

*NMWD
RECYCLED
WATER
FILL STATION*



**NORTH MARIN
WATER DISTRICT
ANNUAL REPORT
FISCAL YEAR 2020-21**

NORTH MARIN WATER DISTRICT

BOARD OF DIRECTORS

Jack Baker, served since 1983 (Division 2)
Rick Fraites, served since 2003 (Division 5)
James Grossi, served since 2017 (Division 1)
Michael Joly, served since 2017 (Division 3)
Steve Petterle, served since 2001 (Division 4)

OFFICERS

Drew McIntyre, General Manager, appointed 1998
Terrie Kehoe, District Secretary, appointed 2018
Julie Blue, Auditor-Controller, appointed 2018
Tony Williams, Assistant General Manager/Chief Engineer, appointed 2020

DEPARTMENT MANAGERS

Administration & Finance Julie Blue
Construction/Maintenance Tony Arendell
Engineering Tony Williams
Operations/Maintenance Robert Clark

MISSION STATEMENT

Our mission is to meet the expectations of our customers in providing potable and recycled water and sewer services that are reliable, high-quality, environmentally responsible, and reasonably priced.

BOARD MEETINGS

Regular Board meetings are held on the first and third Tuesday of each month at 6:00 p.m. Meetings are normally held at North Marin Water District headquarters, 999 Rush Creek Place, Novato. For meeting agendas, contact the District Secretary at 415-761-8921 or visit the website at www.nmwd.com

(Front cover photo: Recycled Water Filling Station)

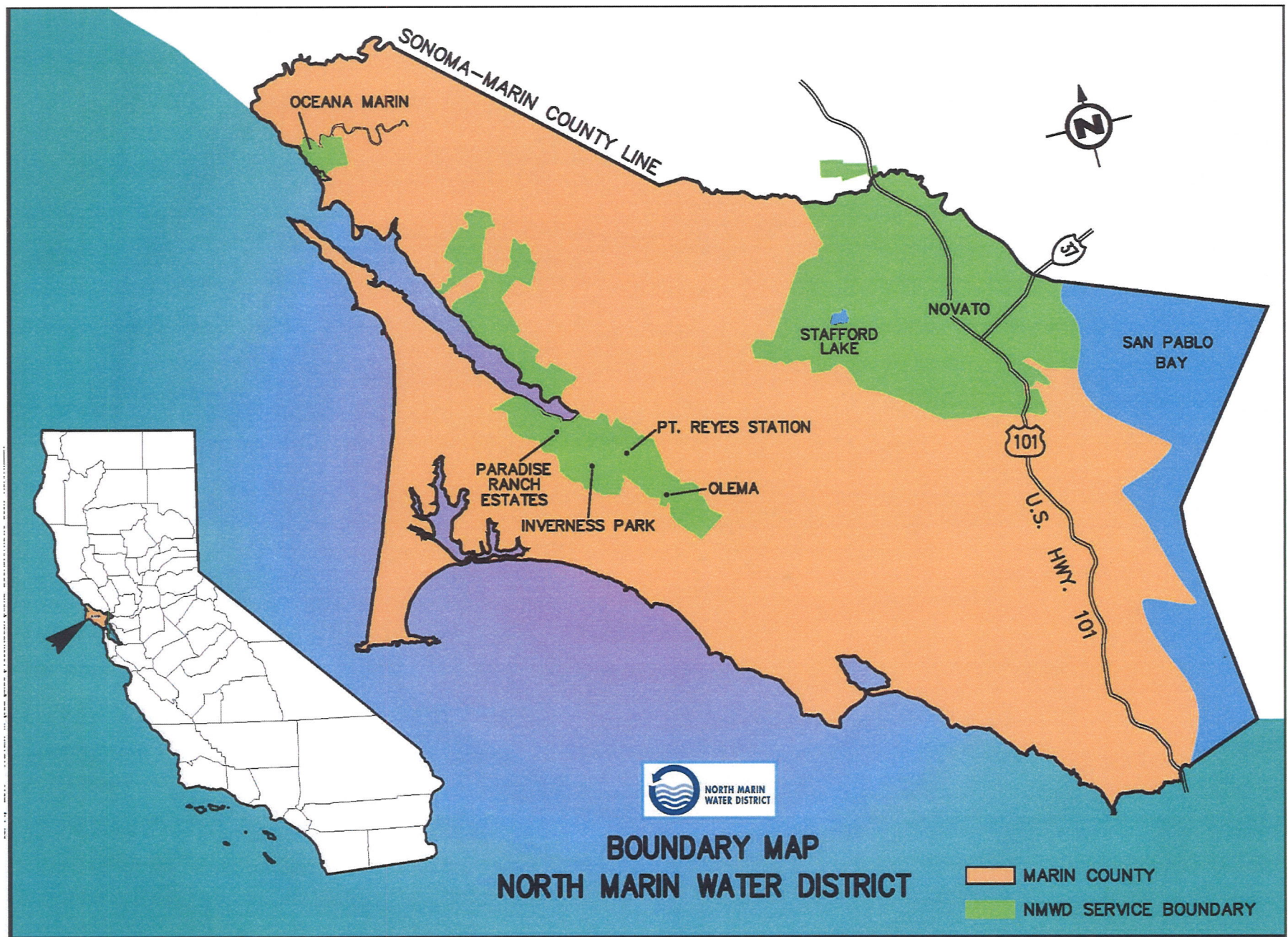
HISTORICAL HIGHLIGHTS

- 1948** The Novato community approves formation of North Marin Water District and purchase of the Novato Water Company.
- 1949** Novato voters impose a significant tax upon themselves (77¢/\$100 assessed value) to finance a \$2 million bond issue to purchase and upgrade the private water system and to construct a dam at Stafford Lake and build a water treatment plant.
- 1951** Contractor T.E. Connolly of San Francisco constructs Stafford Lake Dam, designed by Kennedy Engineers, to impound 560 million gallons (MG) of water.
- 1952** Stafford Water Treatment Plant, designed by Kennedy Engineers and built by C. Norman Peterson, goes into operation. It has a capacity of 3.75 million gallons per day (mgd).
- 1954** The spillway at Stafford Lake is raised to increase the reservoir capacity to 1.45 billion gallons, boosting the annual safe yield of Stafford Lake to 620MG.
- 1960** Voters approve a \$3.79 million bond issue to finance system improvements, Notably construction an aqueduct connecting Novato to the Russian River.
- 1961** The North Marin Aqueduct, a 9.4-mile, 30" pipeline from Petaluma to Novato is completed.
- 1963-66** Multiple water storage tanks are constructed, increasing storage from 2MG to 16MG.
- 1970s** Five small West Marin improvement districts are annexed into NMWD at the request of West Marin citizens: Oceana Marin Sewer in 1969; Point Reyes Station/Inverness Park Water in 1970; Olema Water in 1973; Tomales Sewer in 1975; and Paradise Ranch Estates Water in 1979.
- 1973-75** System storage capacity is increased to 26MG with construction of the Atherton (5MG welded steel) and Pacheco (5MG concrete) Tanks.
- 1974** Stafford Treatment Plant is modified to increase production capacity to 6.3 mgd.
- 1980s** North Marin assumes a leadership role in the water conservation field, pioneering programs such as connection fee discounts for installation of xeriscapes in new residential construction and "Cash-For-Grass" rebates for existing customers who replace irrigated turf with xerophytic plants.
- 1983** The US Army Corps of Engineers completes the construction of the Warm Springs Dam, creating a water supply pool in Lake Sonoma of 69 billion gallons.
- 1990s** Marin United Taxpayers twice touts NMWD as the Best Managed Public Agency in Marin County.
- 1998** The District celebrated 50 Golden Years of Quality, Excellent Service and Tradition.
- 2001** Marin Municipal Water District agrees to reorganize boundaries at Hamilton AFB to be coincident with Novato city limits, enabling NMWD to serve areas within Novato formerly served by MMWD.
- 2002** Amaroli Tank, a 4.5MG buried concrete tank adjacent to Highway 101 on Ammo Hill, is completed and increases total Novato area storage capacity to 33MG.
- 2005** A 180,000-gallon concrete storage tank is constructed in Point Reyes Station to replace a 36-year-old 100,000-gallon redwood tank serving the West Marin community.
- 2006** The Restructured Agreement for Water Supply with Sonoma County Water Agency (SCWA) is executed, authorizing SCWA to construct facilities to increase North Marin's water delivery entitlement to meet Novato's future needs consistent with the community general plan.
- 2006** The Stafford Water Treatment Plant \$16 million reconstruction project is completed enabling Stafford Lake water to meet anticipated future water quality standards.
- 2007** The 0.5 mgd Deer Island Recycled Water Facility, located adjacent to Highway 37 immediately south of Deer Island, commenced operation in June 2007 serving Stone Tree Golf Course.

