Sustainability Report 2021

SJW Group

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resilient in *unprecedented* times

Letter from Eric Thornburg

For SJW Group, 2021 can be summed up in one word – Resilient. It's evident in our employees and the communities we serve. Each SJW Group subsidiary in California, Connecticut, Maine and Texas has found a way to fulfill our mission to deliver high-quality, reliable water service to our customers and communities despite various challenges in 2021. We confronted the pandemic, stresses on some of our water supplies, changing weather conditions, the economic struggles of our customers, and social and societal issues around race and violence in our country.

At the same time as we responded to those challenges, SJW Group's commitment to be a leader across the environmental, social and governance (ESG) issues strengthened in 2021. With the full support of management and SJW Group Board's approval of our 5-year strategic plan, we are more resolute than ever to deliver on our mission and be a trusted partner and force for good in the communities we serve.

Among the ways we took action:

- **Greenhouse Gas (GHG) Inventory** – A group-wide analysis was completed to create a starting point for measuring future GHG reduction efforts.
- **Reducing Carbon Emissions** – With a GHG inventory in hand, SJW Group has committed to reduce Scope 1 and 2 emissions by 50% from 2019 levels by 2030 (science-based target aligned with the Paris Agreement).
- **Vendor Code of Conduct** – Adopted a formal policy that defines and communicates our expectation for vendors that are consistent with the SJW Group Human Rights Policy and ESG parameters.
- **Health and Safety Policy** – Formalized our group-level policy that puts health and safety at the center of our day-to-day operations to keep our teammates safe.
- **Environmental Policy** – SJW Group has recommitted itself to all the applicable laws and regulations that govern our operations so we can be good stewards of our watershed lands and resources.
- **Diversity, Equity and Inclusion (DEI)** – Our DEI initiatives evolved to include implicit bias training for all employees, adjustments of job descriptions to examine them for potential bias, and the continued work of our national employee-led DEI Council. And I was proud to sign on to the CEO Action for Diversity & Inclusion™ CEO Pledge as a direct reflection of my own commitment to this important issue.
- **Supplier Diversity** – Our results improved substantially as San Jose Water led the way by increasing its addressable diverse spend to 30% in 2020. In 2021, it earned recognition from the California Public Utilities Commission for exceeding the 21.5% goal by having a 30.1% addressable diverse spend. Supplier diversity programs were launched and goals established in all operating areas this year.
- **Climate Change Resilience** – We have strengthened our effort to combat climate-related operational impacts such as the February 2021 winter storm in Texas, California's historic drought and the tropical storms in New England. These are just this year's evidence that climate change is here and we need to prepare for future impacts while also working to lessen our own carbon footprint.
- **Environmental Stewardship** – Our efforts to protect natural resources for generations to come are strengthened by our partnerships in open space protection, with nearly 1,000 acres of forest in the Santa Cruz Mountains protected this year, and ongoing open space and water company lands initiatives in California, Connecticut and Maine.

While we have accomplished much, our board of directors and leadership team are excited about our path forward. This year, through group-wide efforts and development of programs, including our Comprehensive Greenhouse Gas Inventory and Code of Vendor Conduct, we are laying the framework to be a force for positive change in greenhouse gas emission reductions and the support of sustainable social and environmental practices through our vendors and supply chain.

At SJW Group, we have over 700 trusted, passionate and socially responsible professionals delivering life-sustaining, high-quality water and exceptional service to families and communities while protecting the environment and providing a fair return to shareholders. They have embraced our mission and vision to enhance our efforts to track, monitor, report and continuously improve our performance in the areas of ESG.

We have faced the unprecedented times of 2021 together, leveraging our national strength with the expertise of our local leadership to be a positive force for good in the lives of our employees, customers and communities. The resilience we have shown together makes me look forward to 2022 with optimism and enthusiasm, with a commitment to serving customers, communities, employees, shareholders and the environment at world-class levels.

Sincerely,

Eric W. Thornburg
Chair, President and CEO, SJW Group

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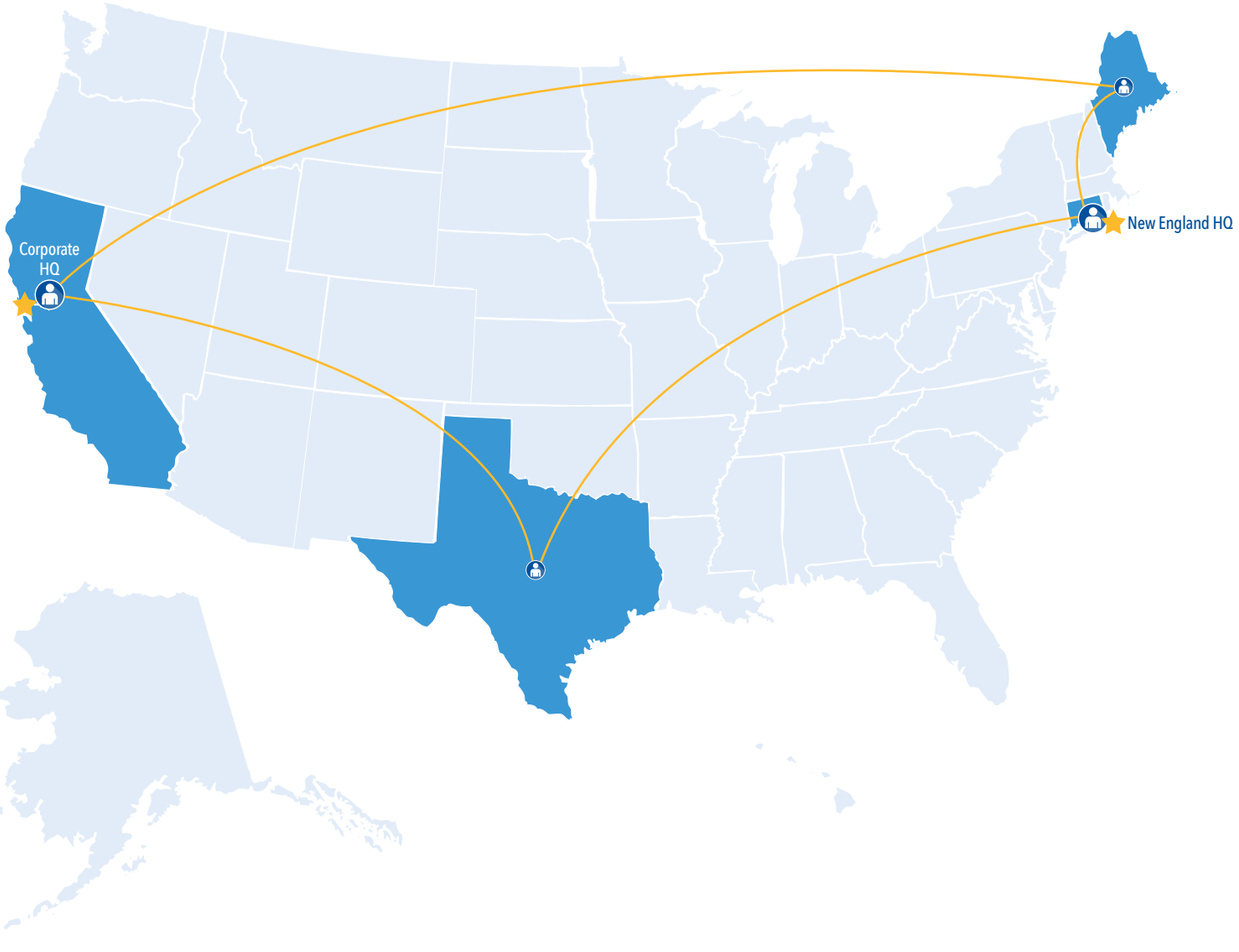
700+ Trusted professionals across a multistate platform



ASSETS

5,400+	Miles of pipe
39	Water treatment plants
400+	Wells
5	Wastewater facilities
300+	Water storage facilities
160+	Pumping stations
~1.5M	People served across CA, CT, ME and TX

Mission, Vision, and Values

OUR MISSION

Trusted, passionate and socially responsible professionals delivering life-sustaining, high-quality water and exceptional service while protecting the environment, enhancing our communities and providing a fair return to shareholders.

OUR VISION

Our vision is what we aspire to...

"To serve our customers and communities, employees, shareholders, and the environment at world-class levels."

OUR VALUES

- Teamwork and Respect
- Straight Talk and Transparency
- Integrity and Trust
- Service and Compassion

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Connecticut Water

Connecticut Water (CWC) is a water and wastewater utility that serves more than 106,000 water customers and approximately 3,000 wastewater customers.

In July 2021, CWC introduced two new water rates. A first-in-state Water Rate Assistance Program (WRAP), offers a 15% discount on water charges for income-eligible customers. Also, a water conservation rate has been established to encourage wise water use by targeting residential customers who use more than 200 gallons per day on average.

Record rainfall, including an August hurricane, provided challenges to the water system. CWC worked closely with community officials to ensure appropriate emergency planning. No customers lost service due to weather-related issues.

Elsa and Henri and remnants of storms Fred and Ida contributed to the third-wettest summer in Connecticut. It was also the eighth hottest, according to data released by the National Weather Service.

Maine Water

Maine Water (MWC) serves more than 32,000 customers throughout the state. In 2021, an innovative Rate Smoothing Mechanism was approved by Maine Public Utilities Commission for customers in the Biddeford-Saco Division. This mitigates the rate impact of the $60 million investment in the new Saco River Drinking Water Treatment Facility.

MWC and its employees also continued a commitment to the partnership with the Coastal Mountains Land Trust and the Round the Mountain Trail in Camden, Rockport and Hope, working to create and maintain the Round the Mountain Trail on watershed land surrounding Mirror Lake and Grassy Pond.

The Saco River Drinking Water Treatment Facility is a generational investment scheduled to begin service in spring 2022 to replace a water treatment facility constructed in 1884.

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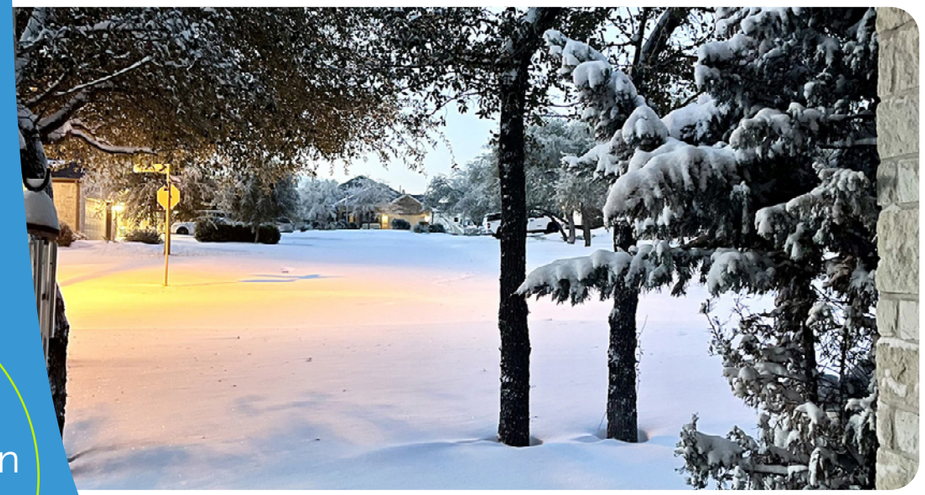
San Jose Water

San Jose Water (SJW) is one of the largest and most technically sophisticated urban water systems in the United States. Founded in 1866, the company serves over 1 million people in the greater San Jose metropolitan area with high-quality, life-sustaining water, with an emphasis on exceptional customer service.

Faced with several consecutive seasons of low precipitation, California is facing an extreme drought. The California Public Utilities Commission (CPUC) approved the SJW mandatory conservation plan in November 2021. The goal is to reduce water usage 15% from 2019 levels with a program that calls for allocations, drought surcharges, and an appeal process.

This past year, San Jose experienced its driest year in 128 years of record-keeping, receiving only 5.33 inches of rain from July 1 to June 30.



Steffany Duke, Dripping Springs Century News

SJWTX dba Canyon Lake Water Service Company

SJWTX provides service to approximately 73,000 people through approximately 23,900 service connections. The service area comprises about 270 square miles in Bandera, Blanco, Comal, Hays, Kendall, Medina and Travis counties, between Austin and San Antonio.

Between February 10 and 20, 2021, Winter Storm Uri swept through much of the state, causing widespread power outages and frozen water service lines. SJWTX leveraged the strength of SJW Group to bring in additional operational support including call center and communications staff and Emergency Operations Center personnel to restore service to customers as quickly and efficiently as possible. SJWTX also continues to grow, serving 3,300 new customers in 2021.

During the great freeze in Texas in February, water service across the state was disrupted for more than 12 million people due to widespread power loss and pipes freezing and bursting.

Goals

2021 Goal Updates

SJW GROUP	
Create new internal role to drive sustainability efforts	COMPLETED
Begin implementation of SJW Group's Environmental Management Policy	IN PROCESS
Implement Human Rights Policy: • Roll out policy training to all employees • Survey vendors across the organization to determine if they are fully aligned with SJW Group's Human Rights Policy and Code of Conduct	COMPLETED COMPLETED
CONNECTICUT WATER	
Continue the purchase of 30% Class I Renewable Energy in advance of the 2025 Connecticut statutory standard	COMPLETED
Establish a plan for implementation of energy efficiency measures identified in 2020 energy audit	COMPLETED
Complete assessment of company properties that can be offered to municipalities or environmental groups for preservation, and evaluate opportunities for additional passive recreation programs to provide environmental safeguards for water company lands	COMPLETED
Replace water main at rate of 1% of pipe each year through the Water Infrastructure and Conservation Adjustment (WICA)	COMPLETED
Fund and construct a solar array at the Stewart Water Treatment Plant in Naugatuck as its first major renewable energy project to offset purchased energy	COMPLETED
Maintain WICA spending of at least $24.8 million in 2021	COMPLETED
MAINE WATER	
Work with a local partner to create a conservation easement in Biddeford in conjunction with the new Saco River Drinking Water Treatment Facility	IN PROCESS
Achieve award status for the Saco River Drinking Water Treatment Facility in 2021 from the Institute for Sustainable Infrastructure, based on the Envision framework	IN PROCESS
Partner with the cities of Biddeford and Saco to develop the Climate Action Plan in response to their declarations of a climate emergency	COMPLETED

SAN JOSE WATER	
Continue work to bring solar energy to two groundwater pumping stations and seven tank sites for a 2022 completion date – see page 16 for updated time frame	IN PROCESS
Apply for Santa Clara County Green Business Certification	IN PROCESS
Continue ~1% replacement of transmission and distribution system	COMPLETED
Invest $100M in capital improvements	COMPLETED
Hire a Watershed Manager to coordinate fuel management, land conservation efforts and public relations	COMPLETED
SJWTX	
Implement strategic communications plan around conservation, drought management and the local ecology	IN PROCESS
Complete pilot of an irrigation checkup program in at least three subdivisions with differing customer characterizations serving at least 200 residential customers	COMPLETED
Launch active implementation of Advanced Metering Infrastructure (AMI) pilot for 860 homes	COMPLETED
Boost reuse efforts by selling treated effluent for dust control at construction sites, and by working with developers to provide treated effluent for irrigation at commercial sites	IN PROCESS
Replace at least three miles of water mains in addition to the installation plans carried over from 2020	COMPLETED

Goals (continued)

2022 Goals

ESG TOPIC	GOALS & TARGET
Reducing Carbon Emissions	Use energy efficiently and reduce carbon emissions in line with the Paris Agreement • Reduce Scope 1 and 2 emissions by 50% by 2030 from 2019 (science-based target aligned with Paris Agreement)
Fostering Environmental Stewardship	Protect natural resources for generations to come by minimizing environmental impacts of our operations • Implement processes and systems to track, monitor, report and continuously improve environmental performance • Achieve 100% compliance with all environmental regulations and permits • No more than 15% non-revenue water (NRW) inclusive of flushing for the combined organization; seek to outperform the 16% NRW national average by at least 1%
Keeping People Safe	Protect our people by putting health and safety at the center of our day-to-day operations • Implement processes and systems to track, monitor, report and continuously improve health and safety performance • Communicate updated Health and Safety Policy to employees to promote compliance, consultation and participation of workers on health and safety matters • Strive for zero accidents and injuries
Supporting Supplier Responsibility	Actively engage our suppliers by setting clear expectations consistent with the SJW Group Human Rights Policy and ESG parameters • Define and communicate to vendors our expectations for adherence to the Vendor Code of Conduct • Develop reasonable and practical documentation processes for vendors to demonstrate they conduct business in environmentally, socially and environmentally responsible ways • Set SJW Group diverse spending targets

resilient because of our *team*

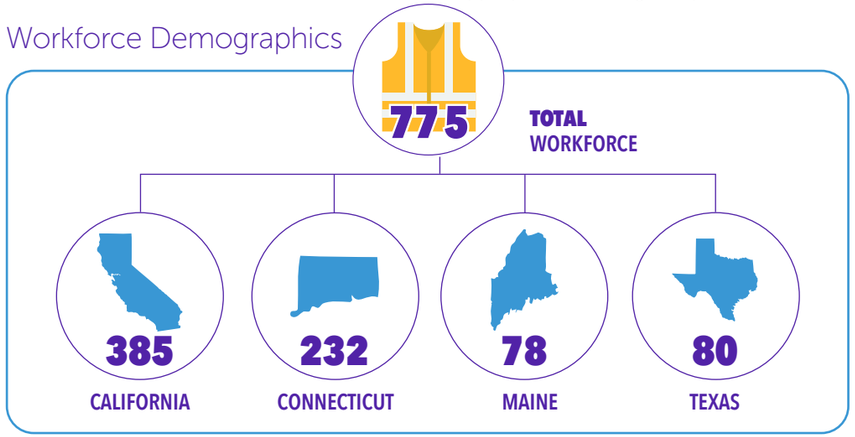
our team

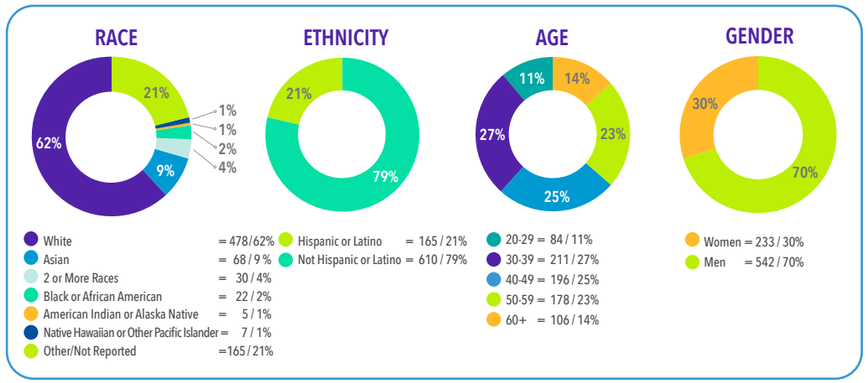
Our Team

SJW Group is a team of over 770 employees who live and work in their communities and are passionate about delivering a reliable supply of high-quality drinking water and exceptional service.

SJW Group is a mission-driven company that strives to be an employer of choice in the communities we serve. We do this by offering a positive and engaging workplace, and by compensating employees at fair wages as benchmarked by the market and other companies as reasonable and appropriate. Training and professional development programs are available for all employees. All of SJW Group's subsidiary companies comply with applicable state and federal employment regulations including minimum wage, overtime, maximum hours, and other applicable laws, rules and regulations.

Workforce Demographics





Midyear 2020	
Employee Satisfaction Index	80.3%
Good Place to Work Index	85.3%
Year-End 2020	
Satisfaction	81.5%
Good Place to Work	86.2%
Midyear 2021	
Satisfaction	76.5%
Good Place to Work	80.6%

An anonymous employee satisfaction and engagement survey is distributed twice each year through an independent third-party survey provider. In addition to the semi-annual survey, anonymous surveys are conducted through the year to cover particular topics of interest. In 2021, some of these surveys included sentiment on returning to the office during the pandemic and effectiveness of employee communications.

