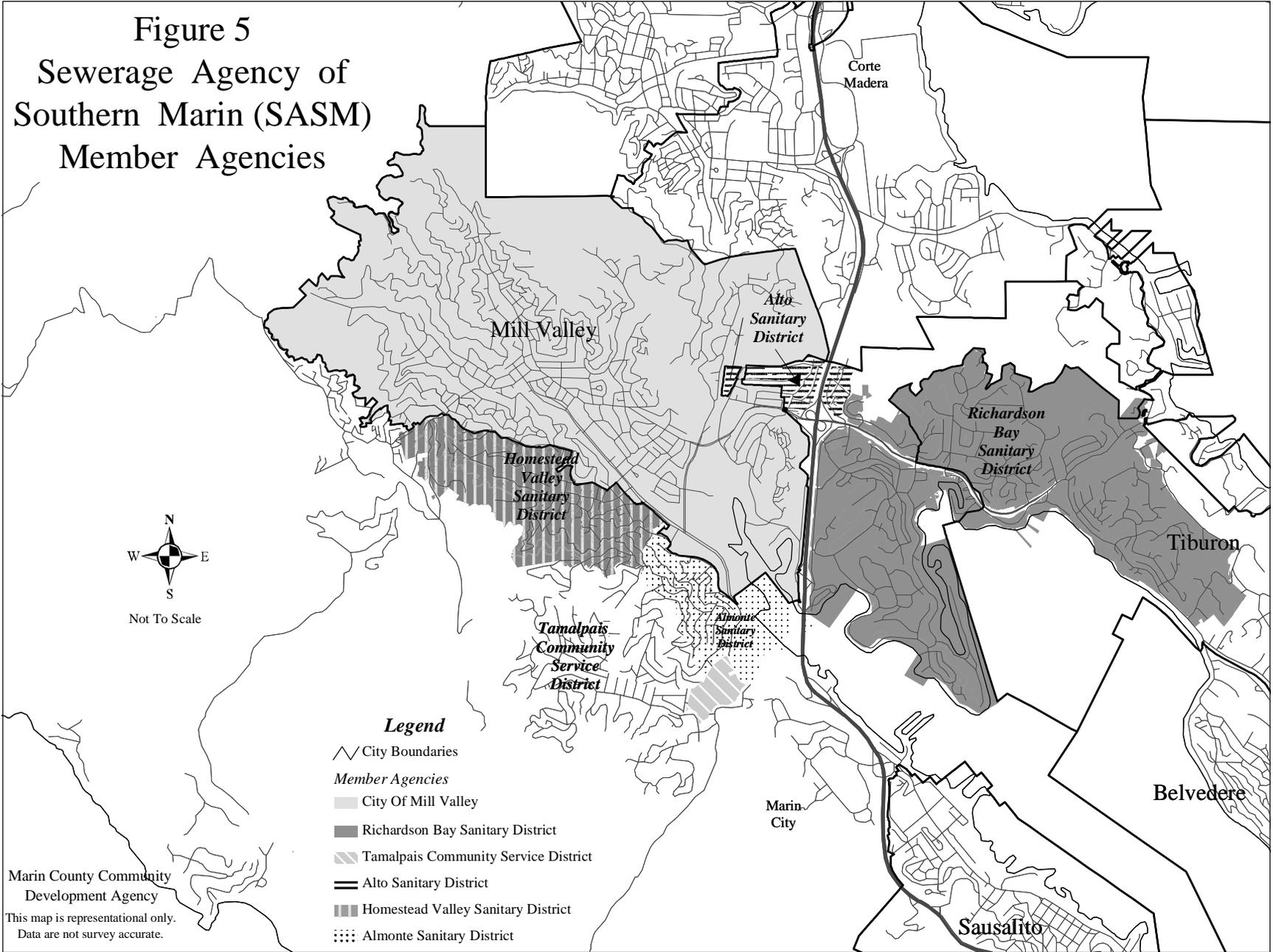
The City of Mill Valley contracts with the SASM to provide operation, maintenance, and management of all SASM facilities. Each SASM member agency is responsible for administering the sewage collection system within its district. Wastewater is then transported to the SASM treatment plant, which is located in Mill Valley. The six member agencies receive a capacity allocation based upon 1980 estimates of service requirements. There are no other inter-jurisdictional contracts.

The purpose of SASM was to facilitate expansion and improvements to the Mill Valley treatment plant. These improvements were completed in 1983. All wastewater from the member agencies is treated at the Mill Valley treatment plant, which is a secondary treatment facility, and discharged via a deep-water outfall into Raccoon Strait. Substantial improvements were also made to each member agency's collection system through a grant obtained by the SASM in 1986.

The SASM plant consists of six pump stations, five miles of gravity sewer mains, and nine miles of force mains. The plant has a dry weather flow processing capacity of 3.6 million gallons per day (MGD). The Average Daily Dry Weather Flow in 2000 (as determined by the lowest three months of the year average per Regional Water Quality Board specifications) was 2.55 MGD, 30 percent below capacity. It is not expected that the plant's capacity will be exceeded in the future. The SASM also operates a dump station at the treatment plant that is designed to receive hauled septic wastes.

The SASM conducted a detailed performance assessment, which resulted in re-rating the plant capacity from 2.90 to 3.60 MGD. In addition, the SASM has performed a number of upgrades to its system over the last ten years. These improvements include: upgrading the capacity of four of its six pump stations, building a small, 180,000 gallon per day reclamation plant; converting the chlorination system from gas to liquid; and adding a small storage building. All other projects categorized as capital projects have actually been large maintenance and repair projects that simply extended the life of existing facilities. The main treatment plant has not been expanded in the last ten years.

Figure 5
Sewerage Agency of
Southern Marin (SASM)
Member Agencies



Marin County Community
Development Agency
This map is representational only.
Data are not survey accurate.



COMMUNITY FACILITIES BACKGROUND REPORT

In 2001, the SASM assumed ownership of a five-mile trunk sewer system from the SASM member agencies. This system required upgrading to prevent sewer system overflows and back-ups. Much of the work has been completed, however one project remains that is estimated to cost about \$750,000.

1. Richardson Bay Sanitary District

The Richardson Bay Sanitary District maintains 40 miles of gravity sewer mains, four miles of force mains, and 24 pump stations. An average of 30,000 gallons per day of secondarily treated wastewater is reclaimed from April until October and is used for irrigation, dust control, and hydro cleaner. The only future development potential within the district boundaries consists of two small parcels where approximately 16 single-family dwellings could be built.

2. City of Mill Valley

The City of Mill Valley provides sewage collection service for the area within the Mill Valley City limits, a region with an area of approximately 4.7 square miles and a population of 14,000. Current facilities consist of 59 miles of collection mains and 4 pump stations. For the last ten years, the City of Mill Valley has spent \$450,000 annually on sewer line rehabilitation, which is expected to continue in the future. No other equipment expansions or upgrades are planned.

3. Tamalpais Community Services District

The Tamalpais Community Services District provides an area of 1.7 square miles and a population of 5,851 (as of 2001) with sewage collection, pump house and system maintenance, parks and recreation and garbage and recycling collection. While the TCSD is a member of SASM, only the wastewater collected in the Kay Park area of the District is pumped to the SASM treatment plants. The remaining wastewater collected in the District is treated by the plants in the Sausalito/Marin City Sanitary District under a separate contract.

4. Alto Sanitary District

The Alto Sanitary District provides sewage collection, system maintenance, and administration of garbage and recycling collection contracts. The District serves a land area of 0.2 square miles and a population of 939 (as of 2000). The total operating revenue for the District for fiscal year 2001/02 was \$178,800.

5. Almonte Sanitary District

The Almonte Sanitary District provides only wastewater collection in its service area, as well as administration of the garbage and recycling contracts with the Mill Valley Refuse Service. The District services the Almonte area of the city of Mill Valley, a land area of 0.4 square miles and a population of 1,478 (as of 2000). The District does not foresee any problems with growth that would impact its existing capacity in the treatment facility, as the area served is already substantially built out.

Between Corte Madera and Tiburon is the Seafirth treatment plant, a small private plant serving approximately 100 homes (see Figure 8). In the past the plant has had operating problems and residents have requested annexation to either Tiburon or Corte Madera. Neither city agreed to annexation in part due to difficulties in providing sewer service. Sanitary District #2 indicates that it



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declined to provide service because sewage from this area would have to be pumped several times over a fairly long distance to join its system. This could create health hazards.

The plant has had a number of process and equipment upgrades over the past ten years. Seafirth Estate Company, which owns the plant, may be interested in connecting to a public treatment facility if the logistics can be successfully worked out to make the connection economically feasible. This will probably require sewerage a large portion of the east side of Paradise Drive in Tiburon, where a number of homes are currently on septic systems.

6. Homestead Valley Sanitary District

The Homestead Valley Sanitary District provides sewage collection, system maintenance, and administration of garbage and recycling collection contracts. The District serves a land area of 0.7 square miles and a population of 2,354 (as of 2000). The total operating revenue for the District for fiscal year 2001/02 was \$246,700.

B. SANITARY DISTRICT #5 (Tiburon Area)

Sanitary District #5 is responsible for the operation and maintenance of the District's two sewage treatment facilities, its nine pumping stations and its approximately 11 mile collection system (see Figure 6). The service area reaches from the southern end of the Tiburon peninsula northward to Trestle Glen on the east side, and to Gilmartin Drive on the west. The District serves approximately 9,000 people.

The plant was designed to accommodate a 1991 population projection of 9,787 people. The facility can process an average daily dry weather flow of 0.98 (MGD). In 1987, average dry weather flows from Tiburon, Belvedere, and small pockets of unincorporated areas were 0.75 MGD, or 77 percent of plant capacity.

After treatment the effluent is discharged 400 feet offshore into Raccoon Strait. The same outfall line is also utilized for wastewater treated at the SASM plant in Mill Valley.

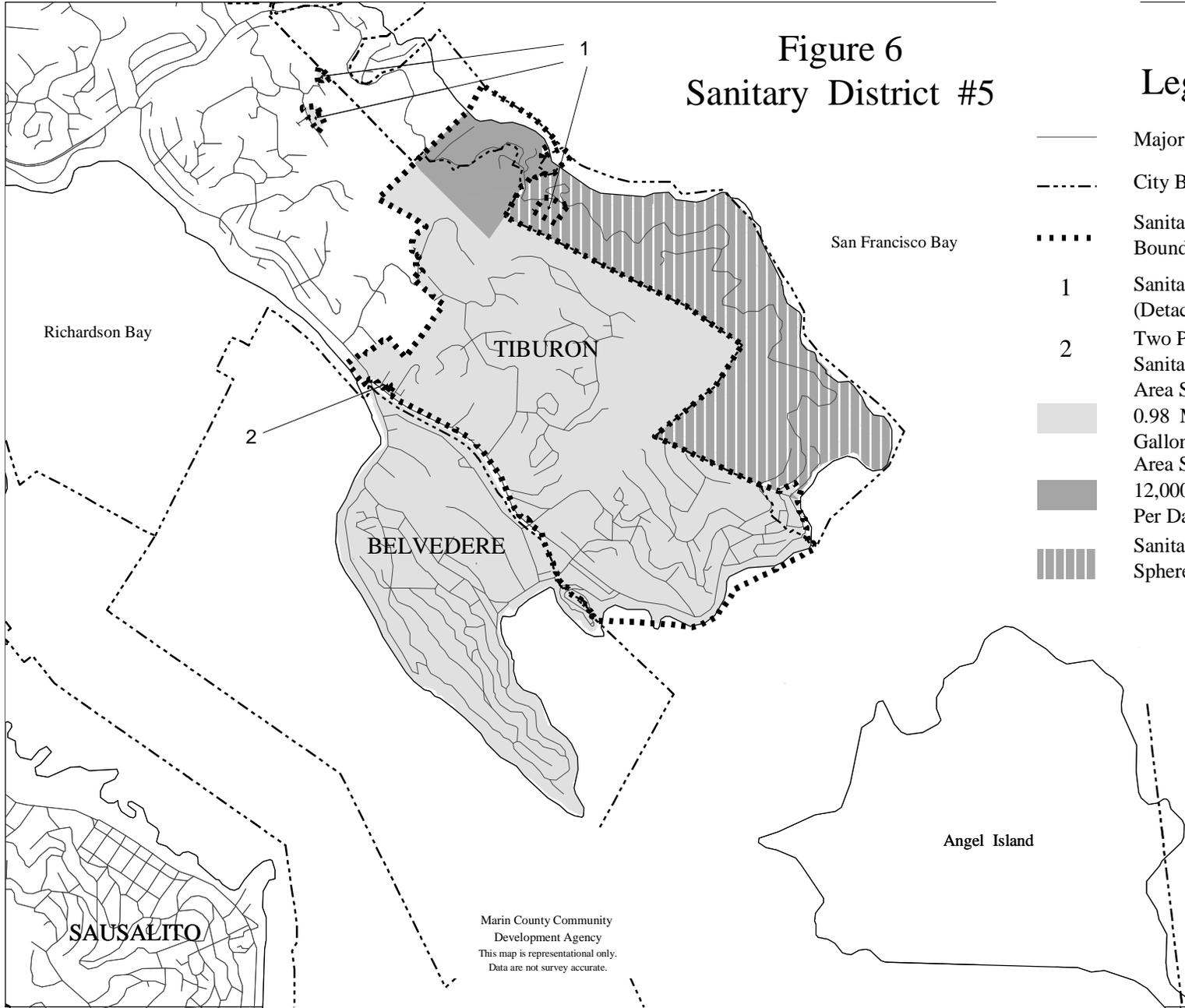
The District is on contract with the City of Belvedere to provide water treatment services. Belvedere maintains its own collection system and has an ongoing capital improvement program. Old lines were recently replaced throughout its wastewater system. As a result, there has been a substantial reduction of salt water and storm water infiltration into the system. The hilly terrain makes it necessary to operate a large number of pump stations, which are expensive to maintain. In 1994 Belvedere completed a program to overhaul all 15 pump stations.

The District has two treatment facilities. The main treatment facility, located at 2001 Paradise Drive in Tiburon, has been operating at about 75 percent of its treatment capacity since 1987. The San Francisco Bay Regional Water Quality Control Board issued a new National Pollution Discharge Elimination System (NPDES) permit for the plant in December 2002. The new permit does not include any limitations that would preclude the District from allowing additional connections to its main facility, nor does it require extensive modification to meet the level of treatment standards to achieve compliance.

Figure 6
Sanitary District #5

Legend

- Major Roads
- - - City Boundaries
- Sanitary District #5 Boundary
- 1 Sanitary District #5 (Detached Portion)
- 2 Two Parcels NOT within Sanitary District #5
- Area Served by 0.98 Million Gallons Per Day Plant
- Area Served by 12,000 Gallons Per Day Plant
- Sanitary District #5 Sphere of Influence



Marin County Community
Development Agency
This map is representational only.
Data are not survey accurate.





MARIN COUNTYWIDE PLAN

Sanitary District #5 also operates a small secondary treatment plant that serves a subdivision near Paradise Cove. This plant can process 12,000 gallons per day and could eventually handle future development located between Trestle Glen and Playa Verde; however, the plant has very little additional capacity. There have been past discussions with homeowners on septic systems and other property owners in the area about joining the sewerage system, though no comprehensive measures have been advanced to date. Since major improvements would be required before the treatment plant could handle a significant amount of future development, it is likely that, if there were any significant increase in future treatment load, the plant would be converted to a pump station, which would pump to the main facility.

The NPDES permit for this facility was subject to renewal in April 2002. However, the renewal did not occur due to delays at the Regional Water Quality Control Board. Permit renewal is expected in Fall 2003 or possibly later. Since the facility is more than thirty years old, it can be expected that its age, as well as new compliance-related issues, will require it to be replaced in the near future. The facility has not yet reached capacity but that is still a concern. Some developments in the District are in the process of hooking up to the system and the District is waiting to see how that affects plant capacity.

Sanitary District #5 has an ongoing capital improvement program, which includes plans to overhaul one of the District's nine pump stations each year. Significant improvements were made to the District's sewer lines when the treatment plant was upgraded. As a result, wet weather infiltration averages less than five million gallons per day while the treatment plant is designed to handle wet weather flows up to 6.3 million gallons per day.

During the 1990s, Sanitary District #5 made several facility upgrades. Improvements in 1993 eliminated the need to use gaseous chlorine and sulfur dioxide, while in 1995 the District covered the wet weather clarifier, upgraded the odor control scrubber, and installed a plastic liner in the dry weather clarifier. In 1998, one of the plant's digestive covers was replaced.

Table 6. Sanitary Treatment Plant Design Capacities (Dry Weather)

Agency	Capacity (MGD)	Flows (MGD) (2000)	Capacity Remaining (2001)	Capacity Reached (Year)
Sausalito/Marin City CSD	1.80	1.57	13%	N/A
SASM	3.60	2.55	20%	N/A
Sanitary District #5	0.98	0.75	23%	N/A
CMSA	10.00	8.00	20%	2001
Las Gallinas Valley Sanitary District	2.92	2.33	20%	2020
Novato Sanitary District				2001
Novato Plant	4.60	3.14	32%	N/A
Ignacio Plant	2.10	1.63	22%	N/A
Bolinas PUD.	0.065	0.035	54%	2000

N/A = Exceedence not expected, given current trends and regulations. Future regulation could alter that.
MGD = million gallons per day



COMMUNITY FACILITIES BACKGROUND REPORT

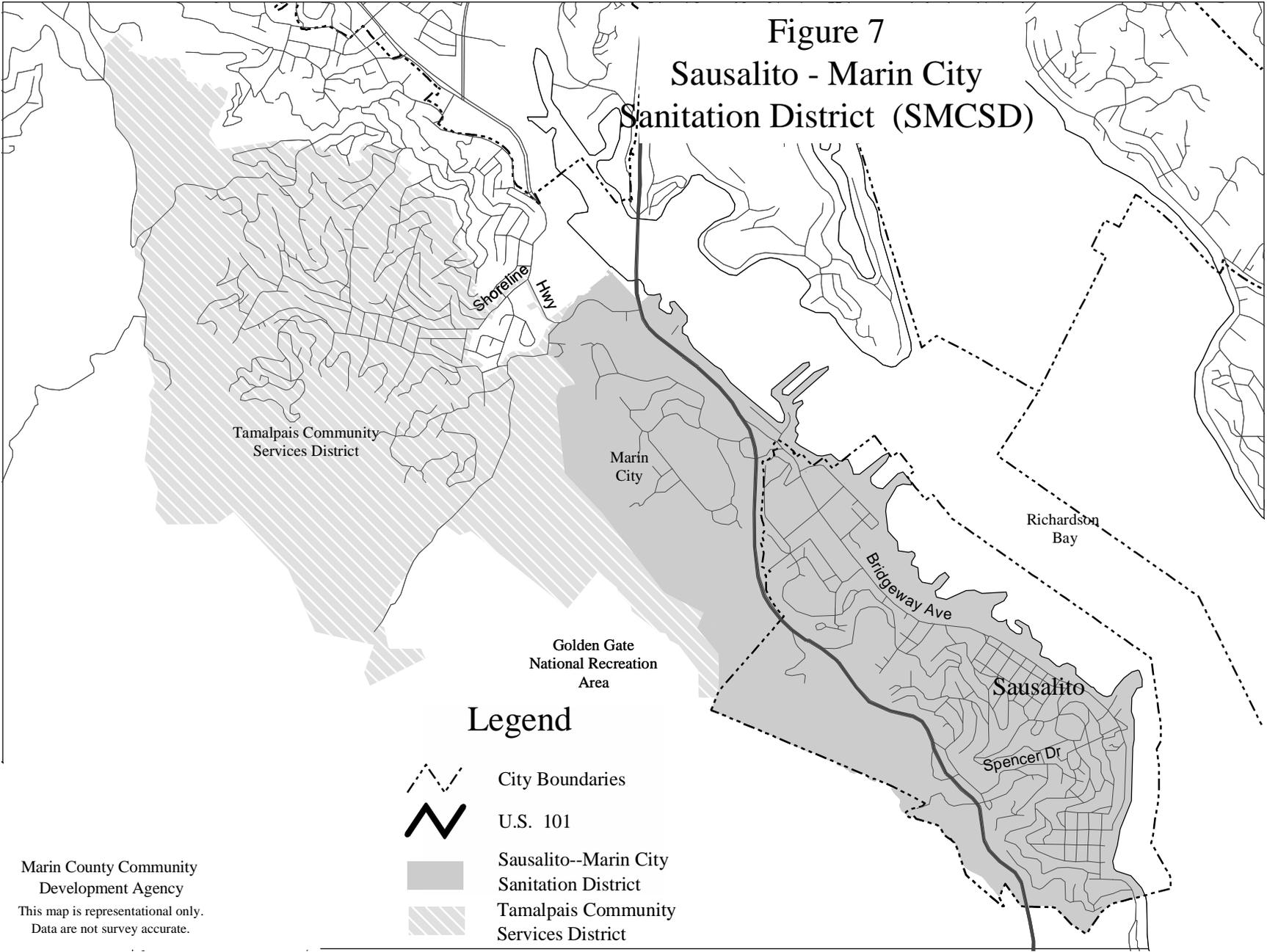
C. SAUSALITO/MARIN CITY SANITARY DISTRICT (SMCSD)

Formed in 1950, the SMCSD provides wastewater conveyance and treatment services to the City of Sausalito, Marin City, parts of Tamalpais Valley, Muir Woods, and the Marin Headlands area. Figure 7 shows the District's service area boundaries. The SMCSD maintains the collection system in Marin City, while the City of Sausalito and the Tamalpais Community Services District are responsible for the maintenance of their respective collection systems. In 2000, SMCSD's service population was estimated at approximately 18,000 people.

The SMCSD conveyance facilities consist of six pump stations, 3.1 miles of force mains, and 1.2 miles of trunk sewers. Under a service agreement arrangement, the SMCSD operates and maintains three pump stations that are owned by the City of Sausalito. The SMCSD wastewater treatment plant provides secondary level treatment and has an average day dry weather design flow capacity of 1.8 MGD. The plant has been designed to treat 5.5 MGD of average day wet weather flow. Plant effluent is discharged to the Central San Francisco Bay via a deep-water outfall. Based on 2001 flow data, the plant discharged an average day dry weather flow of 1.57 MGD. The SMCSD maintains approximately six miles of gravity sewer in unincorporated areas, including Marin City.

In 1984, the SMCSD began making substantial improvements to trunk lines in the north end of the District's service area. Since 1990, the SMCSD has replaced 1.2 miles of deteriorated force main piping, completed a major upgrade to its largest pump station, and installed sand filters and a standby emergency generator at the treatment plant. In addition, the SMCSD converted its gaseous chlorine disinfection system to a liquid chlorine disinfection system. In the next ten years, the SMCSD plans to upgrade two additional pump stations, replace two pump stations with gravity sewers, rehabilitate the Marin City collection system, and install a new sludge dewatering facility at the treatment plant. In partnership with the National Park Service, the SMCSD also plans to study the feasibility of supplying recycled water to Fort Baker for irrigation and other purposes. The District's existing conveyance and treatment facilities are sized to handle the projected growth of the District's service population and, therefore, no major capacity improvements are planned over the next ten years. The treatment plant was upgraded from a primary treatment plant to a secondary treatment plant in 1986.

