2020

Annual Sustainability Report

Incline Village Public Works

2020

Community Highlights

NATIONAL EXEMPLARY SOURCE WATER PROTECTION AWARD FROM THE AMERICAN WATER WORKS ASSOCIATION

The Incline Village General Improvement District (IVGID) acts as the headquarters of the Tahoe Water Suppliers Association (TWSA), which was recognized for its long-standing watershed protection outreach and activities.

THE SPIRIT OF THE TRPA - 50TH ANNIVERSARY AWARD FROM THE TAHOE REGIONAL PLANNING AGENCY (TRPA)

The Incline Village General Improvement District (IVGID) acts as the headquarters of the Tahoe Water Suppliers Association (TWSA), which was selected by TRPA staff and board members as one of the recipients who work so hard to protect Lake Tahoe.

877 MILLION GALLONS OF TAP WATER DELIVERED

The Public Works Service Area utilized 877 million gallons of potable water for indoor and outdoor consumption such as hygiene and irrigation needs.

217,510 GALLONS OF TAP WATER CONSUMED PER HOUSEHOLD

On average, 225,508 gallons of tap water were consumed per household in Incline Village and Crystal Bay in 2020. This includes outdoor irrigation and indoor uses.

334 MILLION GALLONS OF WASTEWATER 100% REUSED

334 million gallons of wastewater were processed by the Water Resource Recovery Facility and then delivered to the Wetlands Enhancement Facility, Clear Creek Golf Course, and Carson Valley Ranch.

82,837 GALLONS OF WASTEWATER TREATED PER HOUSEHOLD

On average, 85,883 gallons of wastewater were treated per household in Incline Village and Crystal Bay in 2020. Wastewater is collected and treated in Incline Village before release at the Carson Valley Wetlands.

731 CUSTOMER SERVICE REQUESTS (WATER & WASTEWATER)

Public Works staff responded to 731 customer service requests ranging from emergency service shut-offs to residential leak detection. Call (775) 832-1203 / Available: 24 hours a day, 7 days a week, 365 days a year.

785 HOUSEHOLD HAZARDOUS AND ELECTRONIC WASTE CUSTOMERS

785 total customers utilized IVGID's Household Hazardous and Electronic Waste Program in 2020. 271 customers were served before the pandemic changed this program to the new appointment only system which served 514 customers.

91,549 BAGS OF PINE NEEDLES TOTALING 720 TONS

A total of 91,549 bags were collected curbside by Waste Management as a part of the green-waste program in 2020. This tallied approximately 720 tons of yard debris that were sent to Full Circle Compost in Carson Valley for reuse as compost material.

RECYCLING RATE OF 26 PERCENT

The community-recycling rate in Incline Village and Crystal Bay is 26 percent, in 2020. Washoe County achieved a recycling rate of 33 percent while the State of Nevada reached a recycling rate of 22 percent.

LESS THAN A POUND OF RECYCLING

Each individual in Incline Village and Crystal Bay generated approximately 3/5 of a pound of recyclable waste every day in 2020.

6,476 POUNDS OF TRASH

6,476 pounds of landfill waste were generated per household in Incline Village and Crystal Bay in 2020.

7 POUNDS OF TRASH

Each individual in Incline Village and Crystal Bay generated more than 7 pounds of trash every day in 2020.

17 POUNDS OF HAZARDOUS AND ELECTRONIC WASTE

On Average, 17 pounds of household hazardous waste and electronic waste were generated by each household in Incline Village and Crystal Bay in 2019.

64,257 POUNDS OF HAZARDOUS AND ELECTRONIC WASTE

39 Household Hazardous Waste Events were held serving 785 residential customers in 2020. 44,696 pounds of Household Hazardous Waste and 19,561 pounds of Electronic Waste were either recycled or properly disposed of.

7,839,249 KWH OF ELECTRICITY CONSUMED

Public Works' electricity consumption (provided by NV Energy) decreased by 7 percent in 2019 compared to 2010 while cost of consumption decreased by 18 percent over the same timeframe.

6,467,954 POUNDS OF CARBON DIOXIDE (CO_2) EMITTED

Public Works operations emitted 6,467,954 pounds of carbon dioxide emissions. This is the equivalent to greenhouse gases emitted by driving an average passenger vehicle 7,373,257 miles (energystar.gov).

49,821 KWH OF ELECTRICITY GENERATED

The Public Works Solar Array generated 49,821 kWh of electricity or 24% percent of total electricity consumed by the Public Works Facility. This tallies a lifetime generation of 493,657 kWh. On average, it produces 44,878 kWh/year.

748,000 POUNDS OF CARBON DIOXIDE (CO_2) AVOIDED

The total accumulation of avoided carbon dioxide emissions thanks to generation of electricity by our solar array, equivalent to swapping out 12,859 Incandescent lamps with LEDs (*epa.gov/energy*).

ACKNOWLEDGMENTS

This report is made possible with the support of the Incline Village and Crystal Bay community and all the hard-working individuals who make it possible to thrive here. The Waste Not Program was founded in 1992 by dedicated residents with a goal to increase conservation and recycling services available to residents and visitors. Now in its 30th year (2022), the program has grown its capabilities and responsibilities to include sustainability as a key strategic principle. Invaluable residents, students and business owners, IVGID staff from all departments, and previous AmeriCorps Members have contributed to this report directly or indirectly through participation in local conservation programs.

COVER PHOTO LOCATION: STATELINE LOOKOUT TRAILS

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American Water Works Association California-Nevada Section

SEP Sustainability Excellence Professional

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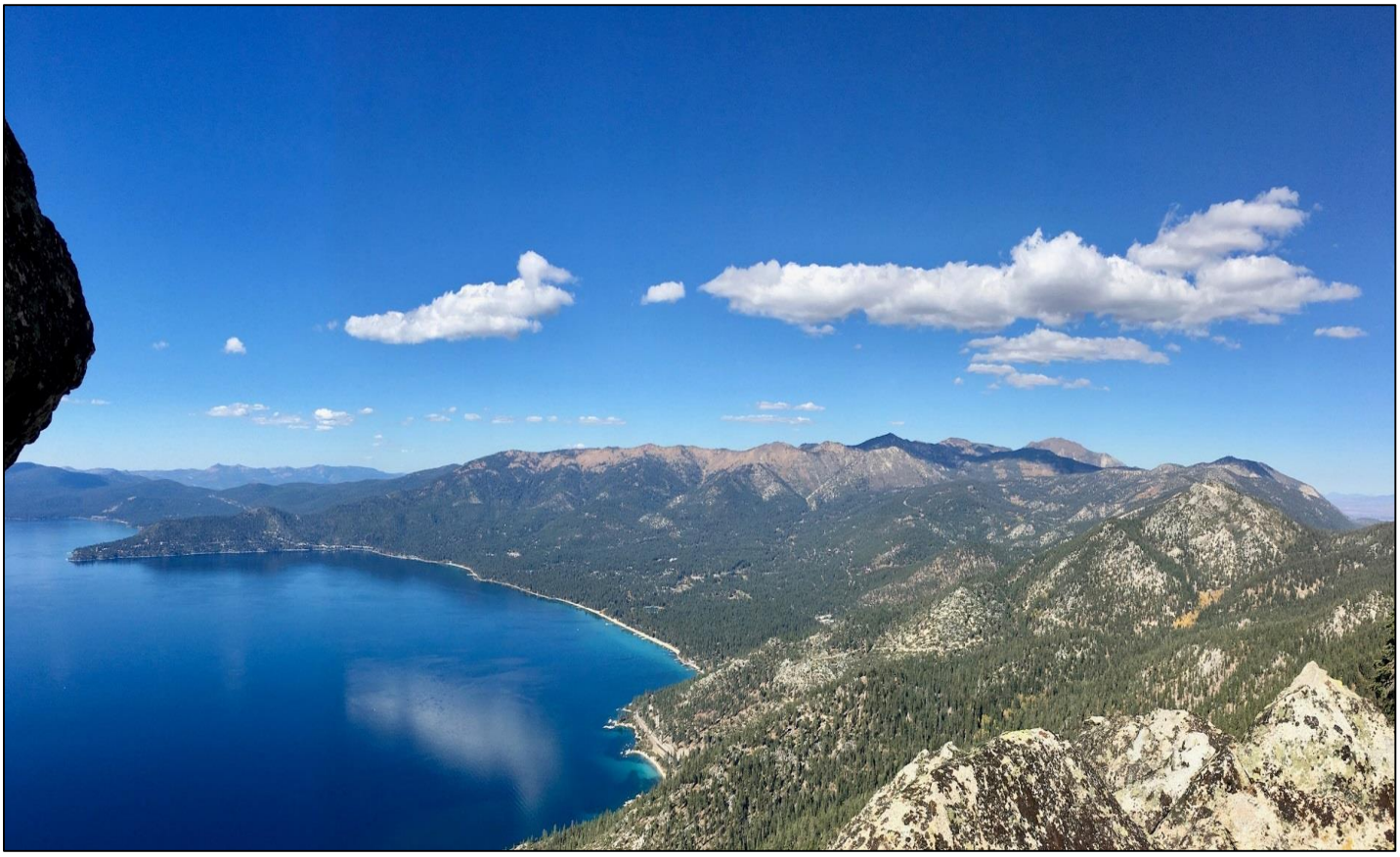


Incline Village and Crystal Bay Scenic Overlook at Herlan Peak

ABOUT THIS REPORT

Introduction

Public Works is a part of the Incline Village General Improvement District (IVGID) on the north shore of Lake Tahoe in the state of Nevada. IVGID is a quasi-public agency established under Nevada Revised Statute, Chapter 318 and chartered to provide water, sewer, trash, and, recreation services for the unincorporated communities of Incline Village and Crystal Bay, Nevada. It is governed by an elected Board of Trustees which, acting on behalf of the electorate, sets policy and determines strategies to accomplish its Strategic Plan. Incline Village and Crystal Bay are located within Washoe County, the entity that had the authority to create IVGID.