- 2008** The 500,000-gallon Center Road Tank in west Novato is completed.
- 2009** Palmer Drive Tank is completed adding 3MG of first-zone storage in southern Novato, and increasing total Novato area storage capacity to 37MG.
- 2013** Expansion of the recycled water distribution system to north and south Novato is completed. Utilizing federal grant and loan funds and recycled water from both Novato & Las Gallinas Valley Sanitary Districts, the project will provide 130MG annually to large-landscape customers.
- 2015** The Gallagher Well Pipeline is completed principally with state grant financing, connecting the West Marin system to a new well located further upstream of Point Reyes Station in Lagunitas Creek, which is less susceptible to salt water intrusion.
- 2016** The \$22 million "Aqueduct Energy Efficiency Project" is completed, replacing the North Marin Aqueduct 30" diameter pipeline with a 42" pipeline from South Petaluma to Redwood Landfill, thereby eliminating the need for the Kastania Pump Station.
- 2017** To improve water use efficiency, accuracy and customer service, the District implemented an Advance Meter Information System (AMI) pilot project. The AMI project replaces the mechanical water meter register with an electronic register that transmits water use data securely to NMWD headquarters.
- 2018** Expansion of the recycled distribution system to Central Novato is completed. Using federal and state grant and loan funds and recycled water from Novato Sanitary District the project will provide at least 65 MG annually to large-landscape customers, including Marin Country Club Golf Course.
- 2019** During a series of public hearings held between April and June 2019, the District established five electoral Divisions in order to transition to a Division-based election in which each Board member is elected by a specific Division within the District. All five board members will continue to participate and vote on district wide matters regardless of what division they represent.
- 2020** The Board accepted the 2020 Novato and Recycled Water Rate Study after a series of several meetings with District Staff, the Board's Ad Hoc Subcommittee and two public workshops. This is the first comprehensive water rate study for Novato in over twenty years.
- 2021** The Board accepted the 2021 West Marin Water Rate Study after a series of several meetings with District Staff, the Board's Ad Hoc Subcommittee and two public workshops. This is the first comprehensive water rate study for West Marin in over twenty years.

The District completed construction of a 125,000-gallon concrete water tank on the ridge at the top of Paradise Ranch Estates to replace the two existing wooden tanks (including one which had burned in the 1995 "Mt. Vision" Fire).

For a narrative description of North Marin Water District history of formation and expansion in Novato and West Marin, please visit our website at www.nmwd.com and click on About/History.



MESSAGE FROM THE GENERAL MANAGER ... *Drew McIntyre*

The North Marin Water District (North Marin) carries out its Mission with a highly-motivated and competent staff empowered to meet the expectations of our customers in providing services that are reliable, high-quality, environmentally responsible and reasonably priced. Each day, District employees strive to carry out their work mindful of these basic principles: Good Water, Good Service, Good Value, and A Safe Place to Work. This annual report updates customers on North Marin accomplishments in Fiscal Year (FY) 2020-21 and provides a snapshot of our current efforts and financial performance.

The last couple of years have presented many challenges, including an historic two-year drought with record low winter rainfalls, regional wildfires, repeated Public Safety Power Shutoffs (PSPS) and a continuing global health pandemic due to COVID-19. This year local water supply from Stafford Lake totaled only 211 MG and provided up to 31% of peak summer (i.e., July 2020) demand on a monthly basis and only 8% of annual demand. Rainfall in Novato totaled 8.6" which was 31% of average, the lowest rainfall year on record since 1916. There was no increase in Lake storage levels in the winter of 2021 due to record low rainfall and Stafford Lake storage only increased due to backfeeding of approximately 1100 acre-feet of Russian River winters flows. Consequently, maximum storage capacity this year peaked at El. 186.1 (54% capacity) in late April 2021.

The Russian River water delivery system operated by Sonoma County Water Agency (Agency) typically provides 70-75% of Novato's water supply. However, due to low rainfall as stated above, imported water represented 92% of potable water and 83% of total water supply (i.e., potable and recycled). As a result of the two-year drought, the District adopted Emergency Water Conservation Ordinance 41 in March, 2021 for the Novato Service Area. This Ordinance was revised later to enact Stage 1 20% voluntary reduction in water use from May 1 to June 30 and Stage 2 mandatory reduction in water use effective July 1. Ordinance 41, as modified, also enacted the drought surcharge as long as Stage 2 mandatory reductions remain in effect. In the Russian River Watershed due to worsening drought conditions, the State Water Resources Control Board (SWRCB) issued an order on June 14, 2021 that reduced minimum instream flow requirements in the lower Russian River from 85 cubic feet per second (cfs) to 35 cfs. The Temporary Urgency Change Order (TUCO) from the State Water Board also required that the Agency and its water contractors reduce total diversions from the Russian River by 20% compared to the same period of 2020 from July 1 through October 31. The order, issued at the

request of the Agency, will allow the Agency to preserve storage in Lake Sonoma, which is the primary source of drinking water for more than 600,000 people in Sonoma and Marin counties.

In cooperation with Novato Sanitary and Las Gallinas Valley Sanitary Districts, North Marin significantly expanded its distribution of recycled water since 2012, which supplies large landscape irrigation customers and various commercial car washes in Novato.

Recycled water customers have increased from 44 to 91 over the last eight years. In total at 257MG, recycled water delivery capacity almost reached 40% of Stafford Treatment Plant's annual 650 MG production goal. This directly addresses the District's 2018 Strategic Plan Goal No. 1: to increase local control and long-term water supply reliability.

To improve water use efficiency, accuracy and customer service, North Marin completed an Advanced Meter Information (AMI) project in 2020. With the AMI system, the customer's mechanical water meter register is replaced with an electronic register allowing digital meter data to be transmitted securely to North Marin's headquarters via wireless communication providing early leak detection and real time water use information

In West Marin, dry year water supply conditions on Lagunitas Creek became effective on May 5, 2020 (FY20) when a water shortage was declared and Emergency Water Conservation Ordinance 39 was enacted. Dry year conditions continued in FY21 with total rainfall of 21" well short of the normal year minimum threshold of 28". Consequently, Ordinance 39 restrictions remained in place including Stage 2 25% mandatory water use reductions and drought surcharges. On July 1, 2020, a 6% Novato revenue rate increase became effective. At \$750 per year, the cost of water service for a typical Novato single family home using 91,000 gallons of water a year is at the median of Bay Area urban area water agencies (see chart on page 18). Water remains a good value for Novato customers.

WATER SUPPLY

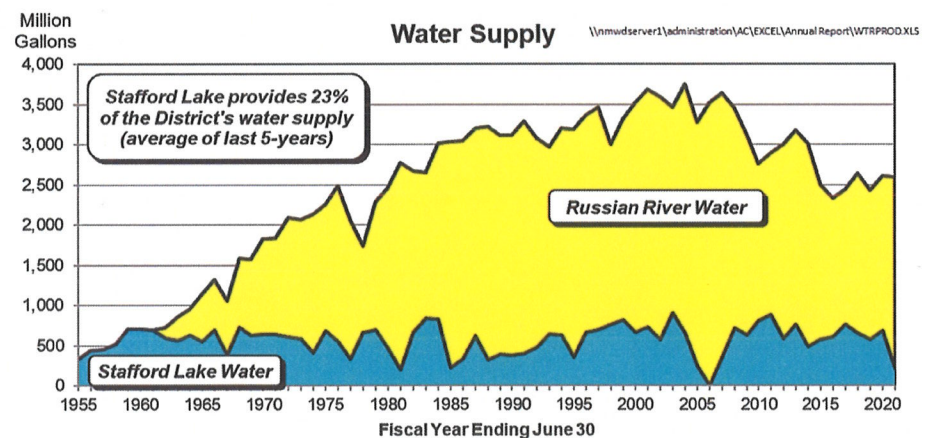
STAFFORD LAKE – Local Source Provides 25% of North Marin's Supply

Stafford Lake lies four miles west of downtown Novato and collects the runoff from 8.3 square miles of watershed land adjacent to the upper reaches of Novato Creek. The lake has a surface area of 230 acres and holds 4,450-acre feet or 1,450 million gallons (MG) of water. Water from Stafford Lake is fed into the Stafford Lake Water Treatment Plant, (located just below the dam) at a maximum rate of 6 million gallons per day (MGD). In FY 2020-21, 648acre feet (211 MG) of water was produced from the facility.