Figure 7
Sausalito - Marin City
Sanitation District (SMCSD)



Legend

-  City Boundaries
-  U.S. 101
-  Sausalito--Marin City Sanitation District
-  Tamalpais Community Services District

Marin County Community Development Agency
This map is representational only.
Data are not survey accurate.



COMMUNITY FACILITIES BACKGROUND REPORT

D. CENTRAL MARIN SANITATION AGENCY (CMSA)

The Central Marin Sanitation Agency treats wastewater from the San Rafael and Ross Valley areas. Its member agencies consist of Sanitary District #1 of Marin County (Ross Valley), Sanitary District #2 of Marin County (Corte Madera), the City of Larkspur and the San Rafael Sanitation District, which all serve a population of approximately 100,000 (see Figure 8). Geographically, the 44 square mile service area includes most of the City of San Rafael (excluding Terra Linda and Santa Venetia, which are part of the Las Gallinas Sanitary District), Larkspur, Ross, San Anselmo, Kentfield, Greenbrae, Fairfax, and Corte Madera.

The CMSA was formed under a joint powers agreement in 1979. The purpose of the agency was to oversee the planning, construction, and operation of a new and improved wastewater treatment plant for agencies in central Marin.

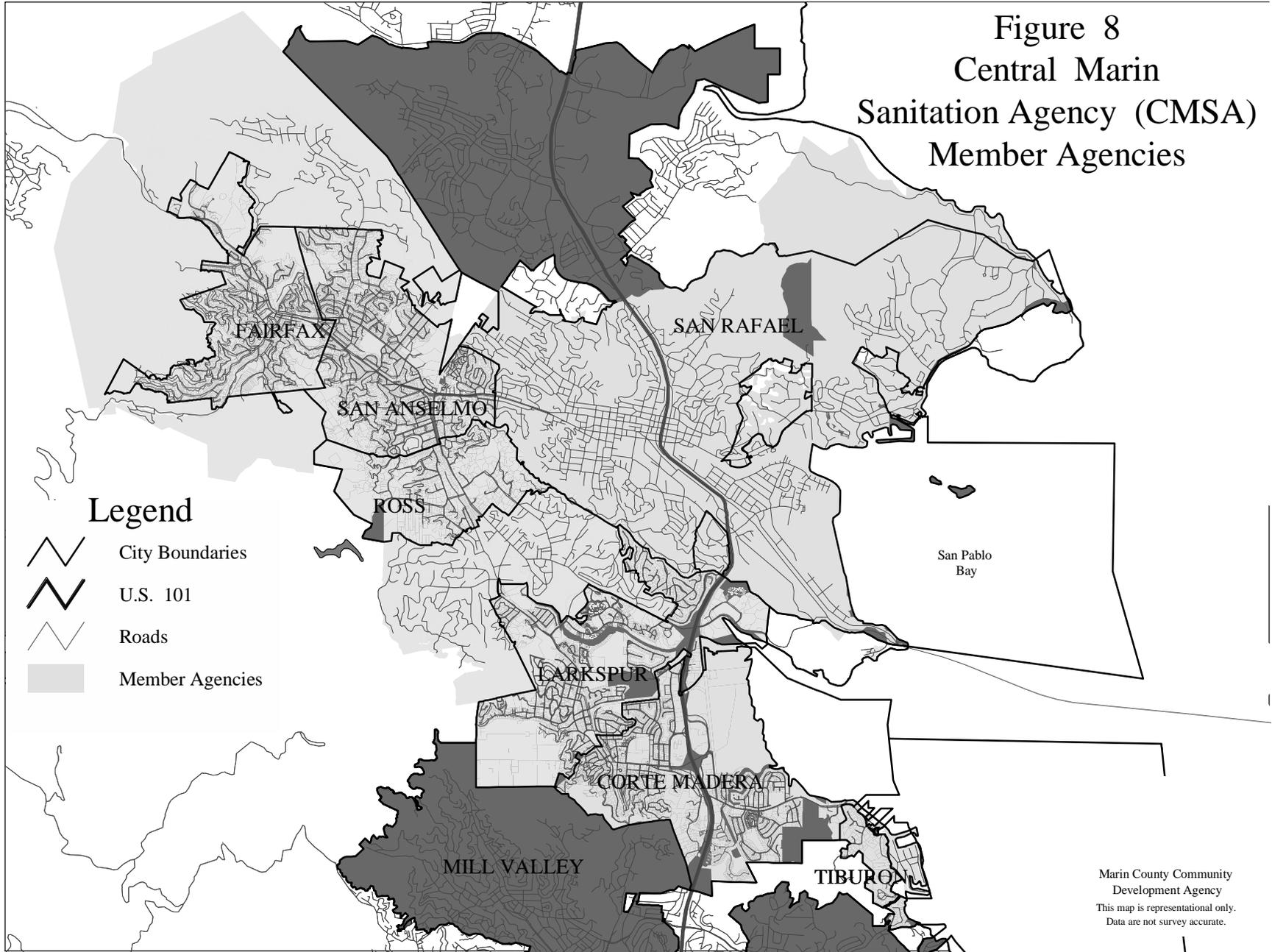
The plant, which was completed in 1985, is located on the north side of Point San Quentin along Anderson Drive in San Rafael. The biological treatment units were designed to process up to 30 MGD of wastewater in wet weather, but the official rated capacity during dry weather is ten MGD. Dry weather flow in 2000 was 8.0 MGD, or 80 percent capacity. In 1987, dry weather flows were 7.9 MGD. During large storms, flows in excess of 30 MGD receive pretreatment (grit removal), primary sedimentation and disinfection for flows up to 125 MGD. The CMSA's existing facilities are described in the sections for Sanitary Districts 1 and 2.

The wastewater treatment processes at the CMSA include bar screen, grit removal, primary sedimentation, biofiltration, conventional activated sludge, secondary clarification and disinfection. After disinfection, the flows are discharged through a seven-foot diameter outfall extending over 8,000 feet into the San Francisco Bay. The discharge point is on the western edge of the shipping channel in the Bay. The treatment of solid waste consists of anaerobic digestion, thickening, and de-watering. Methane gas from the digestion process is used to make electricity and to provide heat for space conditioning and processes.

The CMSA contracts with Sanitary District # 2 (Corte Madera) and with the City of Belvedere to maintain the sewage pumping stations in those areas. The CMSA does not manage or monitor individual septic tanks, but the facility does receive waste removed from septic tanks in Marin County by commercial septage haulers, portable toilet waste, and grease from restaurants. The total amount of hauled waste processed at the CMSA plant for the year 2000 was 653,400 gallons.

Improvements over the last ten years have included the conversion of the CMSA disinfection facilities from processes involving liquefied gases (chlorine and sulfur dioxide) to using chemicals that are in solution form (sodium hypochlorite and sodium bisulfite). The CMSA has also switched from relying on chlorine compounds for disinfection to using a non-hazardous chemical injected at upstream pump stations (calcium nitrate) and to using a polishing chemical near the treatment facility (hydrogen peroxide). Other improvements have included upgrading the cogeneration facility to comply with new air discharge requirements by the Bay Area Air Quality Management District, replacing the facility monitoring and automation system, and modernizing the biosolids thickening processes.

Figure 8
Central Marin
Sanitation Agency (CMSA)
Member Agencies



Marin County Community
Development Agency
This map is representational only.
Data are not survey accurate.



COMMUNITY FACILITIES BACKGROUND REPORT

Actual treatment capacity of the CMSA facility is expected to exceed the rated capacity of ten MGD only if there is a sudden increase in population. Daily flow has been fairly consistent for nearly the past two decades. There are currently no plans to increase the treatment capacity of the CMSA facility.

The Agency is addressing the management of marine outfall and the control of odors from the treatment plant. The outfall is sized for maximum flows of 120 MGD. Residual particles from the activated sludge process accumulate in the pipeline and tend to settle out. Over time, the settled solids reduce the hydraulic capacity of the outfall and must be removed. The CMSA is evaluating ways to keep residual particles suspended in order to reduce the frequency of removal. The agency is also working on improving the control of odors from the facility's sewage treatment processes.

I. Sanitary District # 1 (Ross Valley)

Sanitary District #1 currently serves the area from Larkspur Landing in Larkspur westward to White's Hill in Fairfax, and from Bret Harte Heights in the north to the Corte Madera town limits in the south. The area includes Fairfax, Oak Manor, San Anselmo, Sleepy Hollow, Ross, Kentfield, Greenbrae, Larkspur, and Murray Park.

The District's facilities consist of six major pump stations (including the pump station at San Quentin Prison), six minor pump stations, and eight lift stations. The District also maintains approximately 185 miles of gravity sewers and five miles of force mains. The District currently pumps its wastewater for treatment to the Central Marin Sanitation Agency (CMSA). It is estimated that Sanitary District #1 serves a population of approximately 60,000.

The District has an ongoing capital improvement program for the replacement of inadequate and aging sewer lines and pump stations. Over the past ten years the District has replaced approximately ten miles of gravity sewer lines and has modernized three minor pump stations and one lift station. The capital improvement program also included an evaluation of the need to increase the size of lines and pumping capacities to accommodate current and future needs of strategic areas. The District's budget for capital improvements is approximately \$1 million per year.

The District has no gaps or deficiencies within its service area. There are, however, some areas within the District that are still served by septic tank. As these septic tanks begin to fail and renewal is not an option, it is the property owner's responsibility to provide sewer service to the property when connection to a sewer line is physically feasible. In some cases where several lots are involved, the District may consider an assessment district, which requires the consent of a majority of the property owners. All septic tanks within the District's service area fall under the jurisdiction of the Marin County Environmental Health Services (EHS). When an existing septic tank is abandoned and a new sewer system connection is made, connections must meet current EHS regulatory requirements.

Over the years, Sanitary District #1 has developed guidelines for the installation of both private and public sewer systems. Other sanitary districts within the county have adopted the District's "Standard Specifications and Drawings - 1996," which covers all aspects of sewer construction and installation, entirely or in part.



MARIN COUNTYWIDE PLAN

2. San Rafael Sanitation District (SRSD)

The San Rafael Sanitation District (SRSD) owns and operates 126 miles of gravity sewers, 12 miles of pressure force mains and 32 pump stations of various sizes. Sewage collected by the SRSD is pumped to the Central Marin Sanitation Agency for treatment and disposal. The SRSD serves a population of 30,678, and used approximately 4.8 of the 10 MGD processing capacity of the CMSA in 2000, up from 4.6 MGD in 1999. Average dry weather flows for 2002 was 3.7 MGD, down from 4.15 MGD in 2001.

The original sewers in San Rafael were installed in the late 1800s. About two-thirds of the sewers now in use were installed prior to the 1960s before watertight pipeline materials became available. The older sewers tend to have leaks and allow entrance of groundwater and surface water into the sanitary sewer system. This water, termed infiltration/inflow (I/I), can overload the sewers and pumping facilities during periods of high rainfall. There are also almost ten miles of corrugated metal pipe sewers, which are known to be severely deteriorated and can fail, becoming blocked or causing sinkholes in streets.

In the late 1960s and 1970s, new large trunk sewers were installed in certain areas of town, together with the North Francisco Pump Station and force main, in order to eliminate raw sewage overflows during wet weather. Although the basic cause of the high I/I in the sewer system is leaking sewers and laterals, the District, rather than replacing the old sewer lines, has devoted much of its resources to upgrading the capacities in the transport system to compensate for the higher discharge elevation at the CMSA treatment plant and to prevent overflows.

The SRSD improvement program has been guided by the 1986 Long-Range Plan for Wastewater Treatment System Improvements, which was updated by the 1997 Capital Improvement and Replacement Program. Both of these plans placed a high priority on improvements of the pump station and transport system. In April 2000, the District adopted an updated capital improvement program (CIP) that addresses the necessary improvements to both the gravity sewer and force main systems for the next ten years. Some of the improvements outlined in the CIP include: transport system improvements consisting of upgrading nine of the District's pump stations and replacement of some force mains; collection system improvements, primarily replacing deteriorating corrugated metal pipe in the Canal area and other low-lying areas; miscellaneous smaller sewer rehabilitation and repair projects throughout the District; interim improvements which are necessary to keep pump stations operating until they can be upgraded as a part of the program; and emergency repairs which are necessary to fix collapsing sewers or other problems that occur before the facilities can be scheduled for rehabilitation. These improvements are estimated to cost \$15.9 million.

There are no planned improvements to facilitate additional growth because the area served by the District is substantially built out, with the exception of small pockets of potential development and the isolated construction of single-family housing.

3. Sanitary District #2 (Corte Madera and Tiburon)

Sanitary District #2 serves an area of approximately 4.5 square miles, including most of Corte Madera and a small portion of Tiburon. The population of this area is approximately 9,100 people. The Sanitary District operates a sewer collection system with an average flow of 1.4 MGD, which feeds into the CMSA treatment plant. The District has 17 pump stations and 39 miles of gravity collection mains



COMMUNITY FACILITIES BACKGROUND REPORT

and force mains. The District's sewer permit process does not allow for the construction of any new septic tank systems.

Sewer mains continue to be upgraded. Within the last ten years, a force main was installed from the Paradise Drive pump station to the City of Larkspur. The District is in the process of refurbishing the Lucky Drive pump station and has plans to upgrade additional pump stations in the near future.

The District utilizes its own Standard Specifications and Drawings, dated April 1996, which may be used in the Countywide Plan and Environmental Impact Report for measuring impacts.

The District raised user fees in the late 1980s in order to replace its line under Corte Madera Creek, upgrade three pump stations, and replace a section of a force main.

4. Larkspur Department of Public Works (LDPW)

The Larkspur Department of Public Works used to manage sewage collection within the City for the area south of Corte Madera Creek. Sewage collection and maintenance responsibilities were transferred to Sanitary District #1 in July 1993.

E. LAS GALLINAS VALLEY SANITATION DISTRICT (LGVSD)

The LGVSD's current service area is approximately seventeen square miles and includes the tributary areas to Miller Creek and Gallinas Creek, with the Miller Creek tributary going to the southern portion of Lucas Valley. Approximately 30,000 residents are served by the LGVSD. Its average dry weather flow capacity is 2.92 MGD. Current dry weather flow is approximately 2.33 MGD. The District has seen a reduction in dry weather flow, due to its success in reducing inflow/infiltration into the sewer system. The District currently has 23 pump stations, which it maintains, as well as 100 miles of gravity collection mains and 30 miles of force mains.

After the final step of treatment, wastewater is discharged to San Pablo Bay in wintertime or reclaimed in the District during the summer. The reclamation use of treated wastewater is provided by the LGVSD in cooperation with the MMWD in four ways: pasture irrigation, filling of storage ponds, storage pond evaporation, and a cooperative effort between the LGVSD and the MMWD in treating the secondarily treated wastewater through the tertiary treatment stage and sending it back to customers within the District as landscape irrigation water.

Since 1989 the LGVSD has had an agreement with the MMWD to provide a joint agency effort to treat the District's secondary treated wastewater through the tertiary phase and then extend a distribution system throughout the District to make the treated wastewater available for landscape irrigation and for other purposes. A good illustration is the use of the District's treated wastewater at the Marin County Civic Center. The Civic Center is using treated wastewater for landscape irrigation as well as for toilet flushing in the jail facility.

The District has completed a new laboratory for the purpose of improving sampling and testing abilities and has built a classroom where, during the months of May and June, approximately 1,000 students within the District will be educated about wastewater treatment and how treated wastewater is utilized.

Figure 9 Las Gallinas Valley Sanitary District

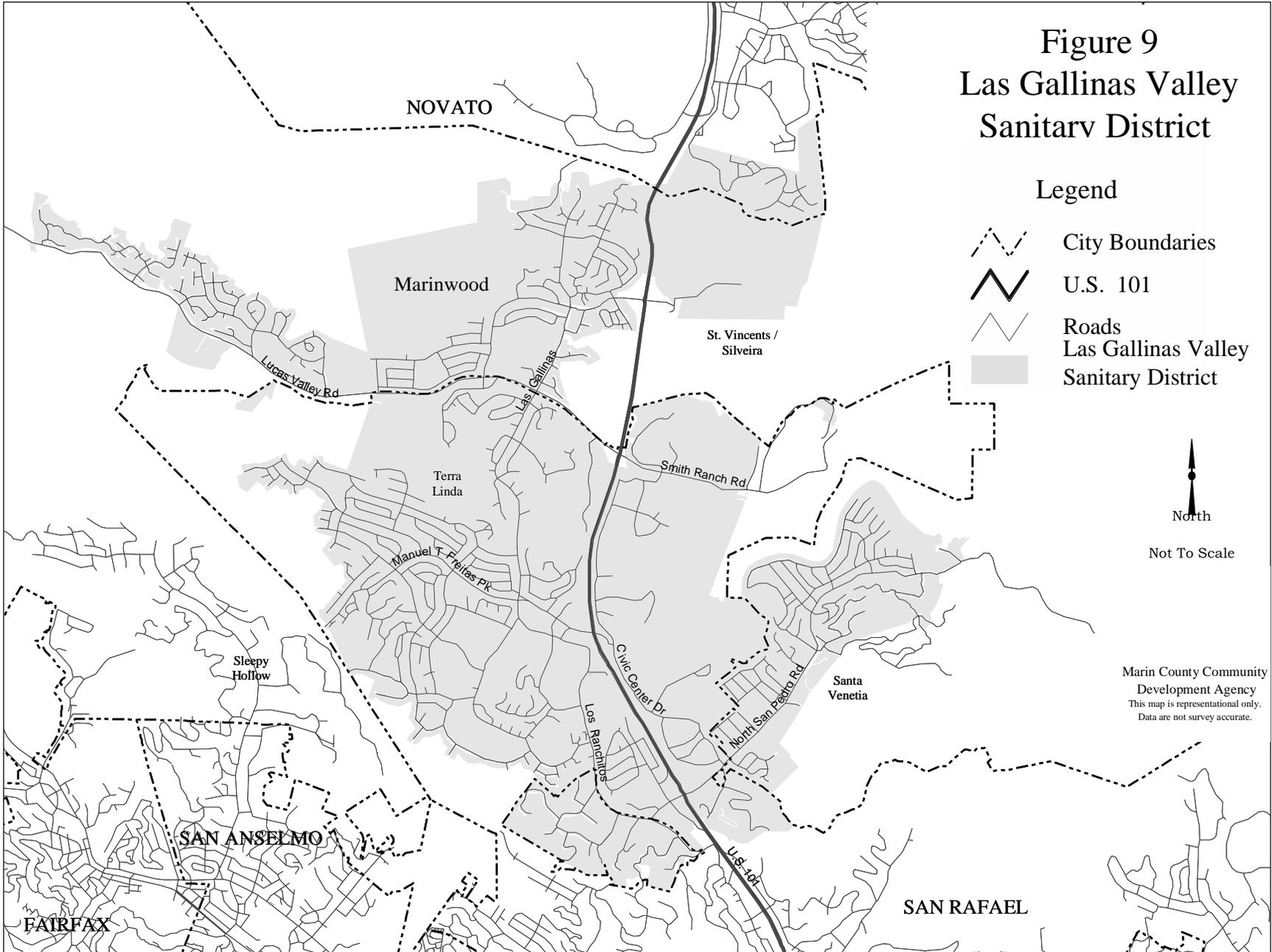
Legend

-  City Boundaries
-  U.S. 101
-  Roads
-  Las Gallinas Valley Sanitary District



Not To Scale

Marin County Community
Development Agency
This map is representational only.
Data are not survey accurate.





COMMUNITY FACILITIES BACKGROUND REPORT

In the past ten years, the LGVSD has completed substantial rehabilitation improvements to the collection system amounting to approximately \$4 million. These improvements have occurred principally in the Santa Venetia area to make the collection system more resistant to inflow/infiltration. Also, the LGVSD has completed various improvements within its 23 pump stations to improve their reliability and to provide both backup power at the pump stations and a more reliable pump station alarm system. The last major improvement made to the LGVSD plant and reclamation system was the 1985 purchase and development of 383 acres of land. From this purchase, 40 acres of land were developed as storage ponds, 220 acres were converted to pasture and irrigation uses, 20 acres were set aside as a marsh habitat pond, while ten acres were reserved for a saltwater marsh area.

The LGVSD has an NPDES permit from the San Francisco Water Quality Control Board, which was issued in October 1998, and which will be subject to renewal in October, 2003. By that time, the District must implement further treatment to reduce metal concentrations in its effluent. The District has satisfactory financial reserves to provide the financing for this further treatment to reduce metal concentrations as required by the Regional Water Quality Control Board.

The District is approximately 70 percent built out, with its future growth principally consisting of the Silveira and St. Vincent's properties. In order to meet proposed growth, the District will have to provide some additional plant improvements to accommodate the additional flow and work with the Marin Municipal Water District (MMWD) to expand the recycled-reuse system to allow the LGVSD to remain in reclamation mode for six months of the year. With the anticipation of future connection fee revenue, the District will have sufficient financial revenue to provide for the financing of these improvements.