The Department of Public Works follows leadership directive and policy pursuant to IVGID's Vision, Mission and, Values. This report will focus on sustainability performance as it pertains to IVGID Administration and Public Works and does not include data for any recreation venues that IVGID owns.

What is Sustainability Reporting?

The purpose of the IVGID Sustainability Program is to responsibly manage resources under IVGID's care, protect public health, and balance its social and environmental duties to the citizens and community while providing cost-effective services to ratepayers. Sustainability holds importance to Incline Village Public Works in terms of environmental, social, and economic security. This importance is highlighted by Lake Tahoe, the place where we live, work, invest, and play.

Community Services Impacted by Winter Weather

Community stakeholders, utility managers, and regulatory agencies are increasingly interested in utility sustainability, typically described in terms of economic, social, and environmental resiliency. This is commonly referred to as the triple bottom line. Sustainability reporting initially began in the 1960s and 1970s as the national environmental movement grew and corporate social responsibility increased. Environmental impact considerations have gained more importance to the public since then.

Water and wastewater treatment systems are designed to prevent pollution, conserve natural resources, support local commerce, and protect public health. The purpose of operating in a more sustainable manner is not to add more work, cost or complexity to an organization; rather, sustainability practices and reports encourage stakeholders to understand how operations integrate with the global economy, community, and environment.

Benefits of Sustainability Reporting

This report provides a vehicle for Public Works to respond to heightened stakeholder expectations for transparent disclosure of economic, social, and environmental effects of our organization on our community. According to the Water Environment Federation (WEF), "Sustainability Reports" have many positive benefits:

- Unify the management system within the organization;
- Reinforce organizational commitments and demonstrate progress;
- Focus on energy, water, and materials management;
- Improve internal governance;
- Document direct cost savings that result from more efficient operations;
- Integrate long-term social, environmental and economic objectives within the organization;
- Set an example for other organizations or public agencies - thereby gaining recognition;
- Enhance the organization's profile and reputation;
- Promote transparency and accountability;
- Encourage stakeholder involvement;
- Improve investment options and value.

WORKPLACE CULTURE

Vision Statement

With passion for quality of life and our environment, Incline Village General Improvement District will enhance the reputation of our community as an exceptional place to live, work, invest, and play.

Mission Statement

The Incline Village General Improvement District delivers exemplary recreational experiences and provides the highest level of water, sewer, and solid waste services while striving for fiscal and environmental sustainability.

Value Statement

We are dedicated people providing quality service, for our community and environment, with integrity and teamwork.

Mantra Statement

One District • One Team

Core Values

IVGID employees are encouraged to define their personal core values while applying the following traits in their day to day lives.

- **Service**
  We will use teamwork to provide reliable services and superior value to our customers.
- **Teamwork**
  We will deliver service and value by collaborating with others in a positive work environment to achieve our goals in the best interest of the community.
- **Integrity**
  We will act in an honest, fair, consistent manner to do the right thing for the greatest good.
- **Responsibility**
  We will be professional in our actions, transparent with communication, and accountable to our decisions.
- **Excellence**
  We will perform to the best of our ability and seek to make tomorrow better than today.

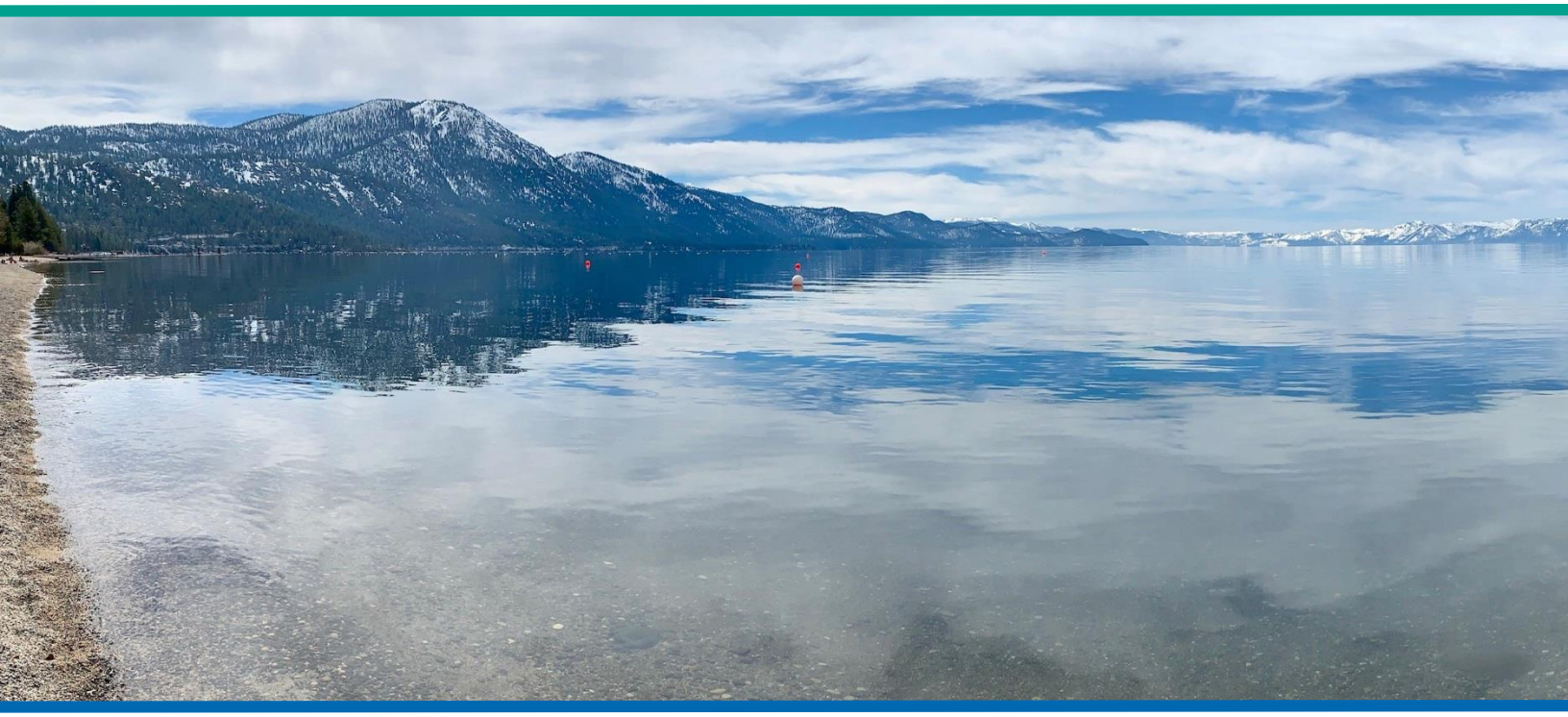
SYSTEM PROFILE

Main Function, Core Responsibilities, and Services Offered

The Department of Public Works provides water and sewer services and manages solid waste services via Waste Management, Inc. for the residential and commercial properties of Incline Village and Crystal Bay, Nevada. Public Works also provides engineering, conservation, fleet services, building maintenance, and snow removal to our internal customers: Golf, Ski, Recreation, and Administration.

The District is also responsible to its Federal, State, and Local regulatory agencies. The production and delivery of safe drinking water and the proper treatment and disposal of wastewater is regulated by the U.S. Environmental Protection Agency and the laws administered by the Nevada Department of Environmental Protection and Washoe County District Health. This responsibility requires substantial reporting to demonstrate compliance with the laws, such as performing laboratory tests, doing system evaluations, having a watershed protection program, inspecting new construction, as well as all the traditional activities to deliver water and treat wastewater.

Public Works serves contractors, developers, and property owners in many ways: customer service, billing, plan checks, field inspections, backflow surveys, water right analysis, garbage enclosures, bear awareness education, project management (internal), engineering services (internal), water audits, water conservation education, recycling education, and household hazardous waste disposal.



Incline Beach

Service Area Demographics

The United States Census Bureau conducts surveys every decade to determine population and other economic or health indicators such as median income and age, etc... The results displayed on this page depict the results from the most recent Census survey which took place in 2020. These figures are compared to Washoe County, the State of Nevada, and National statistics for comparison. The combined Incline Village and Crystal Bay region encompasses 25.4 square miles in the southwestern corner of Washoe County, located on Nevada's western border along the State of California. All information obtained directly from data.census.gov.

