




# Annual Report

Fiscal Year 2021 – 2022



**NORTH MARIN  
WATER DISTRICT**

The background features a light blue gradient with several decorative elements: a large light blue circle in the top left corner, a smaller dark blue circle in the top right, a large solid blue circle in the bottom left, and a series of thin, light blue wavy lines in the bottom right.

**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.**

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## Board Meetings

Regular Board meetings are held on the first and third Tuesday of each month at 6pm.

Meetings are normally held at:  
North Marin Water District  
999 Rush Creek Place  
Novato

For meeting agendas, contact the District Secretary at 415-761-8921 or visit the website at [nmwd.com](http://nmwd.com).

# Board of Directors 2021–2022



**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 2021–2022



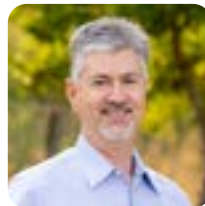
**Drew McIntyre\***  
General Manager  
Appointed 1998



**Terrie Kehoe**  
District Secretary  
Appointed 2018



**Julie Blue**  
Auditor-Controller  
Appointed 2018

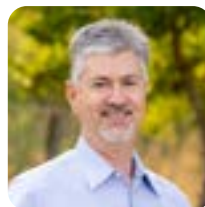


**Tony Williams\*\***  
Assistant General Manager /  
Chief Engineer  
Appointed 2020

# Department Managers 2021–2022



**Julie Blue**  
Administration & Finance



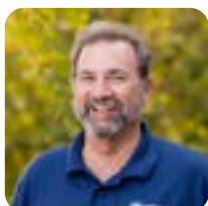
**Tony Williams**  
Engineering



**Pete Castellucci**  
Construction/Maintenance



**Chris Kehoe**  
Construction/Maintenance



**Robert Clark**  
Operations/Maintenance

\*Drew McIntyre retired in May after 25 years of service.

\*\*Tony Williams was appointed General Manager May 2022.





**NORTH MARIN  
WATER DISTRICT**  
999 RUSH CREEK PLACE

BILL 0610



# Historical Highlights 1948 – 2002

- 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 of 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 North Marin Water District 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 Water District 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 North Marin Water District 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 North Marin Water District to serve areas within Novato formerly served by MMWD.

# Historical Highlights 2005 – 2018

- 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 North Marin Water District headquarters.





# Historical Highlights 2019 – 2022

**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 65MG 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 20 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 20 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).

**2022** The District was awarded \$464,019 under the state's Small Community Drought Relief Grant program for the construction of the Gallagher Well No. 2 in West Marin, which commenced in February 2022.

As part of the District's 2018 Strategic Plan, Goal 1, the District participated in Sonoma Water's Regional Water Supply Resiliency Study, and initiated its own Local Water Supply Enhancement Study (LWSES) which evaluated numerous water supply strategies ranging from groundwater to recycled water expansion. The Board held two Public Workshops for the LWSES, one in January and another in April 2022 to review the potential water supply alternatives, evaluation criteria, and to solicit public feedback.

The Board approved the North Marin Water District Office Building and Laboratory Upgrade Project in early 2022 and authorized the award for construction on May 3rd 2022 in the amount of \$11,614,000. The project is expected to be complete in late 2023.

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



# Message from General Manager Tony Williams

North Marin Water District (District) 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 Water District's accomplishments in Fiscal Year (FY) 2021-22 and provides a snapshot of our current efforts and financial performance.

The last couple of years have presented many challenges and the past fiscal year was not much different with continuing historic drought and the ongoing impacts from COVID-19 and subsequent variants. Fortunately, there were no impacts from regional fires or significant power outages in FY 21-22. The District also saw the departure of two long-time key employees, Tony Arendell and Drew McIntyre, who together had close to 60 years of combined service to the District.

This year local water supply from Stafford Lake totaled 168.1MG and provided up to 24% of peak summer (i.e., July 2021) demand on a monthly basis and only 8% of annual demand. Rainfall in Novato totaled 18.25" which was 69% of average. There was a significant increase in Lake storage levels in the winter of 2022 due to welcomed storms in October and December. Consequently, the maximum storage capacity this year peaked at Elev. 191.5 (77% total capacity) at the end of April 2022. Stafford Lake storage did increase slightly as well from a short period of backfeeding that provided approximately 39 acre-feet of Russian River winter flows.

The Russian River water delivery system operated by Sonoma Water typically provides 75-80% of Novato's water supply. In FY 21-22, despite moderate rainfall as stated above, imported water represented 92% of potable water and 78% of total

water supply (potable and recycled). As a result of the ongoing drought, the District's Emergency Water Conservation Ordinance 41 remained in effect for the Novato Service Area, and on July 1st a Stage 2 mandatory 20% reduction in water use took effect. Ordinance 41 was modified in October 2021 to extend the Stage 2 condition; and in June 2022, additional modifications were made to update violation procedures and fine amounts.

Due to consistent drought conditions in the Russian River Watershed, the State Water Resources Control Board (SWRCB) issued an order on June 17, 2022 that reduced minimum instream flow requirements in the upper and lower Russian River to 25 cubic feet per second (cfs) and 35 cfs, respectively. The Temporary Urgency Change Order (TUCO) also required that Sonoma Water 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 Sonoma Water, allows them 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 Water District has previously expanded its distribution of recycled water, which supplies large landscape irrigation customers and various commercial car washes in Novato. Recycled water continued to be a component in the overall lowering of potable demand in Novato and the number of active customers grew to 97. In total, recycled water use reached 252.3MG, just a slight drop compared to the previous year.

To improve water use efficiency, accuracy and customer service, North Marin Water District 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 Water District's headquarters via wireless communication providing early leak detection and real time water use information. This system has proven to be a beneficial tool for our customers and staff for monitoring usage, changing usage, and detecting leaks.

In West Marin, normal year water supply conditions on Lagunitas Creek became effective on March 2022 (FY22) since the Marin Water reservoirs received significantly more rainfall than other parts of the Bay Area. Emergency Water Conservation Ordinance 39 remained in effect but only as dry year conditions ended in FY2021-22 with total rainfall of over 45" on April 1st, well above the normal year minimum threshold of 28". Consequently, Ordinance 39 restrictions for a Stage 2 25% mandatory water use reductions was removed and a voluntary 15% reduction (Stage 1) was enacted.

With respect to capital improvement projects, the construction of the Gallagher Well No. 2 project commenced in early 2022 after a series of appeals to halt the project were successfully denied with a final determination of the California Coastal Commission on October 15, 2021. The project was awarded \$464,019 under the state's Small Community Drought Relief Program in December 2021. The District successfully completed an application under the Hazard Mitigation Grant Program through CalOES and FEMA for the Lagunitas Creek Bridge Pipeline project in April 2022. If successful, an award is expected in early 2023. On July 1, 2021, a 6% Novato and West Marin revenue rate increase became effective. This included a drought surcharge consisting of a percent increase relative to water shortage stage condition (normal supply conditions = \$0 surcharge). Water remains a good value for Novato and West Marin customers.