F. NOVATO SANITARY DISTRICT (NSD)

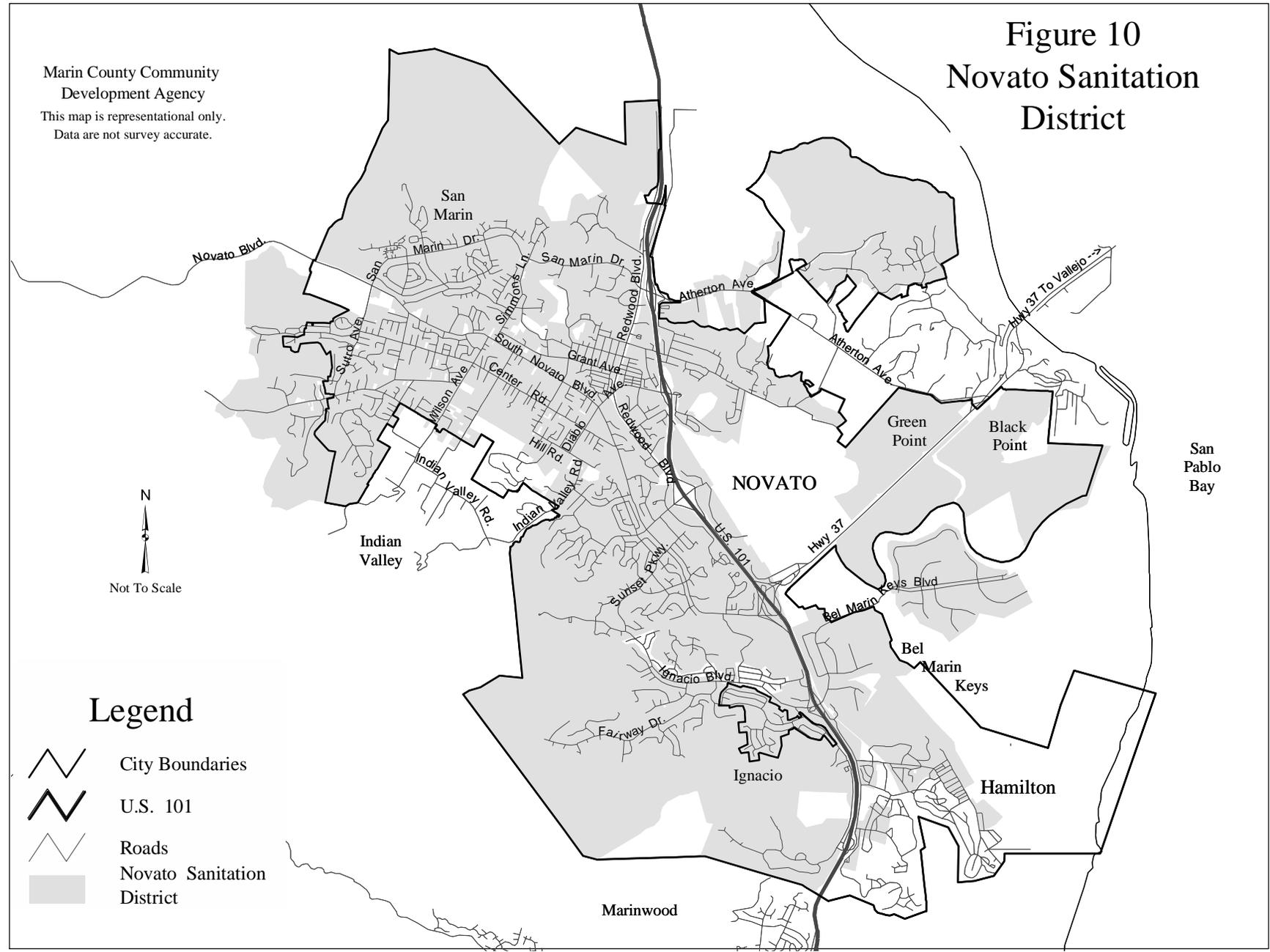
The NSD operates two treatment plants which are located in Novato and Ignacio (see Figure 10). The District serves approximately 18,500 households. The Novato plant was upgraded in 1984 and provides tertiary treatment, which includes nitrification and filtration. This plant has a maximum dry weather flow capacity of 4.6 MGD and, as of the year 2001, has demonstrated sufficient capacity to meet buildout as projected by the Novato General Plan. In 1986 the District completed major capital improvements to the Ignacio plant, which were part of a program initiated in 1970. This plant has a 2.1 MGD dry weather flow capacity (see Table 5).

Both plants discharge treated wastewater into the near shore waters 1,100 feet beyond Hamilton Air Force Base during wet weather months. During dry weather, the treated wastewater is used to irrigate 1,000 acres of District-owned or leased pasturelands. The irrigation program, which has been operating since 1986, provides environmental benefits and has proven to be a financial success for the District.

Both District sewage treatment plants are expected to handle future population growth projections, as growth has been less than expected. The Ignacio plant serves the redevelopment at the Hamilton Air Force Base. Because this development is primarily the re-use of existing facilities, it has not had a

Figure 10
Novato Sanitation
District

Marin County Community
Development Agency
This map is representational only.
Data are not survey accurate.



Legend

-  City Boundaries
-  U.S. 101
-  Roads
-  Novato Sanitation District



COMMUNITY FACILITIES BACKGROUND REPORT

significant impact on treatment capacity. In the future, increased load at the Ignacio plant may be transferred to the Novato plant, though no plans currently exist to do so.

G. BOLINAS COMMUNITY PUBLIC UTILITY DISTRICT (BCPUD)

The Bolinas Community Public Utility District (BCPUD) provides sewage collection, treatment, and plant and system maintenance to Wharf Road, Brighton Avenue, Olema-Bolinas Road from the intersection of Wharf/Brighton north to include 16 Olema-Bolinas Road but no further, the Little Mesa, Park Avenue and Terrace Avenue west to Canyon Road. All other developed properties within the district are served by on-site wastewater disposal systems. The Marin County Environmental Health Services (EHS) has jurisdiction over those systems.

The BCPUD sewage system serves 163 connections with a District population of approximately 480 people. The District's collection system consists of a pump station, 2.1 miles of gravity collection mains, and a force main that transports an average of 0.035 MGD of dry weather flow, up from an average of 0.03 MGD in 1991.

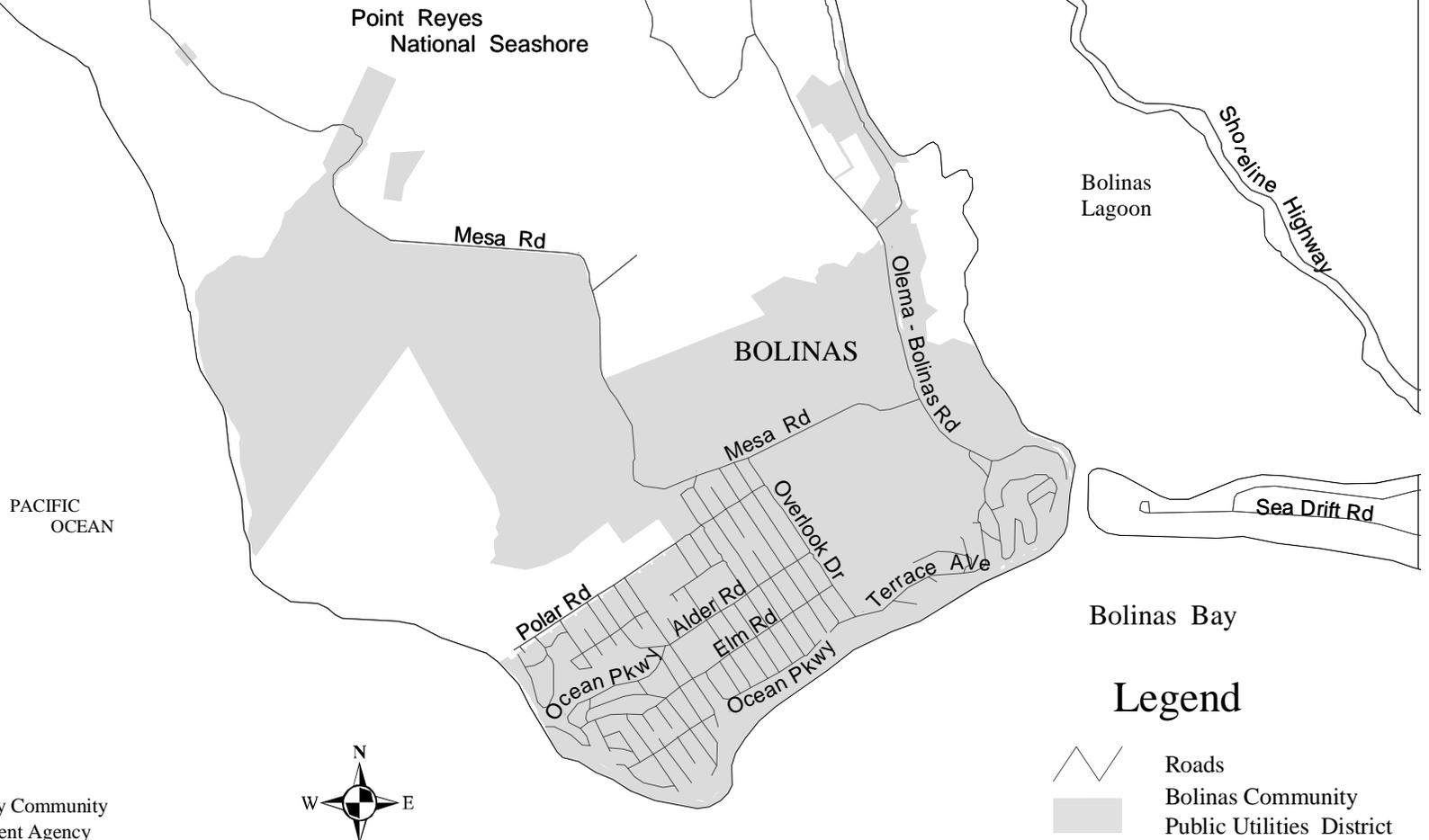
The treatment plant, built in 1975, was designed to treat 0.065 MGD, which was the expected flow predicted for the year 2000. The District uses the reclaimed water to irrigate 45 acres of land surrounding the primary pond system between the months of May and October. There is no outfall of treated wastewater. The District is currently operating at capacity in non-dry weather months.

In June 1990, the BCPUD completed a collection system replacement project with the support of the Environmental Protection Agency and a grant from the California State Water Resources Control Board. Ninety percent of the collection mains were sliplined to reduce storm water and seawater intrusion, at a cost of \$1.2 million. At the time, infiltration rates were reduced by approximately 75 percent. However, unwanted infiltration/inflow often overwhelm the facility during winters of above-average rainfall. It is sometimes necessary to seek special permission from the Regional Water Quality Control Board to spray during the late winter to avoid flooding the ponds. There is a moratorium on new connections to the system until the capacity issue is addressed.

One concern of the District has been pollution of groundwater caused by chloride migration (seawater) from the sewage treatment plant ponds. A study commissioned prior to the collection system upgrade showed that chloride was migrating toward wells used for drinking water. The study estimated that in 12 to 45 years, a chloride removal program would need to be implemented at the treatment plant. However, the BCPUD thinks that the chloride migration problem has been mitigated by the system improvements. Specifically, the project cleared up leaks in the lagoon where seawater was being taken in at high tide.

One-third of the community is linked to the sewerage system. The remaining units use septic systems. Septic tanks in the District are periodically pumped and the effluent is hauled to the treatment plant. The District accepts up to three 1,200-gallon loads per day from District residents only. The pumped solids are disposed of in the settling ponds. The concentrated state of this septic tank effluent periodically puts the ponds at their organic limit for safe treatment of the District's present level of wastewater. As a result, the District may reduce the three-loads-per-day limit.

Figure 11 Bolinas Community Public Utilities District



Marin County Community
Development Agency
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Data are not survey accurate.



COMMUNITY FACILITIES BACKGROUND REPORT

Approximately 68 to 75 new dwelling units could be built in Bolinas under the 1985 Bolinas Community Plan. However, due to insufficient water capacity, a moratorium on the issuance of new water services has been in effect since 1971. There also may not be adequate capacity for the additional development because of the level of demand created by the summer tourist population and the ongoing septic tank hauling. Meeting these demands reduces the capacity available to serve present and future sewer service connections.

H. DILLON BEACH

The North Marin Water District provides sewer service within the Oceana Marin Subdivision in the Dillon Beach community. The gravity system flows to a lift station that is located west of Oceana Drive, which has a pumping capacity of 100 gpm (144,000 gpd). Flows from the sewerage lift station are discharged into two three million gallon storage and treatment ponds located on the ridge top near the subdivision. Treated effluent is discharged to an 11-acre subsurface disposal field. The existing system serves 199 residential connections, including 9 lots located in the “old” Dillon Beach Village. The total number of lots that may connect to the Oceana Marin sewer system is estimated at 331, an increase of 132 over existing services. Sewer service for the remainder of the community is provided by individual septic systems.

I. TOMALES

The community of Tomales opened a sewage collection and service system in 1977. The system is designed to handle waste from the existing residences and commercial establishments, the school facilities, and approximately 50 new residential units. Any development beyond that would require the expansion of the treatment plant facilities.

J. REMAINDER OF WEST MARIN

The remainder of West Marin is on septic systems. Stinson Beach has an innovative septic system management program to ensure proper maintenance of septic systems.



MARIN COUNTYWIDE PLAN

V. FIRE PROTECTION

Fire protection is provided by 16 fire protection districts, including the Marin County Fire Department. The County provides fire protection to areas outside of District boundaries. Most of the fire protection districts have mutual aid agreements.

Fire district regulations are uniformly applied to new development located in County unincorporated areas. Ministerial applications (e.g. building permits) are required to meet only the standards of the County Fire Code. The Marin County Fire Department now requires residential sprinklers in all new construction. In the case of discretionary permits (e.g. subdivisions, design review, etc.), County Planning staff reviews applications and may recommend that more restrictive regulations be required as conditions of permit approval. The Marin County Fire Department estimates that approximately half of all development applications are discretionary in nature.

A. NOVATO PLANNING AREA

I. Existing Level of Service

The Novato Fire Protection District (NFPD) provides fire protection and emergency medical services to the entire Novato planning area which includes the City of Novato as well as surrounding, developed unincorporated areas (see Figure 12). The area is approximately 71 square miles. The District was established in 1926 and currently has four fire stations, which include a training facility and mechanics shop.

The District has 96 full-time personnel and approximately ten volunteers. The staff includes 6 firefighters, 32 firefighter / paramedics, 21 engineers, 18 captains, one inspector, one deputy fire marshal, one public educator, five battalion chiefs, two division chiefs, one deputy chief, one chief, one administrative services manager, one accountant / budget analyst, four clerks, and one mechanic. All firefighters, engineers, and captains are certified as emergency medical technician defibrillators. Twenty personnel, including a battalion chief, staff the stations 24 hours a day, making four type 1 engines, one aerial ladder truck, and two paramedic ambulances available.

The District cross-staffs a variety of apparatus based on need. The apparatus inventory includes seven type 1 structure engines, three type 3 brush engines, four paramedic ambulances, one basic life support ambulance, one water tender, one heavy rescue vehicle, one rescue boat, and 16 staff vehicles. All of the older equipment in the NFPD has been recently replaced per the District's Business Plan, which was adopted in 2003.

The District participates in the Marin County Mutual Aid plan and has automatic aid agreements with the San Antonio Volunteer Fire Company and Lakeville volunteers, as well as mutual aid from Petaluma and the California Department of Forestry and Fire Protection.



MARIN COUNTYWIDE PLAN

The District receives 85.7 percent of its funding from property taxes. The remainder comes from fees and a special tax that is charged based on square footage. The impact of the Educational Revenue Augmentation Fund (ERAF) has been significant since the District has been required to return approximately \$15 million to the State of California over the last ten years.

The District can respond to 71% of all calls in five minutes or less. To improve service, the District requires that all new development have a fuels management plan, and all commercial development over 2,500 square feet have automatic sprinkler systems. Approximately 1,500 homes within the District had automatic sprinklers in 1987.

2. Future Service Capability

The District has a comprehensive plan projecting the future staffing and equipment needs to allow the organization to remain current in its ability to provide fire and life safety services to the community. Fire Station 5 is under construction at 5 Bolling Drive in Hamilton Field and should be completed by June 2004, providing two stations east and three west of the highway. This station configuration is critical for disaster operations such as earthquakes.

Funding for personnel has been greatly reduced by ERAF. The NFPD will need to secure long term, stable funding for additional personnel. A tax measure to alter the existing tax and add an inflation clause was passed by Novato voters in March 2002.

B. LAS GALLINAS VALLEY & SAN RAFAEL BASIN PLANNING AREAS

San Rafael Fire Department (SRFD)

I. Existing Level of Service

San Rafael Fire Department (SRFD)

The San Rafael Fire Department (SRFD) protects the City of San Rafael while County Service Area (CSA) 19 protects Santa Venetia, Los Ranchitos, St. Vincent's and unincorporated islands in the sphere of influence. The Marinwood Fire Department protects Lucas Valley and Marinwood. The planning areas are shown in Figure 13. The SRFD has six stations at the following locations dispersed throughout the District's service area: County Civic Center, Upper Terra Linda, Downtown, Montecito (near the Country Club), East San Rafael and Peacock Gap near Point San Pedro. Each station has one engine capable of pumping 1,500 gallons per minute. The Civic Center station houses a 75-foot aerial ladder truck and there is a 100-foot aerial ladder housed at the Peacock Gap Station.

All stations are staffed with three firefighters per shift, which includes one captain, one engineer and a firefighter, except for the downtown station, which has five firefighters on staff. The downtown station is staffed with two paramedics in addition to the captain, engineer and firefighter. The San Rafael fire suppression force totals 75 of which, 24 are paramedics. Fire department staffing, including 15 administrative staff, totals 90. All non-paramedic fire suppression personnel are trained as emergency medical technicians. A dispatching system matches the San Rafael Fire Department's level of response to a fire by evaluating the structure's value, location, and internal protection systems. All the lands within SRFD's sphere of influence are within an eight-minute Total Reflex Time of one of the six fire



COMMUNITY FACILITIES BACKGROUND REPORT

stations. Total Reflex Time is defined as the amount of time between the time a call is received at the station and the time a unit arrives on the scene of the event.

CSA 19 provides funding to the SRFD for fire protection and paramedic services to nearly all unincorporated areas in San Rafael's sphere of influence, except Lucas Valley and Marinwood.

Marinwood Fire Department

The Marinwood Fire Department, a part of the Marinwood Community Services District, protects the areas of Lucas Valley and Marinwood. Marinwood's Fire Department is under contract with the Marin County Board of Supervisors to provide fire protection and emergency medical services to CSA 13, which covers Rotary Valley Senior Housing, Marin County Open Space District property, Juvenile Hall, and the Marin County Juvenile Courts and Services facilities at 1450 Lucas Valley Road in Lucas Valley. The Marinwood Fire Department has one station located at 777 Miller Creek Road and has a total staff of 36 employees, which includes a fire chief, three captains, seven firefighters, and 15 volunteers. All paid personnel are required to maintain emergency medical technical status as a condition of employment. Thirteen of the current volunteers are trained as emergency medical technicians. Minimum on-duty staffing is three personnel.

The Department is equipped with one 1,500 gallon per minute (gpm) Type 1 pumper engine, one 1,000 gpm Type 1 pumper engine, one 250 gpm Type 3 engine for wild land use and a utility vehicle equipped for rescue and salvage. The Department also has a sport utility vehicle assigned to the Fire Chief.

Response times and ranges to the furthest boundaries for areas served are as follows: westerly - 2.9 miles, 4 ½ minutes; easterly - 2.3 miles, 5 ½ minutes (Contempo Marin speed bumps greatly reduce response time); southerly - 1.3 miles, 2 ½ minutes; and northerly - 1.7 miles, 4 minutes.

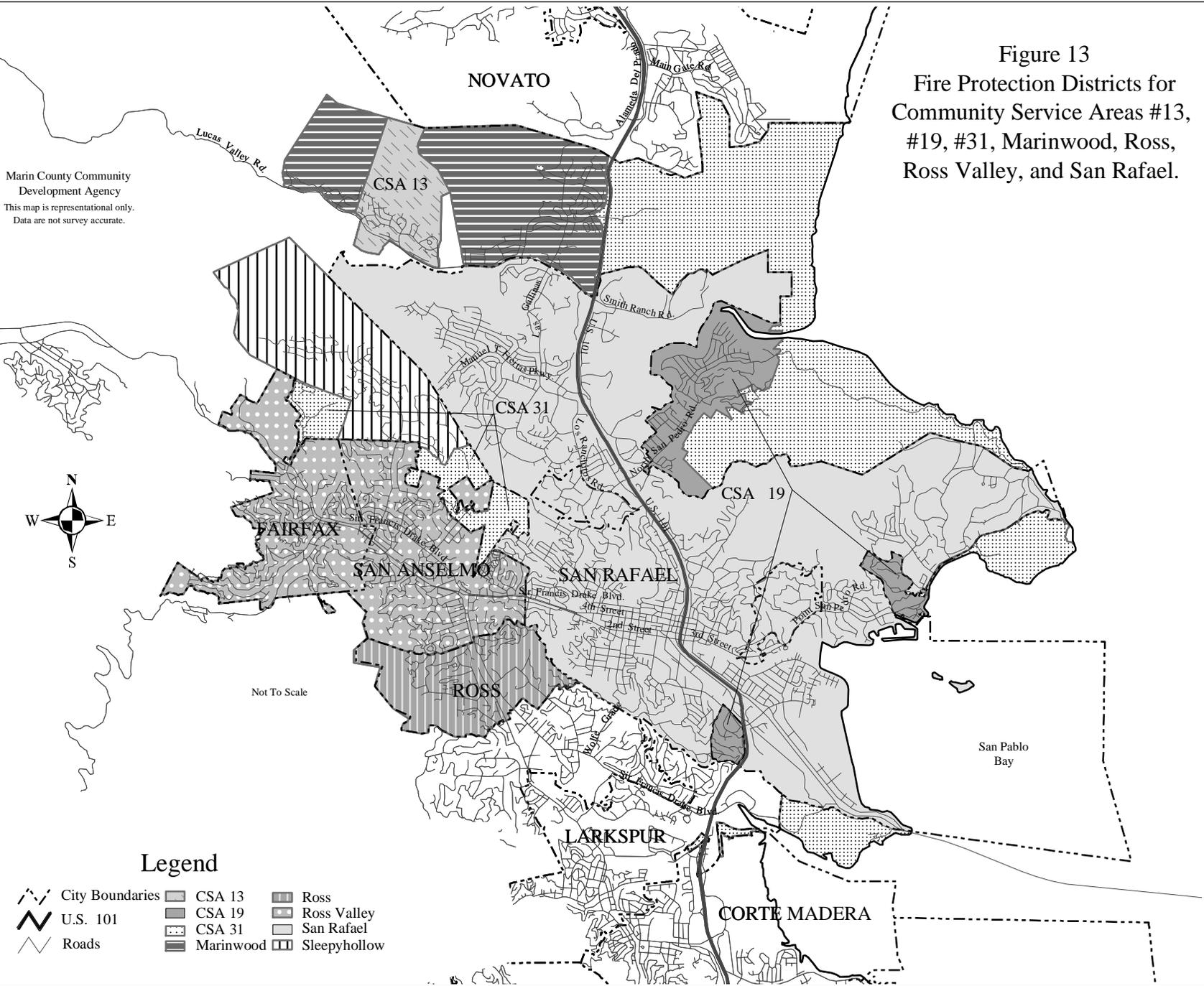
The Marinwood Fire Department participates in the Marin County Mutual Aid Plan and has a 1998 joint powers agreement with the City of San Rafael where the SRFD can be dispatched for calls in Marinwood when needed. Funding sources for the 2000/2001 budget include 17.1 percent property taxes fund, 32.1 percent service charges fund and 50.8 percent contracts for service fund.

New development and structural remodels of 50 percent or more require the addition of residential or commercial fire sprinkler systems as appropriate and the installation of class A roofs.

Paramedic service is provided by contract with the San Rafael Fire Department (SRFD). Primary units are stationed at SRFD Station #1 on C Street and R56 stations at SRFD Station #6 on Del Ganado Road. Reserve units operate out of both stations, and are utilized as staffing and need dictates. Funding is by voter approved paramedic service charge, currently at \$47 annually per improved parcel.