Incline Village and Crystal Bay, Nevada

Population	Households	Median Age	Population over 65	Veterans	Disabled Population
9,817	4,032	51.3	25.4%	8.8%	6%

Median Income	Median Gross Rent	Poverty Rate	Bachelor's Degree or Higher	Employment Rate	Average Commute Time
$99,518	$1,545/Mo	7.3%	57.5%	59%	21.6 Minutes

Washoe County, Nevada

Population	Households	Median Age	Population over 65	Veterans	Disabled Population
486,492	186,116	38.6	15.9%	8.6%	11.1%

Median Income	Median Gross Rent	Poverty Rate	Bachelor's Degree or Higher	Employment Rate	Average Commute Time
$71,881	$1,195/Mo	10.5%	31.5%	63.2%	23.1 Minutes

Reno, Nevada – Located in Washoe County (photo courtesy of visitrenotahoe.com)

State of Nevada

Population	Households	Median Age	Population over 65	Veterans	Disabled Population
3,104,614	1,130,011	38.4	16.2%	8.9%	12.3%

Median Income	Median Gross Rent	Poverty Rate	Bachelor's Degree or Higher	Employment Rate	Average Commute Time
$63,276	$1,168/Mo	12.5%	25.7%	60%	25.6 Minutes

United States of America

Population	Households	Median Age	Population over 65	Veterans	Disabled Population
331,449,281	122,354,219	38.5	16.5%	6.9%	12.7%

Median Income	Median Gross Rent	Poverty Rate	Bachelor's Degree or Higher	Employment Rate	Average Commute Time
$65,712	$1,097/Mo	12.3%	33.1%	60.2%	27.6 Minutes

Important Customers

The District reads approximately 4,450 meters monthly, billing 4,270 water accounts and 4,170 sewer accounts. Some facilities have multiple water meters such as Championship Golf and some accounts are for water only such as irrigation accounts. Multi-family and commercial developments are typically served with one large meter for all the units in that association. Waste Management (WM) directly bills approximately 4,042 residential customers and 393 commercial customers for solid waste services.

A detailed customer breakdown is presented below:

- Total accounts billed: 4,270
- Total water meters read: 4,450
- Total irrigation meters: 89
- Snow making meter: 1
- Sewer only accounts: 13
- E-Statement accounts: 1,472

Public Board Meetings are held online and at the Chateau at Incline

Stakeholder Engagement

In addition to managing customer relations, building rapport with regulators, and meeting citizens at community events, Public Works participates in public meetings held by the IVGID Board of Trustees. Board meetings are available in real time via the Livestream platform. Agendas, packets, recordings, video-streams, and instructions for public comment can be found at the following web address: https://www.yourtahoeplace.com/ivgid/board-of-trustees/meetings-and-agendas

Rules and Regulations

Ordinance # 1 - Trash

An ordinance regulating solid waste matter and the collection, removal, and disposal thereof Incline Village General Improvement District. Visit www.yourtahoeplace.com for details on Ordinance 1.

Ordinance # 2 - Sewer

An ordinance establishing rates, rules, and regulations for sewer service by the Incline Village General Improvement District. Visit www.yourtahoeplace.com for details on Ordinance 2.

Ordinance # 4 - Water

An ordinance establishing rates, rules, and regulations for water service by the Incline Village General Improvement District. Visit yourtahoeplace.com for details on Ordinance 4.

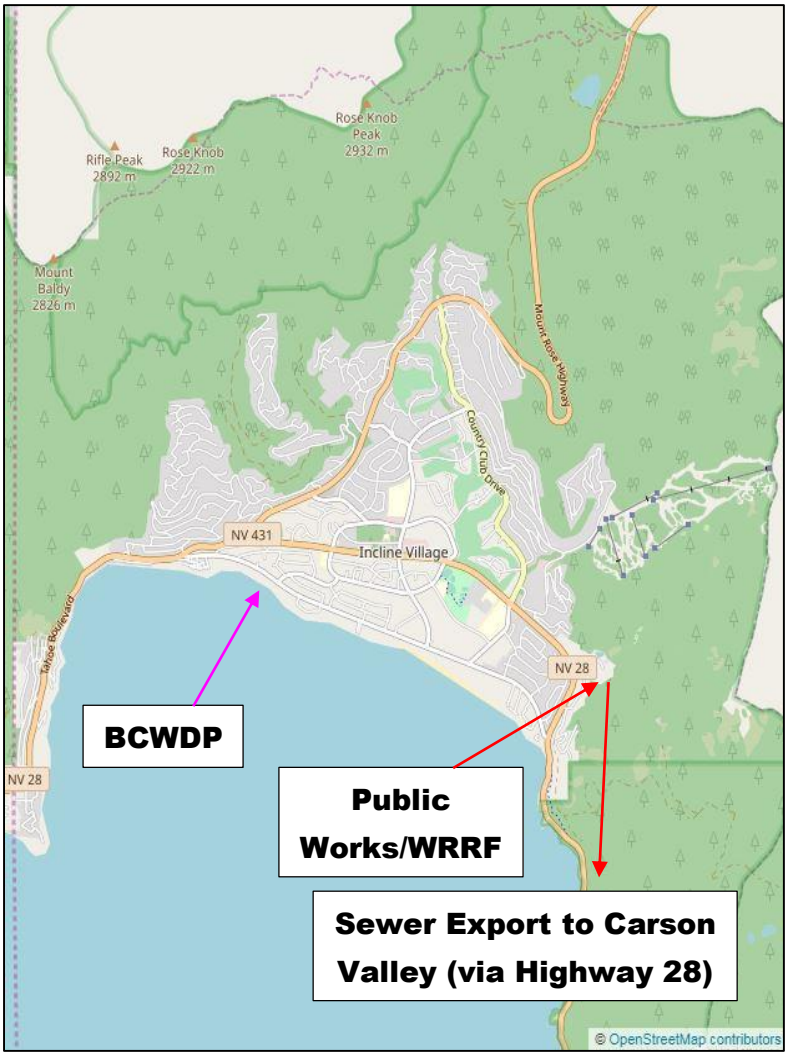
Ordinance # 7 - Recreation

An ordinance establishing rates, rules, and regulations for recreation passes and recreation punch cards by the Incline Village General Improvement District. Visit www.yourtahoeplace.com for details on the work of the General Manager's Recreation Privileges (Ordinance 7) Committee.

Service / Collection Area, Facility Locations, and Infrastructure Inventory

The Public Works Facility located at 1220 Sweetwater Road in Incline Village, Nevada, is comprised of administrative offices, employee break, and conference rooms, on-call quarters, storage warehouses, fleet maintenance garages, facility maintenance warehouses, a wash bay, heavy equipment garages, fuel pumping stations, and a hazardous and electronic waste collection area, in addition to various open and closed storage spaces.

Sierra Nevada College Students participate in an Annual Sustainability & Wastewater Tour



Public Works Service Area

IVGID owns and operates the Burnt Cedar Water Disinfection Plant (BCWDP) located on the north shore of Lake Tahoe. Treating and supplying an average of one billion gallons of drinking water annually, water infrastructure assets include:

- An ultra violet and ozone treatment plant able to treat 8.5 million gallons a day.
- 100 miles of water mains between 4-inches to 24-inches in diameter.
- 2,031 gate valves.
- 13 water tanks with 7 million gallons of storage.
- 14 water pumping stations with 26 pressure zones.
- Service connections to over 4,300 water meters.
- Total water infrastructure replacement value: ***$275,000,000***

IVGID constructed the Wastewater Resource Recovery Facility (WRRF) in 1962.

Wastewater infrastructure assets include:

- 105 miles of gravity pipelines and 14 miles of sewer force main between 6-inches to 24-inches in diameter.
- 1,926 sewer utility holes and 19 sewer pump stations.
- A wastewater resource recovery facility able to treat 2.1 million gallons a day.
- 21 miles of effluent pipeline to Carson Valley for treated effluent water.
- Total sewer infrastructure replacement value: ***$325,000,000***

Capital Improvement

The assets of the District require ongoing maintenance in addition to new projects to add value or meet current regulatory standards. A team of licensed Professional Engineers (PE) manage projects from design to completion. The following list encompasses the major completed projects during 2020 (click link for full details or visit www.yourtahoeplace.com).

Spooner Pump Station

2020 WRRF Aeration System Improvements

The aeration process of wastewater treatment supplies oxygen to facilitate the biological activity that converts raw sewage into treated wastewater effluent.

2020 Championship Golf Course Maintenance Building Drainage & Washpad Improvements

This project improved surface and sub-surface drainage, constructed a modern wash pad facility, and spot-treated pavement failures at the Championship Golf Maintenance Building.

Water Treatment and Sourcewater Protection

Used to supply public drinking water, Source Water is untreated water from streams, rivers, lakes, or underground aquifers. The source of drinking water for many Tahoe Basin communities, including Incline Village and Crystal Bay, is Lake Tahoe. The water is pumped out the lake, managed in a water disinfection facility, and delivered to customers.

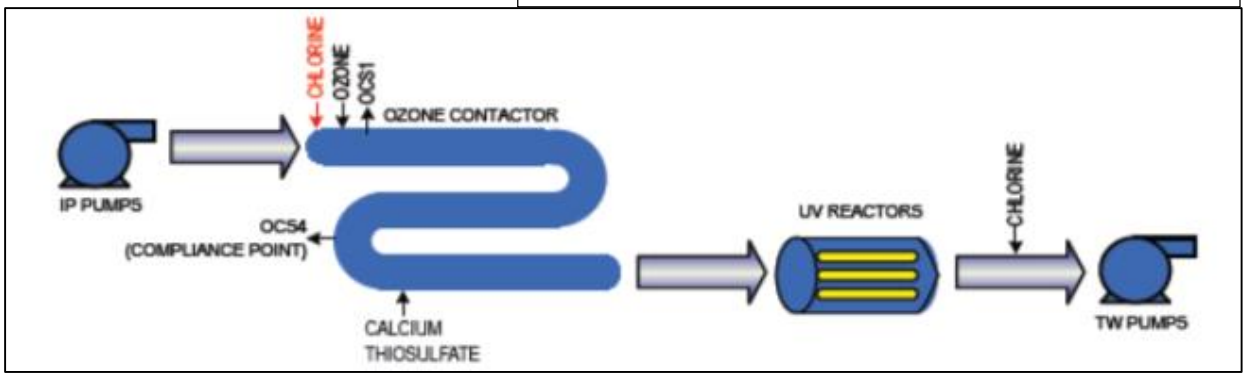
Sourcewater Protection is the protection of drinking water sources from contaminates that are harmful to human health. The water in Lake Tahoe is of excellent quality, and treatment plants are designed to remove or inactivate microorganisms. However, emerging contaminants and increases in contaminants quantities often increases the threat of waterborne illness and creates requirements for new and expensive treatment upgrades.