Colin Davenport,  
Electrical/  
Mechanical  
Technician

# Water Supply

## Novato

### **Stafford Lake – Local source provides 20-25% 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. In FY 2021-22, 515.8 acre feet (168.1MG) of water was produced from the facility between July and October.

### **Russian River – Provides 75-80% 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 46,200-acre feet in FY 2019-20. Releases from the lakes flow to a point about 10 miles upstream of Guerneville (see map on page 31 of this report), where six collector wells draw river

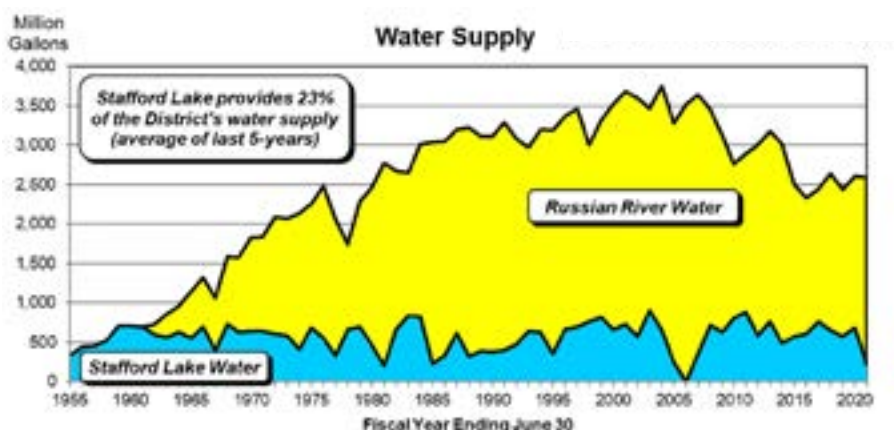
water that has been filtered through 60 to 90 feet of natural sand and gravel to perforated pipes located at the bottom of each well. The thick layer of sand and gravel through which the water must pass before reaching the intake pipes provides a highly efficient, natural filtration process which, with chlorination treatment, produces a clear, potable, bacteria-free water. This water is then fed directly into the SCWA aqueduct system.

In FY 21-22, North Marin received 5,797-acre feet (1,889MG) 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.

## West Marin

### **Groundwater Wells – Local source provides 100% of North Marin’s supply.**

Three active wells provide water for our West Marin customers: Coast Guard Well #2, Coast Guard Well #4 and Gallagher Well No. 1. In FY 21-22, 176.5-acre feet (57.5MG) of water was produced from a combination of these wells. Construction of the new Gallagher Well No. 2 is expected to be complete in FY 22-23 which will provide approximately 180,000 gallons per day to the water system.





Smart move.



NORTH MARIN  
WATER DISTRICT



# Administration

## Administration

The Administration Department is comprised of 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 104,000 bills and reminder notices annually. During the year, field staff responded to 1,046 customer calls for water service assistance and received a 95% 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 21-22 budget. A 6% rate increase was approved by the Board of Directors effective July 1, 2021. 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.
- 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 33) showed that North Marin's cost of water service in Novato ranked ninth out of the 17 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, 2021. This is the 13th 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 FY 20-21 Comprehensive Annual Financial Report: Previous General Manager Drew McIntyre, Julie Blue, Nancy Holton, and Nancy Williamson. The approved audited financial statements for fiscal year ended June 30, 2022 was submitted to GFOA for award consideration in December 2022.

**Below image, front left to right:** Connie Filippi (Account Clerk II), Karen Clyde (Human Resources and Safety Manager), Terrie Kehoe (District Secretary), and Nancy Williamson (Accounting Supervisor).

**Back row left to right:** Nancy Holton (Accounting Supervisor), Shawn Cane (Storekeeper), and Julie Blue (Auditor/ Controller).



Fiscal year 2022 financial highlights include:

- The District, on a consolidated basis, received 99% of budgeted operating revenue and expended 114% of budgeted operating expenditures, resulting in a net loss of \$3.3 million. Four million (36%) of the Capital Improvement Project Budget was expended. The year ended with a cash balance of \$44.7 million, an increase of \$20 million from the prior year.
- Novato potable water consumption decreased 20% from the prior fiscal year. Stafford Lake Water Treatment Plant produced 168MG, down 20% from the prior fiscal year. The net loss of \$3.3 million exceeded the \$34,000 budgeted net loss, and compares to a net income of \$463,000 the prior fiscal year. Novato Water ended the fiscal year with a cash balance of \$37.1 million. A 6% increase applicable to Novato Water customers was approved effective July 1, 2021.
- The Novato Sanitary District and Las Gallinas Valley Sanitary District, along with the Deer Island Recycled Facility, combined to produce 252MG of Recycled Water, down 2% from the prior fiscal year. The fiscal year net income of \$83,000 was greater than the \$448,000 budgeted net loss, and compares to a net loss of \$52,000 the prior fiscal year. Recycled Water ended the fiscal year with a cash balance of \$6.2 million. A 6% increase applicable to Recycled Water customers was approved effective July 1, 2021.
- West Marin Water consumption was down 25% from the prior fiscal year. The \$136,000 net loss compares to a budgeted net income of \$165,000 and to a net loss of \$8,000 from the prior fiscal year. West Marin Water ended the fiscal year with a cash balance of \$793,000. A 6% increase applicable to West Marin Sewer customers was approved effective July 1, 2021.
- Oceana Marin Sewer's net income of \$48,000 compares to a budgeted net income of \$92,000 and to net income of \$48,000 from the prior fiscal year. Oceana Marin ended the year with a \$485,000 cash balance. A 5% increase applicable to Oceana Marin Sewer customers was approved effective July 1, 2021.



# 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 the District's customers in Novato and West Marin. Engineering functions for wastewater-related facilities are also provided by the Engineering Department to support the District'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 the District's regulations.



Replacing 6" AC Pipe - Glen Rd

## Novato

In the Novato service area, 17 capital projects were originally budgeted. An additional 11 projects were added, four projects were carried over from the previous fiscal year, and no projects were deferred, resulting in an adjusted total of 32 projects. The Engineering Department oversaw 23 of the 32 projects, and 16 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.



STP - Coat top of concrete clearwells

## West Marin

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 11 projects. The Engineering Department oversaw eight of the 11 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.



PRE Tank 4A Replacement







# Water Conservation and Communications

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.

Residential activities include residential water use surveys, high-efficiency washing machine (HEW) rebates (26 rebates), high-efficiency toilet (HET) replacements (133 rebates), a Cash-for-Grass Program (68 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, HEW 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. All 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 FY 22, the District continued working 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 completed the Novato “Waterline” Newsletters (distributed in Spring and Fall each year). 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. This past fiscal year, the District also embarked on an outreach campaign aimed specifically at informing customers about the Local Water Supply Enhancement study and also the regional study being performed by Sonoma Water. This campaign included newspaper advertisement, social media posts and public workshops.