Lucas Valley

County Service Area (CSA) #13 is located in Lucas Valley between the Marin County Juvenile Hall site and the Lucas Valley Estates development at the western end of Lucas Valley. CSA #13 contracts with the Marinwood Community Services District for structural fire protection and with the City of San Rafael for paramedic services. Structural fire protection is funded by a building tax of \$0.12 per square





COMMUNITY FACILITIES BACKGROUND REPORT

foot and by a small portion of the one percent property tax assessment. Paramedic services will be taxed at \$50 per home for the 2001/2002 fiscal year.

The San Rafael Fire Department and Marinwood Fire Department work closely together under a joint powers agreement. The SRFD does dispatching for Marinwood fire calls. The two agencies are functionally consolidated but still maintain separate administrations. The SRFD also provides paramedic services to CSA's 13 and 19.

2. Future Service Capability

San Rafael Fire Protection District

The six fire stations in the City of San Rafael are strategically located to provide adequate fire response times to all areas within the San Rafael sphere of influence, with a few exceptions. When the St. Vincent's/Silveira site is developed, it is anticipated that an additional station and a paramedic unit will be required, though a location has not been determined. The SRFD and Marinwood Fire Departments are negotiating over the provision of future service to the undeveloped property west of Highway 101 and north of Lucas Valley Road.

For all remodeling projects, the City of San Rafael requires sprinklers in all residential and commercial buildings that are beyond the five-minute response time. Although the SRFD has proposed a similar requirement for all future residential development, this requirement has not been approved. The City of San Rafael will require sprinklers in future development at St. Vincent's if that is the most economical solution to adequate service provision. Sprinklers are presently required in any residential remodel of 50 percent or more and in newly remodeled commercial buildings.

An additional station serving the proposed St. Vincent/Silveira development would present the District with the need for additional staffing. Approximately 78 percent of all fire department calls are medical in nature.

Marinwood

There are currently no plans to consolidate fire protection services. Potential future development in the Marinwood area includes the Oakview development, located on the 106.3-acre parcel located at the northwest corner of Highway 101 and Lucas Valley Road; the Rocking H Ranch, the 501-acre parcel located on the south side of Lucas Valley Road, southeast of Big Rock; and development on the Grady Ranch for the Industrial Light and Magic buildings. The Oakview development is within the current response ranges. The Rocking H Ranch and Grady Ranch properties lie west and outside of the existing response ranges. It is estimated that response times would be increased by two minutes for calls to these properties.

The Marinwood Fire Department does not plan to hire additional staff, equipment or add equipment or facilities. However, the Department does maintain budget reserves for the replacement of apparatus and equipment as needed.



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C. UPPER ROSS VALLEY PLANNING AREA

I. Existing Level of Service

Fairfax, San Anselmo and Sleepy Hollow

In 1982, the Towns of Fairfax and San Anselmo, along with the Sleepy Hollow Fire Protection District, entered into a joint powers agreement that created the Ross Valley Fire Department (RVFD). The RVFD serves the spheres of influence of the Towns of San Anselmo and Fairfax, including Oak Manor and all the pockets of unincorporated property in the Upper Ross Valley.

The District has three fire stations. One is located in downtown Fairfax adjacent to the police department and Town Hall, and the other two are located in San Anselmo: one is located downtown, while the other is on lower Butterfield Road and is known as the Sleepy Hollow substation. There are approximately 450 homes in the Fairfax sphere of influence and in the unincorporated areas, not including Sleepy Hollow. They receive substantially the same emergency service from the RVFD, as do San Anselmo, Fairfax and Sleepy Hollow. Sleepy Hollow residents pay approximately \$500 per home for fire protection to the RVFD. The County of Marin pays approximately \$70 per home to the RVFD for the 450 homes in the unincorporated areas.

The Fairfax station has one 1,250 gpm type 1 pumper and one 500 gpm type 3 pumper engine. The San Anselmo station has two type 1 pumper engines (with one in reserve), and one chief's vehicle.

In terms of staffing, the Fairfax station is normally staffed with one Captain/EMT and one firefighter/paramedic. The firefighter/paramedic provides first response advanced life support for the upper Ross Valley to supplement the ALS services provided by the Ross Valley Paramedic Authority. The downtown station in San Anselmo is staffed with a minimum of three firefighters per shift, including one battalion chief and two firefighters. The Sleepy Hollow substation is staffed with two firefighters per shift and has two 1,250 gpm pumper engines, with one in reserve. The RVFD staff totals 26 firefighters.

The three stations respond to all reported fires in the service area. The average response time is 3.25 minutes from the receipt of a call to the arrival of the first unit. Approximately 16 percent of the Department's jurisdiction is beyond a five-minute response time with a maximum of eight minutes to remote areas. The extended response time is a function of distance as well as steep, winding, narrow roadways.

The Department is integrated into the Marin County Fire Rescue Mutual Aid Plan and has a written contract with the County to provide protection as needed. The Department additionally responds to provide protection to Ross and San Rafael as needed per an agreement based on Computer Aided Dispatch rules.

The Ross Valley Paramedic Authority (RVPA) provides advanced life support services to the RVFD, while the RVFD itself provides first responder ALS through its paramedic engine company based in Fairfax. The RVPA is a Joint Powers Authority created in 1982 between the jurisdictions of Corte Madera, Larkspur, Kentfield, Ross, San Anselmo, Fairfax, and the County to provide paramedic services. A rescue unit (Rescue 40), staffed by two firefighter/paramedics from the Marin County Fire



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Department under contract with the RVPA, is stationed at the Ross Fire Department and is available to serve the Ross Valley as needed.

The RVFD's three member agencies contribute proportional shares of the Department's budget based on percentages determined when the RVFD formed in 1982. Typical contributions, over time, have been: San Anselmo: 55 percent; Fairfax: 30 percent; and Sleepy Hollow: 14 percent. The breakdown of contributions in 2001 was: San Anselmo: 53.6 percent; Fairfax: 30.4 percent; and Sleepy Hollow: 16 percent. The RVFD receives about a sixth percent of its funding from other sources.

In 1985, the RVFD attempted to consolidate with the Town of Ross Fire Department; however, the Ross Town Council rejected the offer. At some future date this consolidation may be sought again.

Town of Ross

The Ross Fire Department is a part of the Ross Public Safety Department, which provides both police and fire protection to the Town. The Fire Department has one fire station with two type 1 engines and one water tanker. Three captains, three paid firefighters, and seven volunteers staff the Department. Dispatch services are provided by the Marin County Communications Center. Every location in Ross is within a three to five minute response time. Automatic aid is available from the Ross Valley Fire District for certain streets and structures.

The Town of Ross has no plans to expand its staff or purchase additional equipment because the town is nearly built out. No residential sprinkler ordinance is proposed for new development because response times to all areas of Ross are adequate.

Unincorporated Areas

The Marin County Fire Department is responsible for fire protection services in the unincorporated areas outside the jurisdiction of the Ross Valley Fire Department (refer to Section H - Unincorporated Areas for details on the Marin County Fire Department). The Marin County Fire Department requires roughly six minutes to reach Oak Manor and eleven minutes to reach the Monte Cristo tract. To ensure adequate protection, the Marin County Fire Department maintains an automatic aid agreement with the Ross Valley Fire Department. Under the provisions of this agreement, the RVFD will automatically send a minimum of one engine to any emergency call. With this assistance, an engine can be on the scene in outlying areas within three to seven minutes.

2. Future Service Capability

The Ross Valley Fire Department is capable of serving all areas within the Department's sphere of influence as long as detection and/or extinguishing systems are required in all residential and non-residential structures that are either located beyond a five-minute response time or exceed the service capabilities of the Department. It is anticipated that no additional staff, equipment or stations will be required to maintain this level of service; however, a substantial increase in call volume may mandate additional personnel to maintain this level of service.

All new structures are required to provide adequate water supply for fire protection. The Department requires fire sprinklers in all new residential structures, and has an ordinance prohibiting wood shake roofs. All roadways must be designed to permit sufficient turning radii and turnabouts for emergency



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vehicles, as well as the integrity to withstand the weight of fire vehicles. These requirements can be enforced in the County's unincorporated areas only when the agency reviewing development permit applications incorporates these requirements as conditions of project approval.

D. LOWER ROSS VALLEY PLANNING AREA

I. Existing Level of Service

Corte Madera

Fire protection is provided within the Town of Corte Madera by the Corte Madera Fire Department (CMFD), which has 17 paid staff members and 10 to 15 volunteers. All CMFD firefighters are trained emergency medical technicians, and many are paramedics. The main station, adjacent to Town Hall, is staffed at all times with three firefighters who operate an engine. The satellite station on Paradise Drive, which is leased to Marin Ambulance, can be used during major emergencies such as floods or summer fires. This substation is staffed with two firefighters/paramedics who operate an engine and an ambulance. The CMFD's firefighting equipment includes three engines, one ambulance, and several support vehicles. Corte Madera's small geographic area, specialized equipment, and staffing at two stations enable the fire department to provide adequate fire protection to the entire town. Response times of less than five minutes are standard, except to the area at the very top of Christmas Tree Hill, because of the area's steep topography.

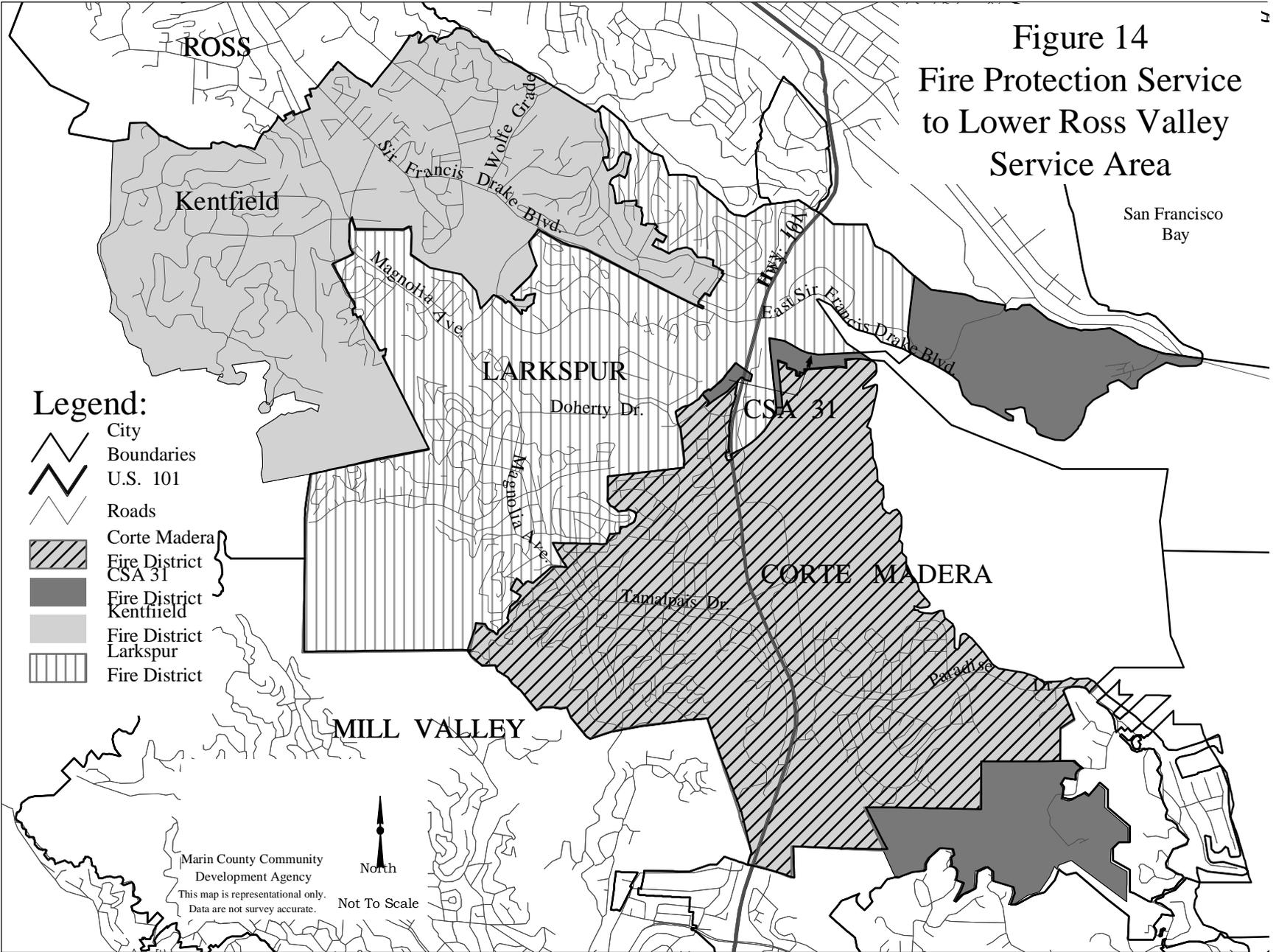
Corte Madera maintains an automatic aid agreement with Larkspur. In addition, the CMFD responds automatically to freeway accidents along portions of Highway 101 in Tiburon, Mill Valley, and the Alto area. Paramedic ambulance service is provided by the CMFD, with agreements with surrounding jurisdictions for rescue and fire response mutual aid. The Department has active fire prevention and disaster preparedness programs.

Larkspur

Fire protection is provided by Larkspur's Fire Department, which maintains its main station in downtown Larkspur on Magnolia Avenue and a satellite station just off Sir Francis Drake Boulevard in the incorporated portion of Greenbrae. The main station is staffed with two persons per shift, while the satellite station has three persons per shift. Each shift includes two chiefs. The total staff includes 18 paid personnel. The fire department has two 1,500 gpm pumper engines, one 1,250 gpm pumper engine, one 500 gpm four wheel drive wildland engine, one 2,000 gallon capacity water tender, and four accessory vehicles. The Ross Valley Paramedic Authority serves Larkspur; most of Larkspur's firefighters have emergency medical technician status. The Larkspur Fire Department has an automatic aid agreement with both the Corte Madera Fire Department and the Kentfield Fire Protection District for structural fires, and mutual aid agreements with the San Rafael Fire Department. The Larkspur Fire Department is operating at maximum capacity.

The Department is able to serve all areas in its district within the desired response time, which is a maximum of six-minutes. Improved equipment and procedures have helped to reduce all response times, including the times to reach hillside neighborhoods. A residential fire sprinkler ordinance has been approved and adopted by the Fire Department and the City.

Figure 14
Fire Protection Service
to Lower Ross Valley
Service Area





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Unincorporated Areas

The developed unincorporated areas along Lucky Drive receive medical aid from the Marin County Fire Department out of the Marin City station, while both the Marin City and Woodacre stations provide structural fire protection. Response times to the Lucky Drive area are not adequate, so the county relies on mutual aid from local jurisdictions to compensate for the difficulty of providing adequate service to this and other unincorporated "islands".

The Kentfield Fire Protection District (KFPD) covers the unincorporated communities of Kentfield, Kent Woodlands, Del Mesa, and parts of Greenbrae, totaling approximately three square miles. The station is located in Kentfield on the corner of College Avenue and Sir Francis Drake Boulevard. The Department has two type 1 engines, one type 1 office/emergency services state pumper, one 2003 Pierce 75-foot aerial ladder truck, one pick-up truck, and one operations vehicle. Total staff includes 11 full-time paid firefighters, 15 to 20 volunteer firefighters and one administrative secretary. Four firefighters staff each shift. All safety personnel are certified emergency medical technicians.

The KFPD maintains an automatic aid agreement with the Marin County Fire Chiefs' Association and a zone drop agreement with the Larkspur Fire Department. In addition, the KFPD has entered into joint powers agreements with the Marin County Fire Chiefs' Association for hazardous materials protection and the Ross Valley Paramedic Authority (Rescue 40 and 41, two medics each) for paramedic service.

The KFPD covers a wide variety of structures and topography from the fairly dense, mixed-use development along Sir Francis Drake Boulevard to the steep, low-density residential hillside areas of Kent Woodlands. The Kentfield Community Plan identifies difficulties in responding to fires in the upper Kent Woodlands area, particularly the upper reaches of Crown Road, Goodhill Road, and Evergreen Drive, where typical response time can be as high as nine minutes. Response times for 80 percent of the District is less than four minutes. The Kentfield Fire District has adopted a sprinkler ordinance that requires that all new or remodeled structures install fire sprinklers.

The KFPD is funded from several sources, including property taxes (82 percent); special assessment (17 percent); and contracts with Marin General Hospital, Marin County Sheriff's Office, and cellular phone companies (1 percent). There are modest gaps in water systems serving some small areas of the District. Some of these gaps are being addressed through the Marin Municipal Water District Fire Flow project.

2. Future Service Capability

Corte Madera

Corte Madera has a requirement that all new or remodeled structures install fire sprinklers. The CMFD is not planning any major facility improvements. A new engine and ambulance were purchased in 2002.

Larkspur

The Greenbrae fire station was rebuilt in 1991 and meets all current state structural safety standards. This facility, which is located in a flood zone, was also constructed according to current flood zone standards.



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Unincorporated Areas

The Marin County Fire Department provides fire protection to the Greenbrae Boardwalk area, with the Larkspur Fire Department providing service under a mutual aid agreement. If the Larkspur Fire Department assumed responsibility for this area and other areas to the north and east, additional staffing, equipment, and possibly stations would be required. At one time the Larkspur Fire Department provided fire protection services to San Quentin prison, though the County is now responsible for the prison's fire protection. Fire protection for San Quentin is provided on site. However, the Larkspur Fire Department is available through its mutual aid agreement.

The Kentfield Fire Protection District has no expansion or consolidation plans. The District continues to look for ways to work jointly with adjacent agencies to improve effective and efficient service delivery. Equipment acquisition is based upon the current apparatus replacement schedule. Improvements to the Ross Valley Paramedic Authority's operational plan are expected to reduce advanced life support response times.

E. RICHARDSON BAY PLANNING AREA

I. Existing Level of Service

Southern Marin Fire Protection District

The Southern Marin Fire Protection District (SMFD) is an independent special district established by the Marin County Board of Supervisors in July of 1999. The District was formed by a merger of the Alto-Richardson Bay Fire Protection District and the Tamalpais Fire Protection District. The SMFD serves the communities of Tamalpais Valley, Almonte, Homestead Valley, Alto, Strawberry, and approximately 25 percent of the town of Tiburon and provides fire protection and medical services to all of the unincorporated areas within the Mill Valley sphere of influence. The SMFD receives federal funding for its support in providing fire protection to the Golden Gate National Recreation Area. The District covers 9.5 square miles, serving a population of approximately 20,500 with over 8,000 homes and commercial properties.

There are two stations in the SMFD. District headquarters are located in the Strawberry area of Mill Valley at 308 Reed Boulevard, while the substation is located in the Tamalpais Valley area at 309 Poplar Street in unincorporated Mill Valley.

The District has 37 full-time employees, including a fire chief, one deputy chief, four battalion chiefs, five captains, 24 firefighters/engineers (nine of whom are paramedics) and two administrative assistants. The SMFD also maintains a staff of 12 volunteer firefighters. All uniformed personnel are trained as emergency medical technicians. Daily staffing at Department's main station is between five and six uniformed safety personnel. At the substation there are between four and six uniformed safety personnel present on a daily basis.

Presently, the SMFD is equipped with three type 1 engines, one type 3 engine, one rescue squad vehicle, one ambulance, one command vehicle, and five staff utility vehicles.

The SMFD has automatic aid agreements with the Tiburon Fire Protection District, the Mill Valley Fire Department and the Corte Madera Fire Department. It also participates in the Marin County Mutual



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Aid System, as well as the statewide mutual aid system. The SMFD also has joint powers agreements with the Southern Marin Emergency Medical Paramedic System (SMEMPS) and the Marin Emergency Radio Authority (MERA). In accordance with the SMEMPS agreement, the SMFD staffs a paramedic ambulance at its substation and a paramedic rescue squad at station headquarters.

Most of the developed areas within the SMFD are within the desired five-minute response time, with the exception of hillside and/or dangerous areas where street configurations make access difficult. A portion of Homestead Valley is slightly outside the five-minute range.

The SMFD operations are financed by property taxes and by a special fire tax. The SMFD enforces the California Fire and Building Codes of 1997. It also requires the installation of automatic fire sprinkler systems in all new construction, as well as substantially remodeled structures, including residential occupancies.

There are areas in Homestead and Tamalpais Valleys where fire flow is less than 1,000 gallons per minute and where there is poor vehicle access.

Mill Valley

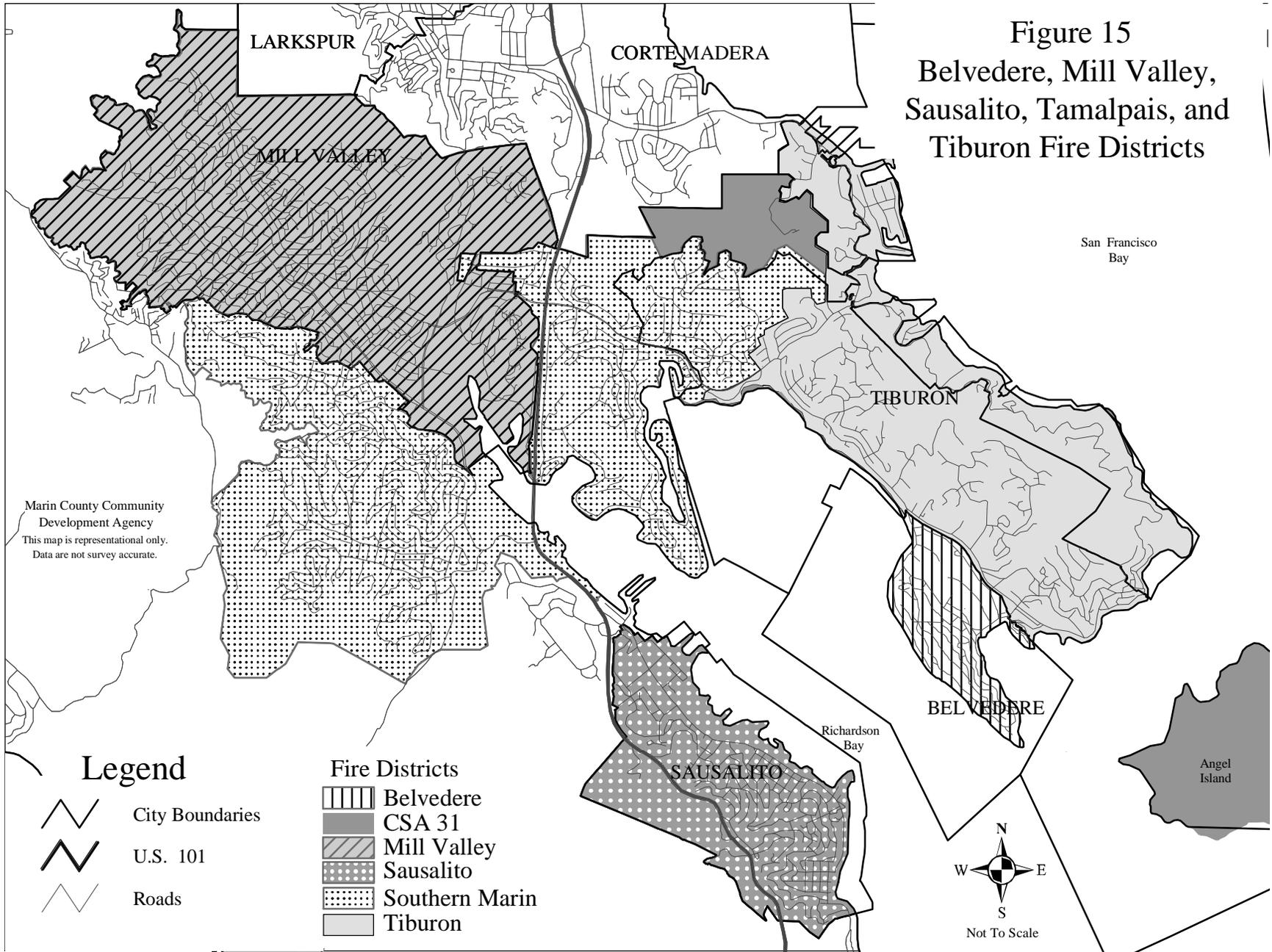
The Mill Valley Fire Department (MVFD) consists of two fire stations staffed with 25 firefighters and seven volunteers. The Department has three type I engines, one type III engine, one ladder truck, four utility vehicles (pick-up trucks), and one accessory vehicle.