Filtration Exemption

Drinking water from Lake Tahoe is currently unfiltered since it meets the U.S. EPA filtration avoidance criteria. There are only 60 filtration exempt systems in the USA; out of 160,000 public water systems 6 of the filtration exempt systems are at Lake Tahoe. IVGID Public Works completed significant plant upgrades in 2013 to comply with the EPA's Long Term 2 Enhanced Surface Water Treatment Rule.

The Treatment Process

IVGID Operates Public Water System #NV0000158



The BCWDP produces 5,900-gallons per minute (gpm) of drinking water for Incline Village and Crystal Bay, Nevada. The BCWDP treatment process designed by CH2M Hill includes ozone disinfection and ultraviolet (UV) disinfection systems followed by free chlorine residual disinfection.

Raw Water and Low Lift Pumps

The Raw Water and Low Lift Pump Station convey raw water from Lake Tahoe through the Ozone and UV Disinfection Systems. Raw water is drawn from the lake through a 24-inch intake pipeline that extends approximately 650 feet from the shoreline into the lake. The Raw Water Intake pipeline is connected to the Low Lift Pump Station. The raw water is pumped through the Ozone Disinfection System and UV Disinfection System. After passing through these treatment systems the water reaches the Treated Water Pump Station. Sodium silicate is added to mitigate potential pipe and pipe joint corrosion issues within the water distribution system.

Chlorine Disinfection Chamber

Ozone, Ultra Violet, and Chlorine Disinfection

The Treated Water Pump Station pumps treated water from the BCWDP to IVGID's drinking water distribution system. The Ozone and UV Disinfection Systems provide multi-barrier protection and reduce the risks against Cryptosporidium, Giardia, and many other protozoan, bacterial, and viral pathogens. Sodium hypochlorite solution is used to provide a free chlorine residual within the drinking water distribution system.

Infrastructure

Water Reservoirs

There are 13 water reservoirs containing over 7 million gallons of water across the District. These water reservoirs range from the smallest at 175,000 gallons all the way to 1,000,000 gallons in size. All of the water reservoirs are steel tanks; they range between 25 to 50 feet tall and have diameters from 35 to 70 feet across. The 7 million gallons of stored water equals about 1 ½ days of water supply in the summer and about 4 days of water supply in the winter. This stored water is what provides the stable water pressure in the water system, is used to fight structure fires and acts as an emergency supply in times of power outages and equipment failures.

Drinking Water Intake Construction at Burnt Cedar Beach, circa 1960

Water Pumping Stations

There are 12 water pumping stations to pump water to the water reservoirs that supply your home or business with the water you need. Some pumping stations are buried in vaults while some are in large buildings located next to water reservoirs. The smallest pumping station pumps water at 75 gallons per minute while the largest pumping station near the ski resort pumps at 3000 gallons per minute. They have motors ranging from 7 to 450 horsepower. The pumping stations are sized to run only several hours a day to fill the water reservoirs and then shut off. The District employs a strategy to try and run these at night when power costs are low and then utilize the water reservoirs to provide your water needs in the day. The large pumping stations have emergency generators that automatically come on during outages so that water supply is maintained. The smaller stations have a hook-up for a small generator to provide the electrical needs to run the station. This is feasible since these small stations only run a couple of hours a day.

Additional Support

Defensible Space

The Defensible Space Fee work provides a protective boundary for the homes of Incline Village and Crystal Bay and protects our drinking water source. The Fuels Management Program began in 1991 in a collaboration of the NLTFPD and IVGID. Approximately $450,000 to $500,000 is spent annually to maintain the 1,000+acres of land that IVGID owns.

North Lake Tahoe Fire Protection District (NLTFPD)

Tahoe Water Suppliers Association

IVGID is one of the 12 water agencies around Lake Tahoe which partner in the Tahoe Water Suppliers Association (TWSA). The agencies work together to develop, implement, and maintain an effective watershed control program and advocate for the protection of Lake Tahoe as a drinking water source. The latest Watershed Control Annual Report produced by the TWSA can be found on their website.

Tahoe Water Suppliers Association
Protect the Source
WWW.TAHOEH2O.ORG

- Visit www.tahoeh2o.org to find out more.

Water Use Efficiency

American Water Works Association California-Nevada Section

Public Works customers receive "high water use" courtesy notifications on their monthly bill if use increases or if the meter runs constantly for more than 24-hours. IVGID staff conducts free, on-site landscape water use audits each summer for customers upon request. Public Works and many of its employees are members of the American Water Works Association (AWWA). Several staff members offer valuable resources to the District by holding Water Use Efficiency Practitioner Certifications offered by the AWWA.

Laboratory

IVGID's laboratory is certified by the State of Nevada for both potable water and wastewater analyses. There are a wide range of analyses conducted on a daily basis for process control of nutrients, microorganisms, settling, pH, disinfection, loadings, densities, and removal rates. The laboratory is divided in two sections: The first section is for the vast number of process control analyses and the clean lab section is for microbial analyses.

Federal, State, and Local Agencies

The Environmental Protection Agency, State of Nevada, and Washoe County provide extensive resources on all topics.

Unique Requirements for Wastewater Processing at Lake Tahoe

The WRRF is a biological secondary treatment facility with a rated capacity of 2.14 MGD (million gallons per day). Wastewater treatment processes include micro-screening, grit removal, aeration, carbonaceous activated sludge, secondary clarification, solids dewatering, odor control, and sodium hypochlorite disinfection of the effluent. Nineteen sewage pumping stations deliver raw sewage to the WRRF - 24 hours a day, 7 days a week, 365 days a year.

Historical Context

IVGID first built a Walker Process Package Treatment Plant (one circular structure with four segments handling the treatment process) in 1962. This treatment plant had a maximum capacity of 0.7 MGD with five sewage-pump stations throughout Incline Village and Crystal Bay and delivered wastewater to Sweetwater Road to eventually be used as local irrigation supplies.

The discharge of untreated effluent into Lake Tahoe's waterbody or streams was first prohibited in 1946. As a result of a Federal Water Pollution Conference held at Lake Tahoe in July, 1966, all properties are required to have sewer connections. Furthermore, all treated effluent must be exported outside of the Lake Tahoe Basin (by 1970) in order to protect Lake Tahoe's water quality and clarity. The Porter Cologne Act and TRPA Compact of 1970 formally prohibit any use of septic systems and discharge of effluent within the Lake Tahoe Basin.

IVGID met the export requirement with completion of a 21-mile pipeline that delivered the treatment plant's secondary effluent into the Carson River. The Nevada Department of Environmental Protection mandated more stringent treatment requirements in addition to the Safe Drinking Water Act of 1974 and subsequent reauthorization requirements. IVGID completed construction of the Wetlands Enhancement Facility in Carson Valley for the release of the treatment plant's effluent (1984). This project helped IVGID meet all local, state, and federal requirements and provides a waterfowl habitat.

Read more about Public Works' History online at www.yourtahoeplace.com.

Wetlands Enhancement Facility and Waterfowl Habitat

Current Wastewater Treatment Practice at IVGID Public Works

Headworks

The treatment of wastewater for IVGID starts at the headworks of the Treatment Plant where flow is measured, and the rotating screens and grit chamber are housed.

Raw sewage is pumped to the headworks from two main sewer pump stations (SPS): SPS 1, across from Incline Beach, and SPS 8, next to the Championship Golf Course on Highway 28. These two stations use a flow matching system that monitors the rate of flow and automatically adjusts the pump speed according to flow demand. There are also two gravity lines from the upper areas of Incline Village that flow into the headworks of the plant. The flow coming into the plant is measured through a 12" flume that tells the plant operators how much flow is going through the flume at any one time.

The rotating screens remove foreign objects such as sticks, paper, and even kid's toys from the raw sewage. The finer, heavier substances, or grit such as sand, eggshells, and coffee grounds, are removed from the wastewater by an airlift grit chamber. The wastewater, now screened and free of grit, flows to the next phase in the treatment process - aeration.

Aeration

The aeration phase of wastewater treatment gets oxygen into the wastewater by means of jet aeration. The plant has six 200,000 gallon basins with two jet aeration clusters per basin. These clusters mix the low pressure air and recirculated mixed liquor (some of the solids from the clarifiers with raw sewage from the headworks) to provide oxygen to the microorganisms that are busy cleaning up the wastewater so it can be reused. The wastewater is treated in these basins five to eight hours for optimal growth of microorganisms and treatment of wastewater.

Aeration Process at the WRRF

Clarification

Clarification slows down the flow of the wastewater to allow the solids, that were produced in the aeration basins and are heavier than water, to settle to the bottom of the clarifiers. The clear water rises and flows over weirs (process to keep the water level at one height at all times) to be disinfected and exported from the Lake Tahoe Basin.