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 HEW, HETs, 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.







Crew performing a "wet tap" on a 16in PVC water main for the Hamilton Village development.



# Construction and Maintenance Department

The Construction and Maintenance Department installs, upgrades, repairs and replaces water main pipelines and their appurtenances on a regular basis in a constant effort to maintain and improve our water facilities and distribution system. Some of these appurtenances may include water services, water meters, fire hydrants, fire services, isolation valves, air relief valves, and water tanks for both potable and recycled water systems. Our facilities and responsibilities are in Novato, West Marin and the sewer system for Oceana Marin. Contractors and developers also regularly call upon this Department to install, inspect and ultimately assume control of these assets.

The Construction and Maintenance Department is also responsible for upgrading water line sizes and meters to comply with Novato Fire Protection requirements for fire sprinklers and City of Novato requirements for accessory dwelling units (ADU). The Department's distribution crew is responsible for flushing and disinfection of pipelines, leak detection, marking and locating our facilities (as part of the Underground Service Alerts system "USA") and operating and performing maintenance on approximately 12,000 valves and close to 3,000 fire hydrants in the Novato and West Marin areas.

During FY 21-22, North Marin Water District Construction and Maintenance crews replaced or repaired 41 polybutylene (Pb) services and 21 copper water services due to leaks. Upgrades were made to 19 water services for fire sprinklers and 11 for ADUs, and new installations were completed for two new recycled water services and two new single-family residences. Crews also repaired 17 different water main leaks and replaced three inline valves.

In addition to fixing leaks, crews are working on developer jobs and District capital improvement projects. This past year, some of these developer jobs include Redwood Credit Union upgrades (water service, fire service, fire hydrant), Bel Marin Keys Blvd upgrades, Hamilton Landing Homes, Atherton Place Homes, Landsea Homes,

Springbrook Homes, Bridge Road Improvements and the Silver Hills neighborhood in West Marin for a culvert replacement project. Some notable capital improvement projects are Old Ranch Rd Tank replacement, ongoing Pb service replacements, the District Yard Main Loop project and the construction of the new Gallagher Well No. 2.



Crew installing a tee for Gallagher Well Project in West Marin

North Marin Water District Construction and Maintenance staff are on call and ready to respond to emergencies at all times including nights, weekends and holidays. This department is first to respond to service leaks, water main breaks or any other concerns that our customers may have. Our goal is to work hand-in hand with the public, developers/contractors and other local municipality agencies to provide water and reliable facilities to North Marin Water District customers at all times.



Jessica Nommsen,  
Chemist

# Operations and Maintenance Division

The Operations and Maintenance (O&M) Division 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 program and monitoring water loss. The O&M staff also oversee Environmental, Water Treatment and Distribution operational permits, Waste Water operational permits, and Water Quality compliance reporting.

## Operations Group

The Operations Group employs 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 team 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 Operations Group manages the potable water supply and distribution systems for Novato and West Marin communities and the wastewater system in Oceana Marin as well as the Novato recycled water transmission and distribution systems. They balance 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.



Stafford Treatment Plant operators training with the Marin County Hazardous Materials Response Team at the plant in Novato.

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 1.5MG of recycled water storage and 17 miles of distribution mains providing 95 customer sites with recycled water from Deer Island, Novato Sanitary District and the Las Gallinas Valley Sanitary District Recycled Water Treatment Facilities. In FY 21-22, 10% of the water supplied to our Novato customers was recycled water, 11% was from Stafford Lake Treatment Plant, and the remaining 79% was from Sonoma Water.

In West Marin, the group operates the Lagunitas Creek wells, Point Reyes Treatment Plant, six pump stations, and 13 storage tanks in Point Reyes Station, Olema, Inverness Park, Paradise Ranch Estates, and Bear Valley. The department also operates and maintains nine miles of sewer collection piping and a 90,000 gallon per day facultative wastewater treatment pond with an eight acre irrigation field for the wastewater system in Oceana Marin.

During FY 21-22, the Operations and Maintenance Division conducted over 500 routine maintenance tasks and implemented several improvement projects, including: Replacing Chemical Tank #2 at the San Marin Pump Station; double containment recoating the chemical storage area; overhauling the pressure regulation stations in Black Point, Novato (at Harbor Drive and Iolanthus Avenue); installing an in-tank mixing system at the Black Point tank; overhauling the chlorine dioxide generator; removing and replacing two variable frequency drives for the Stafford Lake Treatment Plant high-service pump station; rebuilding sodium hydroxide pumps and controls; installing ferric chloride supply piping; and replacing seven chemical pumps.

The annual Chemical Bid Program resulted in increased costs for the four primary treatment plant chemicals - Ferric Chloride, Chlorine, Sodium Hypochlorite and Sodium Hydroxide - which were up by 77% on average.





Gallagher Well field during the Gallagher well #2 testing. Water was provided to several local ranchers at no cost during the drought.

## Maintenance Group

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

The Group works closely with the Engineering and Construction Departments 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.



Novato residential recycled water fill station.



Stafford Treatment Plant High-Service Pump Station variable frequency drive replacement.

## Water Quality Group

The Water Quality Group is a team of five chemists and lab technicians who provide oversight to all aspects of North Marin Water District's operations, ensuring that water quality is protected using a multi-barrier approach.

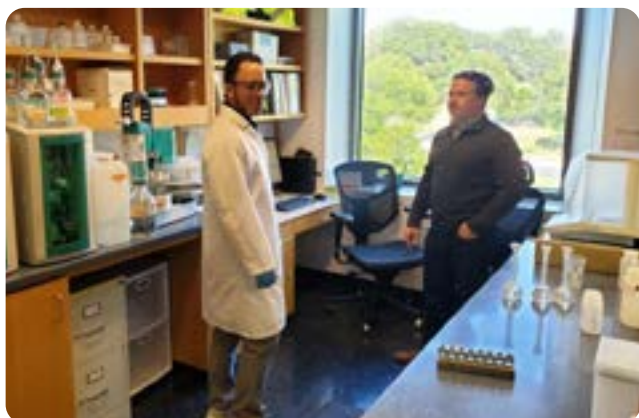
The primary goal of the District is for water at every tap to be safe and taste good. The objectives toward meeting this goal, collaboratively established by the District's Board of Directors and staff, are to meet or exceed all regulatory standards, work to control or prevent all adverse tastes and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

Surveillance and monitoring is performed at multiple points from source to tap. During FY 21-22, the District's laboratory performed over 13,000 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 respond to customer calls with specific information on water quality.

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. 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.

Salinity levels continue to rise above North Marin Water District's customer notification level (50mg/L sodium) despite the blending of the Gallagher well water with the Coast Guard wells. The good news for the Point Reyes customer base is that the new Gallagher well was completed and the salinity levels have dropped and stayed below the notification levels through the end of the year.