The MVFD is a member of the Southern Marin Emergency Medical Paramedic System (SMEMPS). SMEMPS provides a high level of prehospital emergency care. The MVFD currently provides staffing for one Advanced Life Support (ALS) engine at the city hall station as part of the SMEMPS program. Further changes in the SMEMPS and ALS delivery system may require additional paramedics to meet the system's needs.

Certain parts of Mill Valley are outside the MVFD's desired five-minute response time. Neighborhoods at the city's northwestern end, such as the upper section of Summit Avenue, Fern Canyon Road, and Rose Avenue, are reached only after an arduous climb, which slows down pumper engines. The MVFD has adopted an ordinance to require fire sprinklers in all new residential construction and large-scale remodel projects.

Mill Valley has one of southern Marin's oldest water systems with some water mains dating back to the early 20th century, especially in the upper hill areas. Some of the water mains can carry only 500 gallons per minute rather than the 1,500 gallons per minute standard often used for insurance purposes. Developers are required to increase the capacity of these mains and extend them if hydrants are farther than 300 feet from a residence. Developers also must either install sprinklers or enlarge the capacity of the mains to 1,000 gallons per minute.

Figure 15
Belvedere, Mill Valley, Sausalito, Tamalpais, and Tiburon Fire Districts





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The Marin Municipal Water District places a "fire flow" charge on water bills to be applied to the upgrading of water lines to current fire flow standards. In 1985 Mill Valley began upgrading water lines in the Edgewood and Cascade areas. The Department and the city have also instituted a hydrant replacement program to improve water delivery by installing over 240 larger capacity fire hydrants throughout the city. The city plans on the addition of 40 new, high-flow fire hydrants to coincide with the MMWD's water main rehabilitation and seismic upgrade project, which started in January 2000. This project will provide 105,000 feet of water main replacement in Mill Valley over the next 15 years.

The MVFD is working with the city and other outside agencies to implement the vegetation management program established in 1995-1996. This program includes clearing primary and secondary streets of flammable vegetation to increase access and removing dead tan oaks as a result of the sudden oak death syndrome. In cooperation with the Town of Corte Madera and the City of Larkspur, as well as the Marin Conservation Corps, fuel break buffer zones have been created in many areas between the cities. The MVFD also provides wood chippers to neighborhood associations and has marked and signed certain streets to maintain a minimum of eleven feet of clearance to provide for emergency response and resident evacuation. These programs have improved response times of emergency vehicles and have increased fire flow during structure fires.

As a participant in S MEMPS, Mill Valley provides paramedic service by staffing a paramedic engine company out of the city hall station and by providing personnel located at the public safety building in the city's southeastern corner. The MVFD is required to contribute three paramedics to S MEMPS, but sometimes more are provided when needed. All of the MVFD's firefighters are trained emergency medical technicians. They are trained to diagnose a patient's vital signs, which is a level of service above advanced first aid.

Property and business tax revenues fund the MVFD. Because the latter is a relatively large share of total receipts, the MVFD's funding has remained healthy in the post-Proposition 13 era.

Sausalito.

The Sausalito Fire Department (SFD) provides fire protection services within the city limits. The Department has nineteen persons on staff, in addition to a fire chief and one part-time administrative aide. The main station at Johnson and Caledonia Streets is staffed with a minimum of three and a maximum of four firefighters. The Department houses one engine, one truck, one Type III engine, one ambulance, one utility vehicle, an inflatable boat, equipment for a six-man dive team, and other specialized equipment to assist in mountain or water rescue. This station serves primarily the commercial and industrial areas along the waterfront, as well as all residential areas.

Station #2, located near Highway 101, is staffed with two firefighters at all times. Its equipment includes one engine and one reserve engine. Generally, over 90 percent of the structures are within the desired four-minute response time, which decreased from five minutes, although Wolfback Ridge is about a ten-minute distance from the downtown station. The Department maintains automatic aid agreements with all southern Marin fire agencies and the Marin County Fire Department.

A concern expressed by the Department is the inadequate capacity of the water lines in certain areas of Sausalito. Yet even with this limitation the Department is able to adequately protect all areas of the city,



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including Wolfback Ridge and certain sites along the waterfront. All new development in these areas of concern will be required to contribute towards upgrading or replacing existing water mains.

Paramedic service is provided through the Southern Marin Emergency Protection Service, a joint powers agency formed by Sausalito, Tiburon, the Southern Marin Fire Protection District, and the Marin County Fire Department. The general service area includes all areas south of Alto Hill and Strawberry. The Sausalito Fire Department has mutual aid agreements with its neighboring jurisdictions.

Unincorporated Areas in Sausalito Sphere Of Influence (SOI)

The unincorporated areas in the Sausalito sphere of influence are the responsibility of the Marin County Fire Department. The station is located in Marin City and firefighters can easily reach all structures in Marin City within five minutes. While this station can adequately handle brush fires and minor house fires, it relies upon assistance from the Sausalito Fire Department to suppress major fires.

In the past, the Sausalito Fire Department has relied on a fireboat to provide protection to the 400 or so floating homes along portions of Sausalito's waterfront. The use of this boat was limited due to the tidal conditions, shallowness, and debris on the bottom of the bay. Additional fire protection is necessary for the waterfront area, where conditions exist for potential conflagrations and possible loss of life. Bids are currently out for a new fireboat that would be capable of reaching all areas, regardless of water depth, and would be able to provide water for the waterfront properties if water service to those areas is interrupted during an emergency situation. The Sausalito Fire Department expects to purchase the boat by the end of 2003.

Tiburon and Belvedere

Roughly three-quarters of the Town of Tiburon and the northern side of the Tiburon Peninsula are within the jurisdiction of the Tiburon Fire Protection District (TFPD). The TFPD also provides fire protection for the City of Belvedere. The TFPD maintains two stations, with its headquarters located in downtown Tiburon at 1679 Tiburon Boulevard and a substation at 4301 Paradise Drive.

The TFPD employs a total of 22 full-time firefighters and 21 volunteer firefighters, including: four firefighters, six firefighter/paramedics, three engineers, three captains, three battalion chiefs, one inspector, one fire chief, and one administrative/finance officer. All firefighters are trained as emergency medical technicians. On-duty staff number between three and four at station headquarters and between two and three at the substation. The TFPD operates three type I engines, one type III engine, one ambulance, and three staff vehicles.

The TFPD has automatic aid agreements with the Southern Marin Fire Protection District and the Corte Madera Fire Department. It also participates in the Marin County Mutual Aid System as well as the statewide mutual aid system. In addition, the TFPD is a member of SMEMPS and MERA. As a member of SMEMPS, the TFPD staffs a paramedic ambulance at its substation as well as a paramedic engine at the headquarters fire station. SMEMPS revenue is derived from ambulance transport fees. SMEMPS funds all equipment and maintenance needs of the paramedic system, but has no employees. Paramedic and EMT staffing of the SMEMPS ambulances and rescue unit is provided by the member fire departments.



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Most development in the TFPD is well within the desired five-minute response time, except for hillside areas where street configurations make access difficult. The ridge top neighborhoods around Mount Tiburon Road, Sugarloaf Drive and parts of Belvedere are slightly outside the five-minute range. Response times to Teaberry Lane and the San Francisco State University Romberg Center on Paradise Drive are between seven and eight minutes from both stations.

The District's operations are financed by a combination of property taxes, state augmentation funds, special fire tax money, and a service contract with the City of Belvedere. In addition, fees are levied for fire code plan reviews.

The District enforces the California Fire and Building Codes, 1997 edition. The TFPD requires the installation of automatic fire sprinkler systems in all new construction and in substantially remodeled structures, including residential occupancies.

Negative impact from the Marin Countywide Plan is not anticipated, as the unincorporated area of the TFPD jurisdiction is nearly built out.

There are areas of the Tiburon Peninsula where fire flow is less than 1,000 gpm and vehicle access is poor. Since 1979 the TFPD has tried to address this problem with the adopted code requirements for built-in fire protection systems. In 1987, the TFPD began updating its water system. A five-year improvement plan was submitted to the Marin Municipal Water District, which established priorities for water distribution system improvement needs in the county. In addition, the TFPD is increasing hydrant capacities and utilizing large diameter hose to increase available fire flow. Although the section of water main extending from approximately the 3000 block to the 4000 block of Paradise Drive was identified as providing inadequate fire flow, it was not included in the MMWD's 1999 Fire Flow and Seismic Improvement Master Plan.

2. Future Service Capability

Southern Marin Fire Protection District

There are no planned staffing expansions for fire protection and emergency medical services, nor are there planned equipment expansions or upgrades other than the normally anticipated upkeep and replacement of vehicles. There are no plans to either consolidate or expand fire protection in conjunction with other districts, though the issue will always be open for discussion with neighboring jurisdictions.

Mill Valley

The MVFD presently provides adequate fire protection and emergency medical services to nearly all of the Mill Valley sphere of influence; no expansion of staffing or equipment levels is planned. The MVFD has been expanding its community educational services and outreach programs.

Sausalito

With twenty paid personnel and four conventional engines, the Sausalito Fire Department is adequately staffed and equipped to serve the projected development within the existing city limits. The Department has implemented an ordinance requiring the placement of sprinklers in all new residential development and existing homes when more than 50 percent of the structure is being renovated. This



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requirement ensures that the fire department will be able to maintain its current level of service even as the city grows. The SFD plans to acquire a new engine to better serve residential and urban interface areas.

If Marin City were annexed to Sausalito, the response time to the Marin City bowl area would be five to six minutes. It would take an additional one to two minutes to reach the top of the ridgeland area from the present facilities, assuming that Sausalito did not take over the existing County station. Additional staff would need to be hired by the Department to serve this area.

Tiburon

There are no anticipated staffing or equipment expansions at this time, nor are there any plans to consolidate or expand fire protection services with other districts. All facilities meet state seismic standards for essential service buildings. Construction of the headquarters fire station was completed in 1994, while the substation underwent a significant seismic upgrade in 1999. The Tiburon Peninsula is surrounded by San Francisco Bay on three sides with elevations ranging from sea level to 600 feet. Access is limited to just two main roads into town. No changes in response times are anticipated.

F. WEST MARIN

I. Existing Level of Service

Three fire protection districts and the Marin County Fire Department provide fire protection in West Marin. The fire stations are located in Point Reyes Station, Inverness, Marshall, Tomales, Bolinas, Stinson Beach, and Muir Beach.

County Service Area #28 provides paramedic service in West Marin. This agency has two units. One unit provides service from Point Reyes north nearly to the county border and south to Stinson Beach. The second unit provides service eastward to San Geronimo. The City of Petaluma provides paramedic service to the northwestern corner of Marin County. Funding for this paramedic service comes from property taxes.

Bolinas

The Bolinas Fire Protection District (BFPD) staff consists of a full-time paid fire chief, a part-time paid assistant chief and a part-time secretary. Currently the BFPD has 14 citizen volunteers. A firefighter position is staffed twenty-four hours a day, seven days a week, either by a paid firefighter or by a compensated volunteer firefighter who is qualified as a duty officer. Of the latter, four are professional firefighters with other agencies in the county. The firefighter position is currently shared by four firefighters on a part-time basis. Two of the firefighters are Bolinas residents and also respond on their own time as volunteers. The other two are from other areas and are available only when on-duty. Fourteen of the staff and volunteers are trained as emergency medical technicians while two are paramedics employed by other agencies, but do not serve as paramedics in Bolinas. It is becoming increasingly difficult for the BFPD to recruit and retain paid and volunteer firefighters.

The BFPD is currently undertaking a capital campaign to raise funds for a new station. The existing station is seismically inadequate, has structural deficiencies, and is too small for current and future



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needs. The District is seeking funding from both public and private sources for the project. The District hopes to break ground on the new station around the end of 2004 or the middle of 2005.

The BFPD currently operates two structure fire engines and one wildland fire engine. One of the structure engines was replaced in 1997 while the wildland engine was replaced in 1999. The second structure engine is sixteen years old. The District also maintains one rescue/command vehicle and one command/utility vehicle.

Automatic mutual aid agreements are maintained with the Stinson Beach Fire Protection District, the Marin County Fire Department, the Golden Gate National Recreation Area, and the Point Reyes National Seashore. District revenues come from property tax, state augmentation funds, interest on reserves, cell site rental, and grants from the National Park Service and other agencies.

Inverness

The Inverness Public Utility District (IPUD) provides fire protection services through the Inverness Volunteer Fire Department (IVFD) to the unincorporated community of Inverness in western Marin County. The fire department was formed in 1941 and was brought under the IPUD's jurisdiction in 1951. The voters formed the IPUD in 1948 as a special district under the California Public Utility District Act. An elected five-member Board of Directors governs the IPUD; directors serve four-year terms.

The IPUD encompasses some 1,600 acres and serves a full-time population of approximately 700 persons. It is not uncommon for the population to increase by as much as 50 percent on warm-weather summer weekends. The District is bounded on the north by Tomales Bay State Park, on the west by the Point Reyes National Seashore, on the east by Tomales Bay, and on the south by the Marin County Fire Department's service area. There is no potential for expansion of its boundaries.

The risk to the IPUD's assets from wildland fire is rated as "high". This assessment, made by the Marin County Fire Department, takes into account such factors as structures, population density, recreational activity, topography, weather, and vegetation flammability.

The IPUD's fire station is located at 50 Inverness Way, on the Village Green near the commercial center of the community. The IPUD owns the Firehouse/Village Green parcel. The firehouse was built in 1956 and was moderately remodeled and expanded in 1992. It houses the fire department, a community meeting room, and the IPUD and water system offices.

The IVFD maintains a roster of 17, including a chief and a training/maintenance officer, and a maintenance officer, who are employed by the Department on a part-time basis. Paid staffing totals approximately 1.0 full-time equivalents. Six of the Department's members are emergency medical technicians and nine are certified as first responders; all members are defibrillator certified. The Department has no paramedics.

As a volunteer department, personnel availability varies widely with the time of day and day of the week. All the IPUD's water system employees are also fire department volunteers and, thus, are capable of responding from the field. The firehouse is not staffed on a regular basis, but the IPUD's business



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office in the firehouse is open during business hours on weekdays. All volunteers carry pagers with monitoring capability. Officers also carry portable radios.

The Fire Department has two type 1 structure engines, one emergency medical service (EMS) utility pickup, and one staff utility vehicle. In addition, both water system pickup utility vehicles are equipped for emergency response with full emergency lights and siren, a full complement of radios, and basic EMS equipment.

Dispatch services for the Fire Department are provided by the Marin County Fire Department (MCFD). An automatic mutual aid protocol was established with the MCFD in 1994. These mutual aid agreements, as well as the joint powers agreements discussed below, expand the IPUD's response zone to nearly 100 square miles. The IPUD's response zone extends west to the Point Reyes Lighthouse, north to Pierce Point on the west side of Tomales Bay and to Marshall on the east side of Tomales Bay, south along Highway 1 into the Olema Valley, and east to the Nicasio Reservoir area.

The Department is part of a cooperative fire agreement with the Point Reyes National Seashore. Other participants in this agreement include the Marin County Fire Department, Bolinas FPD, Stinson Beach FPD, Muir Beach Fire Department, Southern Marin FPD, and the Sausalito Fire Department. A cooperative agreement for local government fire suppression is in place with the Governor's Office of Emergency Services.

During the calendar year 2000, the "out the door" response times - from the time of dispatch to the time the first engine leaves the station at 50 Inverness Way - averaged four minutes 15 seconds for emergency medical service (EMS) dispatches and five minutes thirty seconds for fire and automatic aid dispatches. The chief and the assistant chief frequently respond directly to incidents from their homes or from work locations in the District. Dispatches are divided between 57.5 percent during daytime hours (6:00 a.m. to 6:00 p.m.) and 42.5 percent during nighttime hours (6:00 p.m. to 6:00 a.m.)

The majority of the Department's funding is from property tax revenue. The following percentages are derived from revenue for fiscal year 2000/2001: Ad valorem property taxes - 73.5 percent; District's Special Fire Tax - 13.8 percent; Local Agency Investment Fund (interest) - 6.7 percent; West Marin Emergency Services Fund - 3.3 percent; and Other - 2.7 percent.

The Inverness Public Utility District is within County Service Area (CSA) 28, the paramedic service area for West Marin. Property owners in the IPUD pay the CSA 28 parcel tax. This means that EMS responses within the IPUD are provided by the Marin County Fire Department, which typically responds from Point Reyes Station with two paramedics on board an advanced life support ambulance. The Inverness Fire Department also responds to all EMS dispatches within the District. Should the ALS ambulance transport a patient, the normal procedure is for one paramedic to remain in the area with the Point Reyes Station engine, which is equipped as an ALS engine. When both paramedics are involved with the transport, a second MCFD ALS ambulance staffed with two paramedics moves up to Point Reyes Station from Woodacre. The use of medivac helicopters is being increased in an effort to reduce the transport time for urgent-care patients.

There are four areas of deficiency in the District: volunteer recruitment, firehouse inadequacies, water supply inadequacies, and financial strains.



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Inverness is not alone in struggling with the widespread problem of maintaining an adequate roster of volunteers. Reasons for this include the area's changing demographics; its aging population, the trend away from full time home occupancy towards weekend and vacation occupancies, and high housing costs that make it difficult for younger people to live in the community. In short, the pool of potential volunteers is shrinking; moreover, the younger, more physically qualified people who do live in the area are more likely today than in the past to commute out of the area to work and are thus less likely to become involved in the community. Nearly half the District's property owners live outside of the District. Recruiting is also complicated by the increasing time commitment which is demanded of a volunteer, who must obtain and maintain numerous certifications and who must keep current with a wide range of mandated skills and knowledge. Essentially, a qualified volunteer is asked to become as highly trained as a firefighter in a paid department. The Inverness Fire Department's volunteers are aging, with most of the core group of regular responders now approaching or in their 50s. The Department is also forced to go farther afield geographically to recruit new members, which makes it difficult for some volunteers to respond to dispatches in a timely manner.

Both existing fire engines are designed to transport firefighters standing on a rear running board, a practice that is no longer deemed desirable and that is not in accordance with National Fire Protection Association (NFPA) standards. When either engine is replaced with a model that includes the necessary crew cab, it will be difficult to accommodate such a vehicle in the firehouse because of the building's shallow engine bays. The firehouse is also deficient in storage, office, maintenance, and workspace.

Three areas in the District – the Highland Way, upper Vision Road, and upper Kehoe Way neighborhoods – are outside the water system's service area and lack municipal fire hydrants due to high elevation. There are approximately 32 residences in these neighborhoods. Fire protection water for some homes (typically, the newer ones) is available from on-site fire storage tanks, but most of the properties were developed before fire storage tanks were required. To fight fires at such residences, the District must rely on water tenders provided by the Marin County Fire Department pursuant to the automatic aid agreement.

Two subdivision applications for the upper Kehoe Way neighborhood, the Kehoe and the Connor subdivisions, have been approved by the County and are expected to result in extension of water system facilities. The Kehoe subdivision's final parcel map is pending. The District is in the process of negotiating the provision of fire flow protection to four of the parcels within the subdivision. The District is also in the process of engineering the extension of the water system for the Connor subdivision. It will include the installation of two water storage tanks. There are no known or anticipated initiatives that would result in extension of water system facilities to serve Highland Way or Upper Vision Road.

Since 1993, the State of California has diverted property tax revenues from cities, counties, and special districts to the Educational Revenue Augmentation Fund (ERAF). The diversion has had a severe impact on funding for the Inverness Volunteer Fire Department because it reduces the District's property tax revenues by approximately 27 ½ percent, which amounted to approximately \$50,000 in 2001. This reduction has restricted capital planning and capital equipment purchases, such as providing for the replacement of aging fire apparatus. Implementation of the District's special fire tax



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replaces only about 60 percent of the lost revenue. In addition, the District's finances are beginning to be impacted by the new, countywide public safety radio system (MERA).

Participation in MERA was not voluntary for the Inverness Fire Department. When the system becomes fully operational it is expected to add to the Department's operating expenses, however given the uncertainty of the status of the system the associated costs to the Department are uncertain at best.

Stinson Beach

The Stinson Beach Fire Protection District staff consists of a chief, an ambulance corps director, and an office manager. The District has approximately thirty volunteers. Twelve of these firefighters are trained as emergency medical technicians, providing basic emergency first aid only. The County provides paramedic service. The District has two stations, one located along Highway 1 and the other at Calle Del Arroyo. The District's equipment consists of four engines, one water tender, one squad car, and an ambulance. One of the engines is a new type 3 fire truck acquired in 2002. Because the staff is largely volunteer, a fire siren and an electronic paging system are used to call volunteers to emergencies.

Muir Beach

The Muir Beach Volunteer Fire Department includes thirteen volunteers, with an elected volunteer fire chief and assistant fire chief. The District has two emergency vehicles and anticipates adding a third. All fire vehicles are coordinated with the County vehicles for compatibility of use. All volunteers have completed the courses necessary to be certified by the state as emergency fire fighters, and are trained in CPR.

In addition to Muir Beach and the surrounding community, the District is generally the first emergency responder to the Muir Woods National Monument. The Department has an average response time of five minutes. The District, whose emergency equipment includes a "jaws of life" apparatus, acquires additional emergency equipment on an annual basis. As a unit, several of the District's volunteers are also qualified in cliff-side rescue. Funding for fire protection services is through the Muir Beach Community Services District.