Supporting Employee Wellness

SJW Group recognizes the importance of employee wellness and provides its team with resources to support their mental and physical health. In addition to the health insurance offered through employees' compensation and benefits packages, SJW Group employees can access an Employee Assistance Program for no-cost, confidential solutions to support mental health and well-being, legal guidance, and free online will preparation. In addition, we offer mental health and wellness trainings throughout the year with topics including mindfulness, self-care and recognizing depression.

Labor Relations: San Jose Water includes a unionized workforce. Both the Utility Workers' Union of America, A.F.L. – C.I.O., Local 259 and the Operating Engineers Local Union No. 3 of the International Union of Operating Engineers entered into three-year agreements with San Jose Water through a vote of their memberships in 2020.

In 2021, CWC was recognized by Top Workplaces for its workplace culture.

Our Team (continued)

Commitment to Ethics in the Workplace

At SJW Group, we hold ourselves to a high standard of ethical conduct and are committed to living our corporate values each and every day. One way we make sure that our own staff is aware of these standards is by requiring annual review and acknowledgment by all employees and the board of directors of our Code of Conduct. In this way, anti-corruption training is provided to all employees, including management. Additionally, our management is subject to questions through quarterly Sarbanes Oxley (SOX) reviews that promote our ongoing commitment to ethical conduct. Executive oversight for our anti-corruption program extends to the board of directors.

SJW Group encourages employees to report violations of any policy anonymously and without fear of retaliation or reprisal. A confidential whistleblower hotline and website are available for employees to report any violations of laws, SJW Group's Code of Conduct (including auditing matters), SJW Group's Human Rights Policy, or any of the commitments made to the Connecticut Public Utilities Regulatory Authority or the Maine Public Utilities Commission promoting local control of the Connecticut Water Company and the Maine Water Company. These reports will be viewed by leadership up to and including the board's Audit Committee.

Number of inquiries to the hotline in 2020: 0
Number of inquiries to the hotline in 2021: 0

as of December 3, 2021

Click to view SJW Group Policies:

- Code of Conduct
- Ethics for Financial Executives
- Insider Trading Policy
- Human Rights Policy
- Whistleblower Policy

Diversity, Equity and Inclusion

Our work toward a more inclusive, diverse workforce where each employee can feel comfortable as their true self remained a priority in 2021 at all levels of the organization both in formal, procedure-based ways and in more informal, culture-shifting ways.

The Diversity, Equity and Inclusion Council, created in 2020, continued to share personal stories across the enterprise. This brought to life for others the diverse experiences that employees throughout SJW Group bring with them each day. Council meetings are facilitated directly by CEO Eric Thornburg. Throughout the year, over half of the SJW Group Board of Directors attended at least one council meeting to share and hear directly from employees.

In partnership with Bias Sync, all employees were offered implicit bias education, with 90% of employees engaging in the training.

Further educational efforts included thorough and consistent education on heritage months, cultural holidays and the importance of a workplace culture that values diversity, equity and inclusion. This includes, but is not limited to, the sharing of regular articles in nationwide and state-specific communications to keep a consistent and current dialogue on the importance of inclusion.

Our hiring teams examined their procedures for structural improvements, which included a review of all job descriptions for potential bias. Examples include removing the requirement of a college-level education when experience in lieu of education could be satisfactory, and physical requirements (i.e., lifting) for office-based jobs. Additionally, the group reviewed recruitment efforts to ensure that opportunities at SJW Group are posted to a diverse array of job boards.

We also announced that the flexible/hybrid work plans developed as a result of COVID-19 will continue following the pandemic.

At the board level, SJW Group values diverse perspectives and will continue to meet the requirements of California AB 979, which designates minimum appropriate levels of representation by board members from underrepresented individuals, defined as individuals who self-identify as Black, African American, Hispanic, Latino, Asian, Pacific Islander, Native American, Native Hawaiian or Alaska Native, or who self-identify as gay, lesbian, bisexual or transgender. The SJW Group was also recognized by 50/50 Women on Boards Gender Diversity Index 2021 as one of just 7% of Russell 3000 companies considered gender balanced in 2021.

CEO Diversity Pledge

CEO ACT!ON FOR DIVERSITY & INCLUSION

In 2021, CEO Eric Thornburg signed on to the CEO Action for Diversity & Inclusion™ CEO pledge, which outlines a specific set of actions the signatory CEOs will take to cultivate a trusting environment where all ideas are welcomed and employees feel comfortable and empowered to have discussions about diversity and inclusion.

The four goals of the pledge:

1. We will continue to make our workplaces trusting places to have complex, and sometimes difficult, conversations about diversity and inclusion.
2. We will implement and expand unconscious bias education.
3. We will share best – and unsuccessful – practices.
4. We will create and share strategic inclusion and diversity plans with our board of directors.

Health and Safety

Protecting the health and safety of our employees is a top priority for SJW Group. We aim to make the workday the safest eight hours of the day for each employee.

To accomplish that, in addition to subsidiary level policies, procedures and compliance with regulations, a nationwide safety team meets weekly to execute and enhance our employee health and safety programs focusing on:

Safety Leadership: Demonstrating management commitment and taking ownership, empowering local teams to be accountable for safety

Participation: Involving everyone in all aspects of the safety programs, and connecting safety work to serving employees, customers, shareholders and the environment

Hazard Identification and Control: Inspecting workplaces, identifying hazards, implementing controls and partnering with front line teams delivering clean, safe drinking water

Training: Training employees on hazards and how to protect themselves

In 2021, we established a uniform safety training program across the enterprise for rollout and tracking of health and safety training for all employees. Employees now have access to the same online training program, which can be implemented and coordinated at the group level.

In addition, our **Say Something Anonymous Safety Reporting Tool** launched in 2021, providing the ability for anyone to report a safety incident or safety concern anonymously. Along with company communication to employees on the **Say Something Anonymous Safety Reporting Tool** to encourage maximum use of the tool, an icon directly linking to the online reporting form appears on the home screen of every company-issued smartphone.

Continuing to Work Safely During a Pandemic

Employee and customer well-being is vitally important to SJW Group. The COVID-19 pandemic continued to play a large role in employee health and safety considerations in 2021. SJW Group's Threat Leveling Management Team (TLMT), a cross-functional, enterprise-wide group of executives and safety and human resources professionals continued to meet weekly to assess COVID-19 data and risks at each of our locations.

Based on data such as number of cases, infection rates and trends over time, the TLMT has provided guidance on and oversight of appropriate precautions to limit the spread of COVID-19 among employees and customers.

Guidance included indoor and outdoor masking and social distancing requirements, building capacity reductions, mobile hand-sanitizing stations, remote work options for office employees, and dispatch from home for members of field service teams.

Our COVID-19 hotline helps track employees who are not feeling well, those who may have been contact traced and those who have tested positive. On a biweekly basis, the company-wide pandemic threat level and total number of positive COVID-19 cases is communicated to all employees via our newsletter.

Total Recordable Incident Rate (TRIR) Q1-Q3 2021

	SAN JOSE WATER	CONNECTICUT WATER	MAINE WATER	SJWTX
Number of Recordable Incidents	14	4	4	1
Total Hours Worked	530,216	320,157	106,496	110,643
TRIR	5.3	2.5	7.5	1.8

SJW Group Average 2.75

Data includes incidents for full-time, part-time and temporary employees

Work-related incidents through Q3 2021 resulted in 238 lost working days, on the basis of approximately one million hours worked. The DART (Days Away Restricted or Transferred) rate through Q3 2021 was 3.9. Through Q3 2021, there were no fatal incidents.

Health and Safety (continued)

Protecting Our Employees Behind the Wheel

Fleet safety policies were updated throughout the organization in 2021 to ensure that annual license checks are conducted in all states. In California, fleet vehicle technology was implemented to alert us to potentially unsafe driving activities such as speeding and quick stops.

America's Water Infrastructure Act

America's Water Infrastructure Act of 2018 requires water utilities that serve over 3,300 people to complete a risk and resilience assessment (RRA) and develop an emergency response plan (ERP). RRAs evaluate the vulnerabilities, threats and consequences from potential hazards, including natural hazards and malevolent acts, resilience of water facility infrastructure, monitoring practices, financial systems, chemical storage and handling, and operation maintenance. ERPs include resilience to improve security, plans to respond to threats to drinking water and strategies to detect threats to the system.

	RRA Completion	ERP Completion
SJW	3/31/2020	12/31/2020
SJWTX	6/30/2021	Expected completion 12/31/21
CWC	One completed 12/31/2020 10 systems requiring an RRA completed 6/2021	One completed 6/30/2021 Update to ERP in progress and expected completion 12/2021
MWC	6/30/2021	Expected completion 12/31/21

Emergency Management

SJW Group's Emergency Management and Business Resiliency teams help prepare for the unpredictable. emergency management departments at each subsidiary have developed fully functioning Emergency Operations Centers (EOCs) – complete with protocols and employee training.

The EOCs provide the location where personnel trained in National Incident Management System (NIMS) incident command structure work to ensure that resources are being deployed to meet the needs of an emergency. Whether it be wildfires, winter storms, floods or prolonged power outages, changes in the situation are analyzed and communicated among the team. Above all, the health and safety of employees, customers and the community are at the forefront of our response. For more information on SJW Group's emergency management, visit sjwater.com.

Health and Safety Policy

SJW Group is committed to embracing health and safety as part of our identity and culture, in service to our employees, customers, communities, shareholders and the environment. As part of our commitment to the health, safety and well-being of our employees, contractors, visitors, customers and communities, in 2021 we adopted a new SJW Group Health and Safety Policy. A health and safety management system will be developed that aligns with the objectives of the ISO 45001 standard and is appropriate to the purpose, size and context of the organization and the respective regulatory requirements to provide a framework for setting and measuring health and safety objectives.

Over Half a Century of Service

SJW's efforts during the pandemic were recognized by the Globe American Best in Business awards for both Company Response of the Year during COVID-19 and the Human Resources Team of the Year.

environmental stewardship

Energy Use

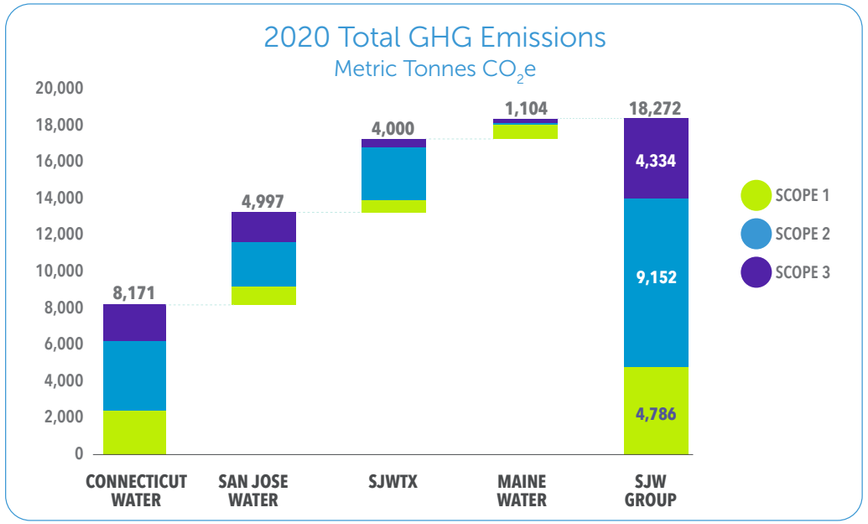
Reducing Carbon Emissions

SJW Group is planning for our future by addressing the effects of climate change and working to reduce the carbon footprint of our organization.

At SJW Group, we are committed to reducing our energy and carbon footprint across our business in line with the goals of the Paris Agreement. We recognize that urgent action is needed to achieve the Paris Agreement, and we have set a science-based target to reduce Scope 1 and Scope 2 GHG emissions by 50% by 2030 from a 2019 base year. Responsibility for assessing and mitigating climate-related risks and opportunities extends up through SJW Group's board of directors.

Our carbon footprint

In 2021, we completed our first group-wide carbon footprint assessment. A breakdown of the SJW Group's energy use and emissions for 2020 are shown below:



Our Scope 1 carbon emissions reflect the fuel consumption of our on-road vehicle fleet, and made up 23% of total emissions alone, and from our off-road vehicle fleet, stationary combustion sources and wastewater treatment. Our Scope 2 emissions are calculated for electricity usage across our facilities, while our Scope 3 emissions were estimated for purchased goods and services (chemicals), waste generated from our operations, employee commuting, and business travel.

In 2022, we will enhance our energy and emissions tracking, monitoring and reporting with a focus on continuous improvement. This will enable us to meet our goal to pursue third-party verification of our emissions inventory in 2022.

Our energy and carbon reduction initiatives

To improve the energy and carbon footprint of our operations, we continue to evaluate and implement efficiency measures across our operations. Below are some of our key energy and emissions management initiatives for 2020 and 2021:

- Increased the renewable electricity procured across our operations to 42% in 2020 from 37% in 2019.
  - SJW purchased 45% renewable electricity from San Jose Clean Energy and 46% renewable electricity from Silicon Valley Clean Energy in 2020.
  - CWC increased its use of Class 1 Renewable Energy Credits to exceed the current requirement, purchasing 30%, the State of Connecticut regulatory requirement established for 2025.
  - MWC purchased 89% of its electricity from renewable sources.
- CWC installed a new on-site photovoltaic system (PV) at Stewart Water Treatment Plant. This system, which was energized in April 2021, is anticipated to generate over 110 MWh per year.

To achieve our carbon-reduction goal, we will continue to explore energy and emissions reduction initiatives in 2022 and beyond by:

- Improving energy efficiency across our operations.
- Exploring renewable energy generation to maximize the potential for PV applications. Specifically:
  - CWC will be formulating a plan in 2022 to install additional PV facilities.
  - MWC expects to meet the energy requirement of the new Saco River Water Treatment Plant with power generated on-site PV by 2023.
  - SJW is planning to install the following PV facilities:

SITE	SYSTEM SIZE (kW)	GENERATION (MWhr/yr)	PLANNED YEAR
McLaughlin	390	616	2022
Three Mile	1,025	1,620	2023
Vickery	311	491	2022 / 2023
Overlook	30	47	2022 / 2023
Montevina	593	937	2025
Almaden	258	407	2022 / 2023
Belgatos	32	50	TBD
Total	**2,639**	**4,168**	

- Procuring additional renewable electricity from our power providers. Our Texas subsidiary is making plans to use 100% renewable power provided by wind-generated energy.
- Decarbonizing our fleet through biofuels procurement and electrification where possible.

GOAL Use energy efficiently and reduce our carbon emissions in line with the Paris Agreement

2030 TARGET Reduce Scope 1 and Scope 2 carbon emissions by 50% by 2030 from 2019 baseline

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Environmental Stewardship

Protecting the quality of our water sources and taking care of the environment for future generations is core to who we are as water professionals. In addition to the source protection, environmental impact reduction and land conservation efforts undertaken by all SJW Group companies, our employees also engage in environmental stewardship initiatives throughout the year.

Connecticut Water began installing wood duck nesting boxes in their watersheds, with the first two being installed near our Kelseytown Reservoir in Clinton. This was met with so much enthusiasm from employees that the program has been expanded and we are planning to install additional nest boxes (for wood ducks and bluebirds) throughout our company lands in the coming months, all through an employee volunteer effort.

Water operator Dan Klune built and installed the first two wood duck boxes

Now more than ever, the ability to access nature is critical to the physical and mental health of people across the country. Through a permit with the Connecticut Department of Public Health, Connecticut Water runs a recreation program at the Shenipsit Lake Reservoir, its largest surface water supply source, in the towns of Ellington, Vernon and Tolland, CT. Structured to protect the public water supply through regulation and monitoring, the program offers fishing from non-motorized or electric powered boats, fishing from shore, and hiking trails. Thousands of Connecticut residents utilized the program this year. The program is fully funded by CWC, and is free to the public.

Jessica Demar, Environmental & Regulatory Compliance Coordinator for Connecticut Water manages the program

In partnership with the Connecticut Department of Energy and Environmental Protection (DEEP), Connecticut Water designed a mechanism to retain and relocate American eels at the Kelseytown Reservoir in Clinton, CT. Young eels migrate from the Sargasso Sea to freshwater bodies across North America, where they mature for 10-25 years before migrating back to the Sargasso Sea to spawn. In partnership with DEEP, the eels are safely retained, tagged by DEEP scientists and released downstream for migration. The first two years of the program resulted in nearly 400 eels tagged and released by DEEP scientists.

Adam Wing designed the mechanism to retain and relocate American eels.

The Saco River, which begins in New Hampshire and extends through Maine to the Atlantic Ocean, has served as the sole water supply source for Maine Water customers in Biddeford, Saco, Old Orchard Beach and the Pine Point section of Scarborough since 1884. Maine Water employees have organized annual Saco River cleanup events, volunteering to take to boats, kayaks and canoes to clean the riverbanks from the water.

A cleanup event in September 2021

Maine Water supports the Saco Watershed Collaborative (SWC) though direct financial support and participation in programs.

Saco River

SWC is a dedicated group of professionals, community members and scientists working to protect the irreplaceable water resources and benefits that come from the Saco Watershed. The Saco River provides drinking water for approximately 250,000 residents across southern Maine and New Hampshire. Forests, shoreland buffers, wetlands, aquifers, small streams, lakes and ponds, and rivers are all part of a system that collects, filters and stores water.

The Saco Watershed Collaborative goals include:

- Protecting water quality, public health and the ecosystems of the Saco Watershed through coordinated land and water conservation, education, research, planning, and management.
- Developing and sustaining mutually beneficial partnerships to accomplish shared goals for clean water.
- Ensuring long-term viability and sustainability of the Collaborative.

Maine Water's partnership with the Coastal Mountains Land Trust benefits the environment and contributes to the quality of life in midcoast Maine. Through the sale of a conservation easement around Mirror Lake and Grassy Pond, Maine Water was able to work with the Coastal Mountains Land Trust to preserve over 1,200 acres of open space, on which the Round the Mountain Trail is being developed. Maine Water employees volunteer each year for work days to help with trail maintenance and construction.

Maine Water employees at the Round the Mountain Trail, October 2021

environmental stewardship

Environmental Stewardship (continued)

A farm located in the watershed of Lake Shenipsit Reservoir

Each year, a team of Watershed Inspectors in Connecticut inspects at least 2,800 watershed properties, which is about half of all watershed properties surrounding CWC's water sources. Inspectors look for land use activities that could impact the public drinking water supply such as poor manure management, failing septic systems and hazardous chemical leaks.

In partnership with Save the Sound, CWC completed an assessment of lands no longer needed for water supply purposes and offered those lands to municipalities and environmental groups for preservation and public recreation. To date, CWC is engaged with five entities, which are developing plans to acquire eight properties totaling 106 acres.

Save the Sound's mission is to fight climate change, save endangered lands, protect the Sound and its rivers, and work with nature to restore ecosystems

Forests have significant potential to mitigate the impacts of climate change by sequestering atmospheric carbon over long timescales. Improved forest management practices, stewardship and conservation management play key roles in increasing the carbon sequestration potential of SJW lands. SJW is exploring opportunities to engage with the ecosystem and carbon marketplace through an innovative program that leverages the forests' ability to capture and store carbon. Sequestered carbon and carbon offsets may be monetized to provide revenue and incentive for forest management and conservation practices.

Los Gatos Creek in the Santa Cruz Mountains

The Community Wildfire Risk Reduction Program at SJW seeks to reduce the risk of catastrophic wildfire on SJW lands while providing additional wildfire risk reduction benefit to neighboring communities such as Chemeketa Park, Aldercroft Heights and other neighbors near SJW's watershed. The program includes community outreach and engagement as well as direct action focused on fuels reduction in the wildland urban interface. Additionally, the program supports development of two critical community emergency/evacuation routes located adjacent to SJW watershed land.

Community leaders in local watershed

The Forest Health Initiative is a multiyear forest health and environmental management initiative funded through a $7.5 million grant awarded through CAL FIRE's Forest Health Program. This initiative focuses on sustainability of forest resources, climate adaptation and resilience, and wildfire mitigation. Over the next four years, SJW will conduct a series of forest health and wildfire mitigation treatments covering over 200 acres of watershed land. These treatments will improve watershed resiliency to wildfire while providing multiple co-benefits related to water quality, source water protection and ecosystem health. In partnership with the Los Gatos Creek Watershed Collaborative, a coalition of regional land management agencies, the initiative will extend to a total of 955 acres in the Los Gatos Creek Watershed. This effort is one of the largest regional forest health programs to date.