Pablo Ramudo and Marc Reischmann organizing the temporary laboratory facilities at the Buck Institute.

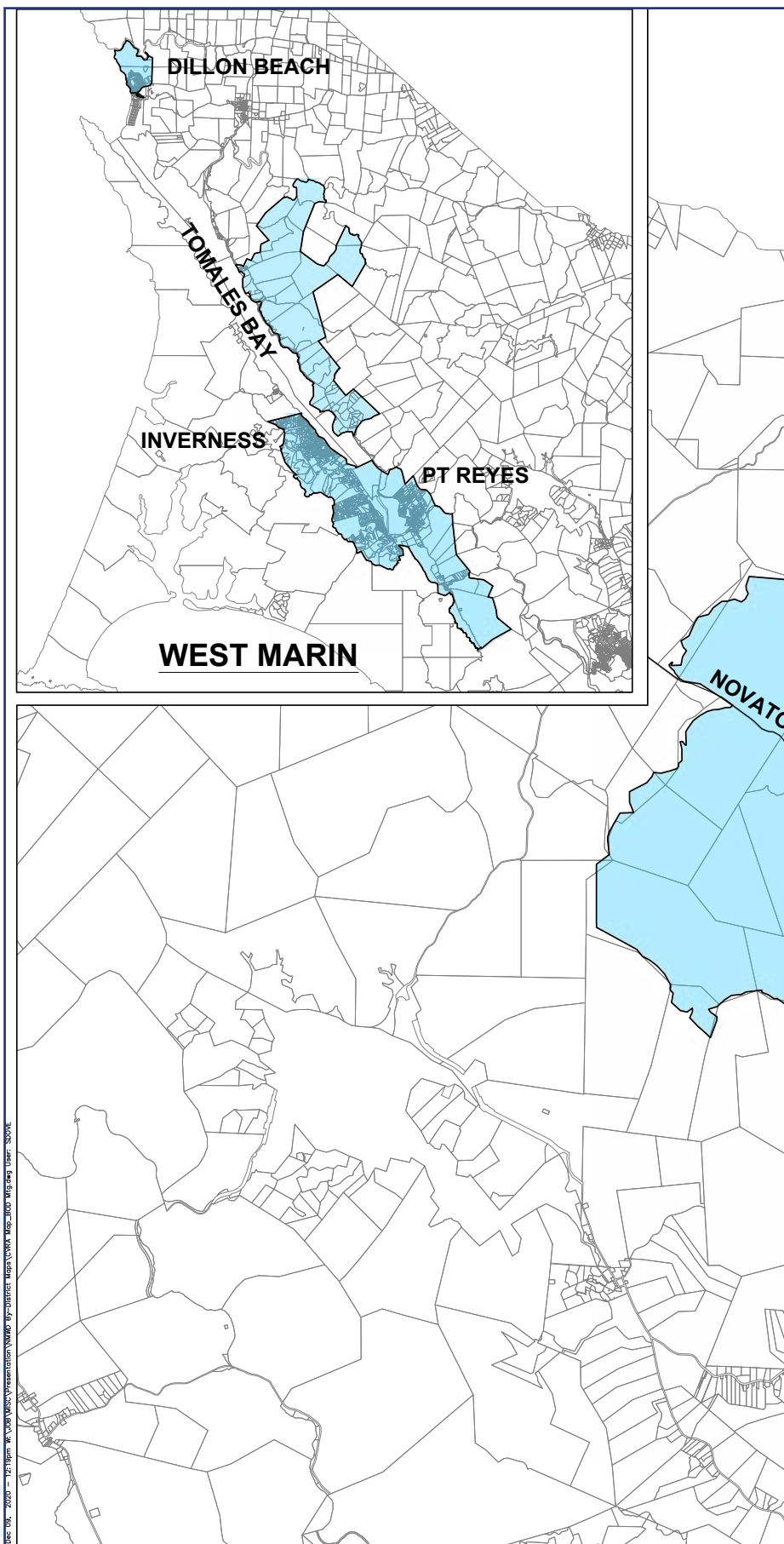
The quality of water in the Novato and Point Reyes distribution system met all regulatory requirements. Operational controls to maintain chlorine residuals were effective in maintaining disinfection. The distribution water quality programs including flushing and cross-connection control were performed. Storage tanks were given their full annual inspection by the Operations and Maintenance staff, which helps determine tank-cleaning priorities.

Between August and December, Water Quality staff completed a series of monitoring samples for cyanotoxins in Stafford Lake and the treated water from the Stafford Lake Treatment Plant. No toxins were ever detected in the treated water and it is not expected that they can make it through the chemical treatment and absorption through granular activated charcoal.

In 2019 the District transitioned from an “At-large” to a division-based election system in conformance with the California Voting Rights Act of 2001.

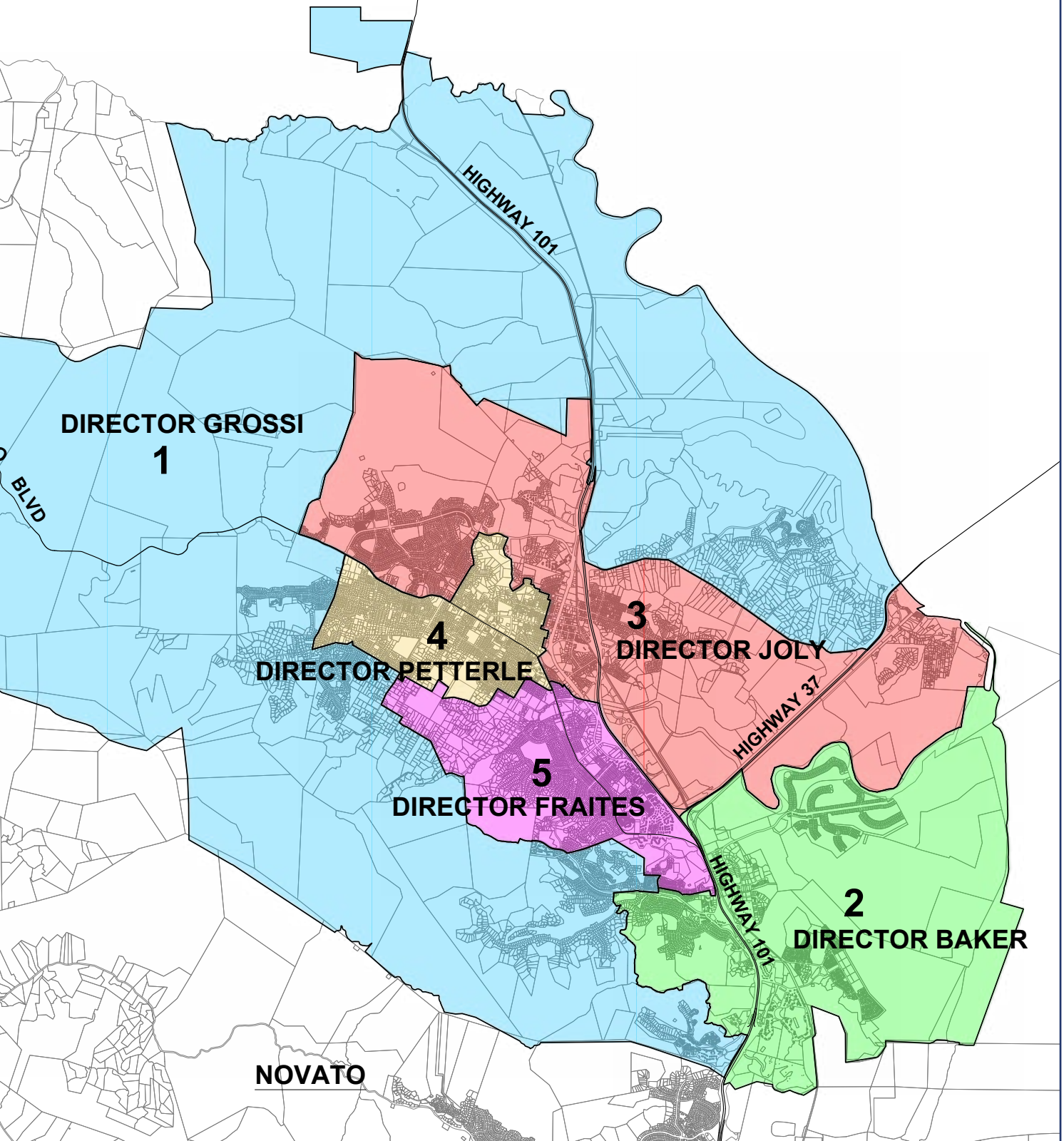
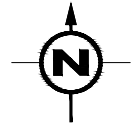
The map to the right depicts the boundaries of the five Divisions within the territorial boundary of the District. After the 2020 Census was developed and the data made available, there were no significant population shifts that required adjustments in division lines.