Disinfection

The clear water that flows over the weirs in the clarifiers flows through a channel that diffuses disinfectant into the treated wastewater. Sodium hypochlorite is used for disinfection. The liquid sodium hypochlorite is metered according to plant flow and is introduced just before the effluent stream enters the twenty-mile export pipeline on its way to the Carson Valley.

The twenty-mile pipeline is used as the plant's chlorine contact chamber and allows sufficient time for the chlorine to come in contact with the effluent and kill any remaining pathogens. After the effluent stream tumbles 3,000 feet down to the Carson Valley floor all the chlorine is gone; therefore, the twenty-mile export pipeline also serves as the plants dechlorination chamber.

Odor Control

This facility removes the malodorous compounds from the air in the solids handling facility and the headworks. The air is forced through the wet scrubber, which is like a big rainstorm that comes in contact with the air molecules and strips out the odors. The wet scrubber uses sodium hypochlorite to oxidize the malodorous compounds to non-offensive compounds before being released to the atmosphere.

Wet Scrubbers deodorize effluent odors

Biosolids Processing and Reuse

The solids that are wasted from the clarifier are over 99% water. This would be very expensive to haul these biosolids for disposal so the next step is to get as much water out as possible. This is done by using large centrifuges to spin the water out of the biosolids with the help of special polymers. The concentration of solids is increased to over 21% in these centrifuges. These biosolids now look like dirt and are put in special containers to be hauled out of the Tahoe Basin. The District contracts with Bently Agrodynamics that composts the biosolids with other organic materials and then they spread it on pasture land to grow forage crop for cattle. The composting process reaches temperatures of over 160 degrees that kills the pathogens in the biosolids.

Effluent Reuse

The District puts 100% of wastewater effluent to reuse annually. During the summer, the effluent is sold to a golf course and a ranch in Douglas County to grow turf and pasture crops. In the winter, the effluent is sent to the Wetlands Facility for waterfowl habitat. The wetlands facility is designed with special holding cells and islands so that nesting birds have a protected area for nesting.

Treated Wastewater can be reused for irrigation

The Wetlands Enhancement Facility located near Hot Springs Mountain in Carson Valley, Nevada

Wetlands Facility

The Wetlands Facility in the Carson Valley is the final destination for IVGID's secondary effluent. The effluent water travels through a pipeline for 21 miles to the wetlands site. The effluent is disposed of through evaporation, transpiration (evaporation through plants), and percolation (seepage through soil). The water travels through multiple lagoons (cells) covering 390 acres of the site that includes bird habitat and protected nesting sites. The system works in harmony with the existing warm water wetlands, adapts well to year-round fluctuations in weather and temperature, provides valuable habitat, and meets State and EPA water quality requirements. The facility was originally built in 1983 to stop discharging effluent water to the Carson River to improve its water quality.

Emergency Storage

In addition to a 500,000-gallon effluent storage tank at the wastewater resource recovery facility, the plant has two emergency storage ponds. The upper pond, which is above the plant, has a capacity of 1.7 million gallons; the lower pond has a capacity of 17 million gallons and is located just below the plant behind Mill Creek dam. These ponds are rarely used for wastewater storage, but provide a safe buffer in case of a failure that could cause an effluent spill into Lake Tahoe.

Scale of the Organization

The IVGID service area is substantially built-out at this point. The Washoe County Assessor parcel database shows that there are approximately 9,060 parcels in the service area with approximately 1,000 parcels owned by the United States and the State of Nevada that are non-buildable. Approximately 7,500 parcels are residential single family and multi-family, 200 parcels are commercial and there are approximately 250 parcels that are undeveloped. The full-time population is estimated below 10,000 people with that number increasing to nearly 20,000 people during peak tourism times in the summer months and winter holidays.

In addition to Public Works, IVGID also owns and operates two 18-hole golf courses, Diamond Peak Ski Resort, Parks and Recreation facilities, and various rentable venues throughout Incline Village. Departmental teams across the entire District share resources and responsibilities to provide quality services to our jurisdiction while supporting regional initiatives and creating stakeholder value.

All staff are trained in customer service and standard operating procedures while individuals pursue certifications related to their career focus. For example, Public Works staff members hold certifications ranging from Water Treatment Operator, Water Quality Laboratory Analyst, Water Use Efficiency Practitioner, Backflow Prevention Assembly Tester to Cross Connection Control Specialist all accredited by the American Water Works Association (AWWA) and supplemented by the Nevada Rural Water Association (NRWA).

IVGID Administrative Offices

Administrative Service Teams

- Accounting
- Communications
- General Administration
- Human Resources
- Information Technology
- Risk Management

Public Works Service Teams

- Buildings
- Compliance
- Customer Service
- Engineering
- Fleet
- Pipeline
- Treatment
- Waste Not

Chris and Alfie responding to a utility emergency

Parks and Recreation Service Teams

- Outdoor Recreation
- Programs
- Rec Center
- Remote Wellness
- Tennis & Pickleball