Removing brush to reduce wildfire risk

Wetlands conservation provides a responsible way to mitigate the unavoidable environmental impacts of certain projects. SJW has several wetland mitigation sites that include habitat restoration, creation, conservation and enhancement. Restoring wetland habitats helps maintain ecological functions such as water filtration and maintenance of wildlife habitat and biodiversity.

Lake Kittridge wetlands

SJW's long-term forest management goals combine coequal environmental management and water resources objectives. These goals focus on forest stewardship, sustainability and maintenance of a diverse mixed-aged forest. Biological resource protection, resiliency and adaptation; ecosystem services; and provision of high-quality water to local communities are extensions of these core long-term goals that also inform planning, management and decision-making.

Watershed surrounding Lake Williams

In the Santa Cruz Mountains, pristine watershed acreage and many small communities have been threatened by wildfires. San Jose Water worked with local fire agencies to evaluate the use of its service roads in the mountains as possible evacuation routes for local residents in case of disaster.

Fire evacuation route exercise

environmental stewardship

Water

Water touches everything we care about. Our commitment to providing high-quality and reliable water service to our customers remained steadfast in 2021.

Water sources vary from state to state and water system to water system throughout the year. Regardless of the source, it is always our intention to protect our water sources today and for the future. Environmental stewardship is key to the work we do and the communities we serve.

WATER SOURCES




SAN JOSE WATER	CONNECTICUT WATER	MAINE WATER	SJWTX
Groundwater: approximately 40% of San Jose Water's water supply is pumped from ~100 wells that draw water from the Santa Clara Groundwater Basin. **Imported Surface Water:** approximately 50% of San Jose Water's water supply is imported surface water from the Sacramento-San Joaquin Delta and purchased from Valley Water, our wholesale supplier. A majority of this water originates as Sierra snowmelt and travels through the state and federal water projects before treatment at Valley Water's three water treatment plants. **Local Mountain Surface Water:** local surface water is collected from our watershed in the Santa Cruz Mountains and treated at our two water treatment plants. This water accounts for approximately 10% of our supply. **Recycled Water:** this drought-proof resource makes up to 2% of San Jose Water's total water supply. Supplied to approximately 280 customers through a separate "purple pipe" distribution system, the recycled water is a great solution for most landscaping needs, cooling towers and dual-plumbed facilities.	**Groundwater**: approximately 50% of Connecticut Water's water supply comes from 200+ groundwater wells throughout our service area. **Surface Water:** approximately 50% of our supply comes from 18 active surface water reservoirs.	**Groundwater:** approximately 7% of Maine Water's water supply comes from 14 groundwater wells throughout our service area. **Surface Water:** approximately 93% of our supply comes from surface water. 2% of the surface water is purchased, and the remainder comes from seven active surface water sources.	**Groundwater:** approximately 45% SJWTX's water supply comes from 40 active wells throughout our service area. **Surface Water:** approximately 55% of our supply comes from two active surface water reservoirs.

WATER CONSUMED

SJW GROUP TOTAL
WATER CONSUMED/PRODUCED (in millions of gallons)

	2020	2019	2018	2017
Total potable water consumed	49,015	44,857	45,702	44,379
Total potable water produced	54,689	50,341	50,438	49,165
Surface water	10,026	13,543	10,560	8,302
Groundwater	23,005	15,067	16,195	18,324
Purchased water (Imported)	21,659	21,732	23,683	22,539
Recycled water*	798	732	762	607
Amount recycled of total water delivered	2.14%	2.08%	2.13%	1.79%
Reused water**	84	76	67	61
Reused	95%	95%	95%	95%

**SJW only **SJWTX only*

environmental stewardship

Wastewater

CWC and SJWTX provide wastewater service for a small percentage of customers and communities.

SJWTX owns and operates four facilities that combined serve approximately 540 customers and one elementary school. The Grove Wastewater Treatment Plant (currently serving 480+ customers) is under expansion to accommodate additional flow, including the addition of an equalization basin, sludge storage, bulk disinfectant tank and additional treatment capacity.

CWC owns and operates the Heritage Village Wastewater Treatment Facility, a 5-stage Bardenpho process facility in Southbury, CT, that serves approximately 3,000 customers.

Planning for the Future

All the states served by SJW Group require detailed water management plans that discuss water supplies in the long term, including withdrawal and scarcity risks. Mitigating those risks is also discussed.

SJW's Urban Water Management Plan, filed in June 2021, updates changes from the last plan, done five years ago. It is a master plan for water supply and resources management. SJW continues with both short-term and long-term planning while maintaining diligent water conservation efforts to meet the local water use reductions goals during the current drought.

MWC is updating Comprehensive Water System Plans (CWSP) in each of their operating divisions. These plans discuss current and future system demand and each system's ability to deliver on these anticipated demands. The plans identify capital improvement projects within a 10-year planning window. Since 2018, CWSPs have been updated in Skowhegan, Freeport, Camden/Rockland, Bucksport, Greenville and Millinocket.

CWC maintains water supply plans for each of the four operating regions in Connecticut and for some smaller water systems, as required by the Connecticut Department of Public Health (DPH). The plans require a 50-year planning horizon and include projections on population growth and how CWC will meet demand for water during that planning period. CWC monitors surface water and groundwater levels, and where possible actively manages the use of sources during periods of high precipitation to assist aquifer recovery.

SJWTX: The Water Availability Report describes the relationship between existing and future water supplies, and provides a broad overview of SJWTX's continued ability to provide a diverse water supply to meet both current and projected demands. The report is done every three years, with the next one due in 2022.

Using the World Resources Institute's Aqueduct Water Risk Atlas tool, no water was sourced from high or extremely high baseline water stress regions in Texas or New England. In California, local water sources including groundwater and nearby reservoirs make up 50% of total supply and are considered low stress. Imported water supplies from the Delta comprise 50% of total potable supplies and rank from low to medium-high stress.

Conservation – Using Water Wisely

SJW Group embraces the philosophy that every drop of water counts. That commitment means working with customers to use water wisely as well as looking within our organization to ensure our own water use is efficient and effective.

Sharing the Message

We actively embrace helping our customers meet local water usage goals and work to further the conservation movement. From coast to coast, customer communication regularly includes conservation tips and insight into why every drop counts. Regionally, conservation programs address the particular needs of the area.

In California, a statewide drought emergency moved SJW toward a mandatory conservation program with water use restrictions, allocations and possible drought surcharges. The conservation check-up program offers free home visits by our water efficiency experts, with a special focus on outdoor conservation. In California, the average customer's usage is 50% outdoor irrigation, so making sure irrigation timers are set properly, broken irrigation is fixed and drought-tolerant plantings are encouraged is key. In 2020, 767 checkup inspections helped customers – a lower number due to COVID-19 concerns. The program was revamped to be contactless for improved safety for both employees and customers.

An outdoor irrigation focus drives water conservation efforts in Texas. Year-round watering schedules plus additional restrictions during various drought stages help keep water use down when there are limited supplies. In December 2020, SJWTX partnered with The Water Irrigation System Evaluation (W.I.S.E. Guys) to launch an Irrigation Check-Up Program in select neighborhoods to decrease outdoor water use in this arid region. This Neutral Output Discharge Elimination System technology one-on-one educational program brought a Licensed Irrigator to 180 homes to evaluate the irrigation system to identify broken, misaligned or leaking heads; incorrect controller settings; pressure and flow issues; and other system inefficiencies. Customized feedback on how to improve any problems identified in the customer's system was also provided.

In New England, the Water Drop Watchers program educates elementary-aged students and their families on the water cycle and the importance of water conservation. Additionally, both Connecticut Water and Maine Water customers were offered the opportunity to purchase discounted rain barrels, delivered straight to their door, as a way to conserve water (and the energy it takes to produce it) by capturing rain runoff to utilize in gardens and landscaping.

In 2021, CWC received approval from Connecticut's Public Utilities Regulatory Authority (PURA) for water rates to promote water conservation and to ensure compliance with mandatory conservation requests. While it is very rare for us to impose mandatory conservation requests, even during periods of prolonged drought or other extreme events, it may be necessary. As of August 1, 2021, PURA approved changes to CWC's Rules & Regulations that allow us to levy a fee on customers who do not comply with mandatory conservation requests.

Flushing Truck – SJW's flushing truck saves about 30,000 gallons of water per flush compared to traditional flushing methods. That is a savings of approximately 6 million gallons per year. Using Neutral Output Discharge Elimination System (NO-DES) technology, effective flushing and sediment removal is obtained with minimal water waste. SJW is improving water quality while saving water.

As a way to encourage wise water use, PURA in 2021 authorized CWC to charge a slightly higher rate for water when a residential customer's use exceeds a 200-gallon-per-day average. At the end of the billing period, any usage that was above the 200-gallon-per-day average is billed at a higher rate. This "inclining block rate" is intended to encourage residential customers to use water wisely, especially for irrigation and lawn watering.

Conservation – Using Water Wisely (continued)

Water Loss

Non-revenue water (NRW) includes all water losses and all unbilled but authorized consumption. Water losses are largely a result of leaking pipelines and other system assets. However, water losses also include customer-metering inaccuracies typically resulting from meter wear or improper sizing. Unbilled but authorized consumption is associated with standard water system activities, some of which include hydrant testing, construction activities, irrigation of water company facilities, tank cleaning and courtesy leak adjustments.

SJW Group continues to work on measuring and reducing water loss. Although water loss metrics differ slightly across the four states, a combined interstate working group is currently developing standardized benchmarking. For SJWTX, CTW and Maine Water, the results do not include authorized unbilled use or meter inaccuracies, and Maine Water measures a metered water ratio rather than NRW.

SJW's 12-month running average of NRW through Q3 2021 was 7.1%, compared to 7.0% for the same period in 2020. It has recently developed a water loss dashboard that visualizes water loss performance on a quarterly basis. SJWTX's 12-month running average of NRW as of September 2021 was 19.8%. Substantial growth, despite the pandemic, as well as improvements in major leak detection, were contributing factors. CTW's 12-month running average of NRW as of September 2021 was 12.6%. Finally, Maine's 12-month running average for its unmetered water ratio as of September 2021 was 16.3%.

SJW has been piloting large consumer meter reliability technologies to enhance metering accuracy. This will enable more precise water loss calculations as well as improving SJW Group's ability to forecast water usage patterns. Similarly, CTW has also been piloting production meter testing programs to further refine production meter accuracy and effectiveness. It has achieved reductions in water loss through the installation of fixed data loggers and enhanced proactive leak detection efforts.

Advanced Leak Detection

Due to the extreme drought in California, the California Public Utilities Commission has approved SJW's mandatory conservation plan to facilitate customer water conservation. In other states, SJW Group continues to encourage customers to conserve water. Whether an area is in drought or not, SJW Group puts an emphasis on reducing water loss by implementing cutting-edge leak detection programs and technologies. Our active leak detection programs across four-state operations continue to proactively catch leaks before they surface, preventing interruptions in water service and saving millions of gallons of water and costs associated with energy and water treatment.

SJW continues to expand its acoustic leak detection sensor system, increasing the total sensor count from approximately 6,000 sensors to over 8,200 in the past year. Additionally, SJW has purchased multiple leak detection correlators and begun training additional staff in order to expand the program's ability to find leaks in a timely manner. In a 12-month period ending in November 2021, SJW saved an estimated 346 million gallons of water through its leak detection program.

SJWTX has invested in new leak detection correlators that have the capability of pinpointing leaks on plastic mains. SJWTX began using this technology in April and has already identified several large leaks.

Key leak detection activities in the Connecticut Water systems include the installation of 1,600 acoustic leak detection sensors in the Central and Guilford systems. Leak detection activities identified 226 service leaks and main breaks, saving an estimated 491 million gallons of water over a 12-month rolling period as of September 2021.

Water Quality

SJW Group's professional staff take pride in our commitment to provide high-quality drinking water to our customers for public health and safety, economic growth, and daily living.

Tackling PFAS

Per- and polyfluoroalkyl substances (PFAS) are a large group of man-made chemicals that have been manufactured and used around the world since the 1940s. These chemicals can accumulate over time and have been found in both the environment and the human body. Water utilities around the world are looking at the impact of these compounds.

Throughout SJW Group, our involvement in industry organizations keeps us informed of new research and enables us to remain compliant with all state and federal drinking water standards.

SJW is conducting innovative research to study the best PFAS treatment options and potential hardness removal at one of its largest groundwater stations.The PFAS treatment study, begun in late 2020, has yielded some very promising results from bench - scale tests showing excellent removal and lower-than-expected implementation costs. Customer surveys and virtual outreach sessions will take place to provide critical input on these potential water-quality projects.

SJW's look at PFAS contributed to the article "Per- and polyfluoroalkyl substances removal with granular activated carbon and a specialty adsorbent: A case study" in the September 2021 issue

of AWWA Water Science. SJW Group presented on this topic at America Water Works Association's Water Quality Technology Conference in November 2021.

In New England, MWC has tested all of its sources for PFAS, and CWC is on track to finish in late 2021 or early 2022.

Leading the Way with Proactive Programs

Lead Inventory and Replacement and Communication – SJW continues to be a leader in our proactive approach to communicating with customers and protecting public health. In compliance with recent legislation, SJW has begun to replace any older services lines with missing records from our distribution system. Without a record of installation, we cannot assume there is not a lead fitting called a gooseneck. SJW is prioritizing transparency with these 6,000 customers by proactively communicating with them. SJW offered courtesy lead analysis for customers upon request and rolled out interdepartmental protocols to ensure customers receive pitcher filters and flushing instructions as these services are replaced, since the period following replacement has the highest potential for lead release.

Keeping up with advancements in water quality is always top of mind. Depending on the emerging contaminant or compounds, we evaluate the potential for presence at all sources and sample in accordance with state or federal guidance so we are prepared for future regulations. One example of this forward-looking approach is SJWTX's routine lead and copper sampling and Long Term 2 Enhanced Surface Water Treatment at one of its larger drinking water systems to look pre-emptively for cryptosporidium. These are both EPA programs administered at the state level to meet requirements under the Safe Drinking Water Act.

contributing to *resilience* in public health

In 2021, SJWTX completed three studies reviewing:

- Disinfection byproduct (DBPs) trends at our largest surface water treatment plant (SWTP)
- Implications of water age for DBPs in the far reaches of our largest drinking water system, with a look at the impact of installing new mains
- Chemical stability at one SWTP, where we are treating, with a permit, zebra mussels with copper sulfate

Annual Water Quality Reports

Annual Water Quality Reports are published each year to share details of testing results with customers.

SJW's McLaughlin Well Station has been permitted and brought into production. It is the largest groundwater chloramination system in the San Francisco Bay Area.

social responsibility

Sustainable Infrastructure Investments

Introduction
Our Team
Environmental Stewardship
Social Responsibility
Addendum

SJW Group is committed to investing in the infrastructure of our water systems at a sustainable rate so that the water systems that serve us today continue to supply clean, high-quality water for our children and grandchildren.

SJW Group has budgeted over $237 million in 2021 and over $223 million in 2022 for infrastructure investment across our subsidiaries.

San Jose Water

SJW continues its long-standing practice of replacing about 1% of pipe, or a staggering 24 miles of pipes of all sizes, each year. With pipes dating to the late 1880s, there are many miles of cast iron, steel and other pipe types. Our world-class pipe replacement program scientifically identifies and prioritizes mains that are statistically most likely to leak based on their history, year installed, type of pipe material and other factors. Additionally, the consequence of failure for each pipe segment is analyzed to help with prioritization, including the number of customers who would be affected, whether the pipe serves critical facilities such as hospitals and the potential impact to the community. Replacement pipes are sized to ensure adequate firefighting flows and future water demands.

The 2022 SJW infrastructure budget is structured to prioritize asset replacement to best meet our sustainable replacement rates.

MORE

SJW's Columbine Tank Project

Maine Water Company

MWC is continuing development of system master plans as the primary means for identifying water main replacement projects within the next 10-year planning period. In 2021, master plans were completed in the Freeport, Millinocket and Greenville systems. Future projects are placed into three categories (short, medium and long-term improvements). Projects are selected in conjunction with local or state road projects and other utility projects when practical. Replacement pipes are sized using hydraulic modeling software to ensure that adequate fire flows are available within the project area. The potential for future development is also taken into consideration when designing and sizing replacement projects.

The $60 million Saco River Drinking Water Treatment Facility project broke ground in 2020 and will begin serving customers in the spring of 2022. The new facility will replace the existing surface water plant constructed in 1884, which sits fully in the 100-year floodplain of the Saco River. In addition to the use of solar power and technology efficiencies, the construction of the facility will include the preservation of over 250 acres of open space. Maine Water anticipates achieving award status through the Institute for Sustainable Infrastructure for this facility.

Connecticut Water

In 2021, CWC invested approximately $61 million in water and wastewater infrastructure. More than $28 million was allocated to the replacement of aging or undersized water mains through our Water Infrastructure and Conservation Adjustment Program which allows for infrastructure investments. This has assisted in the replacement of over 12 miles of water main in 2021, on track to maintain a 1% replacement rate. Also included in this program were four pump efficiency projects, which reduced energy consumption at each of these major facilities an average of 20%.

Sustainable Infrastructure Investments (continued)

SJWTX

SJWTX is continuing development of a Master Plan for the Bulverde region of its service area. With an associated water model largely developed in 2021, a final review is slated for early 2022. The results will identify system needs in a high-growth area where significant new demand is expected in the coming years. With needs identified, decisions can be made with regard to updates and upgrades to the system and budget allocations for those improvements.

In 2021, SJWTX also completed a new dual purpose overflow and drying bed lagoon at its Triple Peak Surface Water Plant. This new feature will help ensure our regulatory compliance as well as yielding a cost savings of about $50,000 annually.

Other major projects in the system include the addition of a new booster station and ground storage tank at The Point facility site, the completion of the new 750,000 gallon elevated storage tank at Ventana, and bringing the Stahl Lane purchased water delivery point on line. All of these projects create more reliable service in one of our fastest-growing drinking water systems.

After Winter Storm Uri, 2021 brought new focus on emergency power supply. SJWTX is investing heavily in backup generators beginning this year and for several years to come. Generators were ordered for six of the most critical or sensitive facilities and will be installed in 2022.

Geographic Information System (GIS) and Business Intelligence

Our investments in technological advancements for GIS and Business Intelligence position SJW Group as an industry leader. Some of the ways in which these investments have directly benefited customers, shareholders and the environment this year are:

- An interactive mapping application at SJW where the public can view known leak locations and water waste concerns to promote water conservation during extreme drought.
- Interactive maps for customers at SJWTX to view restoration efforts after early 2021's historic ice storms impacted critical operations. Our nationwide presence allowed us to leverage employees in other states to assist in this effort, speeding response time and allowing Texas employees the space to address their own personal impacts of the ice storms.
- Use of GIS field collection software at CWC and MWC to track hydrant inspections, watershed inspections, flushing and other operations to ensure our water sources and infrastructure are protected and maintained.
- Use of the ArcGIS Portal to supply all CWC and MWC company staff with up-to-date mapping directly on their mobile phones, to improve speed of service on-site for our customers.
- Availability of data for capital planning: our GIS tools allow us to track leaks, model hydraulics, and model pipe life cycles to plan where capital dollars can be most efficiently spent for continued reliable service.

Asset Management

Asset management plays a central role in ensuring system reliability and sustainability for all of SJW's stakeholders. Short- and long-term planning as well as day-to-day operational strategies are being built upon SJW's asset management framework in order to increase levels of service while maintaining acceptable levels of risk and cost.

SJW continues to identify critical infrastructure needs and prioritize capital projects using asset management plans, which contain robust risk analyses with detailed consequence of failure, probability of failure and business risk exposure calculations for hundreds of thousands of assets. In addition, long-term, 100-year infrastructure risk forecasts and financial projections are used to determine the appropriate level of investment to uphold and improve the reliability of the water system for decades to come. Some of these asset management strategies are being adopted by CWC, particularly in the area of using a more robust risk-driven approach for infrastructure replacement prioritization.