In fact, the 2020 Census data indicated improved population balance among the District’s five electoral divisions, meaning that the current districts as shown in the map comply with the constitutional requirement that the districts have equal population.





**NORTH MARIN WATER DISTRICT  
FINAL DIVISION MAP  
JULY 9, 2019**



The District has a unique territorial boundary (or boundaries as indicated) that includes: the Novato Water System that covers all of the City of Novato and surrounding unincorporated areas; the West Marin Water System that covers Point Reyes Station, Olema, Bear Valley, Silver Hills, Inverness Park and Paradise Ranch Estates; the Oceana Marin Wastewater System; and an area on the eastern side of Tomales Bay near Marshall that currently has no services available.

## North Marin Water District Boundary Map

- Marin County
- North Marin Water District Service Boundary



**NORTH MARIN  
WATER DISTRICT**



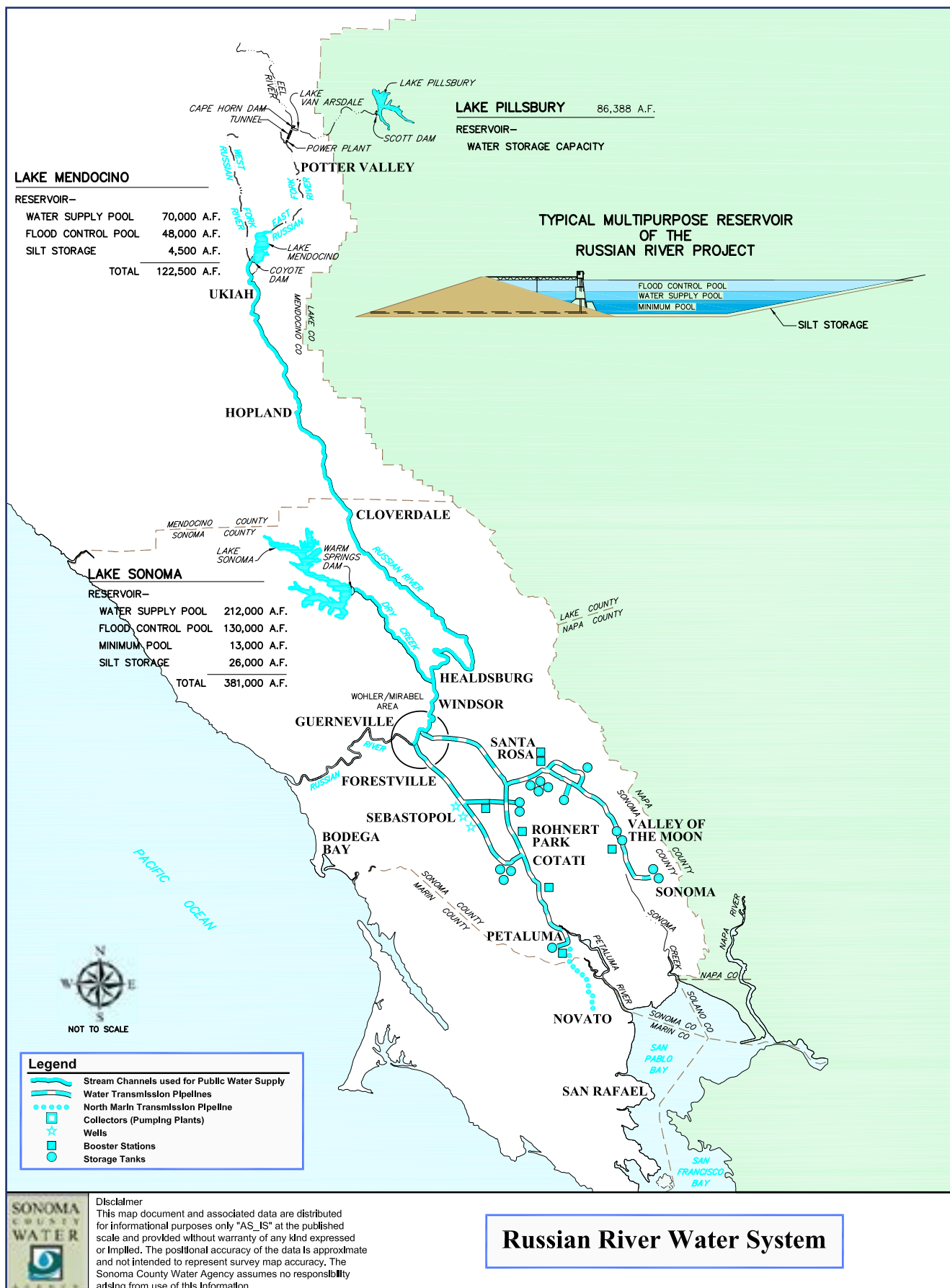



The District has been a long-time water contractor with Sonoma Water and received approximately 75 to 80% of its annual water supply from the Russian River.