2. Future Service Capability

Bolinas

Future growth in Bolinas will increase demands for fire protection services. The Marin County Fire Department notes that some homes within the District have been constructed with inadequate hydrant or water tank supplies. The District has adopted the countywide sprinkler and Class A roof ordinances. Following the County Fire Marshall's recommendation, the District was prepared to adopt the Uniform Fire Code "as adopted by the County," but the County never adopted the updated version. This should be resolved in the foreseeable future.

The BFPD has been active in monitoring and inspecting new construction and significant remodels for compliance with state standards on water supply, defensible space, and access. With recent staff changes, the District anticipates being able to undertake a more regular inspection program of both commercial and residential properties.



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In an attempt to find the best way to provide ongoing service to the changing community of Bolinas, the BFPD conducted an assessment and strategic planning process that produced the strategic plan and mission statement that is now in place.

Inverness

No staffing increases are foreseen. The chief, who held the position for 20 years, retired on August 31, 2001. The IPUD does not foresee any paid staffing changes in the near future.

A long-standing need to replace the aging 1976 EMS utility vehicle has been on hold for several years for fiscal reasons. There is also a need to begin planning for the replacement of at least one engine, which has been in service for 22 years, but fiscal considerations have constrained planning for its replacement.

There is no direction in which the IPUD could expand its boundaries, nor are there any neighboring comparable fire districts with which the IPUD could consolidate. A major remodeling and upgrading of the firehouse was completed in 1993, and a number of energy-conservation (and potentially cost-cutting) improvements were made to the firehouse during the past year.

With fewer volunteers living or working within the IPUD, or living within a reasonable distance of the District, it is unlikely that response times will improve. A major concern is that if the roster of volunteers shrinks, response times may increase.

Stinson Beach

The Stinson Beach Fire Protection District serves the community of Stinson Beach and can reach all residents within five minutes. The District maintains mutual aid agreements with the Marin County Fire Department and the Bolinas Fire Protection District. Revenues are derived from property taxes. The District would like to train more emergency medical technicians but that is very difficult at this time.

Muir Beach

The Muir Beach Volunteer Department is consistently the first responder to calls within its service range, which includes the Muir Woods National Monument and half the highway distance from Muir Beach to Stinson Beach in the north and Mill Valley to the east.

G. UNICORPORATED MARIN

I. Existing Level of Service

The Marin County Fire Department serves an area of 251 square miles, a State Responsibility area of 198,945 acres and a population of approximately 14,000. The Department serves the unincorporated areas of Marin not protected by Fire Protection Districts or Federal Park Agencies. Services offered by the Department include fire control systems, integrated pre-hospital care system, fire prevention, public education, and emergency management. The Department maintains a staff of 84.5 including 1 Chief, 1 Deputy Chief, 3 Battalion Chiefs, 6 Senior Captains, 12 Captains, 3 Heavy Fire Equipment Operators, 8 Firefighter/Paramedics, 18 Fire Engineer/Paramedics, 17 Fire Engineers, 6 Firefighters, 2 Fire Captain Specialists, 1 BC/Training Officer, 1 Forester, 3 Dispatchers, 2 Administrative Personnel, 0.5



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Technology Support Analyst, and 1 Search and Rescue Dog. In addition, the Department has one Heavy Fire Equipment Mechanic that Marin County Public Works has dedicated to the department. Staffing is enhanced during Fire Season by the hiring of approximately 45 Seasonal Firefighters, 2 Dispatch Assistant, 3 Paramedics, 2 EMTs, and 2 Fire Lookouts.

Services and responsibilities of the Marin County Fire Department include:

- ◆ Primarily provides rural all risk emergency management with extensive wildland responsibilities.
- ◆ Administrative jurisdiction of State Responsibility Areas as a Contract County with the California Department of Forestry and Fire Protection.
- ◆ Suppression assistance as required by Local and Federal agencies.
- ◆ Emergency medical services.
- ◆ Contractual provider of Paramedic staffing to the Ross Valley Paramedic Authority. Provide additional paramedic staffing in West Marin during the summer season from May through October.
- ◆ Marin County Urban Search and Rescue, in cooperation with the Marin County Department of Public Works.
- ◆ Water rescue.
- ◆ Provide fire suppression to Marin Municipal Water District and many of the other watersheds in Marin.
- ◆ Member of the County Mutual Aid Program.
- ◆ Chief is the Marin County Operational Area Coordinator for OES.
- ◆ Fire road maintenance.
- ◆ Business inspections.
- ◆ Vegetation management burns.

MCFD maintains 5 structural/Type I engines, 10 wildland/Type III engines, 3 water tenders, 4 paramedic ambulances, 1 dozer transport, 1 D-5 Bulldozer, 9 staff vehicles, and 10 utility vehicles. Dispatch and communications are provided by Emergency Command Center at Woodacre Headquarters.

Three volunteer fire companies supplement MCFD response in communities of: Nicasio, Muir Beach, and Tomales. These agencies have approximately 45 members and 5 fire vehicles. Skywalker Ranch Fire Brigade supplements protection to their area at Skywalker Ranch and their Big Rock complex. They have two fire vehicles and two fire utility vehicles and they also provide initial attack fire and medical assistance to the community surrounding their property.

MCFD operates six year-round fire stations in Marin County: Woodacre, Marin City, Mt. Tamalpais, Marin City, Point Reyes, Tomales, and Hicks Valley. All of the stations have fuel pumps with the Marin City, Woodacre, and Point Reyes stations being available to accommodate vehicles and personnel issued fuel cards by the County of Marin.

Woodacre

The headquarters of Marin County Fire Department is located in the West Marin community of Woodacre. This station serves Woodacre, Nicasio, Lucas Valley, Forest Knolls, Lagunitas, and the San Geronimo Valley. Mutual aid is provided to the community of Fairfax. This is the original



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complex of the Tamalpais Forest Fire District. The station is staffed with four to six firefighters per shift and is equipped with four 1,000-gallon per minute pumpers as well as specialized equipment. Formerly the site of a railroad station, the complex has three buildings that were built prior to 1941, one main building built in the 1970's, a trailer leased for office space, a building formerly owned by MMWD that houses administration, supplies, and emergency communications center, and an apparatus barn. The buildings are aging and space is at a minimum, any additional staffing would require major upgrades to the facilities.

Mt. Tamalpais

The station located on Throckmorton Ridge is situated in a crucial location to respond to wildland fires in the urban-interfaced areas above Mill Valley. Throckmorton Ridge Station also responds to Muir Woods National Monument, Mt. Tamalpais State Park, Marin Municipal Watershed, the unincorporated area surrounding Mill Valley and Muir Woods, and provides mutual aid to Muir Beach. The facilities include one aging firehouse and storage facilities. This is the one station scheduled to be replaced.

Marin City

The Marin City Fire Station has the newest facilities of the department. They are housed in the County of Marin's Public Safety Building along with a Sheriff's Department substation and a community room. The station is staffed full time with two firefighters on each of the three shifts and is equipped with a 1,000 gallon per minute pumper. Marin City is located north of the Town of Sausalito and has the highest number of responses annually for the department. The jurisdiction is comprised of affordable housing, houseboats, commercial waterfront, and commercial property. Mutual Aid is provided to the Cities of Sausalito, Tiburon, and Mill Valley.

Hicks Valley

Hicks Valley serves Hicks Valley, Chileno Valley, and Nicasio Valley. Mutual Aid is provided to the community of Novato. Automatic Aid is provided to the Wilmar Fire Department and the San Antonio Volunteer Fire Department. Located between Point Reyes and Petaluma, the Hicks Valley station provides protection for numerous ranches and is routinely dispatched into Sonoma County as a mutual aid resource. Hicks Valley protects the last three remaining one-room schoolhouses in Marin County. The department manufactures a majority of its soft goods and performs all of its repair work at the sewing shop located here. The facilities include an aging firehouse and storage facility. Any increase in staffing would require major upgrades to these facilities.

Tomales

The Tomales station serves Tomales, Dillon Beach, Marshal, and Chileno Valley. Mutual Aid is provided to the communities of Bodega Bay, Two Rock, Valley Ford, and the US Coast Guard Base in Two Rock. Located in the community of Tomales, the station protects historic downtown Tomales, the Tomales Bay Coastline, Pacific Ocean, and local ranches. Due to its remote location, the Tomales fire station is the first location to house a fire engine with paramedic and lifesaving advanced life support equipment in Marin County. Tomales supplements their staffing with an active volunteer fire department. The Tomales facilities include an aging firehouse and storage facility. Any increase in staffing would require major upgrades to these facilities.



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Point Reyes

Located in the Town of Point Reyes Station, this station protects over 100 square miles of ranchland, parkland and rural communities. The resources from this station respond regularly to emergencies in other jurisdictions and have developed a close working relationship with the Inverness, Bolinas, Stinson Beach and Tomales Volunteer Fire Departments and the United States Park Service Rangers and Firefighters from the Point Reyes National Seashore, Golden Gate National Recreation Area and the Tomales Bay State Park. This station serves the areas of Point Reyes Station, Olema, and Inverness Park. Mutual Aid is provided to Inverness Public Utilities District. The facilities were built in 1984 and house a Sheriff's Department sub-station and a community room. Even though this is not one of our older sites, if increase in staffing and equipment was required, we would need to make major upgrades to this facility.

Rescue 97-West Marin Emergency Services

From May to October, Marin County Fire staffs a Paramedic Unit at Stinson Beach. This ambulance supplements emergency service to meet the demand of the visitors to Marin County's coast. It is housed in a State Park building, which is also used by the lifeguards and sheriff.

Lookouts

Located on Mt. Barnabe and Mt. Tamalpais, Marin County Fire staffs these two fire lookout stations from June to October. These services supplement our fire detection system and update our Emergency Communications Center regarding weather and fire activity daily.

2. Future Service Capability

Current facilities would not adequately accommodate any increase in staffing or equipment if the need to provide enhanced or increased services developed. This would be dictated by an increase in SRA land, increase in population in the areas served, or any decreases to supplemental support given to Marin County Fire by the agencies in West Marin. Only one of our stations has accommodations for female staffing to have their own bathroom. Even though our female firefighters can have their own room on many occasions, none of the stations have sleeping facilities that can be dedicated for female personnel. Only three of our stations have ADA compliant restrooms for both public and staff use, and only one has an ADA compliant shower for personnel. On-duty personnel maintain all of our facilities and even though they are aging they are very well maintained.



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VI. POLICE PROTECTION SERVICES

A. NOVATO PLANNING AREA

I. Existing Level of Service

Novato

The City of Novato's Police Department has sixty-two full-time sworn officers, including the Chief of Police. Thirty-five officers and seven sergeants are assigned to patrol duties. The Department no longer utilizes a reserve unit for patrol duties. Four traffic officers perform traffic-related enforcement and investigative duties. Nine officers and one sergeant are assigned to the investigations bureau. In the patrol responsibilities, approximately anywhere from seven to ten officers are assigned on any given night with a minimum of one to two supervisors on duty during the evening hours. The city is broken into four geographical areas with an additional two to four units serving as directed when needed.

Unincorporated Areas

The Marin County Sheriff's Department serves the unincorporated portions of the Novato Planning Area.

2. Future Service Capability

The Department expects to expand its ranks as needed to reflect population growth changes or changes in service demand. If unincorporated areas were annexed to the city, the Police Department would need to realign its beats to accommodate these areas and possibly add additional staff.

Ongoing infill development in Novato is increasing the demand for police protection. Over the next five years the Department anticipates the need to increase its motorcycle traffic patrol capability, add a canine unit, and hire an additional investigator.

The continued redevelopment at the Hamilton Air Force Base has required the hiring of additional staff. As the population in this area has grown, the Novato Police Department has added five officers, a dispatcher and a records specialist to meet the need for such services.

Unincorporated Areas.

Three to four patrol deputies will be assigned to the unincorporated areas in the Northern County area for both the day and night shifts when the Sheriff's Office is fully staffed.

B. LAS GALLINAS AND SAN RAFAEL BASIN PLANNING AREAS

I. Existing Level of Service

San Rafael

The San Rafael Police Department has one station, located in downtown San Rafael, and seventy-six sworn officers, including the Chief of Police. Of these officers, 37 perform patrol duties; four motor officers are assigned to traffic duty; and eight positions are assigned to the investigations unit. In addition, the Department has two full-time bicycle patrol officers to patrol the downtown area; one



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officer assigned to the schools as a School Resource Officer; and one Mental Health Liaison Officer. The Department operates seven beats, each with two shifts. Each beat has one officer per shift. The Department has sixteen patrol cars, ten investigator's vehicles, four motorcycles, two 4-wheel drive vehicles, one prisoner transport vehicle, one search/rescue patrol boat, two canine units, and twelve other miscellaneous vehicles.

In 1988 the Department served a population of 45,885 (State Department of Finance estimate). In 2000 this figure had increased to 56,063 (2000 U.S. Census). The daytime service population of San Rafael may swell to over an estimated 90,000 people. Due to staff reductions and increasing demands for police services, response times are prioritized depending on the nature of the call. Responses to life-threatening calls average three to five minutes, while other service calls are handled within hours, the same day, or by alternate methods.

Unincorporated Areas

The County Sheriff is responsible for law enforcement in all unincorporated areas except for traffic enforcement, traffic complaints, vehicular accidents or auto theft investigations, which are all handled primarily by the California Highway Patrol. The Sheriff's Office handles traffic enforcement and traffic complaints as a secondary responsibility. County Sheriff's Station #3, located at the Marin County Civic Center, has 16 sworn officers, four supervisors, and three lieutenants. Each shift is staffed with three officers, one supervisor, and one lieutenant. Service in the unincorporated areas of San Rafael appears to be adequate.

2. Future Service Capability

San Rafael

The San Rafael Police Department is presently operating below adequate staffing levels, mainly because of staff injuries and problems with employee retention due to the high cost of living and long commutes. However, the Department has dealt with this problem for over thirty years. The staffing problem continues to be cyclical with the economy and job market. The Department is constantly evaluating its service delivery capabilities and devising alternative delivery systems, reducing levels of response, and in some cases eliminating functions. If the St. Vincent's property is developed it would be annexed to the City of San Rafael and receive police protection from the San Rafael Police Department. This would require the establishment of an additional beat in Terra Linda, as well as additional staff, vehicles, and equipment.

C. UPPER ROSS VALLEY PLANNING AREA

I. Existing Level of Service

Fairfax

Law enforcement activities are performed by the Fairfax Police Department (FPD). The Fairfax service area is approximately two square miles, with a population of 7,200. It encompasses both commercially and residentially zoned areas. The department is staffed with a chief, three sergeants, one detective/juvenile officer, one K-9 officer, six patrol officers, one community service officer, one reserve officer, four dispatchers and four reserve dispatchers. The day shift usually includes one supervisor,



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two sworn personnel, one dispatcher and one community services officer. Night staffing usually includes one supervisor, two sworn officers, one K-9 officer and one dispatcher.

The FPD has four patrol vehicles, one K-9 vehicle, one four-wheel drive vehicle, one vehicle for the chief, and one electric community services vehicle. Average response time to calls is three minutes, and there are informal mutual aid agreements between the department and San Anselmo Police Department, California Highway Patrol, Marin County Sheriff's Department, and other nearby police departments.

The FPD recently upgraded its fleet of vehicles and computer equipment, and is waiting for the implementation of MERA. Current staffing levels are expected to remain the same.

Ross

The Town of Ross Public Safety Department provides patrol, traffic enforcement, crime prevention services, and general criminal investigation services within the incorporated town limits of Ross. A chief, two sergeants, six officers and one School Resource Officer staff the Department. Department equipment includes four marked patrol cars, one investigator's car, and one four-wheel drive pick-up. It is expected that an additional patrol car will be added in the near future, though there is no anticipated need to increase staffing in the future. Average response time to calls is two minutes. Dispatch services are provided by the Marin County Sheriff's Office.

San Anselmo

The Town of San Anselmo – a geographical area of two-and-a-half square miles with a population of approximately 12,500 residents – receives police protection from the San Anselmo Police Department. The Department is staffed with twenty-five full-time employees, including eighteen sworn police officers, one chief, two lieutenants, four sergeants, eight patrol officers, one juvenile officer, one detective and one motorcycle officer. The remaining staff, which includes one dispatch/records supervisor, five dispatcher/clerks, and one parking control officer, are not sworn police officers. There are also ten department volunteers: two reserve police officers, four police volunteers and four police explorers.

The Department has two shifts: a day shift and a night shift. The day shift, Monday through Friday, is staffed with one chief, two lieutenants, one sergeant, two patrol officers, one motorcycle officer, one parking control officer, one juvenile officer, one detective, one dispatch/records supervisor and two dispatcher/clerks. The night shift is staffed with one sergeant, two police officers, and one dispatcher/clerk.

Current equipment consists of five front-line patrol cars, three administrative vehicles, two detective vehicles, one parking control vehicle, one police motorcycle, one radar trailer, and one volunteer vehicle. The Department fields two patrol bicycles and has recently received a grant to purchase two more. It is expected that each patrol vehicle will soon be equipped with Mobile Data Computers.

Response time to calls averages less than three minutes. In addition, the Town of Ross and the College of Marin Police Departments contract with the Town of San Anselmo to provide dispatch services.



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The population of San Anselmo has remained unchanged for ten years. With limited land available for development, the population is expected to remain relatively constant. However, with the advent of community policing and the rapidly changing world of technology, it is uncertain what demands will be placed on the department over the next ten years.

Unincorporated Areas

From the Kentfield substation, the Marin County Sheriff's Department is responsible for serving the unincorporated areas such as Oak Manor, White's Hill, and Sleepy Hollow. Nine full-time deputies serve an area between San Quentin Prison and Lagunitas with two deputies on each shift. A third deputy at this substation is on contract to the community of Kent Woodlands. According to the Marin County Sheriff's Department, this is one of the quietest sub regions in the County. However, the area encompassed is large and maximum response times average two to ten minutes, depending upon the location of the two deputies on patrol at the time of a call. The Department feels that the present staffing level is adequate and has no plans for expansion. Traffic enforcement in unincorporated areas is the responsibility of the California Highway Patrol (CHP). However, the Sheriff's Department will respond to and handle traffic enforcement when requested.

2. Future Service Capability

Fairfax, San Anselmo, Ross

The Fairfax, San Anselmo, and Ross Police Departments do not anticipate the need for future staff increases, unless, as previously stated, the Marin Town and Country Club is acquired by the Towns of Fairfax and San Anselmo and converted to a public park. If this does occur, possibly one additional vehicle and at least one more officer could be required to provide service from the Town of Ross Police Department.

Unincorporated Areas

If Sleepy Hollow were to become the responsibility of the San Anselmo Police Department, the department would need to acquire a new vehicle and hire up to five additional officers. A substation would not be necessary because response times from San Anselmo to Sleepy Hollow are within five minutes.

D. LOWER ROSS VALLEY PLANNING AREA

I. Existing Level of Service

Twin Cities (Corte Madera and Larkspur)

Corte Madera and Larkspur receive police protection from the Twin Cities Police Department (TCPD), which serves a population of approximately 21,100. Present equipment consists of ten marked vehicles, nine unmarked vehicles and three motorcycles.

The TCPD was formed in July of 1980, under a Joint Powers Agreement that combined the police forces of the two jurisdictions. The TCPD currently has thirty-four sworn officers and three reserves. Four officers are on duty at all times. There is one station in Corte Madera and one in Larkspur.

The consolidation has brought about greater efficiency in record keeping, purchasing equipment, scheduling, communications, and investigations. Consolidation has also allowed a decreased



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supervisor/patrol officer ratio and a decreased mechanics/maintenance staff ratio. From a resource standpoint, the ability to deploy patrol officers on a more flexible basis into areas of concern has resulted in improvements in response time and greater visibility of patrol officers. Eventually, there will be a need for expansion of these facilities or construction of a new central facility. Corte Madera and Larkspur split their costs for administration and communication evenly, but other costs are apportioned according to the share of patrol each city receives. In 1987, Larkspur paid 55 percent of patrol costs and Corte Madera paid 45 percent of patrol costs. In 2001, Larkspur paid 51.7 percent and Corte Madera 48.3 percent. This funding formula changes yearly.

Unincorporated Areas

Lucky Drive and the Greenbrae Boardwalk receive law enforcement services from the Sheriff's Department and traffic control from the California State Highway Patrol (CHP). The Sheriff's Department regularly patrols this area.

2. Future Service Capability

Expansion of the Twin Cities Police Department service area to include the Greenbrae Boardwalk and Lucky Drive areas would not require additional police officers or equipment. However, in the growing commercial and residential areas of both cities, another beat may need to be created. This would require hiring four officers and purchasing an eleventh car.

In August 2001, the Twin Cities Police Authority received the results of a commissioned Police Facility Needs Assessment and Site Selection Report, which recommended a new site in Corte Madera. However, that site was turned down by the City Councils due to a cost issue. The Twin Cities Police Authority is now looking to build on-site at the Larkspur facility. A bond measure may be issued in June 2004.

Unincorporated Areas

Sheriff's deputies patrol Kentfield, Kent Woodlands and Greenbrae from a substation in Kentfield with supervision provided by the Sheriff's station at the Marin County Civic Center. Two to three deputies are on duty per shift. There are no areas in the sphere of influence outside the three to five minute desired response time. If additional help is needed, the Sheriff can call upon other units in the area or upon the Twin Cities Police Department under a reciprocal mutual aid agreement.



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E. RICHARDSON BAY PLANNING AREA

I. Existing Level of Service

Belvedere

Law enforcement services in Belvedere are provided by the City Police Department, which is staffed by five patrol officers, one sergeant, and one Chief. The Department has a fleet of four patrol cars. At least one officer is on duty per shift. Dispatch services are provided by contract with the Marin County Sheriff's Communication Center. Because Belvedere is only one square mile in area, officers have little difficulty responding to calls within two to three minutes.

Belvedere has the lowest number of reported crimes in the Bay Area. Because of Belvedere's small community scale, its police officers perform many services beyond basic law enforcement (such as house checks when residents are absent) and respond to emergency and first aid calls. The City Police Department maintains a close mutual aid relationship with the Tiburon Police Department and the communities frequently assist each other. Although Belvedere has considered consolidation with Tiburon's Police Department, a survey of its residents indicated a strong preference for maintaining a city police department regardless of the added cost for doing so. The biggest problem facing the community is residential burglaries. To meet this problem, the City Police Department increased its staffing and implemented an aggressive neighborhood alert program.

Mill Valley

Mill Valley receives police protection from the Mill Valley Police Department (MVPD). The MVPD has twenty-two sworn officers, two parking enforcement officers, three civilian clerks, two reserve officers, one volunteer, and a police explorer program. In addition, one civilian community service officer and one civilian volunteer have been added to the department to address crime prevention issues and to work with investigators. Sworn officers are assigned one of four rotating teams, each working a twelve-hour shift. Staffing on each shift consists of three or four officers. Specialized types of assignments include traffic enforcement, investigations, school resource officer, and foot patrol. Average response time for non-emergency calls is five to six minutes.