Diamond Peak Ski Resort Service Teams

- Lessons & Rentals
- Mountain Operations
- Tickets & Passes

Golf Service Teams

- Championship Course
- Mountain Course
- Golf Academy

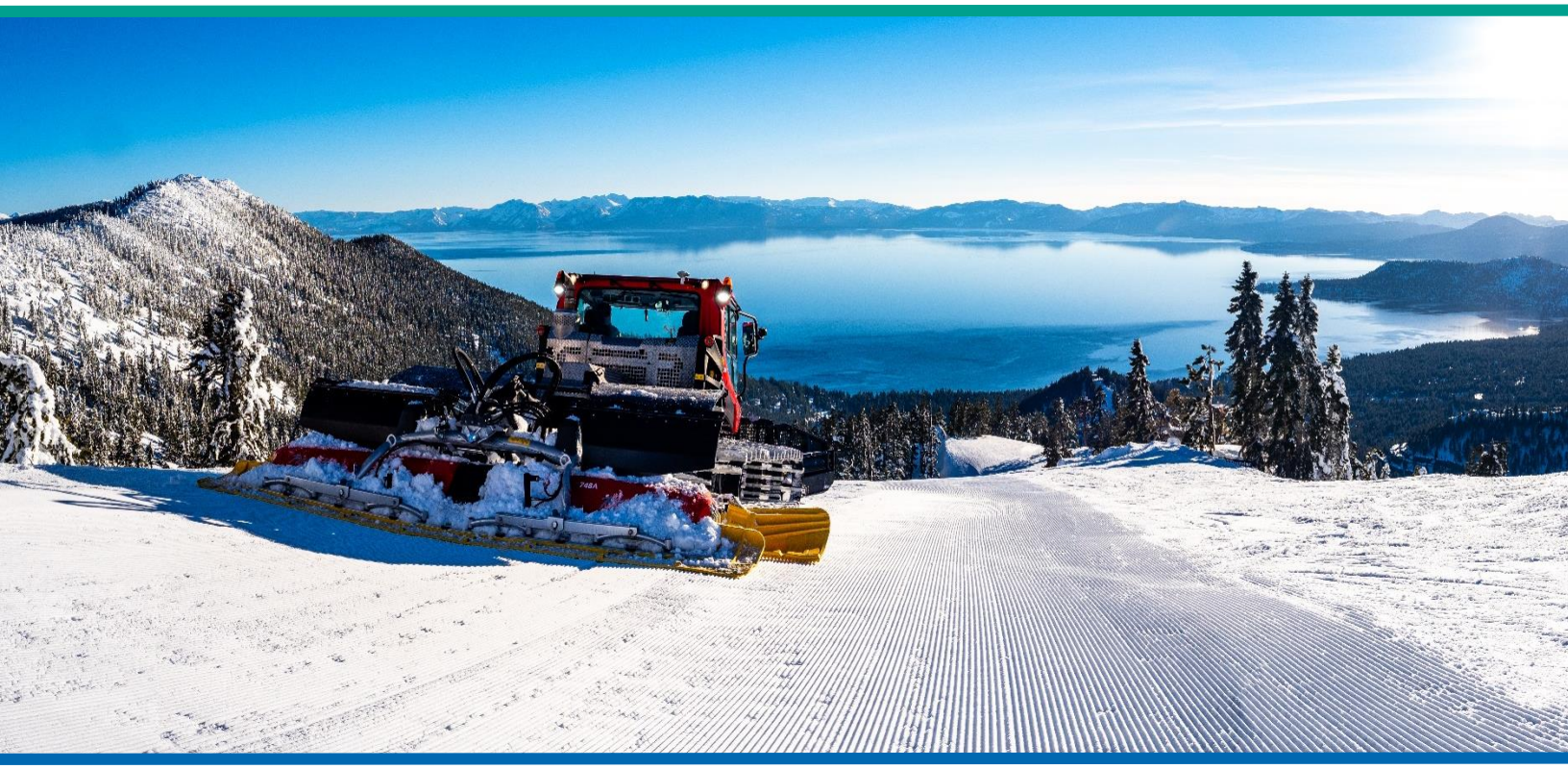
Additional Service Teams

- Food & Beverage
- Marketing
- Weddings & Events

WWW.GOLFINCLINE.COM

Rec Center

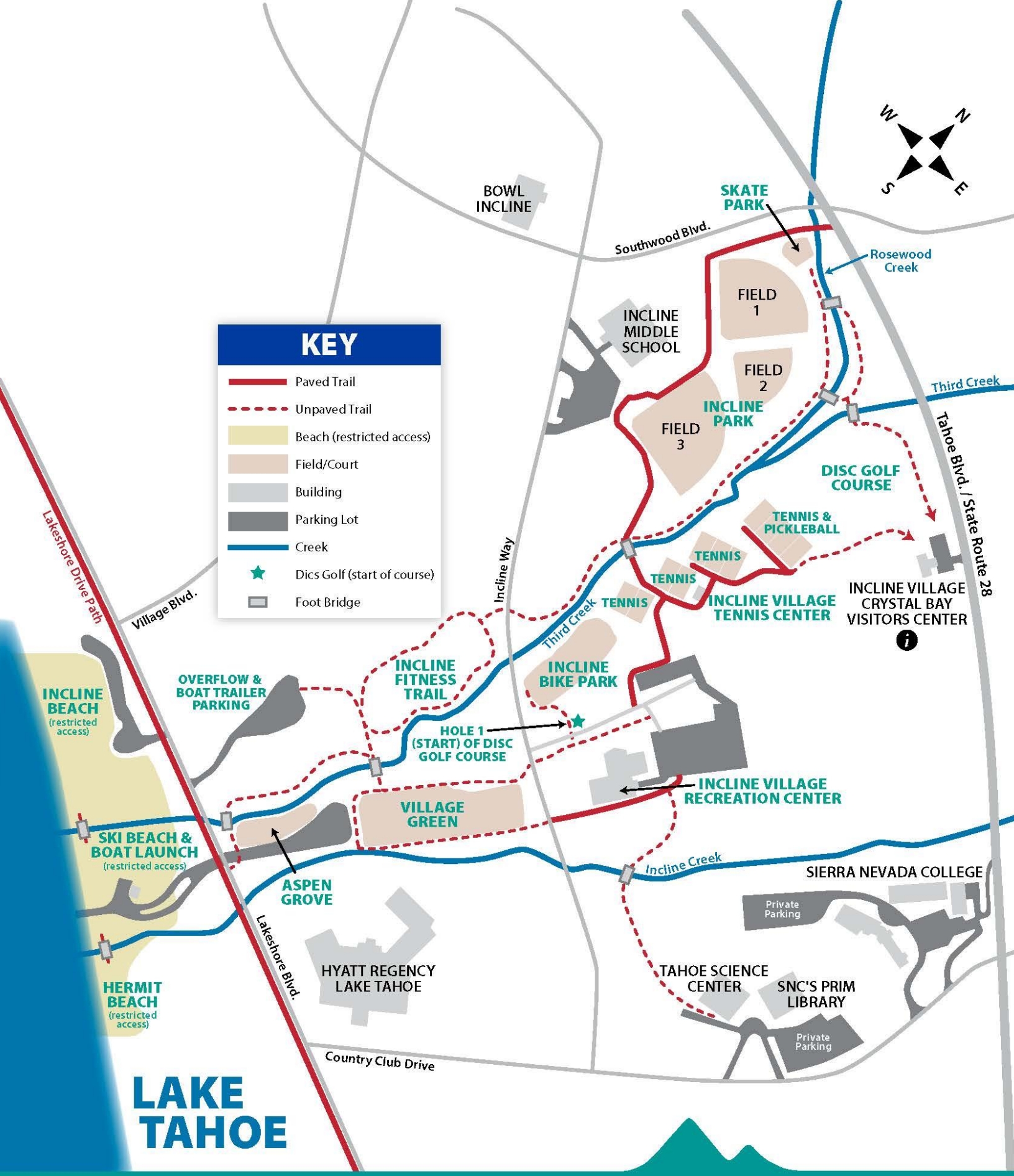
Championship Golf Course



Pisten Bully Groomer on Crystal Ridge, Photo by Ryland West, Courtesy of Diamond Peak Ski Resort

Access to IVGID Beaches (Ski Beach, Incline Beach, Hermit Beach and Burnt Cedar) is restricted to IVGID Picture Pass holders, their guests, and Punch Card holders with beach access.

LEARN MORE ABOUT IVGID PASSES AT INCLINERECREATION.COM



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SUSTAINABILITY ACTION PLAN

Management Approach to Sustainability

The community of Incline Village and Crystal Bay, Nevada has been committed to protecting local resources for decades. IVGID has developed a strategic plan to define long-term principles and the means to achieve them.

The IVGID Board of Trustees approved Resolution Number 1836 in 2015 to direct District staff and future policies to consider sustainability and the environment in District operations, policies, and planning (Appendix A). Long Range Principle Number One includes protecting the environment as a strategic goal for long term planning within the District (Appendix B).

The upper-Tyner water tank (Reservoir 8-B1) is located at 7,771 feet in elevation and has a maximum drinking water capacity of 350,000 gallons.

IVGID Public Works is a member of the American Water Works Association (AWWA) and the Water Environment Federation (WEF). Both organizations provide information, insight, and tools for public utilities use to improve their operations while communicating with other colleagues in the industry. AWWA and WEF both provide supporting tools for sustainability analysis at water and wastewater utilities. This report primarily relies on background information along with recommendations that are explained in further detail in the WEF publication, *Sustainability Reporting Statements for Wastewater Systems* and the AWWA publication, *The Green Utility: A Practical Guide to Sustainability* for sustainability recommendations at a public utility.

Sustainability is not a new subject for small organizations such as Public Works. The AWWA states that approximately 20% of utilities have adopted a sustainability vision or plan (Landis, 2015). This report focuses on services offered by the Public Works Department. However, data obtained and presented within this report reflects the footprint of the District as a whole.

Stakeholder Expectations

The IVGID Sustainability Program is designed to engage the organization regarding sustainability measures specific to local venues while upholding community values in environmental stewardship. The residents and visitors of Incline Village and Crystal Bay are the priority stakeholders within the District. Transparency is valuable to the ratepayers. Local and regional regulators expect Public Works to be compliant with all current and potential standards while becoming a model for the region.

Tahoe Regional Planning Agency (TRPA)

TRPA has established the Lake Tahoe Sustainable Communities Program. This program sets target thresholds for Master Plan areas within the Lake Tahoe Basin to consider while evaluating long-term planning options. It also provides a series of documents to help guide communities within the Lake Tahoe basin develop sustainability frameworks, visions, and action plans. Sustainability action planning allows the region to make significant progress in attaining sustainability related goals. Achievement of sustainability related goals helps to protect Lake Tahoe for future generations to enjoy. TRPA's Lake Tahoe Info is an online resource available to the public which tracks an extensive amount of local data through several portals such as the Sustainability Dashboard.

Sustainability Dashboard Indicators

Community

- Healthy Lifestyle
- Transportation
- Housing
- Education

Economy

- Income
- Employment
- Business Environment

Environment

- Water Quality
- Forest Health and Fire Hazard
- Greenhouse Gas Emissions
- Aquatic Invasive Species

Visit www.laketahoeinfo.org for more information.

IVGID Sustainability Framework

Organizational efforts give staff the necessary tools to achieve sustainability related goals. Three phases divide this framework to facilitate the development and implementation of sustainability initiatives and products. Detailed descriptions of each phase and objectives for those phases are described below.

Sustainability Framework Goals

- Increase staff, resident, and visitor participation and awareness in sustainable activities, energy efficiency, waste reduction, and recycling activities.
- Review and upgrade District policies and practices to encourage or require waste reduction, recycling and environmentally preferable purchasing.
- Serve as a model for the region to influence waste prevention, recycling, and procurement efforts among other public agencies, businesses, contractors, residents, and visitors.

Sustainability Framework Phases

Phase 1

This phase has been completed. The purpose of phase 1 was to create a managing body, with strong purpose and internal support as well as defined roles and operations. The result of phase 1 are the initiatives enumerated below in addition to the sustainability framework. Furthermore, administrative capacity and support is continually allocated as progress is made.

- ✓ **Resources and Environment – Long Range Principle of the District's Strategic Plan**

IVGID revised its Long-Range Principle on resources and the environment to include stronger language on the practices of environmental sustainability with support allocated for defensible space operations, fire suppression enhancement, watershed sanitary surveys, and source water protection. The Strategic Plan provides direction and a planned pursuit of the mission, vision, values, long-range principles, objectives, and actions of the District. The Strategic Plan is approved by the Board of Trustees. Up to date and archival strategic plans are located at the following web address: https://www.yourtahoeplace.com/ivgid/resources/district-strategic-plan

- ✓ **Environmental Sustainability Resolution - Resolution #1836**

Resolution number 1836 introduces the subject of environmental sustainability to the community and Board of Trustees. This resolution was passed unanimously by the IVGID Board of Trustees on April 29, 2015. Find this resolution in Appendix A of this document.

Phase 2

The Public Works Annual Sustainability Report helps to complete phase 2 as an internal assessment of sustainability measurements within the department to create an initial benchmark of data to refer to and build upon in long-term strategies. Phase 2 is research oriented while it establishes a sustainability management, tracking, and reporting system. This phase recognizes and celebrates all of the progress made by the District so far.

Timeline of Sustainability Progress

- ✓ **IVGID Public Works Annual Sustainability Reports (2016, 2017, 2018, 2019, 2020)**
- ✓ **Diamond Peak Ski Resort Initial Benchmark Assessment (2015) and Certification (2018) from the Sustainable Tourism Operator's Kit for Evaluation, *AKA:* STOKE-Certified**
- ✓ **Championship Golf Audubon Cooperative Sanctuary Certification (2010, 2013, 2016, 2019)**
- ✓ **IVGID Parks and Recreation Commitment to Arbor Day Foundation via Tree City, USA**

Phase 3

Phase 3 incorporates the build out of products and supporting tools. Implementation of this phase is currently underway while previous phases are continually supported.