The Russian River watershed includes two major reservoirs, Lake Mendocino and Lake Sonoma, which provide not only critical water supply but also flood protection for communities in Mendocino and Sonoma counties. The Russian River water is naturally filtered and, after disinfection by Sonoma Water, it is delivered to the water contractors through a series of large transmission pipelines or “aqueducts.”



Avram Pearlman  
and Joe Kauwe of  
Engineering



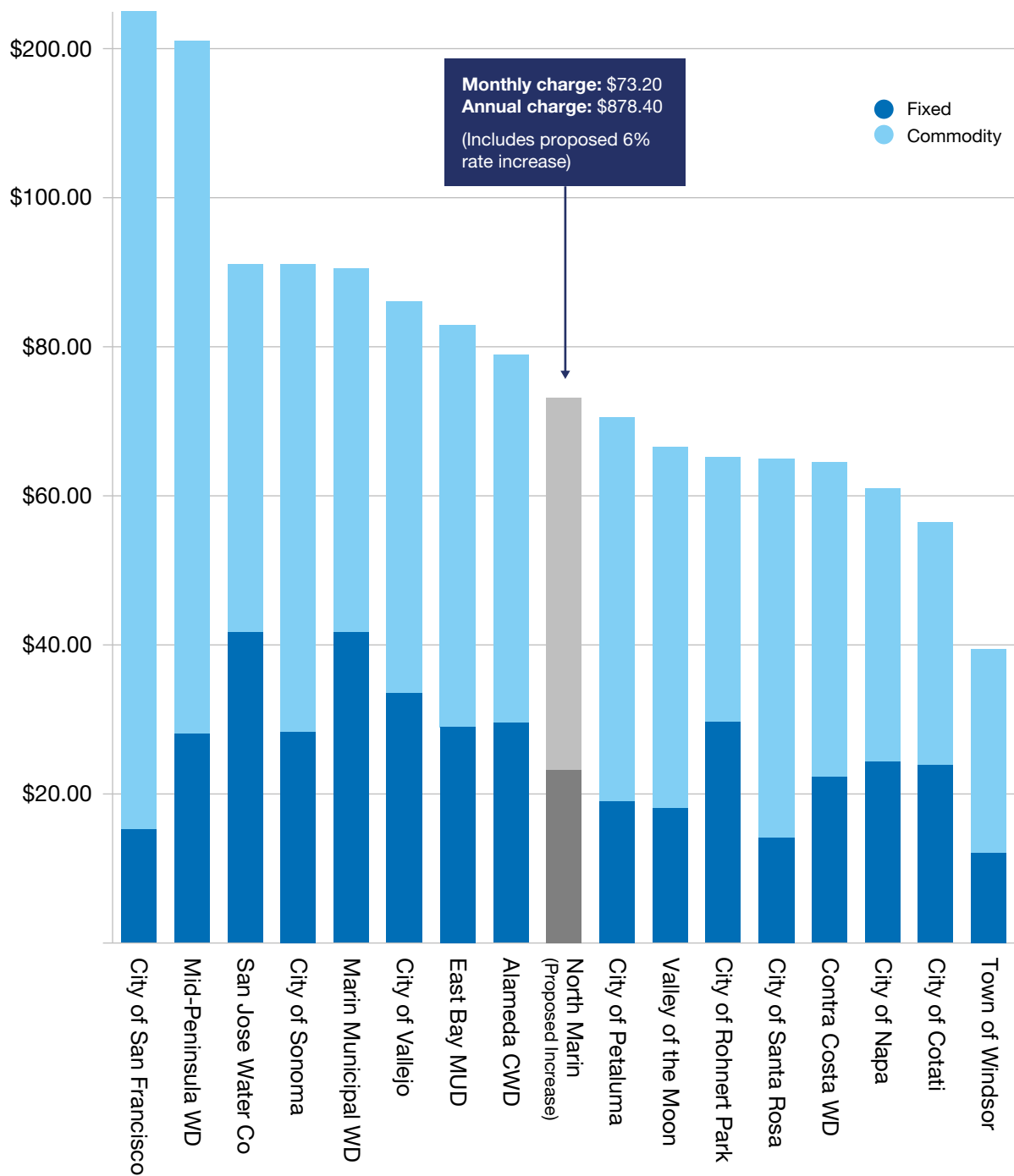
A man, Roy Foster, is smiling and looking at the camera. He is wearing a blue baseball cap with a logo that says "MARIN COUNTY". He is wearing a bright red protective suit with white reflective stripes. A black strap with a large, clear, circular viewing port is attached to his chest. The background is a blurred industrial setting with metal structures and pipes.

Roy Foster,  
Water Distributor  
& TP Operator



# Novato Water Rate Comparison 2022

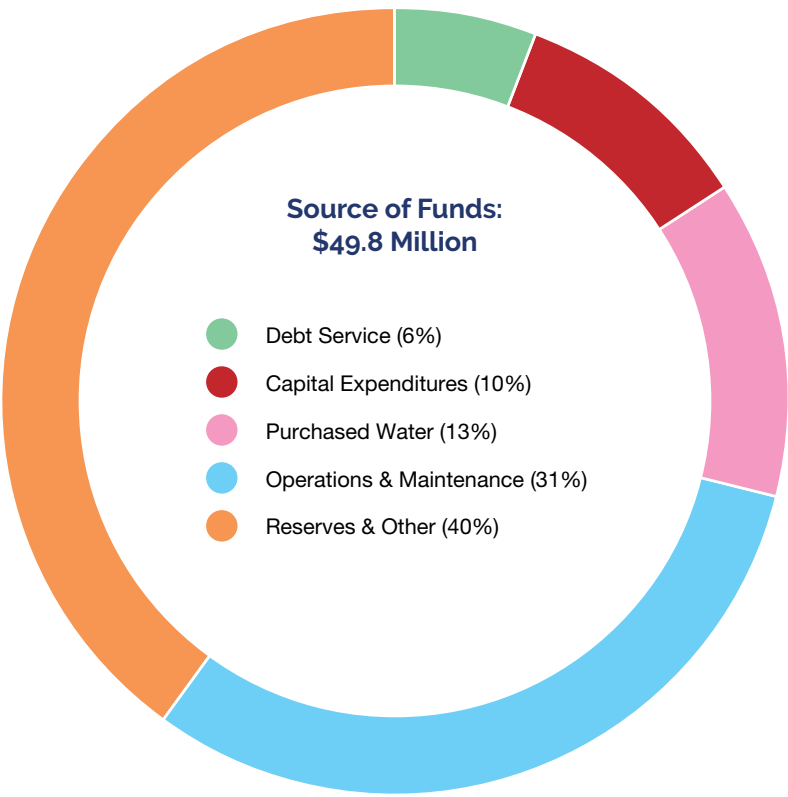
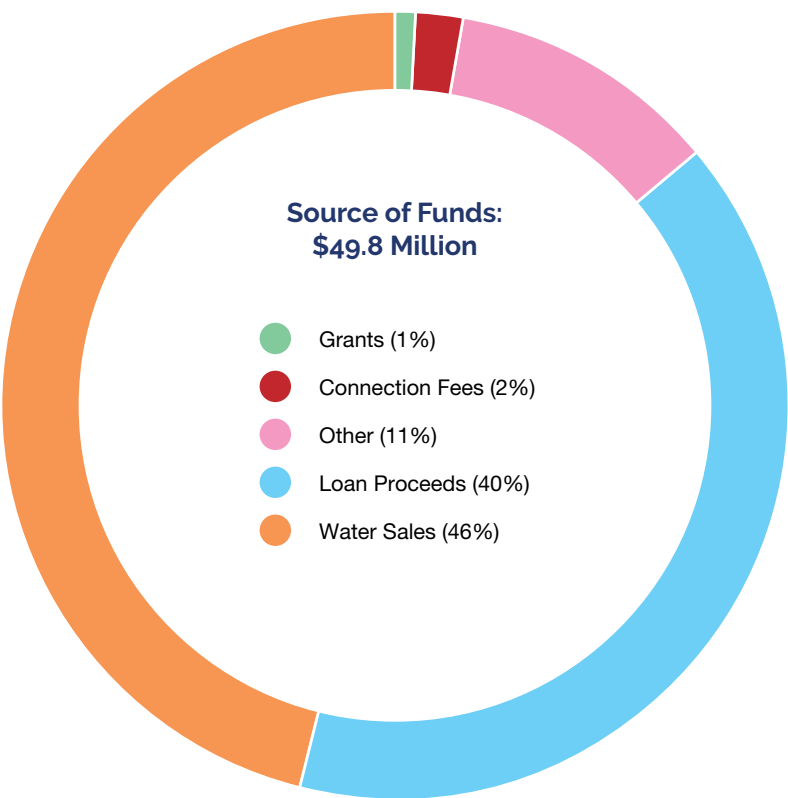
Monthly water bill survey for single family homes with median usage (8,050 gallons per month)