SJW is also in the process of implementing a best-in-class Enterprise Asset Management (EAM) system, Infor EAM, in order to boost field work productivity, minimize costs, and optimally reallocate material and labor resources. This system empowers workers to use mobile solutions to streamline tasks, accurately and efficiently capture critical data, easily follow safety guidelines, and effectively satisfy regulatory requirements. It also serves as the primary platform for analyzing asset failure modes and failure causes, which will enable SJW to isolate and correct the root causes of failures. The EAM system successfully went "live" at the Montevina Water Treatment plant in August 2021, and for the Operations department in December 2021.

Taking advantage of rapidly evolving and advancing technology, SJW uses continuous condition monitoring devices that bring to light minor and otherwise undetectable deficiencies in equipment. Vibration monitoring sensors installed on pumps and motors send out real-time alerts, allowing SJW staff to address defects at their early stages, not only minimizing risk for customers but also minimizing repair costs. In addition, real-time power consumption and efficiency monitoring and business intelligence platforms empower SJW to make data-informed decisions to minimize operational costs.

In step with SJW's Asset Management Policy, SJW continues to advance the practice of asset management in the water industry on a national and even international level. SJW is an active member of the Reliability Leadership Institute, a prestigious international community of practice featuring members from high-performing companies such as Medtronic, 3M and Honda. SJW staff also serve in leadership positions of professional asset management associations and are active contributors to the asset management industry. SJW was also featured in the December 2021 edition of the Water Finance & Management journal. The article highlights SJW's leading approach to long-term sustainability and reliability, and urges water utilities across the nation to position themselves for long-term success through risk-based capital planning, risk mitigation and cost forecasting.

Customer Outreach | Customer Satisfaction

SJW Group companies work hard to ensure that customers have high-quality, reliable drinking water service at their taps 24 hours a day, seven days a week. We communicate with customers through bill messages and inserts, emails, phone calls, text messages, social media, and various channels.

Our call centers are staffed by local employees, some of whom are customers themselves, and our national presence allows us to serve customers across the country with knowledgeable water professionals during challenging circumstances. This was crucial in our response to the large-scale power outages during February 2021's winter storms in Texas, and allowed us to serve customers quickly and efficiently with support from our other states' call centers. Twenty-four-hour emergency on-call service is available in all states as well.

In the event that an urgent message needs to reach our customers, our emergency notification systems at each subsidiary send a simultaneous call/text/email to all affected customers on file. Non-customers may sign up for this service as well, to be notified of any issues at a specified address (i.e., for family members or tenants).

We are always looking for opportunities to improve. Customers receive an independently administered survey through our third-party partner, Great Blue Research, to gauge their satisfaction across multiple areas of all SJW subsidiaries.

In addition to the midyear and year-end customer satisfaction surveys, subsidiaries have a variety of options for customers to submit anonymous feedback throughout the year including instant surveys following service appointments or an engagement with the call center.

CUSTOMER SATISFACTION

2020	86.4%
2021	86.5%

Water Affordability and Equity

SJW Group's Human Right to Water Policy affirms our belief that everyone should have access to clean and reliable water at just and reasonable rates that accurately represent the cost of treating and delivering high-quality water to customer taps 24 hours a day, seven days a week.

Water utility's rates are regulated and approved at the state level by the Maine Public Utilities Commission, Connecticut Public Utilities Regulatory Authority, Public Utilities Commission of Texas and California Public Utilities Commission.

We are committed to being responsible stewards of customer dollars and to keeping costs down while also investing appropriately in our water systems to ensure quality and reliability for customers of all income levels, now and for future generations. Our subsidiaries are making consistent, incremental investments in infrastructure so that the costs and rate impacts of those investments are incurred gradually and can be more easily addressed by the utility and our customers. We are adapting a number of strategies across our subsidiaries to ensure equitable delivery of water service such as:

- Special programs during COVID-19
- Tiered rates to promote conservation
- Customer assistance programs
- Investment in our communities

The companies have collaborated with their water utility professional associations to advocate for state and federal funds and programs to assist low-income customers with payment of their water bills. There are many ways our subsidiaries are working to address water affordability and creating equity at the local level, assisting our customers in their service communities:

- Special programs were offered by all four subsidiaries during COVID-19 which stopped utility terminations for nonpayment for a minimum of nine months and extra efforts were made to communicate and offer payment plans and assistance to customers facing challenges.
- **Water rate discount programs** for eligible customers: In 2021, CWC launched the first program of its kind in Connecticut, joining SJW in offering a Water Rate Assistance Program (WRAP), which provides a 15% discount on water bills to income-eligible customers. SJW's current enrollment data shows that about 75% of eligible households are participating. CWC's program launched in Q3 2021.

- Maine Water's minimum bill includes some amount of water usage, so that customers are not discouraged from using water for basic sanitation needs and can plan on predictable bill amounts while using only what they need.
- A variety of ongoing **Customer Assistance Programs** are offered:
  - Flexible extended payment plans are available at all subsidiaries, with interest-free plans available through SJW and SJWTX and during all or part of the COVID-19 pandemic at CWC and MWC.
  - CWC's H2O – Help 2 Our Customers program provides financial assistance and/or payment plans to support income-eligible customers or those facing a one-time hardship.

- MWC's H2O COVID-19 Hardship Assistance Program provides financial assistance to customers facing COVID-19-related financial difficulties.
- Coordination between CWC and local social service agencies to identify customers in need and share information on available assistance programs.
- CWC partners with state-wide nonprofit Operation Fuel, which provides utility bill assistance to Connecticut residents.
- SJW, CWC and MWC customers may enroll a third party – a friend, family member, etc. – who will be notified before any water is shut off for non-payment. This third party is not responsible for bill payment.
- A new tiered conservation rate implemented in 2021 at CWC aims to ensure that customers who conserve water and only use what is necessary for their basic domestic needs are billed at a lower rate while customers using higher amounts of water outside (e.g., for frequent lawn irrigation) are charged according to the extra burden they place on the water system. SJW and SJWTX also implement existing conservation rates.

Recently, the California Public Utilities Commission (CPUC) published its 2019 Annual Affordability Report. This comprehensive report looks at three different ways of measuring affordability: Hours at Minimum Wage, Socioeconomic Vulnerability Index and Affordability Ratio. SJW's service area is considered within the "affordable" section using these three metrics.

Stakeholder Engagement

SJW Group subsidiaries play a critical role in our service communities and exist to serve all stakeholders, including customers, employees, shareholders, communities and the environment.

Engaging with all stakeholders helps build relationships that allow both parties to thrive. Those stakeholders, both inside and outside our organization, contribute to a dialogue that allows us to share information, and form stronger partnerships – benefiting all of us.

STAKEHOLDER	HOW WE ENGAGE	TOPICS
Customers	• Bill Inserts • Webinars • Customer Satisfaction Surveys • Social Media • Community Events • Press Releases	• Water Affordability • Water Supply • Water Quality • Conservation • Emergency Preparedness • Value of Water
Employees	• Newsletters • Emails • Biannual Employee Satisfaction Surveys • Town Hall Webinars • Department and Inter-Departmental Meetings	• Safety • Diversity, Equity and Inclusion • COVID-19 Updates • Employee Engagement and Satisfaction • Company News
Investors	• Earning Calls • Annual Shareholder Meetings • Securities and Exchange Commission Filings • Sustainability Report • Annual Report • Analyst Meetings • Press Releases	• Company News • ESG Topics • Financial Results
Suppliers	• Conferences • Surveys	• Diversity • Human Rights • Safety
Regulators	• Meetings • Emails • Webinars • Testify at Public Hearings	• Water Quality • Efficiency Standards • Source Protection • Safety • Dam Safety
Government & Elected Officials	• Meetings • Press Conferences • Presentations	• Water Affordability • Water Supply • Water Quality • Conservation • Emergency Preparedness
Industry Colleagues	• Conferences • Industry Events	• Operations • Water Quality • Conservation
Communities	• Employees Serve as Board Members for Local Community Agencies • Funding Local Nonprofit Agencies (examples) • Community Events • Educational Outreach Programs	• Environmental Stewardship • Water Supply • Water Affordability • Community Support
Unions (SJW only)	• Same as How We Engage with Employees, Plus: Management-Labor Training Committee and Joint Labor Management Committee	• Same Topics for All Employees, Plus: Employee Training and Certification; Union Bid Job Openings; Working Conditions and the Union Contract
Environment	• Collaboration with State and Local Environmental Organizations • Active Membership • Fund Environmental Programs	• Environmental Stewardship • Water Conservation • Environmental Cleanups • Land Conservation

Stakeholder engagement is ongoing and the frequency of communication varies

Community Outreach and Charitable Giving

resilient because we **care** about our **COMMUNITIES**

SJW Group company contributions to local organizations in 2021 totaled over $367,000. But beyond financial support, our community involvement is most rewarding when we're able to work with our neighbors to make our communities a better place.

SJW PARTNERED WITH LOS GATOS-MONTE SERENO COMMUNITY EMERGENCY RESPONSE TEAM (CERT) to host an emergency preparedness drive-through water distribution exercise on November 3, 2021. The community practice drill allowed attendees to drive through the line to receive free water and a reusable bag. Perfect for everyone's emergency kit!

AT HAPPY HOLLOW PARK & ZOO, the thrill-packed Pacific Fruit Express Roller Coaster had a fun new makeover thanks to SJW's $25,000 donation. It went from bare bones to transformed – colorful drought-tolerant flowers, an SJW water tower, old farm equipment and fruit-packing boxes pay tribute to our Valley of Heart's Delight history.

Charitable giving endeavors are funded by shareholders and not reflected in customer rates.

MWC EMPLOYEES completed another successful **Annual Kids Coat Drive,** distributing over 100 brand-new coats to kids in need across their service communities.

CWC'S AWARD-WINNING WATER DROP WATCHERS PROGRAM was adapted to a virtual model to accommodate school safety protocols related to COVID-19. Employee volunteers streamed into 3rd-grade classrooms across the state with interactive games and videos to teach a one-hour lesson on the water cycle and the importance of water conservation.

CWC'S SCHOOL WATER BOTTLE FILLING STATION GRANT PROGRAM gave over $15,000 in donations of water bottle filling stations to provide a touch-free option for students to hydrate during the day without the waste caused by single use plastic water bottles.

MWC'S ANNUAL SCHOLARSHIP PROGRAM provides $7,000 in scholarships to graduating high school students in each of our 14 service communities.

SJW CONTINUES ITS COMMUNITY SUPPORT during the Thanksgiving season by helping families have a hearty meal. Local elected officials chose two deserving organizations to each receive a donation of 100 Safeway gift cards: Amigos de Guadalupe and the Billy DeFrank LGBTQ+ Community Center.

SJWTX DONATED 450 COPIES OF ONE WELL: THE STORY OF WATER ON EARTH by Rachel Strauss to five schools within their service communities. The book teaches the value of water and how to protect it.

Working with Suppliers to Be a Force for Good

SJW Group understands that our commitments to social responsibility extend beyond the work done directly within our subsidiaries. Our partnerships with vendors and suppliers must also reflect the values of social responsibility and environmental stewardship that are our passion.

In mid-2021, our vendors completed an annual survey on their awareness and compliance with SJW Group's policies and procedures, such as our Human Rights Policy and Code of Conduct.

In 2021, we strengthened our commitment to social and environmental practices within our supply chain and adopted an SJW Group **Code of Vendor Conduct**.

Purchase Order Terms and Conditions:

- San Jose Water
- SJWTX
- Connecticut Water

Code of Conduct Awareness Vendor Survey % Yes Responses	
Vendor has policies that prohibit child labor, human trafficking and slavery	88.9%
Vendor has a policy that prohibits forced labor	93.7%
Vendor has a policy regarding collective bargaining	39.7%
Vendor has a policy regarding work hours	93.7%
Vendor evaluates the environmental impact of the products supplied	79.4%
Vendor has read the SJW Group Code of Conduct and will comply with it	95.2%
Vendor has a code of conduct that aligns with SJW Group's	88.9%

Supplier Diversity

SJW Group is advancing its commitment to supplier diversity across all of its regulated utilities. Supplier diversity is focused on purchasing goods and services from diverse-owned businesses, ensuring our supply chain reflects the communities we serve.

In 2021, SJW Group leveraged SJW's successful supplier diversity program as a model for its other subsidiaries with a strong focus on increasing our company-wide diverse spend. Individual goals have been created for each location. A cross-functional team with representation from each location meets on a biweekly basis to discuss strategies to enhance the supplier diversity program. The 2021 focus included meeting specific spend goals, enhancing outreach efforts, updating internal policies and procedures, and modifying contract and request for proposal (RFP) language.

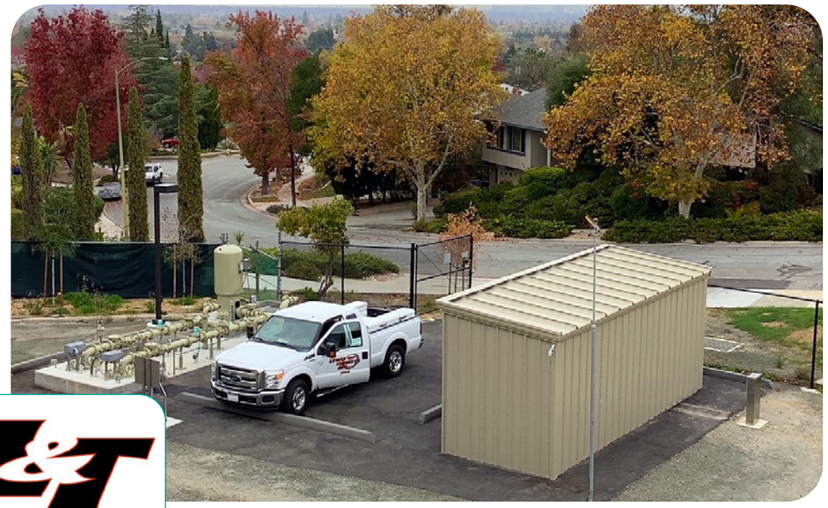
Across SJW Group, each subsidiary completed a vendor coding project, which allows for accurate calculations of diverse spend. Additionally, our procurement teams are engaging in outreach programs designed to reach new potential suppliers and partners.

In 2020, SJW reached a milestone of 30.1% spend with diverse suppliers, well exceeding the 21.5% goal set forth by the California Public Utilities Commission (CPUC). This $28.8M spend equaled a 133 percentage point increase over 2019.

SJW DIVERSE SUPPLIERS	
Minority-Owned Business Enterprise (MBE)	$18.3M
Women-Owned Business Enterprise (WBE)	$5.7M
Disabled Veteran-Owned Business Enterprise (DVBE)	$4.8M

Details of the 2020 results and the 2021 plan for SJW can be found in its Utility Supplier Diversity Report to the California Public Utilities Commission.

In addition, SJW was one of only 10 California regulated utilities to meet or exceed CPUC sub-goals of 15% minority (19.1% actual), 5% women (6% actual) and 1.5% disabled veteran (5% actual) spend. These results were a consideration in U.S. Veteran's Magazine honoring SJW as one the nation's top supplier diversity programs in 2020.



L&T Since '73

MORE

Veterans in Business Network's Corporation of the Year Award

resilient because of our *supplier partners*

Engaging in the Political Process

SJW Group seeks to build and steward constructive relationships with elected officials and staff at all levels of government. Our intention behind these efforts is to have meaningful input in the development of policies and regulations affecting our local water utilities, resources and our customers. Our government affairs programs are conducted at the state level, in compliance with the states' campaign contribution and election laws.

Rules regarding political contributions and lobbying expenditures vary by state; each state has its own various disclosure requirements. At SJW Group, we strive to comply with both the spirit and the letter of all disclosure laws as required. Our Code of Conduct clearly explains our expectations for conducting business with integrity and to the highest ethical standards.

Political Donations:

- **California** – the political contributions of San Jose Water are public information.
- **Maine** – while legally permitted to make political contributions in Maine, Maine Water Company has historically chosen not to, and did not in 2020.
- **Connecticut and Texas** – Neither Connecticut Water Company nor SJWTX are legally permitted to make political contributions under state law.

Lobbying:

- Connecticut Water, San Jose Water and SJWTX retain state lobbyists and CWC also employs registered state lobbyists in-house.
- Maine Water is allowed to retain lobbyists, but has chosen not to do so in 2020.
    - All four utilities are paying members of state and national water industry trade associations that may engage in lobbying on state and national drinking water issues and regulation.
        - All four utilities belong to business associations that may engage in lobbying to affect business regulations.

On October 6, 2021, San Jose Mayor Sam Liccardo (left) hosted a press conference at which he announced he was recommending aligning the City of San Jose's outdoor watering guidance with San Jose Water's schedule of two days per week. SJW's VP John Tang (right) discussed the historic drought facing the community.

Cybersecurity

As an essential business serving more than one million people across the United States, SJW Group takes cybersecurity seriously. From securing customer and employee data to using technology to capture, treat and distribute water, we engage cybersecurity to play a critical role in our resiliency and sustainability.

Training

Employees are the first line of defense against cyberattacks. With an online training program, all employees are brought up to date with security information on topics such as phishing, password protection, removable media and social media threats. Regular testing of employee knowledge helps build a cybersecurity-first culture within the organization and has resulted in scores that are better than average in the energy and utility industry. To assist with employee questions, a dedicated email address was created for fast and accurate responses from a cyber professional.

Risk and Resilience Analysis

America's Water Infrastructure Act (AWIA) Section 2013 calls for water utilities to complete a Risk and Resilience Assessment as well as a Risk Reduction Plan that includes an Emergency Response Plan (ERP) and Risk Mitigation Plan (RMP). Cybersecurity plays an instrumental role since technology runs through each part of the water distribution process. As a result of the AWIA documentation, SJW Group subsidiaries have carefully evaluated risks and identified resilience management options in order to take the appropriate cybersecurity steps to protect the organization, its employees and its customers.

Partnering with the Pros

SJW Group uses the industry standards to guide its cybersecurity efforts, including those of the Center for Internet Security (CIS) Critical Security Controls (CSC). CIS CSC is recognized by both California's previous attorney general and Connecticut's Public Act No. 21-119 as meeting the "reasonableness" standard for cybersecurity. Utilizing technology, including next-generation firewalls and endpoint protection, provides strong guardrails from cyber threats.

Our cybersecurity staff share knowledge with other industry agencies such as American Water Works Association (AWWA), National Association of Water Companies (NAWC) and Water Information Sharing and Analysis Center (WaterISAC) on a collaborative basis. Our goal is to keep up on the cybersecurity issues within our industry and to assist smaller utilities.

CCPA

For SJW, the California Consumer Privacy Act (CCPA) meant that our organization had to meet the new privacy rights and consumer protections that went into effect January 1, 2020. The law covers a customer's right to know what personal information is being stored, the right to know how it is being used and the right to delete it.

SJW STATS THROUGH 3RD QUARTER 2021

Requests to Know	14
Deletion Requests	8
Total CCPA Requests	30

At the White House to Discuss Cyber Protections

On August 25, 2021, SJW Group CEO Eric Thornburg shared his perspective on how to collectively improve the nation's cybersecurity and critical infrastructure resilience in a meeting with President Biden, members of his cabinet and national security team, and private sector and education leaders from across the country. The meeting addressed the increasingly sophisticated malicious cyber activity facing companies today, with a focus on building out the skilled cybersecurity workforce needed to meet this increased challenge. Other notable attendees included executives from Apple, Microsoft, Amazon, Google, IBM and JPMorgan.

SJW Group is eager to collaborate across the public and private sectors to help protect our nation's infrastructure against cybersecurity threats.