SUSTAINABILITY ACTION PLAN

- Promote sustainable living initiatives with internal and external customers.
- Request an Energy Efficiency Audit from NV Energy and implement recommendations.
- Take advantage of incentives offered by NV Energy for efficiency upgrades, lighting retrofits, electric vehicle chargers, battery back-up generators, and solar energy where applicable.
- Consider purchasing renewable electricity and renewable diesel fuel to reduce emissions.
- Participate as the facilitator for a green business program in Incline Village and Crystal Bay, NV.
- Continue tracking relevant data to assist development of a long-term sustainability strategy and waste reduction policy *(see descriptions below).*

Long-Term Sustainability Strategy

The purpose of this initiative is to set in place action plans that achieve positive results and recognition for sustainability efforts District-wide. Sustainability management templates and associated certifications for large scale operations are applicable to this service area. A variety of third parties can examine a wide scope of performance that include quality of and access to basic services, transportation, housing, emergency response, healthcare, education, and recreation in addition to determining infrastructure reliability and reporting community-wide emissions. Furthermore, target setting and implementation of projects to achieve objectives will be allocated as community support, staff availability, internal leadership, and funding become available.

Sustainable Procurement and Waste Reduction Policy

The purpose of this initiative is to support and facilitate the purchase of products and services that minimize the harmful effects to the environment from its production, delivery, use, and disposition. Therefore, it will be the District's procurement strategy to purchase and use environmentally preferable products whenever they perform satisfactorily and can be acquired at similar total value (cost and quality) within the applicable public purchasing statutes. This policy may include funding to install assets that make it easy to avoid single-use consumables. The IVGID Board of Trustees will approve the final policy, directing staff to implement it throughout the District's operations.

INDUSTRY BENCHMARKS

Introduction

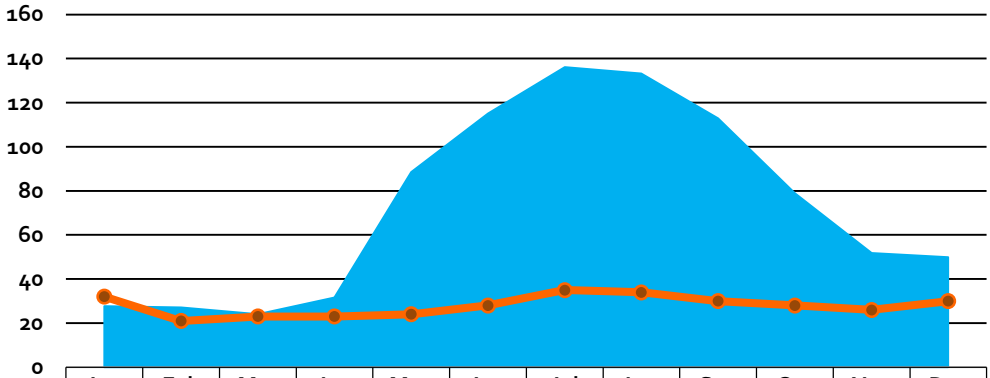
The following parameters are considered "standard" in the water and wastewater treatment industries. These measurements aim to capture basic performance of a utility and can be used in comparison to other utilities. Bio-Solids are typically measured in metric tons. Wastewater or effluent flows are typically measured in million gallons. Water flow is typically measured in acre-feet but have been converted to million gallons for the purposes of this report. Compliance, work and customer service orders as well as solid waste enforcement actions are simply tallied as requests are made.

2020 Public Works Service Area Water and Wastewater Flow (Million Gallons)

Annual Totals

Water Flow: *877 Million Gallons*

Wastewater Flow: *334 Million Gallons*



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Water Flow	28	27	24	32	88	115	136	133	113	79	52	50
Wastewater Flow	32	21	23	23	24	28	35	34	30	28	26	30

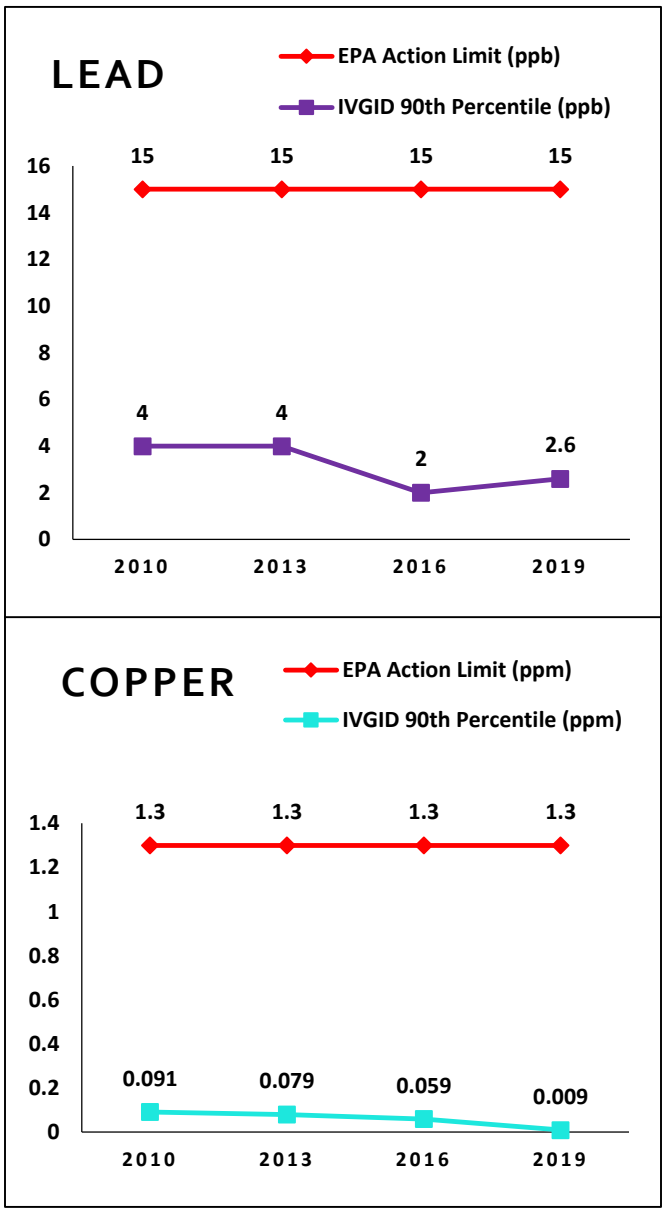
Drink Tahoe Tap ®

Lake Tahoe is a pristine waterbody with unique characteristics that provide the source for exceptional tap water. The United States Environmental Protection Agency considers Lake Tahoe to be an "Outstanding Natural Resource Water, Tier 3" giving the lake the same protective designation as Crater Lake in Oregon and Mono Lake in California. This designation allows the Department of Public Works to operate under a "filtration-exemption status." Five other water purveyors from around the Tahoe Basin whose source of water is Lake Tahoe are also filtration-exempt. The Tahoe Water Suppliers Association (TWSA) helps these agencies comply with state and federal standards while protecting the local quality of water. IVGID is the home agency for the TWSA.

Consumer Confidence of Drinking Water

Public Works uses the Lake Tahoe Intake at the Burnt Cedar Water Disinfection Plant as its source of water. The type of water source is surface water as opposed to groundwater sources. The water provided is safe and high quality. Tap water provided by Public Works exceeds all national standards. A Consumer Confidence Report (CCR) is issued annually by Public Works to comply with all laws and educate the public about the drinking water supply. It is required to include an explanation of any violations for each calendar year. Please see the 2020 CCR located at www.yourtahoeplace.com/public-works for detailed information.

Parameter	IVGID 2020 Result	EPA Maximum Contaminant Level / Action Level
Total Dissolved Solids	79	1,000 (mg/l)
Microbial Contaminants	0	n/a
pH	8.33	8.5



Lead and Copper

Lead and Copper levels are of high concern to a utility and its customers because of adverse health effects that could occur if there are high concentrations of these heavy metals in drinking water. Typical sources of these metals come from corrosion of household plumbing systems, erosion of natural deposits, and leaching from wood preservatives. The graphs below display the IVGID 90th percentile results for Lead and Copper contamination compared to U.S. Environmental Protection Agency "Action Limits" or the concentration of the contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow. The Public Works Team is pleased to report that the drinking water quality is well below the EPA's Maximum Contaminant Levels and Action Limits.

Water Flow (Million Gallons)

Water is treated at the Burnt Cedar Water Disinfection Plant located at 665 Lakeshore Boulevard. It is pumped through the Incline Village and Crystal Bay service area via pipeline and is stored in reservoirs that have been strategically placed to allow for a gravity-based pressurization system. Water flows are usually reported in Acre-Feet, but the figures have been converted to million gallons for comparison with effluent flows which are typically reported in Million Gallons. Water consumption reaches peak demand during the summer months. The Public Works median user consumes 6,000 gallons per month or 72,000 gallons per year.

Wastewater Treatment Process

Treated Wastewater Flows (Million Gallons)

Public Works treats wastewater and ultimately releases it as treated secondary effluent in Carson Valley, Nevada. The Wetlands Enhancement Facility takes most of this flow especially in the winter, but Clear Creek Golf Course and Carson Valley Ranch also use treated effluent in their operations during the summer season. The chart at the bottom of the next page displays the distribution of effluent as it is split up to the previously mentioned locations. Wastewater flow analysis enables Public Works to examine system efficiency compared to other sewage collection systems of similar size or production rate. Public Works median users flush 3,000 gallons per month or 36,000 gallons per year.