RUSSIAN RIVER – Provides 70-75% of North Marin’s Annual Supply

Russian River water originates from both the Eel River and the Russian River watersheds northeast of the City of Ukiah (Lake Mendocino) and west of Healdsburg (Lake Sonoma). The Coyote Dam at Lake Mendocino impounds the Eel River diversions and winter runoff from the local watershed. Warm Springs Dam at Lake Sonoma impounds winter runoff from the Dry Creek and Warm Springs local watersheds. Lakes Mendocino and Sonoma combined can store 367,500-acre feet to meet regional water supply needs, which totaled 51,800-acre feet in FY 2020-21. Releases from the lakes flow to a point about 10 miles upstream of Guerneville (see map on page 17 of this report), where six collector wells draw river water that has been filtered through 60 to 90 feet of natural sand and gravel to perforated pipes located at the bottom of each well. The thick layer of sand and gravel through which the water must pass before reaching the intake pipes provides a highly-efficient, natural filtration process which, with chlorination treatment, produces a clear, potable, bacteria-free water. This water is then fed directly into the SCWA aqueduct system.

In FY 2020-21, North Marin received 8,400-acre feet (2,740MG) of Russian River water. North Marin has an agreement in place with SCWA to provide sufficient supply and meet Novato’s current and future water supply needs. There continues to be competing interests for Russian River water, principally to protect steelhead and salmon listed as threatened or endangered species under the Endangered Species Act.



ADMINISTRATION

The Administration Department is comprised of the Administrative Services, Consumer Services, Finance, Human Resources and Information Systems.

CONSUMER SERVICES

Consumer Services is responsible for accurate and timely meter reading and billing of approximately 158,000 bills and reminder notices annually. During the year, field staff responded to 952 customer calls for water service assistance and received a 98% positive response from customers related to the services provided.

- A rate study for Novato Potable and Recycled Water was approved in March, 2020. The rate study included a five-year financial forecast which was updated as part of the FY 20/21 budget. A 6% rate increase was approved by the Board of Directors effective October 1, 2020. The rates conform to California Law requiring that each class of customer (residential and commercial) pay their proportionate share of the cost to serve them.
- In recognition of the COVID-19 pandemic the Board of Directors delayed the effective date of the rate increases from July 2020 to October 2020.
- A rate study for West Marin Water was approved in March, 2021. As a result of the study a 6% rate increase was approved by the Board of Directors effective July 1, 2021.
- In March, the District's 2021 Monthly Water Bill Survey for Single Family Homes (see chart on page 18) showed that North Marin's cost of water service ranked 9th out of the seventeen urban agencies serving the greater San Francisco Bay Area.

ACCOUNTING

The Accounting Department is responsible for general accounting and budgeting, payroll, purchasing, treasury management, risk management, materials inventory and human resources. The accounting staff completes a full financial statement monthly with extensive cost-accounting detail allowing District managers to closely monitor revenue and expenditures relative to the adopted budget.

The Government Finance Officers Association (GFOA) has awarded the District a Certificate of Achievement for Excellence in Financial Reporting for its comprehensive annual financial report for fiscal year ended June 30, 2020. This is the twelfth consecutive year the District has received this award. The GFOA states that this Certificate of Achievement is the highest form of recognition in governmental accounting and financial reporting, and its

attainment represents a significant accomplishment by a government and its management. The following staff members made significant contributions to the Comprehensive Annual Financial Report: General Manager Drew McIntyre, Julie Blue, Nancy Holton, and Nancy Williamson. The approved audited financial statements for fiscal year ended June 30, 2021 will be submitted to GFOA for award consideration in December 2021.

Fiscal Year 2021 financial highlights include:

- The District, on a consolidated basis, received 112% of budgeted operating revenue and expended 114% of budgeted operating expenditures, resulting in a net income of \$451 thousand. Three million (49%) of the Capital Improvement Project Budget was expended. The year ended with a cash balance of \$24.6 million, an increase of \$2.3 million from the prior year.
- Novato potable water consumption increased 3% from the prior fiscal year. Stafford Lake Water Treatment Plant produced 211 MG, down 69% from the prior fiscal year. The net income of \$463 thousand was lower than the \$546 thousand budgeted net income, and compares to a net income of \$309 thousand the prior fiscal year. Novato Water ended the fiscal year with a cash balance of \$18.7 million. A 6% rate increase applicable to Novato water customers was approved effective October 1, 2020.
- The Novato Sanitary District and Las Gallinas Valley Sanitary District, along with the Deer Island Recycled Facility combined to produce 256 MG of Recycled Water, up 9% from the prior fiscal year. The fiscal year net loss of \$52 thousand was greater than the \$19 thousand budgeted net loss. Recycled Water ended the fiscal year with a cash balance of \$5.3 million. A 6% rate increase applicable to Recycled water customers was approved effective October 1, 2020.
- West Marin Water consumption was down 3% from the prior fiscal year. The \$8 thousand net loss compares to a budgeted net income of \$237 thousand and to net income of \$322 thousand from the prior fiscal year. West Marin Water ended the fiscal year with a cash balance of \$211 thousand. A 4.5% rate increase applicable to West Marin Water customers was approved effective October 1, 2020.
- Oceana Marin Sewer's net income of \$48 thousand compares to a budgeted net income of \$85 thousand and to net income of \$102 thousand from the prior fiscal year. Oceana Marin ended the year with a \$443 thousand cash balance. A 5% increase applicable to Oceana Marin Sewer customers was approved effective July 1, 2020.

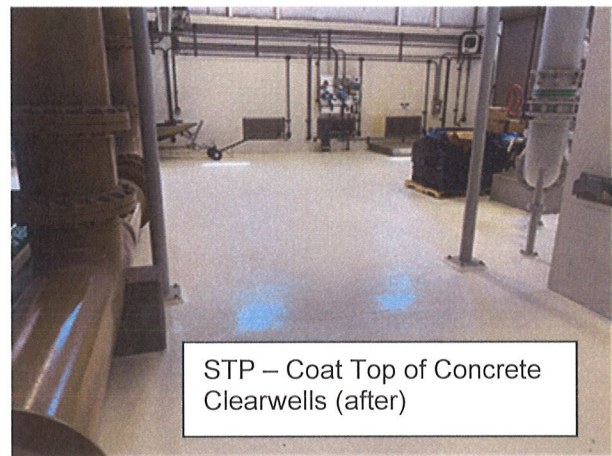
ENGINEERING

ENGINEERING



The Engineering Department consists of professional and technical staff that oversee the planning, permitting, design, construction and project management of water supply, treatment, transmission and distribution facilities necessary to serve North Marin's customers in Novato and West Marin. Engineering functions for wastewater-related facilities are

also provided by the Engineering Department to support North Marin's wastewater collection, treatment and disposal system in Oceana Marin. Property owners or developers desiring new water or wastewater service or an upgrade to their existing service are assisted by the Engineering Department pursuant to North Marin regulations.



In the Novato service area, seventeen capital projects were originally budgeted. An additional eleven projects were added, four projects were carried over from the previous fiscal year, and no projects were deferred, resulting in an adjusted total of thirty-two projects. The Engineering Department oversaw twenty-three of the thirty-two projects, and sixteen of the total number of projects were completed within the fiscal year. Total expenditures equaled \$1,780,882. Some of the significant projects were the Replace 6" AC Pipe (810') – Glen Rd and the Stafford Treatment Plant (STP) Coat Top of Concrete Clearwells (Acti-floc Filter clearwell and Finish water clearwell) projects.