Eric commented, *"It was so cool to have the water industry at the table and for people to realize what an impact water systems can have on the nation's defense, and how crucial it is to collaborate with others on the issue of cybersecurity. It was great to have the interests of water utilities be part of the national conversation."*

addendum

Waste Management

2020 Waste Data - SJW

ORIGINAL DATA																SUMMARY COLUMN
Subsidiary	Manifest	Facility	Shipped	No.	Type	Containers	"Total Quantity"	"Unit Wt/Vol"	Unit of Measure	"Conversion Factor"	Tonnage	"Mailed ""Open"" Manifest?"	"Received ""Closed"" Manifest"	In Transit	Method	Waste Management/Treatment Codes	Disposal
San Jose Water	02042 7547 JJK	Montevina WTP	1/8/20	7	TP	portable tanks	1750	G	gallons (liquids only)	0.00417	7.3	Y	1/15/20	7 days	H141	Storage, bulking, and/or transfer off site--no treatment/recovery, fuel blending or disposal at this site	Landfill
San Jose Water	01992 5163 JJK	Jackson Ave	1/30/20	1	CF	fiber or plastic boxes, cartons, cases	1	Y-N	cubic yards - normal	0.8428	0.84	Y	2/19/20	20 days	H132	Landfill or surface impoundment that will be closed as landfill (to include on-site treatment and/or stabilization)	Landfill
San Jose Water	01864 0294 JJK	Dow Dr	2/5/20	1	DT	dump truck	18	Y-N	cubic yards - normal	0.8428	15.17	Y	2/5/20	0 days	H132	Landfill or surface impoundment that will be closed as landfill (to include on-site treatment and/or stabilization)	Landfill
San Jose Water	02042 7821 JJK	Montevina WTP	2/24/20	1	DF	fiberboard or plastic drums, barrels, kegs	65	P	pounds	0.0005	0.03	Y	3/12/20	17 days	H141	Storage, bulking, and/or transfer off site--no treatment/recovery, fuel blending or disposal at this site	Landfill
San Jose Water	02042 1069 JJK	Twelfth St	7/28/20	10	DF	fiberboard or plastic drums, barrels, kegs	190	G	gallons (liquids only)	0.00417	0.79	Y	8/27/20	30 days	H141	Storage, bulking, and/or transfer off site--no treatment/recovery, fuel blending or disposal at this site	Landfill
San Jose Water	01473 6014 FLE	Columbine Stn	8/4/20	1	CM	metal boxes, cartons, cases (including roll-offs)	25	Y-N	cubic yards - normal	0.8428	21.07	Y	8/6/20	2 days	H132	Landfill or surface impoundment that will be closed as landfill (to include on-site treatment and/or stabilization)	Landfill
San Jose Water	02198 5620 JJK	Seventh St	8/18/20	8	DM	metal drums, barrels, kegs	2400	P	pounds	0.0005	1.2	Y	8/31/20	13 days	H141	Storage, bulking, and/or transfer off site--no treatment/recovery, fuel blending or disposal at this site	Landfill
San Jose Water	00033 3935 DAT	Three-Mile Stores	8/19/20	2	DF	fiberboard or plastic drums, barrels, kegs	250	P	pounds	0.0005	0.13	Y	8/28/20	9 days	H132	Landfill or surface impoundment that will be closed as landfill (to include on-site treatment and/or stabilization)	Landfill
San Jose Water	00033 3936 DAT	Three-Mile Stores	8/19/20	1	DF	fiberboard or plastic drums, barrels, kegs	40	P	pounds	0.0005	0.02	Y	9/11/20	23 days	H132	Landfill or surface impoundment that will be closed as landfill (to include on-site treatment and/or stabilization)	Landfill
San Jose Water	00033 3937 DAT	Three-Mile Stores	8/19/20	2	DF	fiberboard or plastic drums, barrels, kegs	30	G	gallons (liquids only)	0.00417	0.13	Y	9/1/20	13 days	H061	Fuel blending prior to energy recovery at another site	Recycled
San Jose Water	00033 3937 DAT	Three-Mile Stores	8/19/20	2	DM	metal drums, barrels, kegs	300	P	pounds	0.0005	0.15	Y	9/1/20	13 days	H061	Fuel blending prior to energy recovery at another site	Recycled
San Jose Water	00033 3937 DAT	Three-Mile Stores	8/19/20	1	DM	metal drums, barrels, kegs	15	G	gallons (liquids only)	0.00417	0.06	Y	9/1/20	13 days	H061	Fuel blending prior to energy recovery at another site	Recycled
San Jose Water	00033 3938 DAT	Three-Mile Stores	8/19/20	8	DM	metal drums, barrels, kegs	800	P	pounds	0.0005	0.4	Y	9/1/20	13 days	H020	Metals recovery including retorting, smelting, chemicals, etc..	Recycled
San Jose Water	00033 3939 DAT	Three-Mile Stores	8/19/20	1	DF	fiberboard or plastic drums, barrels, kegs	80	P	pounds	0.0005	0.04	Y	9/1/20	13 days	H040	Incineration – thermal destruction other than use as a fuel	Combusted
San Jose Water	00033 3939 DAT	Three-Mile Stores	8/19/20	1	DF	fiberboard or plastic drums, barrels, kegs	80	P	pounds	0.0005	0.04	Y	9/1/20	13 days	H040	Incineration – thermal destruction other than use as a fuel	Combusted
San Jose Water	02198 5626 JJK	Montevina WTP	8/21/20	3	TP	portable tanks	710	G	gallons (liquids only)	0.00417	2.96	Y	9/9/20	19 days	H141	Storage, bulking, and/or transfer off site--no treatment/recovery, fuel blending or disposal at this site	Landfill
San Jose Water	02198 5697 JJK	Cottage Grove	9/10/20	1	DF	fiberboard or plastic drums, barrels, kegs	55	G	gallons (liquids only)	0.00417	0.23	N					Landfill
San Jose Water	02198 5698 JJK	Breeding Stn	9/10/20	4	DF	fiberboard or plastic drums, barrels, kegs	220	G	gallons (liquids only)	0.00417	0.92	N					Landfill
San Jose Water	02198 5698 JJK	Breeding Stn	9/10/20	1	DF	fiberboard or plastic drums, barrels, kegs	55	G	gallons (liquids only)	0.00417	0.23	N					Landfill
San Jose Water	02198 5699 JJK	Buena Vista	9/10/20	2	DF	fiberboard or plastic drums, barrels, kegs	100	G	gallons (liquids only)	0.00417	0.42	N					Landfill
San Jose Water	01473 6079 FLE	Columbine Stn	9/17/20	1	CM	metal boxes, cartons, cases (including roll-offs)	15	Y-N	cubic yards - normal	0.8428	12.64	N					Landfill
San Jose Water	01473 6166 FLE	Columbine Stn	9/22/20	1	CM	metal boxes, cartons, cases (including roll-offs)	19000	K	kilograms	0.001102	20.94	Y	9/23/20	1 days	H132	Landfill or surface impoundment that will be closed as landfill (to include on-site treatment and/or stabilization)	Landfill
San Jose Water	01473 6165 FLE	Columbine Stn	9/24/20	1	CM	metal boxes, cartons, cases (including roll-offs)	19000	K	kilograms	0.001102	20.94	N					Landfill
San Jose Water	01473 6164 FLE	Columbine Stn	9/28/20	1	CM	metal boxes, cartons, cases (including roll-offs)	19000	K	kilograms	0.001102	20.94	N					Landfill
San Jose Water	01473 6163 FLE	Columbine Stn	9/30/20	1	CM	metal boxes, cartons, cases (including roll-offs)	19000	K	kilograms	0.001102	20.94	N					Landfill

Waste Management

2020 Waste Data - SJW (continued from previous page)

This worksheet includes waste data provided by San Jose Water. Waste data is used to help determine Scope 3 emissions.

ORIGINAL DATA																SUMMARY COLUMN
Subsidiary	Manifest	Facility	Shipped	No.	Type	Containers	"Total Quantity"	"Unit Wt/Vol"	Unit of Measure	"Conversion Factor"	Tonnage	"Mailed ""Open"" Manifest?"	"Received ""Closed"" Manifest"	In Transit	Method	Waste Management/Treatment Codes	Disposal
San Jose Water	01473 6162 FLE	Columbine Stn	10/2/20	1	CM	metal boxes, cartons, cases (including roll-offs)	18000	K	kilograms	0.001102	19.84	Y	10/5/20	3 days	H132	Landfill or surface impoundment that will be closed as landfill (to include on-site treatment and/or stabilization)	Landfill
San Jose Water	01473 6360 FLE	Columbine Stn	10/8/20	1	CM	metal boxes, cartons, cases (including roll-offs)	17500	K	kilograms	0.001102	19.29	N					Landfill
San Jose Water	01473 6361 FLE	Columbine Stn	10/8/20	1	CM	metal boxes, cartons, cases (including roll-offs)	10000	K	kilograms	0.001102	11.02	N					Landfill
San Jose Water	01473 6159 FLE	Columbine Stn	10/12/20	2	DM	metal drums, barrels, kegs	453	K	kilograms	0.001102	0.5	Y	10/26/20	14 days	H132	Landfill or surface impoundment that will be closed as landfill (to include on-site treatment and/or stabilization)	Landfill
San Jose Water	02198 5909 JJK	Montevina WTP	10/29/20	1	TP	portable tanks	100	G	gallons (liquids only)	0.00417	0.42	Y	11/18/20	20 days	H141	Storage, bulking, and/or transfer off site--no treatment/recovery, fuel blending or disposal at this site	Landfill
San Jose Water	01293 8060 FLE	Tully Rd	11/3/20	31	DF	fiberboard or plastic drums, barrels, kegs	850	G	gallons (liquids only)	0.00417	3.54	Y	11/5/20	2 days	H039	Metals recovery including retorting, smelting, chemicals, etc.	Recycled
San Jose Water	01293 8061 FLE	Meridian Ave	11/3/20	9	DF	fiberboard or plastic drums, barrels, kegs	440	G	gallons (liquids only)	0.00417	1.83	Y	11/5/20	2 days	H039	Metals recovery including retorting, smelting, chemicals, etc.	Recycled
San Jose Water	02198 5996 JJK	Redhill Rd	11/9/20	3	DF	fiberboard or plastic drums, barrels, kegs	45	G	gallons (liquids only)	0.00417	0.19	Y	12/1/20	22 days	H141	Storage, bulking, and/or transfer off site--no treatment/recovery, fuel blending or disposal at this site	Landfill
San Jose Water	02198 5997 JJK	Seventeenth St	11/9/20	10	DF	fiberboard or plastic drums, barrels, kegs	300	G	gallons (liquids only)	0.00417	1.25	Y	12/1/20	22 days	H141	Storage, bulking, and/or transfer off site--no treatment/recovery, fuel blending or disposal at this site	Landfill
San Jose Water	02198 5998 JJK	Williams Rd	11/9/20	4	DF	fiberboard or plastic drums, barrels, kegs	120	G	gallons (liquids only)	0.00417	0.5	Y	12/1/20	22 days	H141	Storage, bulking, and/or transfer off site--no treatment/recovery, fuel blending or disposal at this site	Landfill
San Jose Water	00035 3000 DAT	Three-Mile Stores	12/17/20	1	DM	metal drums, barrels, kegs	125	P	pounds	0.0005	0.06	Y	12/28/20	11 days	H132	Landfill or surface impoundment that will be closed as landfill (to include on-site treatment and/or stabilization)	Landfill
San Jose Water	00035 3000 DAT	Three-Mile Stores	12/17/20	3	DF	fiberboard or plastic drums, barrels, kegs	350	P	pounds	0.0005	0.18	Y	12/28/20	11 days	H132	Landfill or surface impoundment that will be closed as landfill (to include on-site treatment and/or stabilization)	Landfill
San Jose Water	00036 6501 DAT	Three-Mile Stores	12/17/20	3	DM	metal drums, barrels, kegs	350	P	pounds	0.0005	0.18	N					Landfill

2020 Waste Data - SJWTX

ORIGINAL DATA										SUMMARY COLUMN
Subsidiary	Collection Date	Transporter	Disposal Facility Name	Total Quantity	Unit	Ticket Number	Year	Tonnage	Disposal	Source
SJWTX	6/11/20	Waste Management	Mesquite Creek Landfill	12	Cubic Yards	1303545	2020	0.2143	Landfill	Water Quality Access Database
SJWTX	3/17/20	Waste Management	Mesquite Creek Landfill	12	Cubic Yards	1286385	2020	0.2143	Landfill	Water Quality Access Database
SJWTX	10/30/20	Waste Management	Mesquite Creek Landfill	5	Cubic Yards	1335619	2020	0.0893	Landfill	Water Quality Access Database
SJWTX	9/9/20			2.708	tons		2020	2.7079	Landfill	Sludge disposal letter - 2020_09 VO Annual Sludge Summary Report
SJWTX	9/9/20			0.022	tons		2020	0.0220	Landfill	Sludge disposal letter - 2020_09 RCCH Annual Sludge Summary Report
SJWTX	9/9/20			0.140	tons		2020	0.1396	Landfill	Sludge disposal letter - 2020_09 HEB Annual Sludge Summary Report
SJWTX	9/10/20			9.736	tons		2020	9.7355	Landfill	SJWTX files

This worksheet includes waste data provided by SJWTX, Inc. Waste data is used to help determine Scope 3 emissions.

Waste Management

2020 Waste Data - CWC

This worksheet includes waste data provided by Connecticut Water. Waste data is used to help determine Scope 3 emissions.

ORIGINAL DATA						
Waste Company	**Location**	**Frequency of Pickup**	**Trash**	**Recycle**	**Units**	**Notes**
All Waste	73 Goose Hill, Chester	"Every Other Week Fridays - Trash Every Other Week Wednesdays - Recycling"	52	52	cy	Assume that when not explicitly defined, dumpster is 2 cy
All Waste	12 Kelsey Town Bridge Road, Clinton	"Once a Week Fridays - Trash Every Other Week Wednesdays - Recycling"	104	52	cy	
All Waste	19 Executive Drive, Farmington	"Every Other Week Mondays- Trash Every Other Week Tuesdays - Recycling"	52	52	cy	
Sweitzer Waste Removal	93 W. Main Clinton, CT	"3 Times Week, M,W,F - Every Week Once a Week - Cardboard on Wednesdays"	312	104	cy	
Oak Ridge	316 Heritage Road, Heritage Village	"2 Receptacles Every Week - Tuesday - Trash Every Other Week - Tuesday - Trash"	156	-	cy	
USA Hauling	WC Stewart WTP (119 Horton Hill), Naugatuck	Every two weeks on Tuesday - 4 Yard Trash Dumpster	104	-	cy	
USA Hauling	Stafford WTP (20 Buckley Hwy), Northern	Once a Month - 4 Yard Trash Dumpster	48	-	cy	
USA Hauling	250 Meadow Street, Naugatuck	"Once a week - 4 Yard Trash Dumpster Every Two Weeks - 5 96 Gallon Barrels for Recycling"	208	-	cy	
USA Hauling	10 Snipsic Street, Rockville	"Once a Week - 6 Yard Trash Dumpster Once a Month - 4 Yard Single Screen Recycling Dumpster"	312	-	cy	
USA Waste & Recycling or F&G Recycling	25 North Road	"Once a Week - 4 Yard Trash On Call - 4 Yard Recycle Wood Container On Vall - 6 Yard"	208	-	cy	
Willimantic Waste Paper Co.	West Parkway, Plainfield	"Once a Week Tuesday for Trash Every other week for recycling"	104	-	cy	
Shred It	25 North Road	Every 8 Weeks	13	-	cy	
Shred It	93 W. Main Street, Clinton, CT	Every 4 Weeks	26	-	cy	
Shred It	448 Smith Street, Middletown, CT	Every 4 Weeks	26	-	cy	
Shred It	14W Main Street	Setup as a Purge account - was only a one time service no ongoing service		-	cy	
Shred It	450 Heritage Road, Southbury CT	Every 4 Weeks	26	-	cy	
			1751	260	cy	Trash and Recycling Totals (cy)
			6.367272727	0.945454545	Tons	cy to tons conversion from here

Freshwater Use Intensity

FRESHWATER USE INTENSITY 2015 - 2020							
	Unit	2015	2016	2017	2018	2019	2020
SJW							
Freshwater use	MG	33,712	33,065	35,547	36,649	36,334	39,585
Net sales	mUSD	$264.74	$313.34	$365.11	$370.93	$398.83	$397.45
Freshwater use per net sales	MG/mUSD	127	106	97	99	91	100
Freshwater use	m3	127,615,029	125,164,247	134,559,715	138,733,090	137,537,725	149,844,515
Net sales	mUSD	$264.74	$313.34	$365.11	$370.93	$398.83	$397.45
Freshwater use per net sales	m3/mUSD	482,032	399,448	368,551	374,010	344,856	377,020
SJWTX							
Freshwater use	MG	1325	1367	1388	1524	1946	2355
Net sales	mUSD	$13.88	$14.91	$16.67	$18.37	$20.68	$22.26
Freshwater use per net sales	MG/mUSD	96	92	83	83	94	106
Freshwater use	m3	5,016,871	5,176,377	5,254,152	5,768,968	7,366,411	8,914,515
Net sales	mUSD	$13.88	$14.91	$16.67	$18.37	$20.68	$22.26
Freshwater use per net sales	m3/mUSD	361,567	347,257	315,136	314,092	356,140	400,417
CWC							
Freshwater Use Per Net Sales	MG	8,569	8,597	8,942	8,874	8,781	9,336
Net sales (Operating Revenue)	mUSD	$78.80	$80.75	$86.92	$94.46	$94.01	$101.07
Freshwater Use Per Net Sales	MG/mUSD	109	106	103	94	93	92
Freshwater Use Per Net Sales	m3/mUSD	411,640	403,012	389,429	355,619	353,576	349,886
MWC							
Freshwater Use	MG	3,620	3,437	3,375	3,458	3,360	3,396
Net Sales (Operating Revenue)	mUSD	$17.24	$17.92	$18.34	$20.15	$19.61	$20.88
Freshwater Use Per Net Sales	MG/mUSD	210	192	184	172	171	163
Freshwater Use Per Net Sales	m3/mUSD	794,849	726,030	696,607	649,626	648,597	616,060

addendum

SJW Group Water Production 2017-2020

WATER CONSUMED/PRODUCED (in million-gallons; MG)	2020	2019	2018	2017
SJW				
Total water consumed (potable + recycled) * SJW Only	37,323	35,210	35,740	33,869
Total potable water consumed	36,525	34,478	34,978	33,262
Total potable water produced	39,584	37,120	37,511	36,347
Surface water	1,275	5,333	2,674	619
Ground water	17,360	10,693	11,753	13,750
Purchased water (Import)	20,949	21,094	23,084	21,978
Recycled water	798	732.1	761.7	607.2
% recycled of total water delivered	2.14%	2.08%	2.13%	1.79%
Reuse water	0	0	0	0
% reused	0	0	0	0

WATER CONSUMED/PRODUCED (in million-gallons; MG)	2020	2019	2018	2017
SJWTX				
Total potable water consumed	1,900	1,247	1,395	1,804
Total potable water produced	2,328	1,946	1,524	1,388
Surface water	1,384	1,058	737	675
Ground water	819	797	753	691
Purchased water (Import)	126	91	34	22
Recycled water	0	0	0	0
% recycled of total water delivered	0	0	0	0
Reuse water	84	76	67	61
% reused	95%	95%	95%	95%

WATER CONSUMED/PRODUCED (in million-gallons; MG)	2020	2019	2018	2017
CWC				
Total potable water consumed	7,846	6,425	6,550	6,579
Total potable water produced	9,381	7,915	7,946	8,055
Surface water	4,229	4,131	3,999	3,919
Ground water	4,637	3,302	3,449	3,658
Purchased water (Import)	515	482	498	478

WATER CONSUMED/PRODUCED (in million-gallons; MG)	2020	2019	2018	2017
MWC				
Total potable water consumed	2,744.10	2,707.30	2778.2	2734.2
Total potable water produced	3396.2	3360.0	3457.5	3374.7
Surface water	3,138.00	3020.4	3150.0	3088.5
Ground water	189.4	275.0	240.5	224.5
Purchased water (Import)	68.8	64.6	67.0	61.7

SJW GROUP TOTAL WATER CONSUMED/PRODUCED (in million-gallons; MG)	2020	2019	2018	2017
SJW GROUP				
Total potable water consumed	49,015.1	44,857	45,702	44,379
Total potable water produced	54,689.2	50,341	50,438	49,165
Surface water	10,026.00	13,543	10,560	8,302
Ground water	23,005.4	15,067	16,195	18,324
Purchased water (Import)	21,659	21,732	23,683	22,539
Recycled water*	798	732.1	761.7	607.2
% recycled of total water delivered	2.14%	2.08%	2.13%	1.79%
Reuse water**	84	76	67	61
% reused	95%	95%	95%	95%