Eileen Mulliner,  
Engineering  
Secretary

# Source and Use of Funds







Kent LeBrun,  
Maintenance  
Supervisor

# Characteristics of Service Areas

	Water		Sewer	
Statistics (at June 30, 2021)	Novato Potable & RW	West Marin Service Area	Oceana Marin	Total
Service Area (Square Miles)	75	24	1	100
Active Connections	20,797	789	235	21,821
Dwelling Units	24,094	837	235	25,166
Estimated Population	61,693	1,800	500	63,993
Average Household Size (People)	2.6	2.2	2.1	2.5
FTE Employees	51.0	-	-	51.0
Fire Hydrants	2,722	172	-	2,894
Miles of Pipeline	341	26	5	372
Storage (million gallons)	39.0	1.0	-	40.0
<b>Annual Water Volumes (MG) (FY2021-22)</b>				
Russian River Water Purchases	1,889			1,889
Stafford Water Treatment Plant	168			168
Recycled Water	230			230
Point Reyes Water Treatment Plant		53		53
Oceana Marin Wastewater Treatment			6	6
<b>Total Water Production</b>	2,287	53	6	2,346
RR Water Wheeled to MMWD	2,786			2,786
<b>Annual Budget - FY2021-22</b>				
Operating Revenue	\$22,329,000	\$1,012,000	\$290,000	\$23,631,000
Connection Fees/Misc	1,168,000	62,000	64,000	1,294,000
Grant/Loan Proceeds	3,125,000	550,000	1,450,000	5,125,000
Contribution (To)/From Reserves	2,768,000	242,000	-1,000	3,009,000
<b>Total Sources</b>	\$29,390,000	\$1,866,000	\$1,803,000	\$33,059,000
Operating Labor	\$6,787,000	\$371,000	\$99,000	\$7,257,000
Other Operating Expense (less Deprec)	11,049,000	239,000	110,000	11,398,000
Capital Expenditures	7,312,000	1,085,000	1,590,000	9,987,000
Debt Service & Other Expenditures	4,242,000	171,000	4,000	4,417,000
<b>Total Outlays</b>	\$29,390,000	\$1,866,000	\$1,803,000	\$33,059,000
<b>Annual Water/Sewer Cost (FY2021-22)</b>				
to Typical Single-Family Detached Residence	Novato	West Marin		
Service Charge	\$43.95/2 mo.	\$42.59/2 mo.	\$108.00/mo.	
Annual Consumption (Typical)	97,000 gal	52,200 gal		
Wt'd Avg Water Rate / 1,000 gal 1	\$6.93	\$11.82		
Typical Annual Cost:				
Service Charge	\$264	\$256	\$1,296	
Commodity Charge	\$672	\$617	\$0	
Allocated Tax 2	\$0	\$82	\$289	
<b>Total Annual Cost</b>	\$936	\$955	\$1,585	
<b>Notes</b>				
<sup>1</sup> FY22 weighted average commodity rate. Rates vary by elevation zone to reflect different energy, pumping and storage costs. Novato rates ranged from \$6.18 to \$8.54 per 1,000 gallons, and in West Marin from \$8.88 to \$15.04. Average excludes tier rate charges as typical residential consumption is below tier threshold.				
<sup>2</sup> FY22 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.				