PRE Tank 4A Replacement

In the West Marin service area, including Oceana Marin, seven projects were originally budgeted, four projects were added, none were carried over or deferred, resulting in a total of eleven projects. The Engineering Department oversaw eight of the eleven projects, and total combined fiscal year expenditures equaled \$1,543,724. The most significant project in West Marin was the Paradise Ranch Estates (PRE) Tank 4A Replacement Project.

WATER CONSERVATION AND PUBLIC INFORMATION

North Marin Water District implements a comprehensive and innovative Water Conservation Program aimed at both residential and non-residential customers (commercial and large landscape). Each program element is analyzed to assure that it will efficiently produce long-lasting water savings mutually worthwhile to the customer and the District. Toward the end of the fiscal year, all incentive-based programs were increased due to the drought and effort to get more program participants.



Residential activities include residential water use surveys (on hold due to COVID – 19)), high-efficiency washing machine (HEW) rebates (26 rebates), high-efficiency toilet (HET) replacements (109 rebates), a Cash-for-Grass Program (12 rebates), toilet flapper rebates, weather-based irrigation controller rebates, landscape efficiency rebates, a plumbing retrofit-on-resale program (toilets, showerheads, and bathroom sink faucets)

and rainwater collection and gray water rebates. Hot water recirculation and pool cover rebates were added during the 2014-2016 drought along with the Lawn be Gone sheet mulching lawn removal program. Water conservation programs for non-residential customers include HET rebates, high-efficiency washing machine rebates, and free water audits/surveys. Large landscape audits and landscape efficiency upgrade rebates are also offered to mixed-use accounts and dedicated metered sites. Most rebates and incentives were increased in May 2021 in response to the current drought.



The Public Information Program includes a School Education Program (in cooperation with SCWA) and comprehensive Communications Program. In FY21, the District continued with Kiosk to implement the public communications plan (or public outreach plan) in response to a goal from the 2018 Strategic Plan. As a part of the plan, Kiosk completely re-designed the Fall 2020 issue of the Novato “*Waterline*” (distributed in November 2020). This was followed up with Kiosk’s redesign of the Spring “*Waterline*” newsletter for both Novato (distributed in May 2021) and West Marin (distributed in

June 2021). Kiosk continued maintenance of the re-designed District website which included a fresh and modern design along with ADA complaint and mobile configuration attributes. Other communications actions implemented included the redevelopment of the District “Brand” documents including logo and Brand guidelines, new photography of the Board (for the website and other outreach efforts), initiation of refreshment and redesign of District communications materials, and the initiation of a year-long social media campaign aimed at increasing the quality and frequency of the social media posts on Facebook, Instagram and Twitter.

The District actively maintains a Facebook, Nextdoor, Twitter and Instagram page with regular updates on water use efficiency, construction projects and other appropriate District outreach material. Staff also used the WaterSmart AMI dashboard and customer portal as a public outreach tool to help inform customers on water use patterns and leaks and to also get information to the customers on the drought and other related public workshops and hearings.



Finally, the District requires new development to meet stringent water-use efficiency standards, including: installation of a high-efficiency washing machine, high-efficiency toilets, weather-based irrigation controllers, a maximum of 600 square feet of turf for new residential development and no turf for new commercial development, soil amendment and mulching requirements, drip or other subsurface irrigation for all irrigated non-turf areas, and other landscape irrigation efficiency measures that exceed the requirements of the updated State

Model Water Efficient Landscape Ordinance.

OPERATIONS AND MAINTENANCE DEPARTMENT

The Operations and Maintenance Department is comprised of three groups –Operations, Maintenance and Water Quality – which work together to provide Novato and West Marin customers with good water and good service at good value while continuing to provide a safe place to work. Along with these groups, the O&M Technical Assistant provides document control for the Cross Connection Control, Maintenance Management and Asset Management programs, as well as managing the District's Recycled Water Monitoring and water loss Programs. Additional programs managed by the O&M staff include Environmental, Water Treatment and Distribution operational permits, Waste Water operational permits and Water Quality compliance reporting.

OPERATIONS

The Operations Group is comprised of six staff that are certified in water distribution and treatment operations as well as two operators that are certified to operate our waste water collection and treatment facilities in Oceana Marin. This staff works closely with the Water Quality Group, sharing the responsibility of monitoring the Stafford Lake watershed and working cooperatively with landowners, including the Indian Valley Golf Course and the Marin County Parks and Open Space District. The Group manages the potable water supply and distribution systems for Novato and West Marin communities and the waste water system in Ocean Marin as well as the Novato recycled water transmission and distribution systems. Also in Novato, this department balances the tasks of treating and distributing water from Stafford Lake and imported Russian River water while maintaining appropriate water storage and pressure levels to reliably meet all water system demands and fire protection requirements.

Photo of Operator reinstalling an anode for the prevention of the sludge thickener steel structure from corrosion.



In Novato, the group manages storage of up to 37 million gallons (MG) of potable finished water in 35 tanks through four hydraulic pressure zones with 27 pump stations. There are 1.5 million

gallons of recycled water storage and 17 miles of distribution mains providing 95 customer sites with recycled water from the Deer Island, Novato Sanitary District and the Las Gallinas Valley Sanitary District Recycled Water Treatment Facilities. In fiscal year 2020-21 recycled water was 9% of the water supplied to our Novato customers with 7% from Stafford Treatment Plant and the remaining 84% from Sonoma County Water Agency.

In West Marin, the group operates the Lagunitas Creek wells, Point Reyes Treatment Plant, six pump stations and thirteen storage tanks in Point Reyes Station, Olema, Inverness Park, Paradise Ranch Estates, and Bear Valley. Additionally the department operates and maintains nine miles of sewer collection piping and a 90,000 gallon per day facultative waste water treatment pond with an eight acre irrigation field for the wastewater system in Oceana Marin.

Operations activities and accomplishments during FY2020-21 included various improvement projects during the winter shutdown and over 800 routine maintenance tasks throughout the year. Including Stafford Lake Aeration Project, Filter #3 under drain repair and media replacement, Carbon media replacement and the relocation of the chlorine feed line in the contact chamber.

MAINTENANCE

The Maintenance Group is comprised of seven technicians including Electrical/Mechanical (E/M), Building/Grounds, Fleet, Distribution Cross Connection Control and a Technical Program Administrator and are responsible for all maintenance tasks throughout the Novato, West Marin and Oceana Marin service areas.

Maintenance works closely with Engineering and Construction on new projects for electrical and mechanical installations and with Operations to ensure proper operation of Treatment and Distribution facilities for continuous service to our customers. Throughout the service area the E/M team maintains the Supervisory Control and Data Acquisition (SCADA), Advanced Meter Infrastructure (AMI) and computer network communication systems.

In Novato, facilities include the Stafford Lake Water Treatment plant, Deer Island Recycled Water Treatment Facility, pump stations, tanks, pressure regulators and cross connection devices while also maintaining the Office and Corporation yard facilities.

In West Marin, the Maintenance group maintains the Lagunitas Creek wells, Point Reyes treatment plant, tanks and pump stations. Additionally, the group maintains the collection and wastewater treatment operations in Oceana Marin.

Maintenance accomplishments during FY2020-21 included five facilities improvement projects and over 500 routine maintenance tasks. Staff continued to execute the day-to-day activities while performing various projects including STP Generator installation, state required pressure

vessel inspections, front office touch-less entry sensors/door operators, signage for COVID Safety, Oceana Marin ponds transfer pump replace, San Antonio Wireless Bridge install, Coast Guard, Gallagher Wells, cleaning & pump/Motor replace.

This is a photo of the Stafford Treatment Plant emergency generator.