** SJW only ** SJWTX only*

addendum

SJW Wastewater Discharges

SJW TOTAL WASTEWATER DISCHARGES (all volumes in gallons)				
	2020	2019	2018	2017
SJW				
Permit				
SJ-901C	201,270	685,809	382,165	377,430
WV-901C	98,030	124,245	88,650	105,590
CU-901C	95,710	94,004	14,400	43,290
WV-904C	11,174,055	46,505,351	14,267,649	35,553,860
NPDES SJWC + Cupertino	26,910,000	46,500,000	44,620,000	45,550,000
NPDES (SJWC + Cupertino)				
Total Discharge	26,910,000	46,500,000	44,620,000	45,550,000
Beneficial Reuse	8,550,000	10,810,000	4,780,000	11,350,000
% Beneficial Reuse	31.8%	23%	11%	25%

addendum

SJW Group 2020 Data Supplement

SJW GROUP 2020 DATA SUPPLEMENT					
Data	**Measurement**	**2020**	**2019**	**2018**	**2017**
Customers					
Total Customers	Number	389,293	386,607	247,267	244,133
Emissions					
Total GHG emissions (Scopes 1, 2, and 3)	Metric tonnes of CO2e	18,272	19,021	–	–
Total GHG emissions (Scopes 1 and 2)	Metric tonnes of CO2e	13,937	15,135	–	–
SJW Group Direct GHG emissions (Scope 1)	Metric tonnes of CO2e	4,786	5,748	–	–
Connecticut Water	Metric tonnes of CO2e	2,400	2,574	–	–
Maine Water	Metric tonnes of CO2e	755	838	–	–
San Jose Water	Metric tonnes of CO2e	966	1,252	–	–
SJWTX	Metric tonnes of CO2e	664	1,083	–	–
SJW Group Indirect GHG emissions (Scope 2)	Metric tonnes of CO2e	9,152	9,387	–	–
Connecticut Water	Metric tonnes of CO2e	3,765	4,298	–	–
Maine Water	Metric tonnes of CO2e	110	114	–	–
San Jose Water	Metric tonnes of CO2e	2,403	1,718	–	–
SJWTX	Metric tonnes of CO2e	2,873	3,258	–	–
Other indirect GHG emissions (Scope 3)	Metric tonnes of CO2e	4,334	3,886	–	–
GHG Emission Intensity					
Total GHG emissions by customer	Metric tonnes of CO2e	0.036	0.039	–	–
Target					
Science-based emissions reduction target for 2030	Metric tonnes of CO2e	7,568	–	–	–
GHG science-based target progress	% of progress towards target	15.8%	–	–	–

SJW GROUP 2020 DATA SUPPLEMENT					
Data	**Measurement**	**2020**	**2019**	**2018**	**2017**
Energy					
Total direct and indirect energy consumed within organization	Megawatt hours	93,321	84,392	–	–
Total direct energy consumed	Megawatt hours	23,263	26,761	–	–
Diesel	Megawatt hours	5,886	7,459	–	–
Gasoline	Megawatt hours	10,722	11,663	–	–
Biofuels (renewable diesel, biodiesel, ethanol)	Megawatt hours	3,025	2,162	–	–
Natural gas	Megawatt hours	2,090	3,637	–	–
Other fuels (propane and fuel oil)	Megawatt hours	1,540	1,840	–	–
Total indirect energy consumed	Megawatt hours	70,058	57,632	56,739	57,583
Total indirect renewable electricity consumed	Megawatt hours	29,108	21,960	19,530	19,508
Connecticut Water	Megawatt hours	7,060	4,323	3,775	3,576
Maine Water	Megawatt hours	3,832	3,928	1,377	1,295
San Jose Water	Megawatt hours	18,215	13,709	14,378	14,637
SJWTX	Megawatt hours	0	0	0	0
Total indirect non-renewable electricity consumed	Megawatt hours	40,950	35,672	37,209	38,075
Connecticut Water	Megawatt hours	11,520	11,398	11,325	12,316
Maine Water	Megawatt hours	496	394	3,212	3,021
San Jose Water	Megawatt hours	22,098	16,131	15,551	15,868
SJWTX	Megawatt hours	6,837	7,749	7,121	6,869

Electrical Energy Usage

ELECTRICITY ENERGY USAGE (in kWh)				
	2020	2019	2018	2017
SJW				
Total energy used (renewable and nonrenewable sources)	40,313,164	29,840,014	29,928,776	30,504,731
Surface Water treatment (filter plants)		3,152,057	1,885,532	829,608
Distribution Pumping		25,659,719	27,066,314	28,789,959
Other (offices, facilities)		1,028,238	976,930	885,164
Electrical Energy Sources				
Renewable sources (wind and solar)	18,215,325	13,708,566	14,377,949	14,637,129
% of total from renewable sources	45.2%	45.9%	48.0%	48.0%
Non-renewable sources (Hydro, nuclear, coal, gas)	22,097,839	16,131,448	15,550,827	15,867,602
% of total from renewable sources	54.8%	54.1%	52.0%	52.0%
% total from non-renewable sources				
Carbon free sources (wind, solar, and hydro)	37,483,324	27,880,014	25,738,747	2,634,069
% of total from carbon free sources	93.0%	93.4%	86.0%	8.6%
On-site Energy Generation				
On-site hydroelectric		170,234	554,652	442,571
On-site solar		48,870	50,350	8,380

ELECTRICITY ENERGY USAGE (in kWh)				
	2020	2019	2018	2017
SJWTX				
Total energy used (renewable and nonrenewable sources)	6,836,621	7,749,393	7,121,439	6,869,484
Surface Water treatment (filter plants)		2,420,646	2,355,439	2,209,620
Distribution Pumping		3,430,837	4,676,243	4,476,568
Other (offices, facilities)		1,389,030	89,757	183,296
Electrical Energy Sources				
Renewable sources (wind and solar)	-	-	-	-
% of total from renewable sources				
Non-renewable sources (Hydro, nuclear, coal, gas)	6,836,621	7,749,393	7,121,439	6,869,484
% of total from renewable sources	100.0%	100.0%	100.0%	100.0%
% total from non-renewable sources				
Carbon free sources (wind, solar, and hydro)				
% of total from carbon free sources				
On-site Energy Generation				
On-site hydroelectric				
On-site solar				

100% of electricity was purchased from the grid in 2020.

addendum

Electrical Energy Usage

ELECTRICITY ENERGY USAGE (in kWh)				
	2020	2019	2018	2017
MWC				
Total energy used (renewable and nonrenewable sources)	4,328,002	4,321,577	4,588,856	4,316,391
Surface Water treatment (filter plants)		3,127,267	3,315,608	3,167,273
Distribution Pumping		984,474	1,031,055	949,589
Other (offices, facilities)		209,836	242,194	199,529
Electrical Energy Sources				
Renewable sources (wind and solar)	3,832,423	3,927,950	1,376,657	1,294,917
% of total from renewable sources	88.5%	90.9%	30.0%	30.0%
Non-renewable sources (Hydro, nuclear, coal, gas)	495,579	393,627	3,212,199	3,021,474
% of total from renewable sources	11.5%	9.1%	70.0%	70.0%
% total from non-renewable sources				
Carbon free sources (wind, solar, and hydro)				
% of total from carbon free sources				
On-site Energy Generation				
On-site hydroelectric				
On-site solar		22,000	22,000	22,000

ELECTRICITY ENERGY USAGE (in kWh)				
	2020	2019	2018	2017
CWC				
Total energy used (renewable and nonrenewable sources)	18,580,262	15,720,884	15,099,712	15,891,979
Surface Water treatment (filter plants)		4,021,648	3,541,487	3,527,038
Distribution Pumping		10,944,065	10,855,632	11,684,479
Other (offices, facilities)		755,171	70,593	680,462
Electrical Energy Sources				
Renewable sources (wind and solar)	7,060,499	4,323,243	3,774,928	3,575,695
% of total from renewable sources	38.0%	27.5%	25.0%	22.5%
Non-renewable sources (Hydro, nuclear, coal, gas)	11,519,763	11,397,641	11,324,784	12,316,284
% of total from renewable sources	62.0%	72.5%	75.0%	77.5%
% total from non-renewable sources				
Carbon free sources (wind, solar, and hydro)				
% of total from carbon free sources				
On-site Energy Generation				
On-site hydroelectric		-	-	-
On-site solar		-	-	-

ELECTRICITY ENERGY USAGE (in kWh)				
	2020	2019	2018	2017
SJW GROUP				
Total Energy Use	72,727,385	57,631,868	56,738,783	57,582,585

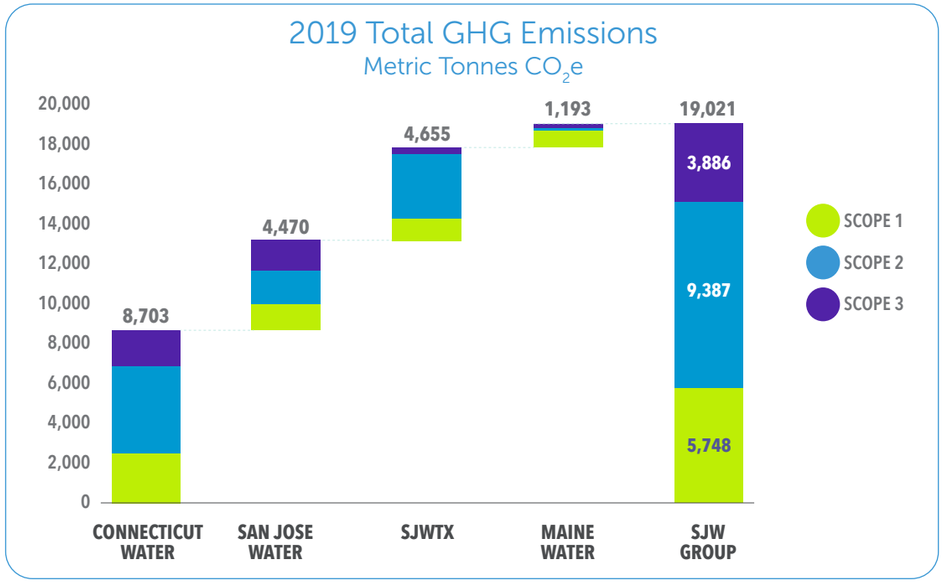
100% of electricity was purchased from the grid in 2020.

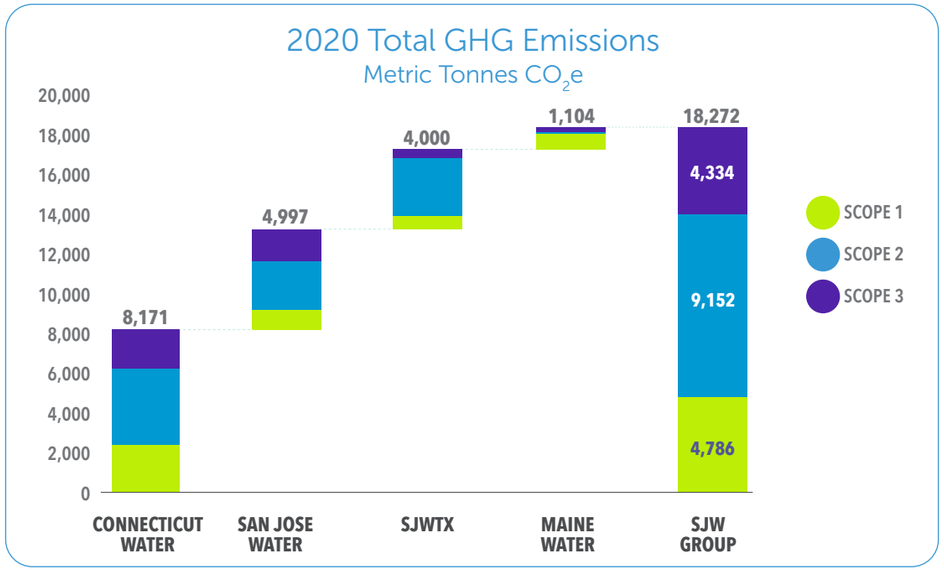
addendum

GHG Emissions

GHG EMISSIONS ($MTCO_2e$)	2020	2019
San Jose Water		
Scope 1	966	1,252
Scope 2	2,403	1,718
Scope 3	1,628	1,500
Total GHG	4,997	4,470
SJWTX		
Scope 1	664	1,083
Scope 2	2,873	3,258
Scope 3	463	313
Total GHG	4,000	4,655
Maine Water		
Scope 1	755	838
Scope 2	110	114
Scope 3	238	242
Total GHG	1,104	1,193
Connecticut Water		
Scope 1	2,400	2,574
Scope 2	3,765	4,298
Scope 3	2,006	1,831
Total GHG	8,171	8,703
SJW Group		
Scope 1	4,030	5,748
Scope 2	9,152	9,387
Scope 3	4,334	3,886
Total GHG	18,272	19,021

Note: 2020 numbers in red represent an emissions increase vs. 2019 figures, while 2020 numbers in green represent an emissions decrease vs. 2019 figures.





addendum

Direct Energy Consumed (MWh)

DIRECT ENERGY CONSUMED IN MWh															
Scope	Source	Year	Subsidiary	CO2 (MT CO2e)	N2O (MT CO2e)	CH4 (MT CO2e)	CO2e (MT CO2e)	Fuel Type	Fuel Type	Value	Units	Converted Value	Converted Unit	Converted Value	Converted Unit
Scope 1	Stationary	2019	Maine	18.50	0.04	0.02	18.56	Distillate Fuel Oil No. 2	Diesel	1,812	gallons	250	mmBtu	73	mWh
Scope 1	Stationary	2019	Maine	321.04	0.84	0.38	322.25	Propane	Other fuels (propane and fuel oil)	56,125	gallons	5,107	mmBtu	1,497	mWh
Scope 1	Stationary	2019	Maine	-	-	-	-	Ethanol	Biofuels (renewable diesel, biodiesel, ethanol)	-	gallons	-	mmBtu	-	mWh
Scope 1	Stationary	2019	Maine	14.94	0.01	0.01	14.96	Natural Gas	Natural Gas	282	mmBtu	282	mmBtu	83	mWh
Scope 1	Stationary	2019	Maine	-	-	-	-	Motor Gasoline	Gasoline	-	gallons	-	mmBtu	-	mWh
Scope 1	Stationary	2019	Connecticut	524.55	1.22	0.53	526.30	Distillate Fuel Oil No. 2	Diesel	51,376	gallons	7,090	mmBtu	2,078	mWh
Scope 1	Stationary	2019	Connecticut	73.48	0.19	0.09	73.76	Propane	Other fuels (propane and fuel oil)	12,846	gallons	1,169	mmBtu	343	mWh
Scope 1	Stationary	2019	Connecticut	1.47	0.00	0.00	1.47	Ethanol	Biofuels (renewable diesel, biodiesel, ethanol)	255	gallons	21	mmBtu	6	mWh
Scope 1	Stationary	2019	Connecticut	589.53	0.33	0.28	590.14	Natural Gas	Natural Gas	11,111	mmBtu	11,111	mmBtu	3,256	mWh
Scope 1	Stationary	2019	Connecticut	23.94	0.07	0.03	24.03	Motor Gasoline	Gasoline	2,727	gallons	341	mmBtu	100	mWh
Scope 1	Stationary	2019	San Jose Water	166.18	0.39	0.17	166.74	Distillate Fuel Oil No. 2	Diesel	16,276	gallons	2,246	mmBtu	658	mWh
Scope 1	Stationary	2019	San Jose Water	-	-	-	-	Propane	Other fuels (propane and fuel oil)	-	gallons	-	mmBtu	-	mWh
Scope 1	Stationary	2019	San Jose Water	-	-	-	-	Ethanol	Biofuels (renewable diesel, biodiesel, ethanol)	-	gallons	-	mmBtu	-	mWh
Scope 1	Stationary	2019	San Jose Water	54.02	0.03	0.03	54.08	Natural Gas	Natural Gas	1,018	mmBtu	1,018	mmBtu	298	mWh
Scope 1	Stationary	2019	San Jose Water	-	-	-	-	Motor Gasoline	Gasoline	-	gallons	-	mmBtu	-	mWh
Scope 1	Stationary	2019	SJWTX	8.18	0.02	0.01	8.21	Distillate Fuel Oil No. 2	Diesel	801	gallons	111	mmBtu	32	mWh
Scope 1	Stationary	2019	SJWTX	0.05	0.00	0.00	0.05	Propane	Other fuels (propane and fuel oil)	8	gallons	1	mmBtu	0	mWh
Scope 1	Stationary	2019	SJWTX	-	-	-	-	Ethanol	Biofuels (renewable diesel, biodiesel, ethanol)	-	gallons	-	mmBtu	-	mWh
Scope 1	Stationary	2019	SJWTX	-	-	-	-	Natural Gas	Natural Gas	-	mmBtu	-	mmBtu	-	mWh
Scope 1	Stationary	2019	SJWTX	-	-	-	-	Motor Gasoline	Gasoline	-	gallons	-	mmBtu	-	mWh
								2019 Stationary Subtotal		142,228	gallons	28,746	mmBtu	8,425	mWh
										12,410	mmBtu				

Direct Energy Consumed (MWh)

ELECTRICITY ENERGY USAGE (in kWh)														
Scope	Source	Year	Subsidiary	CO2 (MT CO2e)	N2O (MT CO2e)	CH4 (MT CO2e)	CO2e (MT CO2e)	Fuel Type	Fuel Type	Value	Units	Converted Value	Converted Unit	Converted Value	Converted Unit
Scope 1	Mobile - Onroad	2019	Maine	326.69	0.58	0.11	327.38	Motor Gasoline	Gasoline	37,202	gallons	4,650	mmBtu	1,363	mWh
Scope 1	Mobile - Onroad	2019	Maine	115.83	0.09	0.01	115.93	Distillate Fuel Oil No. 2	Diesel	11,343	gallons	1,565	mmBtu	459	mWh
Scope 1	Mobile - Onroad	2019	Maine	0.75	0.02	0.00	0.77	Ethanol	Biofuels (renewable diesel, biodiesel, ethanol)	130	gallons	11	mmBtu	3	mWh
Scope 1	Mobile - Onroad	2019	Maine	-	-	-	-	Renewable Diesel	Biofuels (renewable diesel, biodiesel, ethanol)	-	gallons	-	mmBtu	-	mWh
Scope 1	Mobile - Onroad	2019	Maine	1.79	0.09	0.01	1.89	Biodiesel	Biofuels (renewable diesel, biodiesel, ethanol)	189	gallons	24	mmBtu	7	mWh
Scope 1	Mobile - Onroad	2019	Connecticut	1,196.05	2.25	0.57	1,198.86	Motor Gasoline	Gasoline	136,198	gallons	17,025	mmBtu	4,990	mWh
Scope 1	Mobile - Onroad	2019	Connecticut	160.37	0.16	0.01	160.54	Distillate Fuel Oil No. 2	Diesel	15,704	gallons	2,167	mmBtu	635	mWh
Scope 1	Mobile - Onroad	2019	Connecticut	-	-	-	-	Renewable Diesel	Biofuels (renewable diesel, biodiesel, ethanol)	-	gallons	-	mmBtu	-	mWh
Scope 1	Mobile - Onroad	2019	Connecticut	-	-	-	-	Biodiesel	Biofuels (renewable diesel, biodiesel, ethanol)	-	gallons	-	mmBtu	-	mWh
Scope 1	Mobile - Onroad	2019	Connecticut	23.64	0.23	0.03	23.91	Ethanol	Biofuels (renewable diesel, biodiesel, ethanol)	4,111	gallons	345	mmBtu	101	mWh
Scope 1	Mobile - Onroad	2019	San Jose Water	795.50	1.14	0.31	796.95	Motor Gasoline	Gasoline	90,587	gallons	11,323	mmBtu	3,319	mWh
Scope 1	Mobile - Onroad	2019	San Jose Water	225.61	0.13	0.01	225.75	Distillate Fuel Oil No. 2	Diesel	22,093	gallons	3,049	mmBtu	894	mWh
Scope 1	Mobile - Onroad	2019	San Jose Water	-	-	-	-	Ethanol	Biofuels (renewable diesel, biodiesel, ethanol)	-	gallons	-	mmBtu	-	mWh
Scope 1	Mobile - Onroad	2019	San Jose Water	-	-	-	-	Biodiesel	Biofuels (renewable diesel, biodiesel, ethanol)	-	gallons	-	mmBtu	-	mWh
Scope 1	Mobile - Onroad	2019	San Jose Water	509.65	2.66	0.07	512.37	Renewable Diesel	Biofuels (renewable diesel, biodiesel, ethanol)	49,907	gallons	6,887	mmBtu	2,019	mWh
Scope 1	Mobile - Onroad	2019	SJWTX	447.78	0.97	0.23	448.98	Motor Gasoline	Gasoline	50,990	gallons	6,374	mmBtu	1,868	mWh
Scope 1	Mobile - Onroad	2019	SJWTX	625.33	0.69	0.06	626.07	Distillate Fuel Oil No. 2	Diesel	61,235	gallons	8,450	mmBtu	2,477	mWh
Scope 1	Mobile - Onroad	2019	SJWTX	-	-	-	-	Ethanol	Biofuels (renewable diesel, biodiesel, ethanol)	-	gallons	-	mmBtu	-	mWh
								2019 Mobile - Onroad Subtotal		479,690	gallons	61,872	mmBtu	18,134	mWh