Vehicular equipment consists of six patrol vehicles, two motorcycles, three unmarked vehicles, a community service van, a mobile communications van, two parking enforcement vehicles, two police bicycles and three administrative vehicles.

The central police station is located in the Public Safety Building on Hamilton Drive, on the east side of the city between Highway 101 and downtown Mill Valley. While the primary service area is the incorporated city limits, the MVPD is capable of serving areas outside the city limits, frequently providing mutual aid to neighboring jurisdictions as needed.

Dispatch services are provided by contract with the Marin County Sheriff's Communication Center.

Sausalito

The Sausalito Police Department provides primary police services to the incorporated city of Sausalito. The city of Sausalito is 2.2 square miles in area. The south city limit is Alexander Avenue at the Sausalito Lateral. The north boundary is Gate 6 Road, while the eastern boundary is Richardson Bay,



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and Wolfback Ridge - to the edge of the Golden Gate National Recreation Area (GGNRA) - is the western border. The city's sphere of influence (SOI) includes: the Sausalito Lateral to the Golden Gate Bridge, including Vista Point and Fort Baker to the south; U.S. 101 to the Highway 1 turnoff to the north, including the Manzanita Park and Ride, as well as areas adjacent to U.S. 101 on the east and west (including the Heliport, Pohono Road businesses, Marin City and the Headlands); Richardson Bay to the east; and the ridgeline border with the GGNRA to the west.

The staff consists of twenty-six full-time employees and twenty-four volunteers. This number includes the chief, two captains, five sergeants, one investigator, thirteen patrol officers, three parking services officers, one administrative aide, and one administrative clerk. The volunteers perform court runs, front counter duties, data collection, traffic control, security at special community events, miscellaneous clerical tasks, vacation house checks, and a variety of other assignments.

The Sausalito Police Department is divided into two divisions: Operations and Support. Each division is under the direction of a captain. The Operations Division consists of four teams. Teams 1 and 2 split the week working from 7 p.m. to 7 a.m. These teams consist of a sergeant and three patrol officers. Teams 3 and 4 split the week and work from 7 a.m. to 7 p.m. Teams 3 and 4 consist of a sergeant and three patrol officers. In addition, the parking services officers work under the supervision of the Team 3 and 4 sergeants.

The Support Services Division consists of one team, called Team 5, which is composed of one sergeant and one investigator. This team typically covers the weekday shift from 7 a.m. to 5 p.m. In addition, the administrative assistant, administrative clerk, and all the volunteers are within the Support Services Division.

Dispatch services are provided under contract by the Marin County Communications Center. The average response time to emergency calls is approximately two minutes. Non-priority calls are generally responded to in less than ten minutes. Through countywide agreement, mutual aid is provided per established policy. Mutual aid at levels greater than intra-county capabilities is provided under the coordination of the Marin County Sheriff and the California Office of Emergency Services.

The Department's equipment includes six marked patrol units, four unmarked investigative vehicles, one pool car, four parking services vehicles (one of which is four wheel drive), two motorcycles, two radar trailers, and three bicycles.

The Sausalito Police Department currently operates from a temporary modular facility located at 300 Locust Street. The City of Sausalito is about to complete a comprehensive study that is focusing on the need for a police facility, as well as proper location, design, and funding resources.

In past years, commercial and industrial development in Sausalito's Marinship and Central Waterfront areas has created increased demand for police protection. The Department has responded by expanding its ranks and now has sufficient staff. The Sausalito Police Department has entered into a contract with the Richardson Bay Regional Bay Agency, a joint powers agency formed in 1987 by Sausalito, Mill Valley, Tiburon, Belvedere, and the County, to serve the water area of Richardson Bay. The Department patrols the area and enforces anchoring and mooring regulations in the Bay.



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Tiburon

The Tiburon Police Department (TPD) currently patrols the town with 15 to 16 sworn officers, including a chief, one lieutenant, five sergeants, and eight police officers. The Department is staffed with four teams consisting of three personnel each, including one sergeant and two officers per team. Support personnel consist of an administrative secretary assisting the chief of police, and a Police Services Aide position. A staff of four reserve police officers also assists the TPD, though staffing levels and personnel functions are subject to change. The Department operates two beats, both of which exclude Tiburon's thinly populated pockets on the peninsula's eastern shore. This area falls under the jurisdiction of the Marin County Sheriff. Response to these areas occurs only when requested. All assigned beats receive neighborhood patrol.

The Tiburon Police Department responds to surrounding areas such as Belvedere, Mill Valley, Corte Madera, Larkspur, Sausalito, and unincorporated areas of Marin County when requested. Dispatch services are provided by contract with the Marin County Sheriff's Communication Center.

The Tiburon Police Department currently utilizes five patrol vehicles, one unmarked police car, and one police motorcycle. In 1999 the Department moved into a brand new, state of the art public safety building that also houses the Emergency Operations Center for the entire Tiburon peninsula.

Unincorporated Areas.

One of the County Sheriff's four substations is located in Marin City. Deputies from this facility serve the unincorporated communities of southern Marin, from the Golden Gate Bridge to Corte Madera and from the Tiburon Peninsula to Muir Beach. The Sheriff's Department Marin Patrol also operates out of this station. Current staffing at the Marin City substation includes 16 officers, with three on duty at all times, four sergeants, one lieutenant, and three complaint takers. This is the busiest station among the four operated by the County Sheriff's Department. One or two officers could be added to the staff to serve better the southern Marin area. Nonetheless, the Sheriff's Department feels that staffing is generally adequate at the present time. Future development in southern Marin will require additional staff to maintain the present level of police service. The Sheriff's Department patrols Richardson Bay and the Marin County area of San Francisco Bay.

2. Future Service Capability

Mill Valley

It is anticipated that the MVPD's existing level of service will be adequate for the next ten years. The Mill Valley Police Department generally maintains a ratio of 1.7 to 1.9 officers per thousand persons.

Mill Valley could extend services into Homestead and Tamalpais Valley. The proximity of the city's Public Safety Building to Highway 101 means that it is well situated to assist in serving communities to the south and east.

A continual effort will be made to incorporate community policing into the daily routine of officer activity. School, community and residential safety will continue to be the focus as well as keeping the community safe from hate crimes and domestic violence. Focus on intervention programs; such as those to prevent hate crimes and domestic violence, will continue to be evaluated as the agency works closely with County programs.



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Sausalito

The Sausalito Police Department is adequately staffed to meet present and future police protection needs of the city. If Marin City were annexed to Sausalito or if Sausalito provided police protection under contract, additional police officers and equipment would be needed. However, additional space will not be available in the new facility for further expansion, and there are no plans to expand services within the next ten years. In fact, there are proposals to cut staffing levels as currently established.

Tiburon

The Tiburon Police Department sees no difficulty in absorbing the areas within Tiburon's sphere of influence. The relatively small area of the peninsula permits the Police Department to respond to the majority of calls within five minutes.

Unincorporated Areas.

The type of future development in unincorporated southern Marin will dictate what is required to service the area.

F. MARIN COUNTY SHERIFF

The Marin County Sheriff serves as the primary law enforcement agency for all the unincorporated county areas. In addition, the Sheriff's Department operates the county jail, provides bailiffs (deputies) and security to the county's courts, operates the Marin County Sheriff's Communication Center (police, fire & medical dispatching), and manages the county's Office of Emergency Services. The Sheriff's Department is divided into three Bureaus: Bureau of Field Services, Bureau of Detention Services and Bureau of Administrative and Support Services, which includes the Communications Division. The Bureau of Field Services is comparable to a Police Department as it provides the full range of law enforcement services, including Special Units, with the exception of traffic accident investigations. The California Highway Patrol provides traffic enforcement and investigates traffic accidents in the unincorporated areas and on all the state roads in the incorporated areas.

I. Existing Level of Service

Bureau of Field Services

This Bureau is divided into three divisions: Patrol, Investigations and Volunteer Services.

Patrol Division

This division operates out of four Sheriff's Stations located in Marin City, Kentfield, Civic Center and Point Reyes Station. The Southern Station, located in Marin City, is responsible for all of unincorporated Marin County south of Corte Madera and Larkspur, including Muir Beach, Muir Woods National Park, the Boot Jack campgrounds in Mount Tamalpais State Park area, and Angel Island State Park. The Kentfield Station is responsible for all of the unincorporated areas south of Second Street in San Rafael out to the areas covered by the Southern Station. This area includes all of the unincorporated area of Greenbrae, Ross Valley, San Anselmo, Fairfax and San Geronimo Valley to the east side of Samuel P. Taylor State Park. The Civic Center Station, which is located in San Rafael, is responsible for all the unincorporated areas north of Second Street in San Rafael to the Marin/Sonoma County boundary. The Western Station, which is located in Point Reyes Station in West Marin, is responsible for the unincorporated areas of the west county that are not assigned to



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another Sheriff's station. This includes the areas of Stinson Beach, Mount Tamalpais State Park, Samuel P. Taylor State Park, Olema, Point Reyes Station, Inverness, Marshall, Tomales, Dillon Beach, and Nicasio.

Five lieutenants, 10 sergeants, 58 deputies, two parking enforcement officers, and two senior sheriff's service assistants staff the Patrol Division. These personnel are dispersed throughout the Sheriff's stations and provide law enforcement services to the unincorporated area seven days a week, 24 hours per day.

The Volunteer Services Division augments the Patrol Division. The Volunteer Services Division provides personnel for specialized duties and normal patrol functions. Members of the Volunteer Services Division staff the patrol boat, crew the airplane, provide patrol reserves, and mounted deputies. They also provided services for specialized events. The Patrol Division has a lieutenant on-duty as a watch commander 19 hours per day, seven days a week. The on-duty watch commander allocates the distribution of manpower for each shift. Staffing considerations include, but are not limited to, calls for service, criminal activities and special details.

The Patrol Division has contracts with the Marin County Open Space District to provide a deputy to patrol the open space areas throughout the county. The Kent Woodlands Community Service District also contracts for a deputy, who provides patrol and law enforcement services to the Kent Woodlands community eight hours per day. The Marin County Housing Authority also pays the Patrol Division to provide a two-person walking beat in the Housing Authority area of Marin City. One patrol deputy is assigned to the Patrol boat to patrol the bay waters within the county boundaries. The Patrol boat also has a staff of volunteers, the Marine Patrol Reserves, which aid the patrol deputy. The Sheriff's Department similarly has contracts with the City of Belvedere and the Town of Ross to provide a lieutenant to each community to be the Chief of Police.

The average response time to calls for service is under five minutes, except in Area IV (Point Reyes), where it is under 15 minutes. This is due to the size of the beat area, traffic, road conditions, and weather (fog).

As established by state law, the Sheriff is the county mutual aid coordinator. If a local police department exhausts all its resources for an unplanned event, it can request additional resources through the Sheriff. The Sheriff provides assistance from the Sheriff's Department and can obtain other resources from local police agencies, surrounding counties, and/or state law enforcement agencies. This is known as the law enforcement mutual aid system, which is established by state law. The Sheriff's Department also provides assistance to local police departments through a program called mutual assistance. Mutual assistance is an informal system based on the mutual aid system by which local law enforcement agencies request the assistance of the Sheriff for a specific event or events. For example, the Sheriff's Department has formal agreements with San Quentin Prison for specific events and circumstances.

The Investigations Division investigates all serious crimes in the unincorporated area and provides augmentation and expertise to local police agencies when requested. The Division is divided into three units: Adult Crimes, Juvenile Crimes, and Scientific Investigation. The Investigations Division consists



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of seven investigators, two sergeants, and one lieutenant. In addition, the Division manages a countywide, three-person probation enforcement team that consists of one sergeant and two deputies.

Volunteer Services Division

The Volunteer Services Division consists of five units of specially trained volunteers with unique skills. There are ten patrol reserve deputies, 15 marine patrol members, 38 search and rescue members, 18 air patrol members and 32 members of the Sheriff's mounted posse.

The Bureau of Field Services fleet includes the following equipment: 28 patrol units, five four-wheeled vehicles, one county-owned airplane, two county-owned boats (one 32 foot patrol boat and one 19 foot rigged hull), two wave runners, 12 investigator vehicles, two prisoner transport vehicles, three command vans, three canine units, one horse trailer, and specialized equipment for the dive, hostage, and search and rescue teams. In addition, the Sheriff's Office has access to privately owned airplanes and boats belonging to members of the Volunteer Services Division.

The ratio of officers per 1,000 residents in unincorporated areas nationwide is 1.7. In the Pacific Region, it is 1.3 officers per 1,000 residents. The Sheriff's Field Services Bureau currently operates at 1.3 officers/1,000 in the unincorporated area.

2. Future Service Capabilities

Staffing levels in the Field Services Division will be increasing. The Sheriff's Department has received a grant that will pay for an additional patrol deputy to work with mental health related crisis intervention. The grant started in July 2001. In addition, the legislature approved special funding for Sheriff's Departments that allowed for the funding of four additional deputies. The Sheriff's office is also pursuing funding for two school resource deputies.

The Sheriff's Department and the Marin County Administrator are currently planning for a new location for the Communications Center and County Emergency Operations Center.

The Marin Emergency Radio Authority (MERA) is installing a new radio system for public safety. MERA is a joint powers agency consisting of 26 agencies in Marin County, including the County of Marin, each municipality, and all the fire protection and water districts. This is a change affecting all law enforcement agencies. The timetable for the MERA system consists of three phases. Phase I is expected to begin around the end of 2003 or the beginning of 2004. It will have the system go online without the South Marin tower, which is still experiencing siting problems and lawsuits. Cities above Mill Valley will be able to use MERA but the Sheriff and County Fire Department will not because they need to operate countywide. Phase II will occur three to six months later with the installation of the Bolinas tower which will add the West Marin Area. Phase III will be getting the South Marin tower up. MERA officials are currently looking for an alternative site, which will then need an Environmental Impact Statement. They are hoping to have the tower up and operating by the beginning of 2005.



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VIII. OTHER COMMUNITY FACILITIES

A. SCHOOL FACILITIES

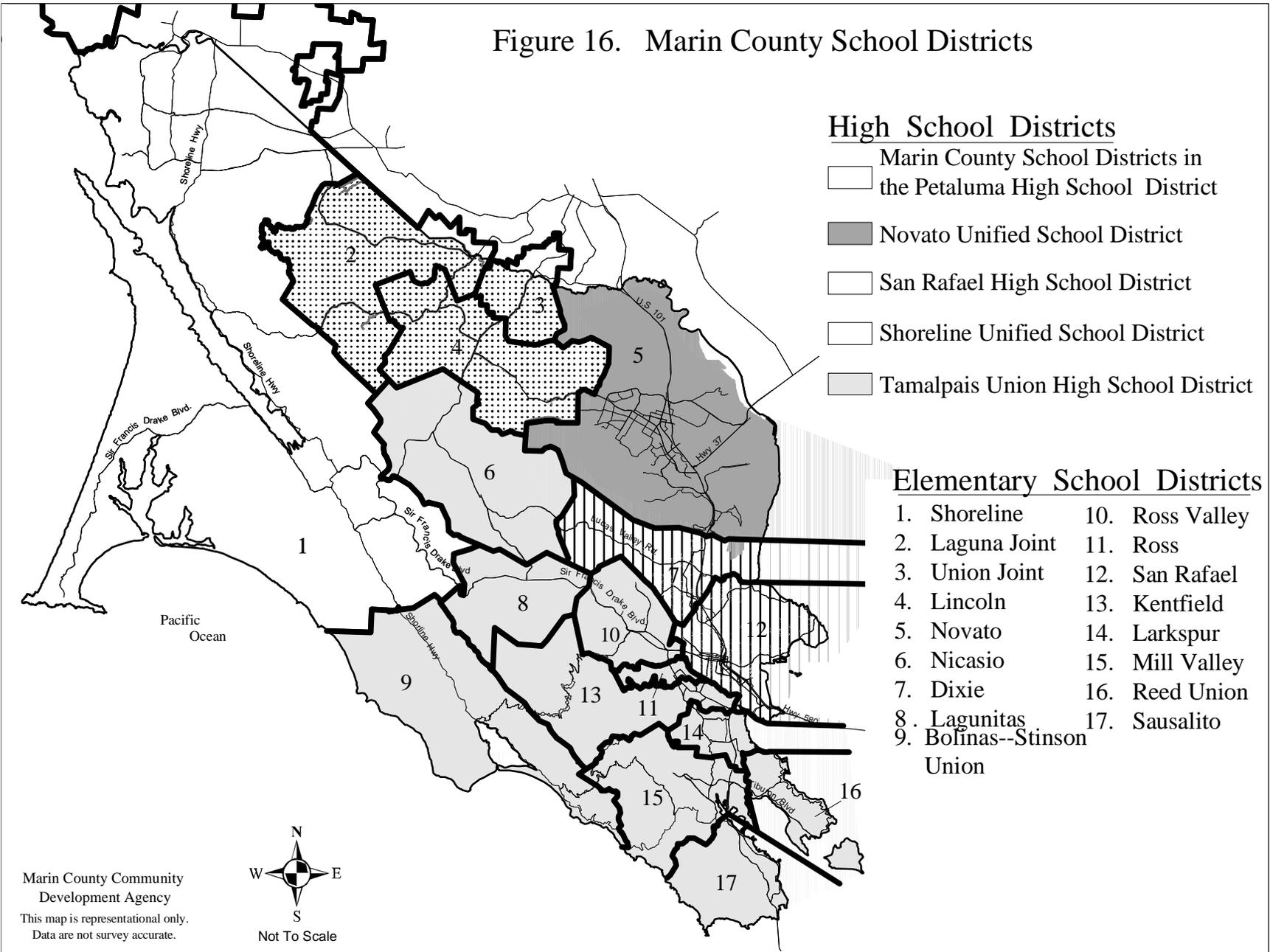
This section outlines general trends in school enrollment and identifies existing school facilities in the 15 elementary school districts, two high school districts, and two unified school districts (K-12) in Marin County (see Figure 16). Enrollment in public schools has fluctuated a great deal since 1970. The late 1970s showed a decrease in enrollment, which continued until the mid-1980s. The drop in the number of school children caused seven districts in Marin County to close schools. Some districts chose to lease the sites to day care centers, non-profit organizations or to other users. Other districts sold the facilities outright. There have been indications that enrollment is now on the increase. In 1986/87, average daily attendance (ADA) increased countywide for the first time in five years. Furthermore, since 1985 the following elementary school districts have had a steady increase in ADA: Dixie, Kentfield, Larkspur, Ross Valley, San Rafael Elementary, and Novato Unified. On the other hand, since 1990 the Lagunitas and Sausalito School Districts have experienced declining enrollments. Yet all the other elementary school districts exhibited moderate increases in ADA from 1990 through 1998. From 1998 to 2001, ADA for the elementary school districts either remained unchanged or showed slight decreases.

The increase in the number of elementary school children in the mid 1990s caused some school districts, such as the Mill Valley School District, to reopen closed schools or to expand existing facilities. The Dixie School District added additional classrooms and a science wing at the Miller Creek Middle School facility and reopened Mary Silveira School. In the Reed School District, three new classrooms were built at Reed School and another classroom was added at Del Mar Middle School. The San Rafael Elementary School District reopened Laurel Dale School.

From 1980 through 1990 all four high school districts experienced a decline in enrollment. However, high school ADA increased moderately for the Shoreline Unified School District, Tamalpais Union High School District, San Rafael High School District, and Novato High School District between 1990 and 2001. In 1990 the California Department of Finance (DOF) had projected that the number of children in the 15 to 19 age bracket would decrease steadily until the year 2005. Current DOF projections indicate that the number of children in this age bracket will actually increase slightly through 2010. This trend would indicate a continuing increase in enrollment but many factors may affect what actually happens.

In 1986, school districts were given authority to collect development fees and use those fees for construction of permanent facilities (California Government Code Section 65970 *et. seq.*). The development fees are only a supplement to State funds. Therefore, although the fees help mitigate the impact of new development, schools will continue to be largely dependent on State funding sources. The County has cooperated with the school districts that are collecting fees by requiring proof that these fees have been paid before issuing a building permit.

Figure 16. Marin County School Districts



Marin County Community Development Agency
This map is representational only.
Data are not survey accurate.





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In Marin County, the following school districts are collecting development fees: Kentfield, Larkspur, Mill Valley, Reed Union, Ross Valley, San Rafael Elementary, and Novato Unified. Collecting the fees will enable the school districts to build new facilities or expand existing facilities in order to accommodate projected growth. Projections by the school districts may take into consideration enrollment trends and pending development projects as well as age-specific population projections.

B. CHILD CARE

There has been a continual increase in the need for child care, both at the national and local level. This need has arisen from an increase in the number of women in the work force, often a result of single-parent households or two-income families. Many of these families rely on some form of child care. Other families may share child care responsibilities with spouses, have flexible hours, or work at home.

While Marin's supply of licensed child care has increased between 1990 and 2000, it has not kept pace with the demand for care from working families—with significant gaps in both infant and school-age care. Marin's relatively high cost of living has hampered efforts to increase supply. Child care programs are often unable to find the affordable space and/or staff needed to adequately house and run their programs. Unlike elementary and secondary schools that are publicly funded, financial support for the child care system comes primarily from private sources.¹ However, in 1998, additional resources were made available with the passage of the California Children and Families First Act.

State licensing agencies recognize two types of child care facilities: child care centers and family child care homes. A child care center is defined as any child care facility of any capacity in which less than 24 hour per day non-medical care and supervision are provided in a group setting. Residences generally do not qualify. A child care center is licensed by Community Care Licensing, State Department of Social Services. A family day care home is defined as regularly provided care, protection, and supervision of children in the caregiver's own home. The primary caregiver must live in the home and be present at least 80 percent of the time. The Marin County Department of Social Services is under contract with the State Department of Social Services to license family day care homes.

State law makes a further distinction between small family day care homes (up to eight children) and large family day care homes (up to 14 children). Under Senate Bill 163, the use of a residence as a small family day care home is considered a residential use of property for purposes of all local ordinances. This means that small family day care homes are allowed in all residential zoning categories. No city or county may require use permits, business licenses, fees, or taxes for operating a small family day care home.

The Marin County zoning ordinance contains policies regarding the regulation of childcare facilities. Both centers and family child care homes are required to obtain a conditional use permit under certain

¹ According to the **Economic Impact of Child Care in Marin County**, July 1998 prepared by the National Economic Development and Law Center, the childcare industry produces approximately \$57.5 million in gross receipts annually. Of this total, approximately 85 percent are from parent fees. About 10 percent come from government subsidies and less than 1 percent from the corporate sector.



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circumstances and are subject to different approval processes. No clear distinction is made between the large family child care home and a child care center. All child care facilities with more than eight children are subject to a conditional use permit. Furthermore, large family day care homes and centers are restricted in planned districts unless approved in the Master Plan. The Marin County zoning ordinance does not prohibit the provision of child care, since child care facilities are allowed in all zoning classifications (subject to a conditional use permit in non-residential categories). However, child care development may be discouraged since the cost of the use permit is high due to the high cost of processing applications and notifying property owners.