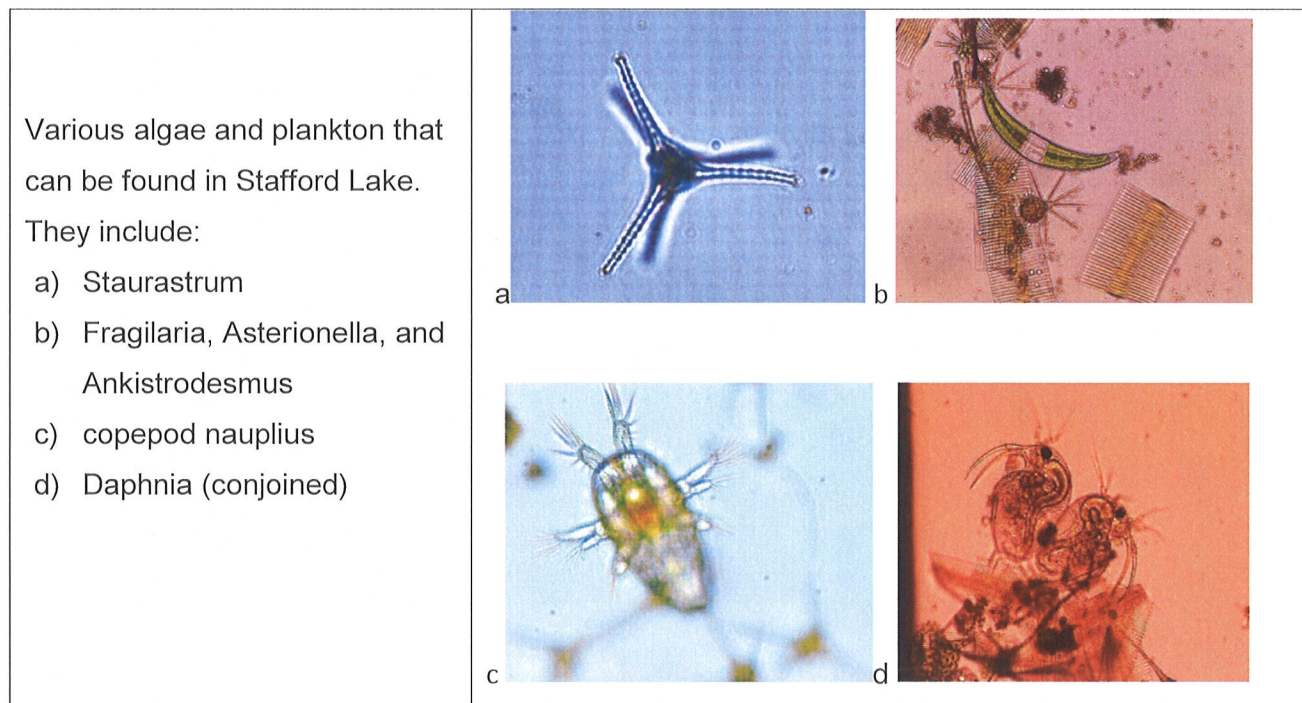
WATER QUALITY

The Water Quality Group is comprised of five employees, chemists and lab technicians providing oversight to all aspects of North Marin operations to ensure that water quality is protected, using a multi-barrier approach. Surveillance and monitoring is performed at multiple points from source to tap. North Marin's laboratory performed over thirteen thousand water quality tests as required by state and federal drinking water regulations and to support the work performed by other District departments. Annually, a water quality report is sent to all District customers in both Novato and West Marin. In addition, Water Quality staff responds to customer calls with specific information on water quality.

The primary goal of North Marin Water District is for water at every tap to be safe and taste good. The objectives toward meeting this goal, collaboratively established by the District's Board of Directors and staff, are to meet or exceed all regulatory standards, work to control or prevent all adverse tastes and odors and work with appropriate agencies to protect public health.

North Marin Water District's Water Quality Division prides itself on providing exceptional customer service based on a commitment to public health and a safe water supply. The District's Water Quality laboratory is certified by the California Environmental Laboratory Accreditation Program to perform analyses for both regulated and unregulated contaminants. The laboratory provides testing services to other District divisions for quality control of the water supply as well as testing in response to customer concerns. Monitoring is from source to tap. The laboratory also provides the Novato Sanitary District with sample collection, analysis and reporting.

Routine tests are performed on the bacterial, algal and chemical conditions of the source water in Stafford Lake and the Point Reyes wells. High nutrient levels can increase algal growth, which can result in taste and odor problems. Tests are also conducted on the water purchased from Sonoma County Water Agency. Source monitoring in the Point Reyes system focuses on a well quality. Salinity levels continue to rise above NMWD's customer notification level (50mg/L sodium) despite the blending of the Gallagher well water with the Coast Guard wells. The laboratory supports the Operations staff with monitoring of Stafford Treatment plant to evaluate the effectiveness of the various treatment processes.



The quality of water in the Novato and Point Reyes distribution system met all regulatory requirements. Operational controls to maintain chlorine residuals were effective in maintaining disinfection. The distribution water quality programs including flushing and cross-connection control were performed. Storage tanks were given their full annual inspection by the Operations and Maintenance staff, which helps determine tank-cleaning priorities. During the year, Water Quality staff completed the Stafford Lake sanitary survey that assessed all property owners on the watershed, assisted the Division of Drinking Water on the West Marin system permit inspection and the Novato Sanitary District on the inspection of the Stafford Lake Treatment Plant discharge permit.

CONSTRUCTION/MAINTENANCE DEPARTMENT

The Construction/Maintenance Department installs repairs and replaces water main pipelines and their appurtenances (valves, hydrants, services and meters, etc.) in upgrading and maintaining our facilities. The Construction/Maintenance Department may be contracted by developers to install new water mains, services, fire hydrants and fire services. In addition, staff upgrades $\frac{3}{4}$ " service lines to 1" and 2" to comply with the Novato Fire Protection District's requirements for sprinklers in new building construction. Staff is on call at all times and may be the first to respond to emergencies such as service leaks, main breaks, or knocked-over hydrants. Construction/Maintenance staff work hand-in-hand with the public, City and developers to install high-quality and reliable facilities to serve North Marin customers.

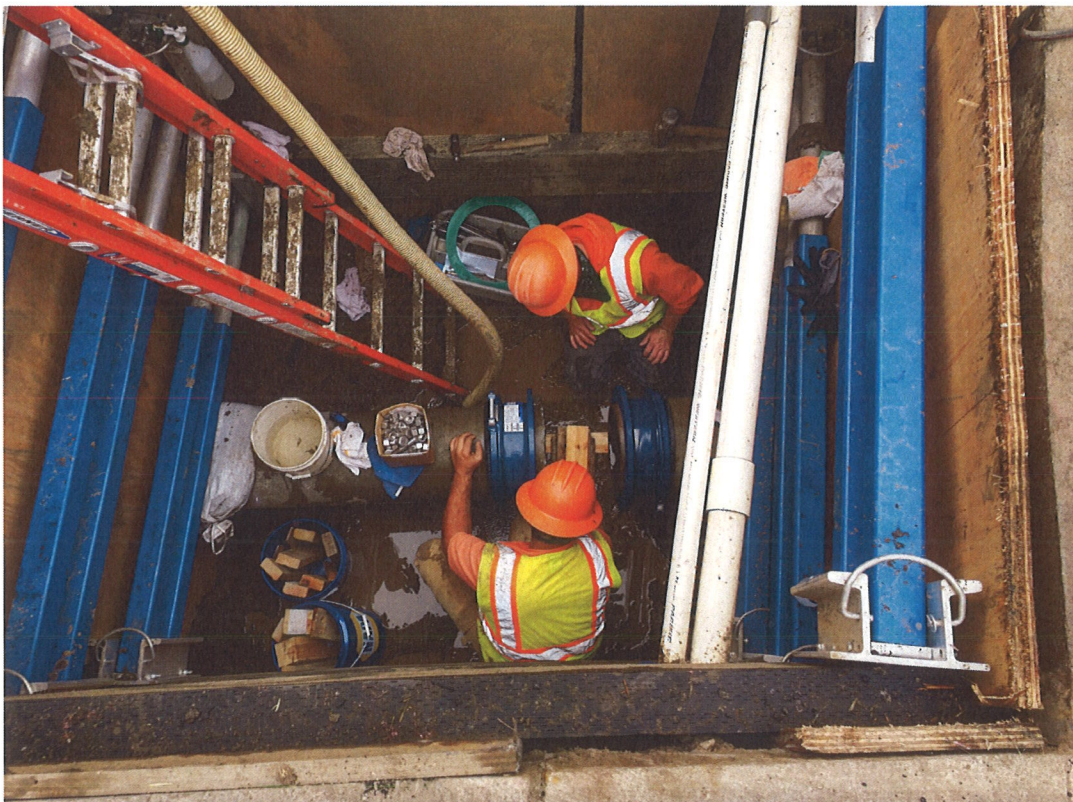


Crew working on air valve testing and repair.