Direct Energy Consumed (MWh)

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Environmental Stewardship

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ELECTRICITY ENERGY USAGE (in kWh)															
Scope	Source	Year	Subsidiary	CO2 (MT CO2e)	N2O (MT CO2e)	CH4 (MT CO2e)	CO2e (MT CO2e)	Fuel Type	Fuel Type	Value	Units	Converted Value	Converted Unit	Converted Value	Converted Unit
Scope 1	Mobile - Offroad	2019	Maine	2.71	0.02	0.04	2.78	Motor Gasoline	Gasoline	309	gallons	39	mmBtu	11	mWh
Scope 1	Mobile - Offroad	2019	Maine	35.21	0.49	0.02	35.72	Distillate Fuel Oil No. 2	Diesel	3,448	gallons	476	mmBtu	139	mWh
Scope 1	Mobile - Offroad	2019	Connecticut	-	-	-	-	Motor Gasoline	Gasoline	-	gallons	-	mmBtu	-	mWh
Scope 1	Mobile - Offroad	2019	Connecticut	0.49	0.01	0.00	0.50	Distillate Fuel Oil No. 2	Diesel	48	gallons	7	mmBtu	2	mWh
Scope 1	Mobile - Offroad	2019	San Jose Water	3.07	0.02	0.05	3.14	Motor Gasoline	Gasoline	349	gallons	44	mmBtu	13	mWh
Scope 1	Mobile - Offroad	2019	San Jose Water	2.82	0.04	0.00	2.86	Distillate Fuel Oil No. 2	Diesel	277	gallons	38	mmBtu	11	mWh
Scope 1	Mobile - Offroad	2019	San Jose Water	6.38	0.09	0.00	6.47	Renewable Diesel	Biofuels (renewable diesel, biodiesel, ethanol)	625	gallons	86	mmBtu	25	mWh
Scope 1	Mobile - Offroad	2019	San Jose Water	-	-	-	-	Ethanol	Biofuels (renewable diesel, biodiesel, ethanol)	-	gallons	-	mmBtu	-	mWh
Scope 1	Mobile - Offroad	2019	SJWTX	-	-	-	-	Motor Gasoline	Gasoline	-	gallons	-	mmBtu	-	mWh
Scope 1	Mobile - Offroad	2019	SJWTX	-	-	-	-	Distillate Fuel Oil No. 2	Diesel	-	gallons	-	mmBtu	-	mWh
								2019 Mobile - Offroad Subtotal		5,056	gallons	689	mmBtu	202	mWh

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Direct Energy Consumed (MWh)

ELECTRICITY ENERGY USAGE (in kWh)														
Scope	Source	Year	Subsidiary	CO2 (MT CO2e)	N2O (MT CO2e)	CH4 (MT CO2e)	CO2e (MT CO2e)	Fuel Type	Fuel Type	Value	Units	Converted Value	Converted Unit	Converted Value	Converted Unit
Scope 1	Stationary	2020	Maine	6.92	0.02	0.01	6.94	Distillate Fuel Oil No. 2	Diesel	678	gallons	94	mmBtu	27	mWh
Scope 1	Stationary	2020	Maine	245.08	0.64	0.29	246.01	Propane	Other fuels (propane and fuel oil)	42,846	gallons	3,899	mmBtu	1,143	mWh
Scope 1	Stationary	2020	Maine	-	-	-	-	Ethanol	Biofuels (renewable diesel, biodiesel, ethanol)	-	gallons	-	mmBtu	-	mWh
Scope 1	Stationary	2020	Maine	14.53	0.01	0.01	14.54	Natural Gas	Natural Gas	274	mmBtu	274	mmBtu	80	mWh
Scope 1	Stationary	2020	Maine	1.36	0.00	0.00	1.36	Motor Gasoline	Gasoline	154	gallons	19	mmBtu	6	mWh
Scope 1	Stationary	2020	Connecticut	664.67	1.55	0.67	666.89	Distillate Fuel Oil No. 2	Diesel	65,100	gallons	8,984	mmBtu	2,633	mWh
Scope 1	Stationary	2020	Connecticut	85.03	0.22	0.10	85.35	Propane	Other fuels (propane and fuel oil)	14,866	gallons	1,353	mmBtu	396	mWh
Scope 1	Stationary	2020	Connecticut	-	-	-	-	Ethanol	Biofuels (renewable diesel, biodiesel, ethanol)	-	gallons	-	mmBtu	-	mWh
Scope 1	Stationary	2020	Connecticut	327.60	0.18	0.15	327.94	Natural Gas	Natural Gas	6,174	mmBtu	6,174	mmBtu	1,810	mWh
Scope 1	Stationary	2020	Connecticut	27.06	0.07	0.03	27.16	Motor Gasoline	Gasoline	3,082	gallons	385	mmBtu	113	mWh
Scope 1	Stationary	2020	San Jose Water	117.72	0.27	0.12	118.12	Distillate Fuel Oil No. 2	Diesel	11,530	gallons	1,591	mmBtu	466	mWh
Scope 1	Stationary	2020	San Jose Water	-	-	-	-	Propane	Other fuels (propane and fuel oil)	-	gallons	-	mmBtu	-	mWh
Scope 1	Stationary	2020	San Jose Water	-	-	-	-	Ethanol	Biofuels (renewable diesel, biodiesel, ethanol)	-	gallons	-	mmBtu	-	mWh
Scope 1	Stationary	2020	San Jose Water	36.31	0.02	0.02	36.35	Natural Gas	Natural Gas	684	mmBtu	684	mmBtu	201	mWh
Scope 1	Stationary	2020	San Jose Water	-	-	-	-	Motor Gasoline	Gasoline	-	gallons	-	mmBtu	-	mWh
Scope 1	Stationary	2020	SJWTX	8.01	0.02	0.01	8.04	Distillate Fuel Oil No. 2	Diesel	785	gallons	108	mmBtu	32	mWh
Scope 1	Stationary	2020	SJWTX	0.14	0.00	0.00	0.14	Propane	Other fuels (propane and fuel oil)	25	gallons	2	mmBtu	1	mWh
Scope 1	Stationary	2020	SJWTX	-	-	-	-	Ethanol	Biofuels (renewable diesel, biodiesel, ethanol)	-	gallons	-	mmBtu	-	mWh
Scope 1	Stationary	2020	SJWTX	-	-	-	-	Natural Gas	Natural Gas	-	mmBtu	-	mmBtu	-	mWh
Scope 1	Stationary	2020	SJWTX	-	-	-	-	Motor Gasoline	Gasoline	-	gallons	-	mmBtu	-	mWh
								2020 Stationary Subtotal		139,065 7,132	gallons mmBtu	23,568	mmBtu	6,907	mWh

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ELECTRICITY ENERGY USAGE (in kWh)															
Scope	Source	Year	Subsidiary	CO2 (MT CO2e)	N2O (MT CO2e)	CH4 (MT CO2e)	CO2e (MT CO2e)	Fuel Type	Fuel Type	Value	Units	Converted Value	Converted Unit	Converted Value	Converted Unit
Scope 1	Mobile - Onroad	2020	Maine	378.08	0.97	0.17	379.22	Motor Gasoline	Gasoline	43,053	gallons	5,382	mmBtu	1,577	mWh
Scope 1	Mobile - Onroad	2020	Maine	68.43	1.31	0.14	69.88	Distillate Fuel Oil No. 2	Diesel	6,701	gallons	925	mmBtu	271	mWh
Scope 1	Mobile - Onroad	2020	Maine	0.12	0.00	0.00	0.12	Ethanol	Biofuels (renewable diesel, biodiesel, ethanol)	20	gallons	2	mmBtu	0	mWh
Scope 1	Mobile - Onroad	2020	Maine	1.80	0.00	0.00	1.80	Biodiesel	Biofuels (renewable diesel, biodiesel, ethanol)	190	gallons	24	mmBtu	7	mWh
Scope 1	Mobile - Onroad	2020	Connecticut	1,102.37	1.81	0.50	1,104.67	Motor Gasoline	Gasoline	125,531	gallons	15,691	mmBtu	4,599	mWh
Scope 1	Mobile - Onroad	2020	Connecticut	185.91	1.62	0.10	187.63	Distillate Fuel Oil No. 2	Diesel	18,205	gallons	2,512	mmBtu	736	mWh
Scope 1	Mobile - Onroad	2020	Connecticut	-	-	-	-	Ethanol	Biofuels (renewable diesel, biodiesel, ethanol)	-	gallons	-	mmBtu	-	mWh
Scope 1	Mobile - Onroad	2020	San Jose Water	804.48	0.92	0.27	805.67	Motor Gasoline	Gasoline	91,609	gallons	11,451	mmBtu	3,356	mWh
Scope 1	Mobile - Onroad	2020	San Jose Water	-	-	-	-	Distillate Fuel Oil No. 2	Diesel	-	gallons	-	mmBtu	-	mWh
Scope 1	Mobile - Onroad	2020	San Jose Water	-	-	-	-	Ethanol	Biofuels (renewable diesel, biodiesel, ethanol)	-	gallons	-	mmBtu	-	mWh
Scope 1	Mobile - Onroad	2020	San Jose Water	751.15	3.62	0.11	754.88	Renewable Diesel	Biofuels (renewable diesel, biodiesel, ethanol)	73,556	gallons	10,151	mmBtu	2,975	mWh
Scope 1	Mobile - Onroad	2020	SJWTX	248.02	0.48	0.13	248.64	Motor Gasoline	Gasoline	28,243	gallons	3,530	mmBtu	1,035	mWh
Scope 1	Mobile - Onroad	2020	SJWTX	403.97	3.42	0.20	407.58	Distillate Fuel Oil No. 2	Diesel	39,558	gallons	5,459	mmBtu	1,600	mWh
Scope 1	Mobile - Onroad	2020	SJWTX	-	-	-	-	Ethanol	Biofuels (renewable diesel, biodiesel, ethanol)	-	gallons	-	mmBtu	-	mWh
Scope 1	Mobile - Offroad	2020	Maine	6.77	0.05	0.11	6.92	Motor Gasoline	Gasoline	771	gallons	96	mmBtu	28	mWh
								2020 Mobile - Offroad Subtotal		4,244	gallons	583	mmBtu	171	mWh

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ELECTRICITY ENERGY USAGE (in kWh)															
Scope	Source	Year	Subsidiary	CO2 (MT CO2e)	N2O (MT CO2e)	CH4 (MT CO2e)	CO2e (MT CO2e)	Fuel Type	Fuel Type	Value	Units	Converted Value	Converted Unit	Converted Value	Converted Unit
Scope 1	Mobile - Offroad	2020	Maine	30.09	0.42	0.01	30.52	Distillate Fuel Oil No. 2	Diesel	2,946	gallons	407	mmBtu	119	mWh
Scope 1	Mobile - Offroad	2020	Connecticut	-	-	-	-	Motor Gasoline	Gasoline	-	gallons	-	mmBtu	-	mWh
Scope 1	Mobile - Offroad	2020	Connecticut	0.29	0.00	0.00	0.30	Distillate Fuel Oil No. 2	Diesel	29	gallons	4	mmBtu	1	mWh
Scope 1	Mobile - Offroad	2020	San Jose Water	2.01	0.01	0.03	2.05	Motor Gasoline	Gasoline	229	gallons	29	mmBtu	8	mWh
Scope 1	Mobile - Offroad	2020	San Jose Water	-	-	-	-	Distillate Fuel Oil No. 2	Diesel	-	gallons	-	mmBtu	-	mWh
Scope 1	Mobile - Offroad	2020	San Jose Water	10.63	0.15	0.01	10.78	Renewable Diesel	Biofuels (renewable diesel, biodiesel, ethanol)	1,041	gallons	144	mmBtu	42	mWh
Scope 1	Mobile - Offroad	2020	SJWTX	-	-	-	-	Motor Gasoline	Gasoline	-	gallons	-	mmBtu	-	mWh
Scope 1	Mobile - Offroad	2020	SJWTX	-	-	-	-	Distillate Fuel Oil No. 2	Diesel	-	gallons	-	mmBtu	-	mWh
								2020 Mobile - Onroad Subtotal		427,439	gallons	55,224	mmBtu	16,185	mWh

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Scope 1 Emissions Factors

These emissions factors are from the US EPA Center for Corporate Climate Leadership. They were last modified on April 1, 2021.

Typically, greenhouse gas emissions are reported in units of carbon dioxide equivalent (CO2e). Gases are converted to CO2e by multiplying by their global warming potential (GWP). The emission factors listed in this document have not been converted to CO2e. To do so, multiply the emissions by the corresponding GWP listed in the table below.

STATIONARY COMBUSTION							
Fuel Type	Heat Content (HHV)	CO_2 Factor	CH_4 Factor	N_2O Factor	CO_2 Factor	CH_4 Factor	N_2O Factor
	mmBtu per short ton	kg CO_2 per mmBtu	g CH_4 per mmBtu	g N_2O per mmBtu	kg CO_2 per short ton	g CH_4 per short ton	g N_2O per short ton
Coal and Coke							
Anthracite Coal	25.09	103.69	11	1.6	2602	276	40
Bituminous Coal	24.93	93.28	11	1.6	2325	274	40
Sub-bituminous Coal	17.25	97.17	11	1.6	1676	190	28
Lignite Coal	14.21	97.72	11	1.6	1389	156	23
Mixed (Commercial Sector)	21.39	94.27	11	1.6	2016	235	34
Mixed (Electric Power Sector)	19.73	95.52	11	1.6	1885	217	32
Mixed (Industrial Coking)	26.28	93.90	11	1.6	2468	289	42
Mixed (Industrial Sector)	22.35	94.67	11	1.6	2116	246	36
Coal Coke	24.80	113.67	11	1.6	2819	273	40
Other Fuels - Solid							
Municipal Solid Waste	9.95	90.70	32	4.2	902	318	42
Petroleum Coke (Solid)	30.00	102.41	32	4.2	3072	960	126
Plastics	38.00	75.00	32	4.2	2850	1216	160
Tires	28.00	85.97	32	4.2	2407	896	118
Biomass Fuels - Solid							
Agricultural Byproducts	8.25	118.17	32	4.2	975	264	35
Peat	8.00	111.84	32	4.2	895	256	34
Solid Byproducts	10.39	105.51	32	4.2	1096	332	44
Wood and Wood Residuals	17.48	93.80	7.2	3.6	1640	126	63

GAS	100-YEAR GWP
CH_4	25
N_2O	298

Source: Intergovernmental Panel on Climate Change (IPCC), Fourth Assessment Report (AR4), 2007. See the source note to Table 11 for further explanation.

CONVERSION FACTORS		
1 barrel =	42	gallons
1 MMBTU =	1.05505585	gigajoule (GJ)
1 MWH =	3.412	mmBtu
1 cubic meter natural gas =	0.36	therms
1 KWH =	3412	BTU
1 MWH =	1000	KWH

Federal Register EPA; 40 CFR Part 98; e-CFR, June 13, 2017. Table C-1, Table C-2, Table AA-1.

***Note:** Emission factors are per unit of heat content using higher heating values (HHV). If heat content is available from the fuel supplier, it is preferable to use that value. If not, default heat contents are provided.*

Scope 1 Emissions Factors

STATIONARY COMBUSTION							
Fuel Type	Heat Content (HHV)	CO_2 Factor	CH_4 Factor	N_2O Factor	CO_2 Factor	CH_4 Factor	N_2O Factor
	mmBtu per short ton	kg CO_2 per mmBtu	g CH_4 per mmBtu	g N_2O per mmBtu	kg CO_2 per short ton	g CH_4 per short ton	g N_2O per short ton
Natural Gas							
Natural Gas	0.001026	53.06	1	0.1	0.05444	0.00103	0.0001
Other Fuels - Gaseous							
Blast Furnace Gas	0.000092	274.32	0.022	0.1	0.02524	0.000002	0.000009
Coke Oven Gas	0.000599	46.85	0.48	0.1	0.02806	0.000288	0.00006
Fuel Gas	0.001388	59	3	0.6	0.08189	0.004164	0.000833
Propane Gas	0.002516	61.46	3	0.6	0.15463	0.007548	0.00151
Biomass Fuels - Gaseous							
Landfill Gas	0.000485	52.07	3.2	0.63	0.025254	0.001552	0.000306
Other Biomass Gases	0.000655	52.07	3.2	0.63	0.034106	0.002096	0.000413
Petroleum Products							
Asphalt and Road Oil	0.158	75.36	3.0	0.60	11.91	0.47	0.09
Aviation Gasoline	0.12	69.25	3.0	0.60	8.31	0.36	0.07
Butane	0.103	64.77	3.0	0.60	6.67	0.31	0.06
Butylene	0.105	68.72	3.0	0.60	7.22	0.32	0.06
Crude Oil	0.138	74.54	3.0	0.60	10.29	0.41	0.08
Distillate Fuel Oil No. 1	0.139	73.25	3.0	0.60	10.18	0.42	0.08
Distillate Fuel Oil No. 2	0.138	73.96	3.0	0.60	10.21	0.41	0.08
Distillate Fuel Oil No. 4	0.146	75.04	3.0	0.60	10.96	0.44	0.09
Ethane	0.068	59.60	3.0	0.60	4.05	0.2	0.04
Ethylene	0.058	65.96	3.0	0.60	3.83	0.17	0.03
Heavy Gas Oils	0.148	74.92	3.0	0.60	11.09	0.44	0.09
Isobutane	0.099	64.94	3.0	0.60	6.43	0.3	0.06
Isobutylene	0.103	68.86	3.0	0.60	7.09	0.31	0.06
Kerosene	0.135	75.20	3.0	0.60	10.15	0.41	0.08
Kerosene-Type Jet Fuel	0.135	72.22	3.0	0.60	9.75	0.41	0.08

Federal Register EPA; 40 CFR Part 98; e-CFR, June 13, 2017. Table C-1, Table C-2, Table AA-1.

Note: Emission factors are per unit of heat content using higher heating values (HHV). If heat content is available from the fuel supplier, it is preferable to use that value. If not, default heat contents are provided.