Austin Simpson,  
Water Distributor  
& TP Operator



# Summary Financial Information

June 30, 2022					
Net Assets	Total	Novato Water	Novato Recycled	West Marin Water	Oceana Marin Sewer
<b>Assets</b>					
Cash & Investments	\$44,658,187	\$37,160,663	\$6,219,625	\$793,256	\$484,643
Receivables & Other Assets	13,249,726	11,477,055	1,510,905	258,299	3,467
Construction-in-Progress	8,520,571	6,260,780	89,594	1,847,536	322,661
Property, Plant & Equipment (net)	132,283,244	94,638,525	30,352,213	6,348,217	944,289
<b>Total Assets</b>	<b>\$198,711,728</b>	<b>\$149,537,023</b>	<b>\$38,172,337</b>	<b>\$9,247,308</b>	<b>\$1,755,060</b>
<b>Liabilities</b>					
Current Liabilities	\$9,632,352	\$8,180,382	\$1,102,537	\$335,157	\$14,276
Long-Term Debt	68,822,799	54,846,135	12,464,233	1,512,431	-
<b>Total Liabilities</b>	<b>\$78,455,151</b>	<b>\$63,026,517</b>	<b>\$13,566,770</b>	<b>\$1,847,588</b>	<b>\$14,276</b>
<b>Net Assets</b>					
Invested in Capital Assets	\$146,160,546	\$109,317,299	\$27,485,372	\$7,880,497	\$1,477,378
Restricted & Designated Reserves	3,103,369	112,355	3,745,283	-608,609	(145,660)
Earned Surplus	-29,007,338	-22,919,149	-6,625,087	127,832	409,066
<b>Net Assets</b>	<b>\$120,256,577</b>	<b>\$86,510,505</b>	<b>\$24,605,568</b>	<b>\$7,399,720</b>	<b>\$1,740,784</b>
<b>Revenue &amp; Expense</b>					
Operating Revenue	\$23,587,781	\$20,773,979	\$1,657,333	\$866,009	\$290,460
Operating Expense	25,686,578	22,938,477	1,385,891	1,048,671	313,539
Operating Income/(Loss)	(\$2,098,797)	(\$2,164,498)	\$271,442	(\$182,662)	(\$23,079)
Non-Operating Revenue/(Expense)	-1,169,574	-1,098,938	-188,749	47,029	71,084
<b>Net Income/(Loss)</b>	<b>(\$3,268,371)</b>	<b>(\$3,263,436)</b>	<b>\$82,693</b>	<b>(\$135,633)</b>	<b>\$48,005</b>
<b>Cash Flow</b>					
Net Income/(Loss)	(\$3,268,371)	(\$3,263,436)	\$82,693	(\$135,633)	\$48,005
Add Back Depreciation	4,023,236	3,007,398	768,645	200,647	46,546
<b>Cash Generated</b>	<b>\$754,865</b>	<b>(\$256,038)</b>	<b>\$851,338</b>	<b>\$65,014</b>	<b>\$94,551</b>
<b>Other Sources/(Uses)</b>					
Connection Fees	\$961,980	\$900,380	-	61,600	-
Loan Proceeds	20,000,000	20,000,000	-	-	-
Capital Asset Acquisition	-4,939,980	-4,228,666	(26,444)	-634,501	(50,369)
Principal Paid on Debt	-2,133,404	-1,383,201	(699,681)	-50,522	-
Grant Proceeds	273,009	-	146,634	124,168	2,207
Caltrans Capital Contribution	90,393	90,393	-	-	-
Connection Fee Transfer	-	(743,438)	743,438	-	-
Working Capital & Miscellaneous	5,053,774	4,118,826	-76,407	1,016,117	-4,762
<b>Total Other Sources/(Uses)</b>	<b>\$19,305,772</b>	<b>\$18,754,294</b>	<b>\$87,540</b>	<b>\$516,863</b>	<b>(\$52,925)</b>
<b>Net Cash Generated/(Used)</b>	<b>\$20,060,636</b>	<b>\$18,498,256</b>	<b>\$938,879</b>	<b>\$581,877</b>	<b>\$41,624</b>



Brian Northern,  
Utility Worker II

# Historical Statistics

Fiscal Year Ending June 30:	2022	2021	2020	2019	2018
Active Services					
Novato Water	20,700	20,607	20,554	20,546	20,543
Novato Recycled	97	96	91	91	66
West Marin Water	789	785	782	783	783
Oceana Marin Sewer	235	235	235	234	234
<b>Total Active Services</b>	<b>21,821</b>	<b>21,723</b>	<b>21,662</b>	<b>21,654</b>	<b>21,626</b>
Full-Time Equivalent (FTE) Employees	51.0	50.0	50.0	52.0	53.0
FTE Employees per 1,000 Active Services	2.3	2.3	2.3	2.4	2.5
Property, Plant and Equipment (millions)	\$212.8	\$207.5	\$202.6	\$198.5	\$194.1
FTE Employees per \$1M Capital Assets	0.24	0.24	0.25	0.26	0.27
Miles of Pipeline	367	366	365	364	364
Storage (MG)	40.0	40.0	40.0	40.0	40.0
<b>Water Production (MG)</b>					
Point Reyes Treatment Plant	53	74	76	81	81
Stafford Treatment Plant	168	211	686	567	646
Recycled Water	230	257	229	191	155
Russian River Water Purchases	1,886	2,380	1,919	1,863	1,947
<b>Total Water Production</b>	<b>2,336</b>	<b>2,923</b>	<b>2,910</b>	<b>2,702</b>	<b>2,829</b>
Wheeled to Marin Municipal WD	2,786	2,566	1,800	1,728	1,683
<b>Novato Service Area Average Day Potable Water Production (MG)</b>					
Annual	5.6	7.1	7.1	6.7	7.1
Peak Month	8.1	11.6	14.5	11.9	10.7
Peak Week	8.4	12.7	16.2	11.4	10.3
Peak Day	9.0	14.4	18.1	13.7	13.2
<b>Financial History</b>					
Source of Funds					
Water Sales	\$22,898,960	\$24,756,773	\$23,162,788	\$21,147,467	\$21,328,795
Investment Earnings	-252,240	215,069	632,208	484,686	243,752
Tax Revenue	125,633	125,416	120,821	115,706	109,908
Grant Proceeds	273,009	86,060	336,398	20,191	592,907
Connection Fees	961,980	3,496,089	1,531,535	1,492,380	1,455,400
Loan Proceeds	20,000,000	-	-	-	6,393,836
Other Sources	5,837,584	1,114,838	3,718,247	1,698,238	1,413,583
	\$49,844,926	\$29,794,245	\$29,501,997	\$24,958,668	\$31,538,181
Use of Funds					
Purchased Water	\$6,339,645	\$8,536,957	\$6,978,395	\$5,383,444	\$5,350,855
Operation & Maintenance	15,323,697	12,200,113	12,428,759	10,987,701	11,110,175
Debt Service	3,040,446	2,849,550	2,920,230	2,749,713	2,201,451
Capital Expenditures	4,939,981	3,853,557	3,419,820	3,989,561	11,270,831
Other Uses	140,522	5,334	444,649	-210,161	-3,406,707
Reserves	20,060,635	2,348,734	3,310,144	2,058,410	5,011,576
	\$49,844,926	\$29,794,245	\$29,501,997	\$24,958,668	\$31,538,181
Net Assets					
Assets	\$198,711,728	\$177,437,410	\$174,194,976	\$167,702,424	\$166,351,644
Liabilities	78,455,151	55,753,246	57,481,213	56,903,171	59,528,196
Net Assets	\$120,256,577	\$121,684,164	\$116,713,763	\$110,799,253	\$106,823,448





In Memory of  
**Director James Grossi**

Serving on the board from 2017 to 2022.







Stafford Lake looking north.







The top half of the page features a series of horizontal, wavy lines in a light blue color against a dark blue background. The lines are evenly spaced and create a rhythmic, undulating pattern that spans the entire width of the page.

**nmwd.com**

**Phone:** 415-897-4133 (Weekdays 8am – 5pm)

**Email:** [info@nmwd.com](mailto:info@nmwd.com)

**Mailing Address:** PO Box 146, Novato, CA 94948-0146

**Payment Address:** PO Box 511529, Los Angeles, CA 90051-8084

**West Marin Customers**

Call (toll free): 1-800-464-6693

**Emergencies & After Hours**

**Call:** 415-897-4133

After hours calls are answered by an outside on-call service center. Please call our main line at (415) 897-4133 and press option 7 to be connected to the after hours services who then contacts District on-call personnel.

Cover: James Lemos, Elec/Mechanical Technician