During FY 2020/21, North Marin Water District's Construction crews, replaced 82 polybutylene water services, 19 copper water service laterals because of leaks in Novato and West Marin service areas. 13 water mains were repaired do to leaks. The Crews upsized 22 service laterals for residential fire service. The Crews replaced 12 fire DCDA Fire service for commercial buildings.

The Construction Crews work with developers on jobs, including Bahia Heights, Landsea Homes, McPhails Commercial Ph 2, IVC Miwok Center and Fire Service & Hydrant for the Marin Public Library.

Crews worked on the following Capital Improvement Projects in Novato: the Grant Avenue Bridge Pipeline Replacement Project. In Point Reyes the new 120,000 PRE-Tank 4C. Crews replaced 53 PB services during the annual PB replacement projects. In Novato services on Vivian Ct, Joaquin Ct, Vineyard Rd, West Brooke, and various streets in Black point. In Point Reyes on Drakes PRE-Tank 4A replacement.

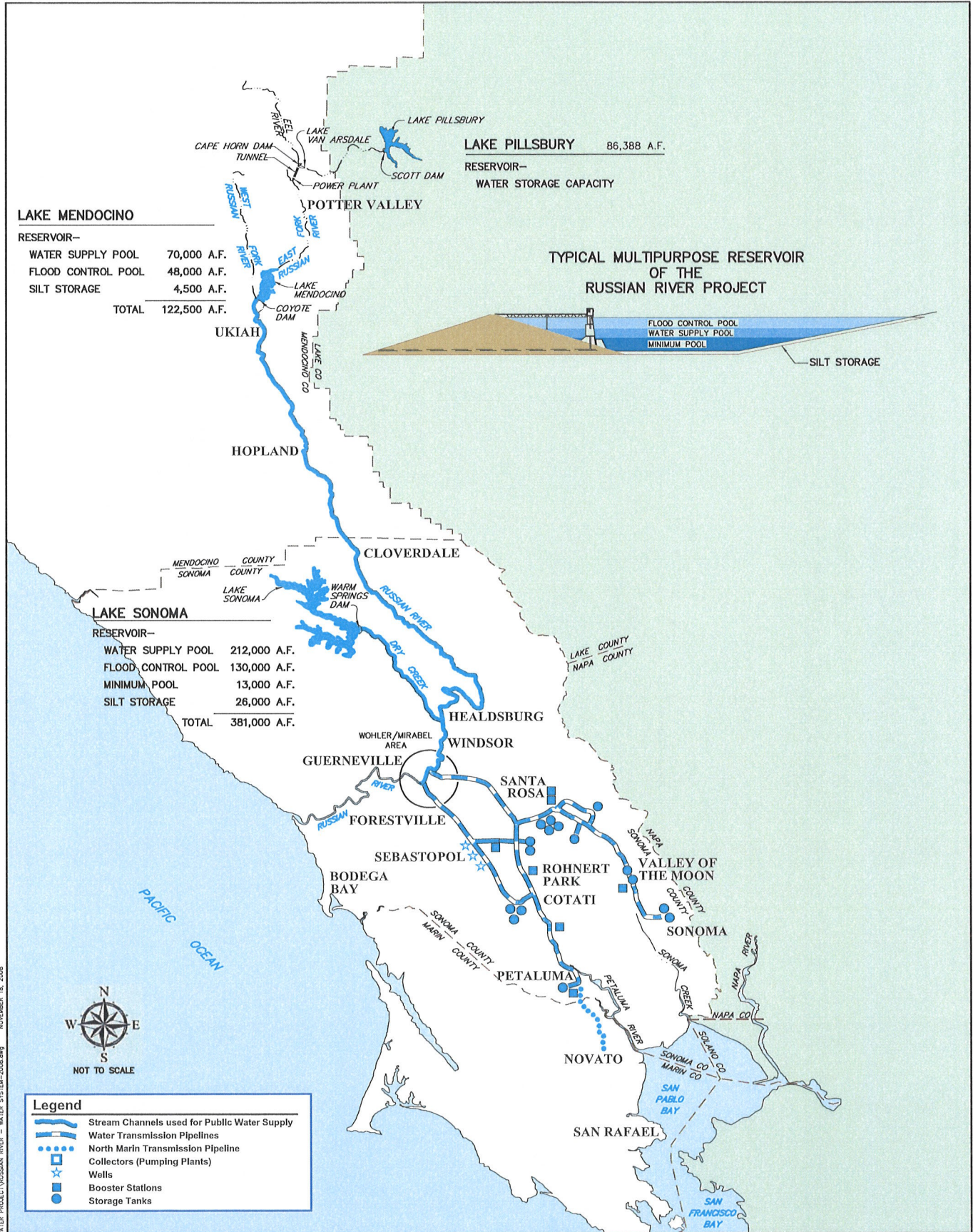


Crews working on installing a New 12" valve at Novato Blvd and Diablo Ave.

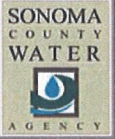
The Crews work on all types of leaks, in the water and wastewater systems of NMWD. Some of the more notable leaks are as follows: The 6" Main on Glen Road, Fire Hydrant run at 52 Oak Valley Drive, a 6"x2" Tee on Posada Del Sol, and 8" AC main at School Road Pump Station. In Oceana Marin the 6" Force Main was repaired on a hillside.



In a separate incident at a different pressure zone, crews in the picture above are working to repair an 8" ACP Main and Service on Atherton Ave. The Crew installed an 8" Full Circle Repair clamp tapped for 1" service to repair the leak and restore service to the consumers.