Scope 1 Emissions Factors

STATIONARY COMBUSTION							
Fuel Type	Heat Content (HHV)	CO_2 Factor	CH_4 Factor	N_2O Factor	CO_2 Factor	CH_4 Factor	N_2O Factor
	mmBtu per short ton	kg CO_2 per mmBtu	g CH_4 per mmBtu	g N_2O per mmBtu	kg CO_2 per short ton	g CH_4 per short ton	g N_2O per short ton
Liquefied Petroleum Gases (LPG)	0.092	61.71	3.0	0.60	5.68	0.28	0.06
Lubricants	0.144	74.27	3.0	0.60	10.69	0.43	0.09
Motor Gasoline	0.125	70.22	3.0	0.60	8.78	0.38	0.08
Naphtha (<401 deg F)	0.125	68.02	3.0	0.60	8.5	0.38	0.08
Natural Gasoline	0.11	66.88	3.0	0.60	7.36	0.33	0.07
Other Oil (>401 deg F)	0.139	76.22	3.0	0.60	10.59	0.42	0.08
Pentanes Plus	0.11	70.02	3.0	0.60	7.7	0.33	0.07
Petrochemical Feedstocks	0.125	71.02	3.0	0.60	8.88	0.38	0.08
Petroleum Coke	0.143	102.41	3.0	0.60	14.64	0.43	0.09
Propane	0.091	62.87	3.0	0.60	5.72	0.27	0.05
Propylene	0.091	67.77	3.0	0.60	6.17	0.27	0.05
Residual Fuel Oil No. 5	0.14	72.93	3.0	0.60	10.21	0.42	0.08
Residual Fuel Oil No. 6	0.15	75.10	3.0	0.60	11.27	0.45	0.09
Special Naphtha	0.125	72.34	3.0	0.60	9.04	0.38	0.08
Unfinished Oils	0.139	74.54	3.0	0.60	10.36	0.42	0.08
Used Oil	0.138	74.00	3.0	0.60	10.21	0.41	0.08
Biomass Fuels - Liquid							
Biodiesel	0.128	73.84	1.1	0.11	9.45	0.14	0.01
Ethanol	0.084	68.44	1.1	0.11	5.75	0.09	0.01
Rendered Animal Fat	0.125	71.06	1.1	0.11	8.88	0.14	0.01
Vegetable Oil	0.120	81.55	1.1	0.11	9.79	0.13	0.01
Biomass Fuels - Kraft Pulping Liquor, by Wood Furnish							
North American Softwood		94.4	1.9	0.42			
North American Hardwood		93.7	1.9	0.42			
Bagasse		95.5	1.9	0.42			
Bamboo		93.7	1.9	0.42			
Straw		95.1	1.9	0.42			

Federal Register EPA; 40 CFR Part 98; e-CFR, June 13, 2017. Table C-1, Table C-2, Table AA-1.

Note: Emission factors are per unit of heat content using higher heating values (HHV). If heat content is available from the fuel supplier, it is preferable to use that value. If not, default heat contents are provided.

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Scope 1 Emissions Factors

MOBILE COMBUSTION CO_2		
Fuel Type	**kg CO_2 per unit**	**Unit**
Aviation Gasoline	8.31	gallon
Biodiesel	9.45	gallon
Compressed Natural Gas (CNG)	0.05444	scf
Diesel Fuel	10.21	gallon
Ethanol	5.75	gallon
Kerosene-Type Jet Fuel	9.75	gallon
Liquefied Natural Gas (LNG)	4.50	gallon
Liquefied Petroleum Gases (LPG)	5.68	gallon
Motor Gasoline	8.78	gallon
Renewable Diesel	10.21	gallon
Residual Fuel Oil	11.27	gallon

Federal Register EPA; 40 CFR Part 98; e-CFR, June 13, 2017. Table C-1.

***LNG:** The factor was developed based on the CO2 factor for Natural Gas factor and LNG fuel density from GREET1_2017. xlsx Model, Argonne National Laboratory. This represents a methodology change from previous versions.*

GHG	MT GHG PER MT OF CO_2
CH_4	8.31
N_2O	9.45

***SOURCE:** The Climate Registry default emissions factors for 2021. Table 2.9.*

MOBILE COMBUSTION CH_4 AND N_2O FOR ON-ROAD GASOLINE VEHICLES			
Vehicle Type	**Year**	**CH_4 Factor (g / mile)**	**N_2O Factor (g / mile)**
Gasoline Passenger Cars	1973-74	0.1696	0.0197
Gasoline Passenger Cars	1975	0.1423	0.0443
Gasoline Passenger Cars	1976-77	0.1406	0.0458
Gasoline Passenger Cars	1978-79	0.1389	0.0473
Gasoline Passenger Cars	1980	0.1326	0.0499
Gasoline Passenger Cars	1981	0.0802	0.0626
Gasoline Passenger Cars	1982	0.0795	0.0627
Gasoline Passenger Cars	1983	0.0782	0.063
Gasoline Passenger Cars	1984-93	0.0704	0.0647
Gasoline Passenger Cars	1994	0.0617	0.0603
Gasoline Passenger Cars	1995	0.0531	0.056
Gasoline Passenger Cars	1996	0.0434	0.0503
Gasoline Passenger Cars	1997	0.0337	0.0446
Gasoline Passenger Cars	1998	0.024	0.0389
Gasoline Passenger Cars	1999	0.0215	0.0355
Gasoline Passenger Cars	2000	0.0175	0.0304
Gasoline Passenger Cars	2001	0.0105	0.0212
Gasoline Passenger Cars	2002	0.0102	0.0207
Gasoline Passenger Cars	2003	0.0095	0.0181
Gasoline Passenger Cars	2004	0.0078	0.0085
Gasoline Passenger Cars	2005	0.0075	0.0067
Gasoline Passenger Cars	2006	0.0076	0.0075
Gasoline Passenger Cars	2007	0.0072	0.0052
Gasoline Passenger Cars	2008	0.0072	0.0049
Gasoline Passenger Cars	2009	0.0071	0.0046

Scope 1 Emissions Factors

MOBILE COMBUSTION CH_4 AND N_2O FOR ON-ROAD GASOLINE VEHICLES			
Vehicle Type	**Year**	**CH_4 Factor (g / mile)**	**N_2O Factor (g / mile)**
Gasoline Passenger Cars	2010	0.0071	0.0046
Gasoline Passenger Cars	2011	0.0071	0.0046
Gasoline Passenger Cars	2012	0.0071	0.0046
Gasoline Passenger Cars	2013	0.0071	0.0046
Gasoline Passenger Cars	2014	0.0071	0.0046
Gasoline Passenger Cars	2015	0.0068	0.0042
Gasoline Passenger Cars	2016	0.0065	0.0038
Gasoline Passenger Cars	2017	0.0054	0.0018
Gasoline Passenger Cars	2018	0.0052	0.0016
Gasoline Light-Duty Trucks	1973-74	0.1908	0.0218
Gasoline Light-Duty Trucks	1975	0.1634	0.0513
Gasoline Light-Duty Trucks	1976	0.1594	0.0555
Gasoline Light-Duty Trucks	1977-78	0.1614	0.0534
Gasoline Light-Duty Trucks	1979-80	0.1594	0.0555
Gasoline Light-Duty Trucks	1981	0.1479	0.066
Gasoline Light-Duty Trucks	1982	0.1442	0.0681
Gasoline Light-Duty Trucks	1983	0.1368	0.0722
Gasoline Light-Duty Trucks	1984	0.1294	0.0764
Gasoline Light-Duty Trucks	1985	0.122	0.0806
Gasoline Light-Duty Trucks	1986	0.1146	0.0848
Gasoline Light-Duty Trucks	1987-93	0.0813	0.1035
Gasoline Light-Duty Trucks	1994	0.0646	0.0982
Gasoline Light-Duty Trucks	1995	0.0517	0.0908
Gasoline Light-Duty Trucks	1996	0.0452	0.0871
Gasoline Light-Duty Trucks	1997	0.0452	0.0871
Gasoline Light-Duty Trucks	1998	0.0412	0.0787
Gasoline Light-Duty Trucks	1999	0.0333	0.0618

MOBILE COMBUSTION CH_4 AND N_2O FOR ON-ROAD GASOLINE VEHICLES			
Vehicle Type	**Year**	**CH_4 Factor (g / mile)**	**N_2O Factor (g / mile)**
Gasoline Light-Duty Trucks	2000	0.034	0.0631
Gasoline Light-Duty Trucks	2001	0.0221	0.0379
Gasoline Light-Duty Trucks	2002	0.0242	0.0424
Gasoline Light-Duty Trucks	2003	0.0221	0.0373
Gasoline Light-Duty Trucks	2004	0.0115	0.0088
Gasoline Light-Duty Trucks	2005	0.0105	0.0064
Gasoline Light-Duty Trucks	2006	0.0108	0.008
Gasoline Light-Duty Trucks	2007	0.0103	0.0061
Gasoline Light-Duty Trucks	2008	0.0095	0.0036
Gasoline Light-Duty Trucks	2009	0.0095	0.0036
Gasoline Light-Duty Trucks	2010	0.0095	0.0035
Gasoline Light-Duty Trucks	2011	0.0096	0.0034
Gasoline Light-Duty Trucks	2012	0.0096	0.0033
Gasoline Light-Duty Trucks	2013	0.0095	0.0035
Gasoline Light-Duty Trucks	2014	0.0095	0.0033
Gasoline Light-Duty Trucks	2015	0.0094	0.0031
Gasoline Light-Duty Trucks	2016	0.0091	0.0029
Gasoline Light-Duty Trucks	2017	0.0084	0.0018
Gasoline Light-Duty Trucks	2018	0.0081	0.0015
Gasoline Heavy-Duty Vehicles	<1981	0.4604	0.0497
Gasoline Heavy-Duty Vehicles	1982-84	0.4492	0.0538
Gasoline Heavy-Duty Vehicles	1985-86	0.409	0.0515
Gasoline Heavy-Duty Vehicles	1987	0.3675	0.0849
Gasoline Heavy-Duty Vehicles	1988-1989	0.3492	0.0933
Gasoline Heavy-Duty Vehicles	1990-1995	0.3246	0.1142
Gasoline Heavy-Duty Vehicles	1996	0.1278	0.168
Gasoline Heavy-Duty Vehicles	1997	0.0924	0.1726

Federal Register EPA; 40 CFR Part 98; e-CFR, June 13, 2017. Table C-1.

LNG: *The factor was developed based on the CO2 factor for Natural Gas factor and LNG fuel density from GREET1_2017.xlsx Model, Argonne National Laboratory. This represents a methodology change from previous versions.*

addendum

Scope 1 Emissions Factors

MOBILE COMBUSTION CH_4 AND N_2O FOR ON-ROAD GASOLINE VEHICLES			
Vehicle Type	**Year**	**CH_4 Factor (g / mile)**	**N_2O Factor (g / mile)**
Gasoline Heavy-Duty Vehicles	1998	0.0655	0.175
Gasoline Heavy-Duty Vehicles	1999	0.0648	0.1724
Gasoline Heavy-Duty Vehicles	2000	0.063	0.166
Gasoline Heavy-Duty Vehicles	2001	0.0577	0.1468
Gasoline Heavy-Duty Vehicles	2002	0.0634	0.1673
Gasoline Heavy-Duty Vehicles	2003	0.0602	0.1553
Gasoline Heavy-Duty Vehicles	2004	0.0298	0.0164
Gasoline Heavy-Duty Vehicles	2005	0.0297	0.0083
Gasoline Heavy-Duty Vehicles	2006	0.0299	0.0241
Gasoline Heavy-Duty Vehicles	2007	0.0322	0.0015
Gasoline Heavy-Duty Vehicles	2008	0.034	0.0015
Gasoline Heavy-Duty Vehicles	2009	0.0339	0.0015
Gasoline Heavy-Duty Vehicles	2010	0.032	0.0015
Gasoline Heavy-Duty Vehicles	2011	0.0304	0.0015
Gasoline Heavy-Duty Vehicles	2012	0.0313	0.0015
Gasoline Heavy-Duty Vehicles	2013	0.0313	0.0015
Gasoline Heavy-Duty Vehicles	2014	0.0315	0.0015
Gasoline Heavy-Duty Vehicles	2015	0.0332	0.0021
Gasoline Heavy-Duty Vehicles	2016	0.0321	0.0061
Gasoline Heavy-Duty Vehicles	2017	0.0329	0.0084
Gasoline Heavy-Duty Vehicles	2018	0.0326	0.0082
Gasoline Motorcycles	1960-1995	0.0899	0.0087
	1996-2018	0.0672	0.0069

Source: *EPA (2020) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2018. All values are calculated from Tables A-107 through A-111.*

Scope 1 Emissions Factors

MOBILE COMBUSTION CH_4 AND N_2O FOR ON-ROAD DIESEL AND ALTERNATIVE FUEL VEHICLES				
Vehicle Type	**Fuel Type**	**Vehicle Year**	**CH_4 Factor (g / mile)**	**N_2O Factor (g / mile)**
Passenger Cars	Diesel Fuel	1960-1982	0.0006	0.0012
Passenger Cars	Diesel Fuel	1983-1995	0.0005	0.0010
Passenger Cars	Diesel Fuel	1996-2006	0.0005	0.0010
Passenger Cars	Diesel Fuel	2007-2018	0.0302	0.0192
Light-Duty Trucks	Diesel Fuel	1960-1982	0.0011	0.0017
Light-Duty Trucks	Diesel Fuel	1983-1995	0.0009	0.0014
Light-Duty Trucks	Diesel Fuel	1996-2006	0.0010	0.0015
Light-Duty Trucks	Diesel Fuel	2007-2018	0.0290	0.0214
Medium- and Heavy-Duty Vehicles	Diesel Fuel	1960-2006	0.0051	0.0048
Medium- and Heavy-Duty Vehicles	Diesel Fuel	2007-2018	0.0095	0.0431
Light-Duty Cars	Methanol		0.0080	0.0060
Light-Duty Cars	Ethanol		0.0080	0.0060
Light-Duty Cars	CNG		0.0820	0.0060
Light-Duty Cars	LPG		0.0080	0.0060
Light-Duty Cars	Biodiesel		0.0300	0.0190
Light-Duty Trucks - Alternative Fuel	Ethanol		0.0120	0.0110
Light-Duty Trucks - Alternative Fuel	CNG		0.1230	0.0110
Light-Duty Trucks - Alternative Fuel	LPG		0.0120	0.0130
Light-Duty Trucks - Alternative Fuel	LNG		0.1230	0.0110
Light-Duty Trucks - Alternative Fuel	Renewable Diesel		0.0290	0.0214
Light-Duty Trucks - Alternative Fuel	Biodiesel		0.0290	0.0210
Medium-Duty Trucks	CNG		4.2000	0.0010
Medium-Duty Trucks	LPG		0.0140	0.0340
Medium-Duty Trucks	LNG		4.2000	0.0430
Medium-Duty Trucks	Renewable Diesel		0.0095	0.0431

MOBILE COMBUSTION CH_4 AND N_2O FOR ON-ROAD DIESEL AND ALTERNATIVE FUEL VEHICLES				
Vehicle Type	**Fuel Type**	**Vehicle Year**	**CH_4 Factor (g / mile)**	**N_2O Factor (g / mile)**
Medium-Duty Trucks	Biodiesel		0.0090	0.0010
Heavy-Duty Trucks	Methanol		0.0750	0.0280
Heavy-Duty Trucks	Ethanol		0.0750	0.0280
Heavy-Duty Trucks	CNG		3.7000	0.0010
Heavy-Duty Trucks	LPG		0.0130	0.0260
Heavy-Duty Trucks	LNG		3.7000	0.0010
Heavy-Duty Trucks			0.0095	0.0431
Heavy-Duty Trucks	Biodiesel		0.0090	0.0430
Buses	Methanol		0.0220	0.0320
Buses	Ethanol		0.0220	0.0320
Buses	CNG		10.0000	0.0010
Buses	LPG		0.0340	0.0170
Buses	LNG		10.0000	0.0010
Buses	Biodiesel		0.0090	0.0430

Source: *EPA (2020) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2018. All values are calculated from Tables A-110 through A-113.*

addendum

Scope 1 Emissions Factors

MOBILE COMBUSTION CH_4 AND N_2O FOR NON-ROAD VEHICLES			
Vehicle Type	**Fuel Type**	**CH_4 Factor (g / mile)**	**N_2O Factor (g / mile)**
Ships & Boats	Residual Fuel Oil	0.55	0.55
	Gasoline (2 stroke)	9.54	0.06
	Motor Gasoline	4.88	0.23
	Diesel Fuel	0.31	0.50
Locomotives	Diesel Fuel	0.80	0.26
Aircraft	Jet Fuel	0	0.30
	Aviation Gasoline	7.06	0.11
Agricultural Equipment[A]	Gasoline (2 stroke)	12.96	0.06
	Gasoline (4 stroke)	7.24	0.21
	Diesel Fuel	0.28	0.49
	LPG	2.19	0.39
Agricultural Offroad Trucks	Motor Gasoline	7.24	0.21
	Diesel Fuel	0.13	0.49
Construction/Mining Equipment	Gasoline (2 stroke)	12.42	0.07
Construction/Mining Equipment	Motor Gasoline	5.58	0.20
Construction/Mining Equipment	Diesel Fuel	0.20	0.47
Construction/Mining Equipment	LPG	1.05	0.41
Construction/Mining Offroad Trucks	Motor Gasoline	5.58	0.20
Construction/Mining Offroad Trucks	Diesel Fuel	0.13	0.49
Lawn and Garden Equipment	Gasoline (2 stroke)	15.57	0.06
	Gasoline (4 stroke)	5.84	0.18
	Diesel Fuel	0.33	0.47
	LPG	0.35	0.41
Airport Equipment	Motor Gasoline	2.58	0.25
	Diesel Fuel	0.17	0.49
	LPG	0.33	0.41

MOBILE COMBUSTION CH_4 AND N_2O FOR NON-ROAD VEHICLES			
Vehicle Type	**Fuel Type**	**CH_4 Factor (g / mile)**	**N_2O Factor (g / mile)**
Industrial/Commercial Equipment	Gasoline (2 stroke)	15.14	0.06
	Motor Gasoline	5.48	0.20
	Diesel Fuel	0.23	0.47
	LPG	0.44	0.41
Logging Equipment	Gasoline (2 stroke)	12.03	0.08
	Gasoline (4 stroke)	6.71	0.18
	Diesel Fuel	0.10	0.49
Railroad Equipment	Motor Gasoline	5.78	0.19
	Diesel Fuel	0.44	0.42
	LPG	1.20	0.41
Recreational Equipment	Gasoline (2 stroke)	7.81	0.03
	Motor Gasoline	8.45	0.19
	Diesel Fuel	0.41	0.41
	LPG	2.98	0.38

Source: *EPA (2020) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2018. All values are calculated from Tables A-114 through A-115.*

Notes:

[A] *Includes equipment, such as tractors and combines, as well as fuel consumption from trucks that are used off-road in agriculture.*

[B] *Includes equipment, such as cranes, dumpers, and excavators, as well as fuel consumption from trucks that are used off-road in construction.*

STEAM AND HEAT			
	CO_2 Factor (g / mile)	**CH_4 Factor (g / mile)**	**N_2O Factor (g / mile)**
Steam and Heat	66.3300	1.2500	0.125

Note: *Emission factors are per mmBtu of steam or heat purchased. These factors assume natural gas fuel is used to generate steam or heat at 80 percent thermal efficiency.*

Waste Generation

SUMMARY OF SAN JOSE WATER'S RECYCLING PROGRAM REVENUES								
	Water Meter		Red Brass		Copper		Insulated Wire	
Year	Pounds	$	Pounds	$	Pounds	$	Pounds	$
2017	97,488	$114,511	7,132	$10,333	2,140	$4,227	824	$1,172
2018	92,308	$117,342	5,542	$8,564	3,224	$6,904	392	$478
2019	124,748	$124,865	5,806	$8,013	2,944	$5,523	88	$97
2020	25,221	$36,248	2,942	$3,856.28	2,434	$4,475	0	0

SJW's comprehensive waste management program closely tracks all hazardous and non-hazardous wastes. Solid waste generation is minimized by recycling paper, cardboard, plastic, waste metals, and obsolete meters. These recycling programs allow SJW to more than recover the cost of sorting and segregating recyclable materials. A summary of the revenues generated by San Jose Water's recycling program is shown below.

SUMMARY OF SAN JOSE WATER'S RECYCLING PROGRAM REVENUES	
Year	SJWC Hazardous Wastes (Tons)
2017	247.45
2018	239.69
2019	26.58*
2020	207.30

As required by regulation, SJW also keeps track of the hazardous wastes it generates.

** 2019 had fewer pre-construction site assessments and remediations, leading to a smaller disposal amount*

SJW also manages all solid waste generated from its main repair and replacement activities. These wastes include old pipes and the soils that are excavated during these activities. Excavated soils are disposed of as solid waste, provided they are not found to be hazardous, and replaced with new materials that meet each jurisdiction's requirements.

SJW Group

ConnecticutWater

MaineWater

SJWTX

SAN JOSE WATER