While licensed supply has increased significantly over the last decade, estimated demand for care continues to exceed available licensed supply for both infant and school age care. Between 1990 and 1999, licensed child care supply increased by approximately 39 percent, from about 8,202 to 9,144 slots. This increase varied by age group with estimated infant care supply increasing by 57 percent, preschool care by 2 percent, and school age care by 17 percent, as shown in Table 7.

Table 7. Comparison of Licensed Child Care Supply 1990 vs. 1999

Age group	1990	1999	Percent Change
Infant care (0-3 years)	698	1,102	57 %
Preschool (3-5 years)	5,169	5,288	2 %
School age (6-13 years)	2,335	2,754	17 %
Total	8,202	9,144	37 %

Source: "California Inventory of Child Care Facilities" Issued by the California Child Care Resource and Referral Network, San Francisco, February 1987 and "Marin's Estimated Need for Child Care -By Age Group and Zip Code -10/99."

Supply data for needs assessment provided by the Marin Child Care Council.

In October 1999, Marin County had 9,144 licensed child care slots (see Table 8). Of these, about 80 percent were from 130 child care centers while the remaining 20 percent came from approximately 220 family child care homes located across the county.



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Table 8. Marin County Licensed Child Care Supply – October 1999

Age of Child	Center Based Capacity	Capacity of Family Child Care Homes	Total
Under 3	358	744	1,102
3 to 5 years	4357	931	5,288
6 to 13 years	2568	186	2,754
Total	7283 (80%)	1861 (20%)	9144 (100%)

Source: “Marin’s Estimated Need for Child Care -By Age Group and Zip Code -10/99.” Marin County Child Care Commission, November 1999.

Supply data for needs assessment provided by the Marin Child Care Council.

Despite growth in the licensed child care system over the last decade, Marin continues to have significant shortages in licensed infant and school-age care. As shown in Table 9, an estimated 25,232 children under the age of 14 live in working families (i.e. families with two working parents or a single parent). These families are likely to need care for their children. There are an estimated 4,759 children under age three competing for 1,102 licensed infant slots. Estimated school-age demand also exceeds supply with 15,714 children competing for 2,754 licensed spaces. Many working families with infants rely on informal or license-exempt² care arrangements to care for their children as well. Similarly, many parents rely on after school activities and informal arrangements to care for their school-age children.

Licensed preschool supply is estimated to slightly exceed demand for care by working families. However, many families in Marin report difficulty in finding full time preschool childcare, as many of the vacancies are for part time care only. Furthermore, demand for preschool care for enrichment or educational purposes is much higher in Marin than in other counties. Much of this care is not full time and does not meet the needs of working parents.

Table 9. Marin County Child Care Demand versus Licensed Supply, October 1999

Age of Child	Total Demand (Estimated by children in working families)	Total Licensed Supply*	Difference	No. of children per licensed slot
Under 3	4,759	1,102	3657	4.3
3 to 5 years	4,759	5,288	-529	Less than one
6 to 13 years	15,714	2,754	12,960	5.7
TOTAL	25,232	9,144	16,088	2.7

Source: “Marin’s Estimated Need for Child Care -By Age Group and Zip Code -10/99.” Marin County Child Care Commission, November 1999.

Supply data for needs assessment provided by the Marin Child Care Council.

*Licensed supply includes centers and family child care homes. Family child care home supply is estimated to be 40% for infants, 50% for preschool, and 10% for school-age care.

² Licensed-exempt care is care which has been exempted from licensure and includes care (1) in a private home that includes children from only one family other than the provider’s children, (2) by a person who is hired by a family to come into a home to care for the family’s children, (3) in a recreation program that operates less than 13 hours per week or 12 weeks per year, or (4) provided by a school district directly.



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Childcare costs in Marin County are among the highest in California with the average cost for full-time infant care at \$9,789 per year.³ Some subsidized childcare exists for low-income families within the county, although the number of qualified families far exceeds available subsidies. The Marin County Child Care Commission estimated in October 1999 that existing public childcare subsidies covered only seven percent of infants eligible for state-subsidized childcare. State subsidies were estimated to cover only 10 percent of eligible school-age children and 49 percent of preschoolers.

Providing high-quality, stable, and affordable child care depends primarily on having a safe and stimulating environment or facility and a well-trained and consistent teaching staff. Acquiring and maintaining facilities for child care has been a challenge for many providers. Because of Marin's high real estate costs and the narrow margin within which programs operate, many providers have relied on lower cost sources of space, such as excess public school sites or churches. However, many providers have lost their low cost sites as Marin's school districts have recaptured some of their leased space in order to implement California's class size reduction program. Religious communities are also reclaiming leased space to provide more programs for their aging parishioners. When looking for new sites on the commercial real estate market, providers face much higher real estate costs. Additionally, land use requirements have made it difficult for many providers to maintain or expand their ongoing programs. For example, the Head Start program had leased school district space at less than \$1 per square foot, but faced commercial rates of \$1.50 to \$3.25 per square foot when it began looking for new space.

In response to these challenges, the Making Space for Children Project was established in 2001 to support child care programs in preserving and expand their existing programs. This project assists providers by: (1) locating space, including conducting feasibility analysis and budget development, (2) offering workshops on facility and business management, and (3) providing technical assistance on locating grants and loans.

A second component to maintaining and/or expanding child care supply is the dearth of qualified staff. Retention and recruitment of trained child care teachers or caregivers has been difficult during the last several years. Turnover rates within the center-based teaching staff are 20 percent for teachers and 37 percent for teaching assistants. MarinCARES, a program that provides stipends to teachers who remain in their jobs for at least one year and who complete specified training activities, was created in an effort to address child care staffing challenges.

Employers are beginning to recognize the benefits of ensuring that employees have access to quality child care. There have been many different approaches, all based on the premise that employees will be more productive if they feel secure about the care of their children. In addition, many employers feel that employees stay at the job longer and have lower rates of absenteeism if child care benefits are provided. Some of the benefits currently being offered by employers include the following:

- ◆ Flexible sick leave or family sick leave
- ◆ Tax-free payroll deductions for childcare
- ◆ Flexible work hours

³ Excerpted from the "The 2001 Child Care Portfolio," produced by the California Child Care Resource and Referral Network."



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- ◆ Cash payment of unused benefits, which can be used for child care
- ◆ Direct cash payment
- ◆ Child care facility on site (Lucasfilm provides on site care)

Unlike other local governments in California, Marin County has not required new developments to contribute to the expansion of child care supply by providing new child care slots or paying "in lieu" fees. Establishment of such a fee requires conducting a "Nexus Study." The study would provide justification for such a fee by determining the quantifiable need for child care slots created by new commercial or residential units. Santa Cruz, San Francisco and South San Francisco require developers of residential, commercial, office, hotel, and other projects to pay a fee, per square foot or per residential unit, to a facilities fund or include child care facilities in the project. In Contra Costa County, developers must submit a child care needs assessment and show that they intend to meet the need. The City of San Ramon is collecting development fees to offset the impact of new development on existing facilities.

Other counties have contributed to supply building efforts by providing child care on county property for their employees. Sonoma County, for example, has built a child care facility with 80 percent of the slots reserved for County employees and the remaining 20 percent open to the general public. Alameda County has also opened a county child care facility that is partially used for the general public. San Francisco operates several child care facilities for its employees and local residents. Marin County has taken a first step in considering the development of a county child care facility. It has completed a survey of employees about their child care needs.

Supply-building efforts could be further strengthened with the modification of several land use requirements. While not yet approved, the county's draft development code, which complies with state law, would streamline the permitting process for both large family child care homes and centers, and allow facilities in a wider range of zones. Further improvements could be made if conditional use permit requirements for large family day care homes were eliminated as they have been in San Francisco and Ventura counties. Finally, the County's general plan should specifically require that child care needs to be an explicit component of any master plan for planned-use developments.

C. LIBRARIES

The Marin County Free Library (MCFL), a special district operating under the authority of the Marin County Board of Supervisors, serves all the unincorporated areas of Marin and the cities of Corte Madera, Ross, Fairfax and Novato. The system has 11 branches and a bookmobile, which provides service to retirement and convalescent facilities, five children's programs, five West Marin schools, and fourteen unincorporated residential areas. In addition to the County libraries, there are six municipal libraries including Belvedere/Tiburon, Larkspur, Mill Valley, San Anselmo, San Rafael, and Sausalito.

The libraries receive the bulk of their income from property tax revenue, some additional local funding, and revenue from fines and fees. Minimal income is provided by the State when there is an imbalance in library use between patrons who are residents of a given jurisdiction and those who live elsewhere. For example, Mill Valley receives money from the State because a high proportion of the people utilizing materials from the library do not live in the City of Mill Valley. This form of compensation makes it possible for residents to use any library in the County, regardless of where they reside.



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The State's shift in funding priorities from libraries to schools has caused a shortfall of approximately \$1 million out of an \$9 million budget for the Marin County Free Library. Possible new funding sources for the libraries include increasing the allotment from the County's property tax revenues, implementing a countywide sales tax measure, general fund monies, increased State funding, and grants and gifts. In 2001, the Board of Supervisors agreed to fund the MCFL up to \$550,000 a year for FY01/02 and another year to help maintain the Library. If future funding cannot be secured, libraries may be forced to limit hours and reduce staff to cover the shortfall in revenue.

Approximately 148,176 borrowers represent 60 percent of the County's population and circulate 2,,569,498 books and other materials. All the libraries in Marin County participate in a cooperative circulation and catalog system through which residents may access materials from any of the 7 public libraries in the county, including MCFL's 11 branches. Dominican College, the College of Marin libraries, and other North Bay libraries participate through interlibrary loan agreements.

The library system exists to make a broad range of culture, information and knowledge available for the needs of the public. A survey conducted for the Library in August 2000 found that providing library services was one of the four most important issues for Marin County residents. Besides storing and circulating books, periodicals, videos, audiotapes, and CDs, the libraries offer a broad range of services. They are: children's and teen services, the bookmobile, reference services, senior services, literacy programs, the California History Room, and a government document depository at the Civic Center Library. The Library also supports outreach services such as home delivery to seniors and depository collections in convalescent homes. The FLAGShip takes literacy and health education services to the parents and caregivers of children ages five years and under. In addition, there are Spanish language collections in several branches.

The Marin County Free Library *Action Plan for the Years 2003-2006* outlined concerns to develop and maintain additional funding sources to ensure continued service and to continue seeking innovative and cost-effective ways to better serve the needs of the County's special populations, such as children, young adults, the elderly, and Spanish-speaking residents. The Plan also focused on upgrading technology and relocating the existing South Novato branch to the Hamilton area. The County will continue to address these needs as resources allow.

The MCFL expects several challenges in the future to meet the growing needs of Marin County's residents. One significant challenge has been, and will continue to be, for libraries to keep up with rapid changes in technology. Moreover, as the average age of Marin's population continues to increase, and as its ethnic backgrounds continue to become more diverse, it is anticipated the demand for services will increase. This may require reassessing the types of services and programs the libraries provide. A significant challenge will be finding and keeping qualified staff due to the high cost of living and salary disparities.

In the late 1980s there was some discussion concerning a plan to administratively consolidate the Civic Center Library and the San Rafael Public Library. This plan collapsed in 1993 when the libraries did not receive State library grant funds. The consolidation of the two libraries is now considered infeasible and unlikely to occur.



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D. SOLID WASTE

Garbage collection in the county is governed by 22 franchising agencies. They include 10 of the 11 cities, 11 special districts, and the county. Each agency franchises with one of five private haulers, with the exception of one special district that provides its own service.

Redwood Landfill, located just north of Novato, is the only permitted landfill operating in the county. This facility is privately owned and operated. The West Marin Landfill facility located north of Point Reyes Station ceased accepting waste in 1998. In 1990, about 256,000 tons of waste were disposed of at the two facilities, with about 97 percent of the waste going to Redwood Landfill. In 2000, 381,102.55 tons of waste was disposed at Redwood Landfill. Table 10 provides a material type and source breakout of this amount:

Table 10. Marin County Waste By Type at the Redwood Landfill

Waste Type	Marin County (Year 2000)	Sources Outside Marin	Total Tons
MSW & Debris	182,473.99	178,924.87	361,398.86
Sludge (Wet Tons)	118.41	19,585.29	19,703.70
Total Tons	182,592.40	198,510.16	381,102.56

Projections done in the early 1990s had estimated that three million tons would be disposed of at these two landfills over the next 15 years, even with aggressive recycling and composting efforts.

In addition to disposing of solid waste, Redwood Landfill disposes of non-hazardous sewage sludge. In 1990, Redwood accepted 173,000 tons of wet sludge, dried it, and then disposed of the 59,000 dry tons in the landfill. About six percent of the sludge was from treatment plants in the county. The remainder was from treatment plants throughout the Bay Area. In 2000 Redwood Landfill received 23,578.52 wet tons of sludge that were utilized as alternative daily cover.

Redwood Landfill received a new Solid Waste Facilities Permit (SWFP) issued by the County on July 28, 1995. This permit allows the landfill to operate at a maximum of 2,300 tons per day (tpd) as follows: 1,270 tpd for non-hazardous general municipal solid waste (msw); 1,000 tpd for non-hazardous sludge; 10 tpd for non-hazardous separated or commingled recycleables; and 20 tpd for designated waste types.

As of June 1994 the Redwood Landfill facility has an estimated closure date of 2039. This is based on estimated remaining capacity of 10.9 million tons of waste, or an equivalent of 14.1 million cubic yards and includes a daily cover ratio of 3.5:1 and an in-place waste conversion factor of 1.2935 cubic yards per ton of waste landfilled. Increased recycling and resource recovery activities throughout the county are expected to extend the life span of this landfill.

Collection of separated recyclables is available to all single-family residences, multi-family complexes, and businesses throughout the county. Most of the collected materials are processed at the Marin Recycling Center in San Rafael. Additional resource recovery services are also provided at the Marin Resource Recovery Facility in San Rafael. These facilities are also privately owned and operated.



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The county's waste management system is further described in the Source Reduction and Recycling Element, an element of the County Integrated Waste Management Plan that was prepared in accordance with the California Integrated Waste Management Act of 1989 (AB 939). This outlines a course of action for meeting the State's mandate of diverting 25 percent of the waste stream from disposal by 1995 and 50 percent by the year 2000. Diversion may include source reduction, recycling, composting, and limited transformation, such as wood incineration. In 1990, city-specific diversion rates ranged from 16 percent to 36 percent. Marin County's diversion rate in 1995 was 32.8 percent and the State approved diversion rate for year 2000 was 71 percent. Both of these rates exceed the 25 percent and 50 percent diversion mandates under the Integrated Waste Management Act, which has been adopted by each city in the County.

E. HAZARDOUS WASTE

The Marin County Hazardous and Solid Waste Joint Powers Authority is the countywide agency responsible for implementing the household hazardous waste collection project in Marin County. The County has sponsored periodic collection days for household hazardous waste (HHW) for Marin County and its cities since 1986. These events have increased public awareness of what constitutes household hazardous waste and how it should be properly managed. Marin Sanitary Service, in conjunction with the City of San Rafael, has been operating a permanent HHW collection facility in San Rafael since 1995. In December 1996, the HHW collection program in San Rafael was contracted by the Marin County Hazardous and Solid Waste Joint Powers Authority to extend service to all of Marin's jurisdictions, except for the City of Novato. Since 1996 the City of Novato has separately operated its own HHW collection program with the Novato Sanitary District for Novato residents and businesses. The permanent HHW facility in San Rafael is open year round for disposal purposes for county residents. Residents may also dispose of their HHW at satellite collection events or at the mobile unit. The mobile and satellite HHW collection programs are operated on an as-needed basis by local jurisdictions (Marin County Regional Summary Plan).

F. HOSPITALS

Marin County is within the Marin County Health Facility Planning Area, established by the Office of Statewide Health Planning and Development. Within the planning area are three acute care hospitals. These are Marin General, Kaiser Permanente Medical Center, and Novato Community Hospital. The Ross General Hospital was closed in February 1988.

Marin General Hospital, located in Kentfield, has 235 beds. A 100,000 square foot addition was completed in 1989. The new space contains a surgical suite, beds and an intensive care unit. The hospital also includes a Level III Trauma Center. In order to meet mandated state seismic safety guidelines Marin General must either retrofit two of three wings by 2008, or build an entirely new hospital by 2013. Kaiser Permanente Medical Center has 120 beds and includes an Emergency Department approved for trauma. The hospital provides medical, surgical, intensive care, and specialty services, in addition to ambulatory surgery and operating rooms. Kaiser plans to add an additional 50 beds within the next 15 years. Novato Community Hospital is licensed for 47 acute care beds, eight of which are set aside for critical care. Novato Community Hospital has expansion capabilities of up to 100 beds.



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The Statewide Health Facilities and Services Plan (1985) indicates that Marin County has a significant excess of acute care hospital beds. The rising cost of health care has caused a shift to shorter hospital stays, and more outpatient facilities. Also, the delivery of healthcare has changed dramatically – with a greater emphasis on outpatient services, wellness and health maintenance. Thus, the need for hospital facilities is not expected to increase significantly.

G. GAS AND ELECTRIC SERVICE

Pacific Gas and Electric (PG&E) provides gas and electric service to the residents of Marin County. Residential energy consumption has been slowly climbing since 1995 (Marin Profile 2001). Total residential consumption increased 18.5 percent from 619 million per kilowatt hour (kWH) in 1995 to 734 million kWH in 2000. Non-residential energy consumption has also increased, from 646 million kWH in 1995 to 834 million kWH in 2000, an 18.5 percent increase. PG&E has been making continual improvements to the delivery system and expects to be able to provide energy resources to meet anticipated demand.

The California Legislature changed the distribution and supply of energy in 1996 when it enacted laws that deregulated the energy industry. This resulted in a significant increase in electricity and gas bills to Marin residents when the law went into effect in northern California in late 2000.

In addition to maintaining adequate capacity, PG&E is continuing its program to underground existing electrical lines. Several undergrounding projects that have been completed since the program began in 1988 include:

- ◆ Larkspur, Magnolia/Bon Air Road
- ◆ San Rafael, Lindero, and 2nd Street
- ◆ Marin County, Redwood Frontage Road.

Upcoming undergrounding projects include North San Pedro Road from the Marin County Civic Center to Santa Venetia in San Rafael, and Sir Francis Drake Boulevard in Fairfax.

There are no anticipated problems in providing gas and electricity in Marin County.

H. TELECOMMUNICATION

Telecommunication is the transmission of information from one point to one or more other points using a variety of signals. These signals are transmitted via telephony, which consists of electronic signals over copper wire for telephones, video (frequency over coaxial cable), data (digital signals over copper, co-ax and fiber optic cable), wireless voice data, TV, AM/FM radio, two-way radio, and satellite transmissions for voice, radio, data and TV. Transmitting antennas are used to broadcast or direct a radio frequency signal, which is picked up by receiving devices such as receiving antennas, television sets, radios, car telephones, or pocket pagers.

Among the users of telecommunication facilities are cable television companies. Comcast is the primary provider of cable television in the county, having bought AT&T Broadband in 2002. AT&T had previously bought Viacom Cablevision and Chambers Cable. Viacom Cablevision served southern



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and central Marin, while Chambers Cable served the Novato area. The west Marin area is served by West Marin Cablevision.

The accommodation of demand for telecommunications products and services has critical implications for land use policy in Marin County. These implications vary, depending on whether the telecommunication facilities are a major use on a property, such as a transmitter tower site, or a minor use accessory to a residential or commercial development, such as satellite dish antennas for single-family residences. Many telecommunications facilities must be located on ridgetops in order to be effective. The siting of these facilities may be in conflict with the ridge and upland greenbelt policies contained in the Countywide Plan. However, the County must accommodate telecommunication facilities and mitigate their potential adverse impacts by regulation for two basic reasons:

- ◆ Such facilities are necessary for quality of life and economic well-being of people in Marin County because telecommunication facilities provide necessary services ranging from radio and television to radio communication with emergency response vehicles; and,
- ◆ Federal and State regulations would not allow total prohibition or unreasonable regulation of telecommunications services.

Policy planning issues include more than land use. They should include the importance of the deployment of broadband (high-speed and high capacity data networks) for economic development. Communities need to encourage this infrastructure to attract and maintain industries that need high-speed access to the world wide web.

Other policy issues to consider are transportation, governmental services, access to public information, quality of life, and equal access to electronic services. The availability of broadband services can facilitate telecommuting options for employers and employees and remove commuters from highways. Governments can do much of their business electronically and can provide internet access to public information. Quality of life issues include access to the internet, cable TV, and satellite broadcasts. Equal access to electronic service for people who cannot afford their own computers and internet service can be provided in libraries and other community centers.

The federal government has primary regulatory power over telecommunications facilities through its powers to control interstate commerce. The Federal Communications Act gave the Federal Communications Commission authority to preempt local regulations prohibiting or discriminating against building or expanding telecommunications facilities. Through the California State Public Utilities Commission (CPUC), the State of California also regulates some telecommunications facilities that are considered public utilities. The Commission's primary interests include determining the necessity for the service, operating in compliance with State regulations, approving fee schedules, and serving as the lead agency for environmental review. The CPUC maintains that local jurisdictions cannot prohibit or restrict utilities such as cellular phone installations. Local regulations can prescribe land use and construction guidelines for telecommunications facilities, but cannot prohibit the use of a site if there is no reasonable alternative site. The FCC and the CPUC can prevent local decisions through commission orders that have the force of law and can require violators to go to court.



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Most of the telecommunication infrastructure is installed underneath public streets. Martin Nichols, Executive Director of the Marin Telecommunication Agency, has advised local jurisdictions to insist that the telecommunications companies provide fair compensation for use of the public rights-of-way. In addition, the local governments should coordinate installation of various types of infrastructure in order to avoid multiple street cuts that damage public investment in roadways.

Due to the tremendous increase in demand for telecommunications products and services, Marin County has prepared a Telecommunication Facilities Policy Plan. This Plan contains policies and information about the potential impacts of telecommunications facilities. For more information, please refer to this plan.

I. TELEPHONE SERVICE

Two phone companies, SBC and Verizon, provide basic telephone service in Marin County. Verizon serves the Novato area and SBC serves the remainder of Marin County. Residents have the option of choosing between various long distance telephone service providers due to deregulation of the telephone industry in California in 1996.

J. JAILS

The current Marin County jail was opened in 1994. The Marin County Sheriff is responsible for staffing and operating the County jail. The main jail is located on the Civic Center grounds and houses both male and female adults who are either awaiting trial or are already sentenced for criminal and or civil violations. The bed capacity at the Civic Center jail is 294 (230 for males and 64 for females). In addition the County jail contracts with the U.S. Marshall's Service to house federal inmates who are waiting for legal action in the U.S. District Courts.