WATER TRANSMISSION PROJECTS WATER PROJECT/ RUSSIAN RIVER - WATER SYSTEM-3008.dwg NOVEMBER 18, 2008

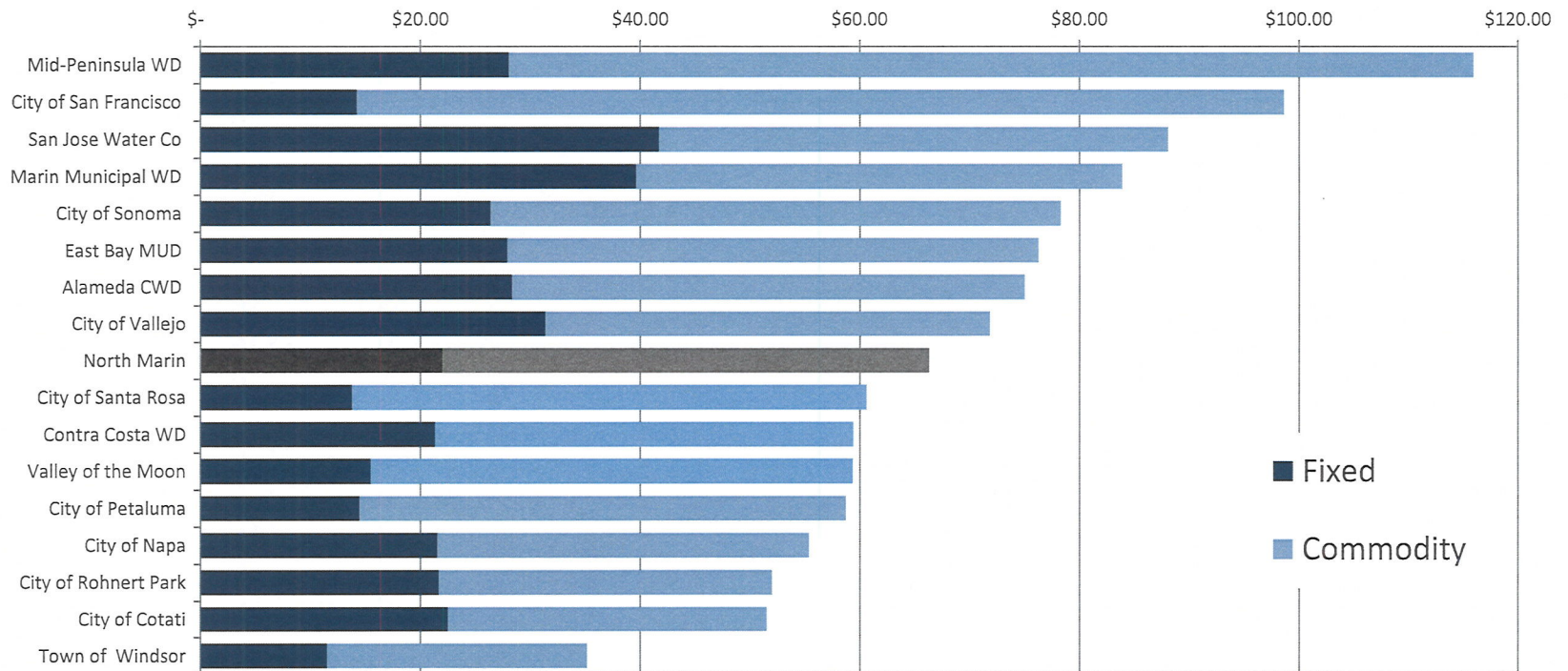


SONOMA COUNTY WATER AGENCY

Disclaimer
 This map document and associated data are distributed for informational purposes only "AS IS" at the published scale and provided without warranty of any kind expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from use of this information.

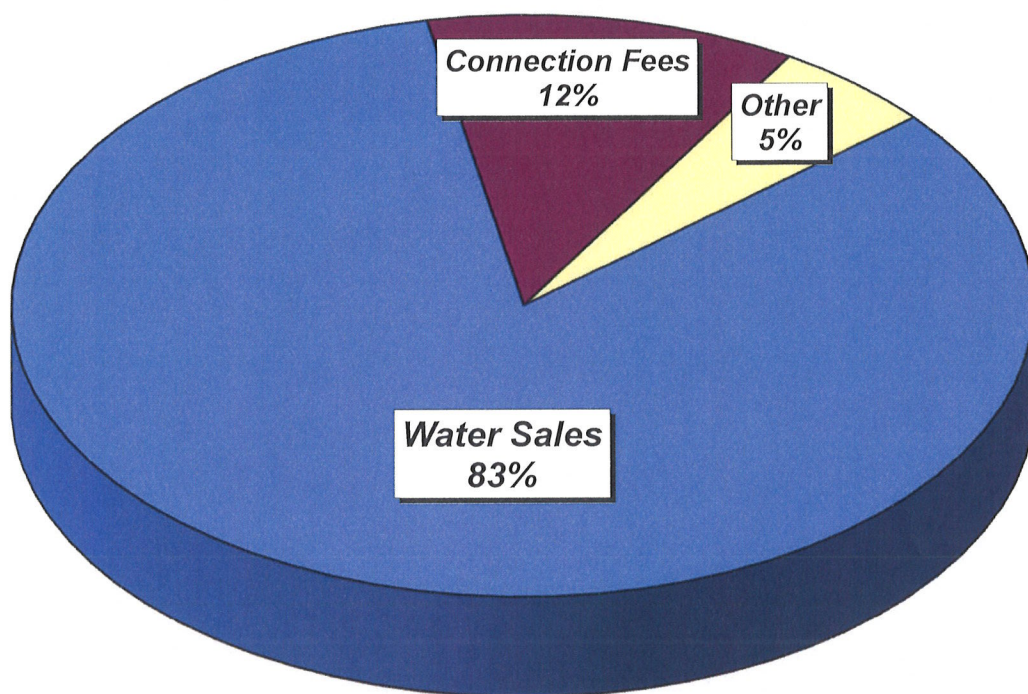
Russian River Water System

Monthly Water Bill Survey for Single Family Homes with Median Usage (7,600 gallons per month)

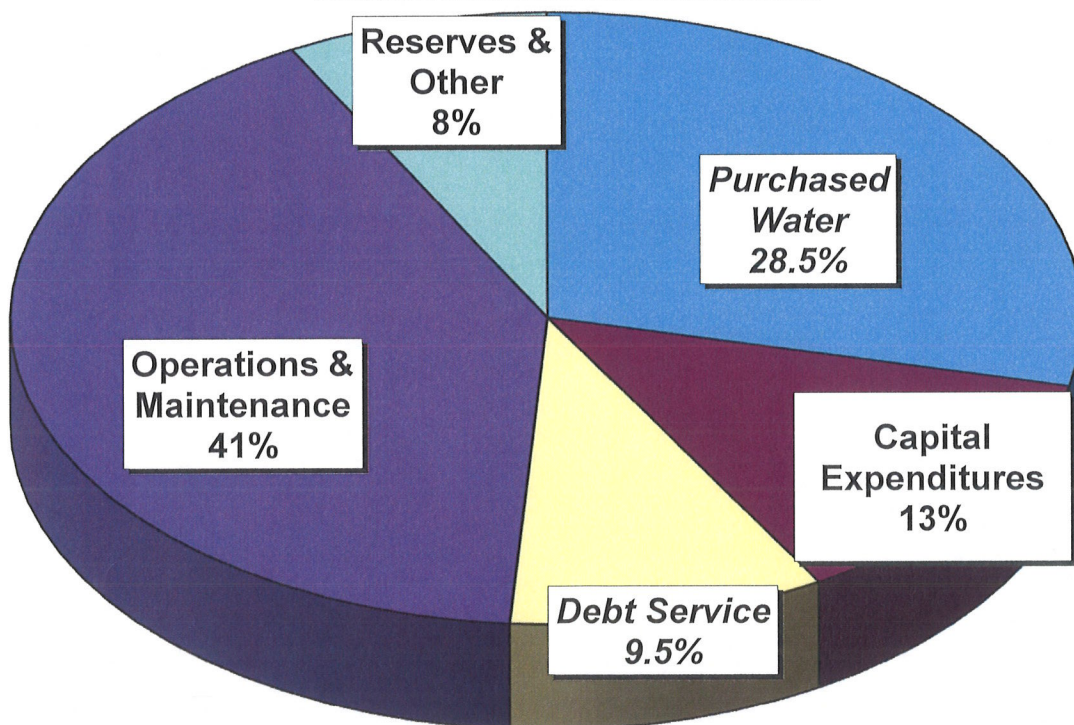


North Marin Water District - Fiscal Year 2020-21

Source of Funds: \$27.4 Million



Use of Funds: \$27.4 Million



CHARACTERISTICS OF SERVICE AREAS

Statistics (at June 30, 2021)	Water		Sewer	Total
	Novato Potable & RW	West Marin Service Area	Oceana Marin	
Service Area (Square Miles)	75	24	1	100
Active Connections	20,703	785	235	21,723
Dwelling Units	24,094	836	235	25,165
Estimated Population	61,655	1,800	500	63,955
Average Household Size (People)	2.6	2.2	2.1	2.5
FTE Employees	50.0	-	-	50.0
Fire Hydrants	2,714	172	-	2,886
Miles of Pipeline	335	26	5	366
Storage (million gallons)	39.0	1.0	-	40.0

Annual Water Volumes (MG) (FY2020-21)

Russian River Water Purchases	2,393			2,393
Stafford Water Treatment Plant	211			211
Recycled Water	257			257
Point Reyes Water Treatment Plant		74		74
Oceana Marin Wastewater Treatment			6	6
Total Water Production	2,861	74	6	2,941
RR Water Wheeled to MMWD	2,566			2,566

Annual Budget - FY2020-21

Operating Revenue	\$21,431,000	\$939,000	\$276,000	\$22,646,000
Connection Fees/Misc	1,166,000	91,000	64,000	1,321,000
Grant/Loan Proceeds	-	385,000	225,000	610,000
Contribution (To)/From Reserves	3,335,000	701,000	(68,000)	3,968,000
Total Sources	\$25,932,000	\$2,116,000	\$497,000	\$28,545,000
Operating Labor	\$6,402,000	\$349,000	\$95,000	\$6,846,000
Other Operating Expense (less Deprec)	10,652,000	211,000	112,000	10,975,000
Capital Expenditures	5,786,000	1,485,000	290,000	7,561,000
Debt Service & Other Expenditures	3,092,000	71,000	0	3,163,000
Total Outlays	\$25,932,000	\$2,116,000	\$497,000	\$28,545,000

Annual Water/Sewer Cost (FY2020-21)

to Typical Single-Family Detached Residence				
Service Charge	\$41.46/2 mo.	\$35.68/2 mo.	\$98.00/mo.	
Annual Consumption (Typical)	91,200 gal	54,000 gal		
Wt'd Avg Water Rate / 1,000 gal ¹	\$6.68	\$11.10		
Typical Annual Cost:				
Service Charge	\$249	\$214	\$1,176	
Commodity Charge	\$609	\$599	\$0	
Allocated Tax ²	\$0	\$77	\$272	
Total Annual Cost	\$858	\$890	\$1,448	

Notes

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¹ FY20 weighted average commodity rate. Rates vary by elevation zone to reflect different energy, pumping and storage costs. Novato rates ranged from \$5.50 to \$7.60 per 1,000 gallons, and in West Marin from \$9.66 to \$16.12. Average excludes tier rate charges as typical residential consumption is below tier threshold.

² FY21 allocated share of Marin County 1% ad valorem tax per active connection. Tax is collected by the County and allocated by formula to the West Marin districts.

SUMMARY FINANCIAL INFORMATION

June 30, 2021

NET ASSETS

	Total	Novato Water	Novato Recycled	West Marin Water	Oceana Marin Sewer
Assets					
Cash & Investments	\$24,597,552	\$18,662,406	\$5,280,747	\$211,380	\$443,019
Receivables & Other Assets	13,497,926	11,696,181	1,606,472	194,173	1,100
Construction-in-Progress	7,403,767	3,882,372	470,660	2,768,953	281,782
Property, Plant & Equipment (net)	131,938,165	95,236,112	30,730,706	4,990,001	981,346
Total Assets	\$177,437,410	\$129,477,071	\$38,088,585	\$8,164,507	\$1,707,247
Liabilities					
Current Liabilities	\$6,056,564	\$4,717,192	\$1,060,094	\$262,604	\$16,674
Long-Term Debt	49,696,682	35,736,289	13,395,688	564,705	-
Total Liabilities	\$55,753,246	\$40,453,481	\$14,455,782	\$827,309	\$16,674
Net Assets					
Invested in Capital Assets	\$142,839,171	\$107,248,024	\$26,595,300	\$7,536,351	\$1,459,496
Restricted & Designated Reserves	12,380,866	7,675,540	5,292,525	(461,867)	(125,332)
Earned Surplus	(33,535,873)	(25,899,973)	(8,255,022)	262,714	356,408
Net Assets	\$121,684,164	\$89,023,591	\$23,632,803	\$7,337,198	\$1,690,572

REVENUE & EXPENSE

Operating Revenue	\$25,378,535	\$22,434,080	\$1,686,124	\$981,971	\$276,360
Operating Expense	24,624,169	21,761,527	1,529,983	1,039,650	293,009
Operating Income/(Loss)	\$754,366	\$672,553	\$156,141	(\$57,679)	(\$16,649)
Non-Operating Revenue/(Expense)	(303,499)	(209,914)	(207,926)	49,215	65,126
Net Income/(Loss)	\$450,867	\$462,639	(\$51,785)	(\$8,464)	\$48,477

CASH FLOW

Net Income/(Loss)	\$450,867	\$462,639	(\$51,785)	(\$8,464)	\$48,477
Add Back Depreciation	3,887,096	2,857,337	786,073	199,315	44,371
Cash Generated	\$4,337,963	\$3,319,976	\$734,288	\$190,851	\$92,848

Other Sources/(Uses)

Connection Fees	\$3,496,089	\$3,496,089	-	-	-
Capital Asset Acquisition	(3,853,557)	(2,305,508)	-	(1,510,796)	(37,253)
Principal Paid on Debt	(2,111,920)	(1,379,754)	(683,339)	(48,827)	-
Grant Proceeds	86,060	-	-	-	86,060
Caltrans Capital Contributon	10,733	10,733	-	-	-
Connection Fee Transfer	-	(890,072)	890,072	-	-
Working Capital & Miscellaneous	383,367	62,126	(111,395)	432,406	230
Total Other Sources/(Uses)	(\$1,989,228)	(\$1,006,386)	\$95,338	(\$1,127,216)	\$49,036
Net Cash Generated/(Used)	\$2,348,734	\$2,313,590	\$829,627	(\$936,365)	\$141,882

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HISTORICAL STATISTICS

Fiscal Year Ending June 30:		2021	2020	2019	2018	2017
Active Services	-Novato Water	20,607	20,554	20,546	20,543	20,544
	-Novato Recycled	96	91	91	66	47
	-West Marin Water	785	782	783	783	780
	-Oceana Marin Sewer	235	235	234	234	231
	Total Active Services	21,723	21,662	21,654	21,626	21,602
Full-Time Equivalent (FTE) Employees		50.0	50.0	52.0	53.0	53.7
FTE Employees per 1,000 Active Services		2.3	2.3	2.4	2.5	2.5
Property, Plant and Equipment (millions)		\$207.5	\$202.6	\$198.5	\$194.1	\$182.8
FTE Employees per \$1M Capital Assets		0.24	0.25	0.26	0.27	0.29
Miles of Pipeline		366	365	364	364	364
Storage (MG)		40.0	40.0	40.0	40.0	39.4

Water Production (MG)

Point Reyes Treatment Plant	74	76	81	81	66
Stafford Treatment Plant	211	686	567	646	756
Recycled Water	257	229	191	155	144
Russian River Water Purchases	2,380	1,919	1,863	1,947	1,681
Total Water Production	2,923	2,910	2,702	2,829	2,647
Wheeled to Marin Municipal WD	2,566	1,800	1,728	1,683	1,670

Novato Service Area Average Day Potable Water Production(MG)

Annual	7.1	7.1	6.7	7.1	6.7
Peak Month	11.6	14.5	11.9	10.7	10.0
Peak Week	12.7	16.2	11.4	10.3	10.6
Peak Day	14.4	18.1	13.7	13.2	15.6

Financial History

Source of Funds						
	Water Sales	\$24,756,773	\$23,162,788	\$21,147,467	\$21,328,795	\$18,136,626
	Investment Earnings	215,069	632,208	484,686	243,752	156,662
	Tax Revenue	125,416	120,821	115,706	109,908	107,089
	Grant Proceeds	86,060	336,398	20,191	592,907	5,061,105
	Connection Fees	3,496,089	1,531,535	1,492,380	1,455,400	1,034,585
	Loan Proceeds	-	-	-	6,393,836	1,899,538
	Other Sources	1,114,838	3,718,247	1,698,238	1,413,583	5,981,896
	Reserves	(2,348,734)	(3,310,144)	(2,058,410)	(5,011,576)	2,937,250
		<u>\$27,445,511</u>	<u>\$26,191,853</u>	<u>\$22,900,258</u>	<u>\$26,526,605</u>	<u>\$35,314,751</u>
Use of Funds						
	Purchased Water	\$8,536,957	\$6,978,395	\$5,383,444	\$5,350,855	\$4,469,632
	Operation & Maintenance	12,200,113	12,428,759	10,987,701	11,110,175	10,630,056
	Debt Service	2,849,550	2,920,230	2,749,713	2,201,451	2,527,022
	Capital Expenditures	3,853,557	3,419,820	3,989,561	11,270,831	12,488,621
	Other Uses	5,334	444,649	(210,161)	(3,406,707)	5,199,420
		<u>\$27,445,511</u>	<u>\$26,191,853</u>	<u>\$22,900,258</u>	<u>\$26,526,605</u>	<u>\$35,314,751</u>
Net Assets						
	Assets	\$177,437,410	\$174,194,976	\$167,702,424	\$166,351,644	\$159,886,280
	Liabilities	55,753,246	57,481,213	56,903,171	59,528,196	55,974,308
	Net Assets	<u>\$121,684,164</u>	<u>\$116,713,763</u>	<u>\$110,799,253</u>	<u>\$106,823,448</u>	<u>\$103,911,972</u>

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