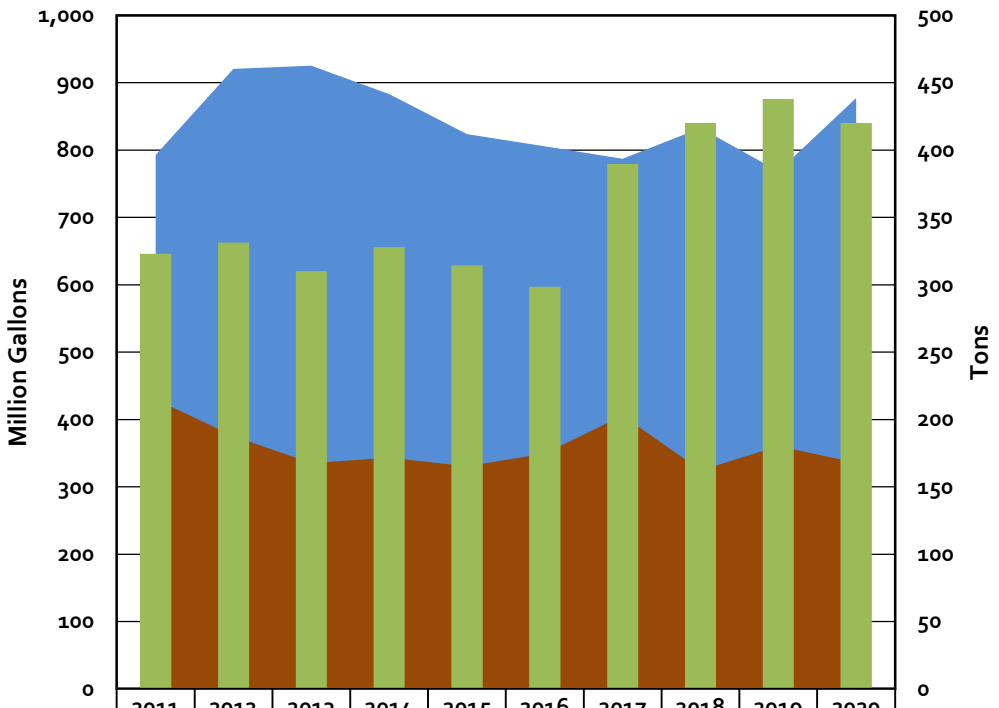
Bio-solids (Tons)

Bio-solids are nutrient rich organic materials produced from wastewater treatment facilities like the one that Public Works operates in Incline Village. Bio-solids can be recycled and applied as fertilizer to improve and maintain productive soils and stimulate plant growth. Effective bio-solids management options help ensure that useful materials are recycled on land at Bently Ranch in Carson Valley, NV and harmful materials are not released to local water bodies. On average, 110 pounds of bio-solids per household were generated, dewatered, and transported to the Carson Valley in 2020.

Distribution of Bio-Solids at Bently Ranch in Carson Valley, Nevada.

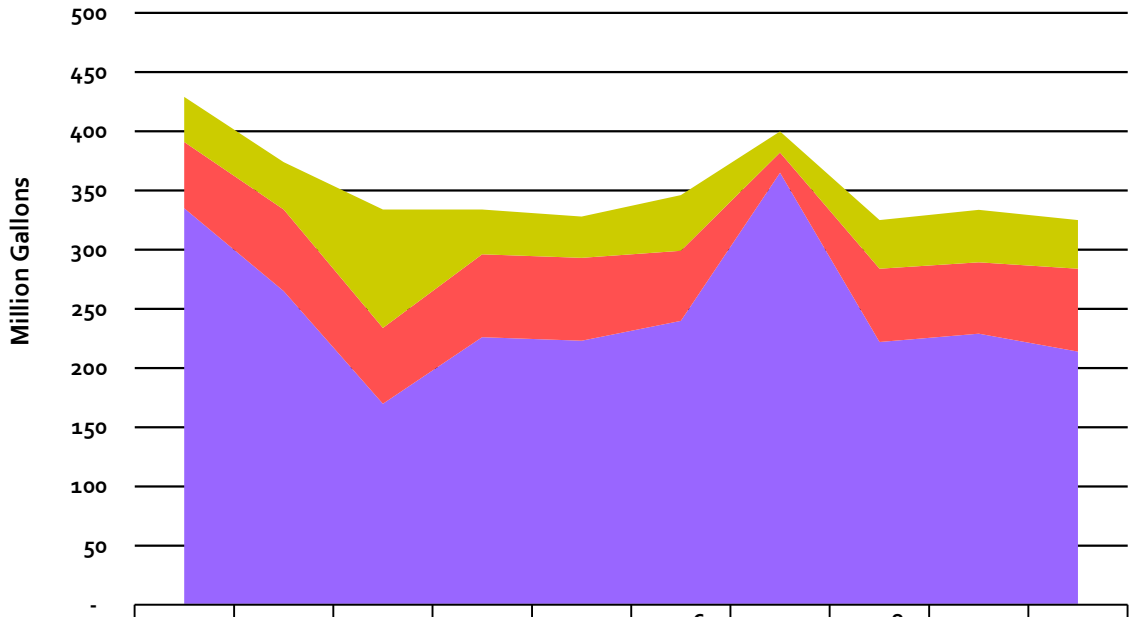
Public Works Industry Benchmarks

Water Flows (Million Gallons), Wastewater Flows (Million Gallons), and Biosolids (Tons)



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Water Flow (Million Gallons)	793	920	925	883	824	806	787	833	769	877
Wastewater Flow (Million Gallons)	429	374	334	342	329	348	404	323	359	334
Biosolids (Tons)	323	331	310	328	315	299	390	420	438	420

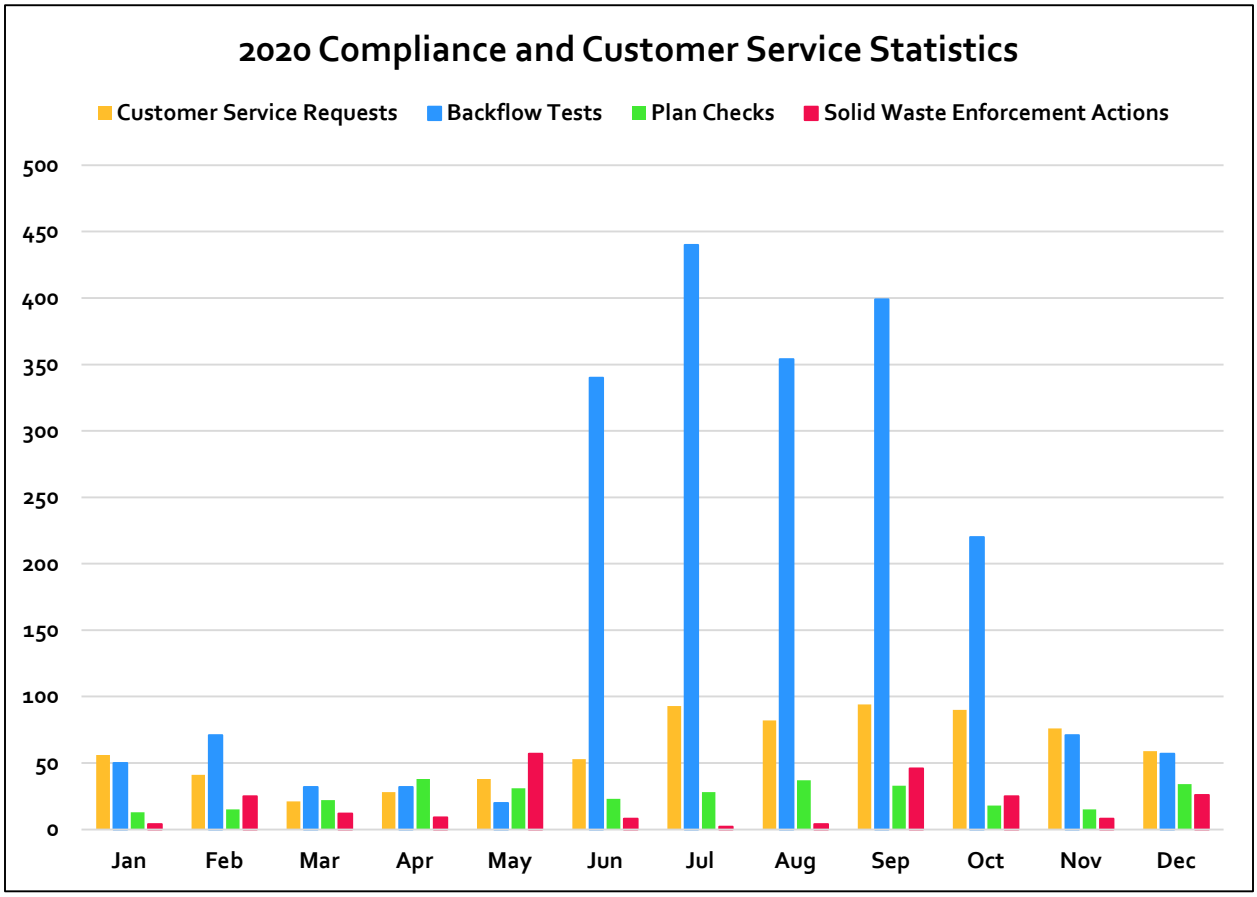
Treated Wastewater Flow Splits (Million Gallons)



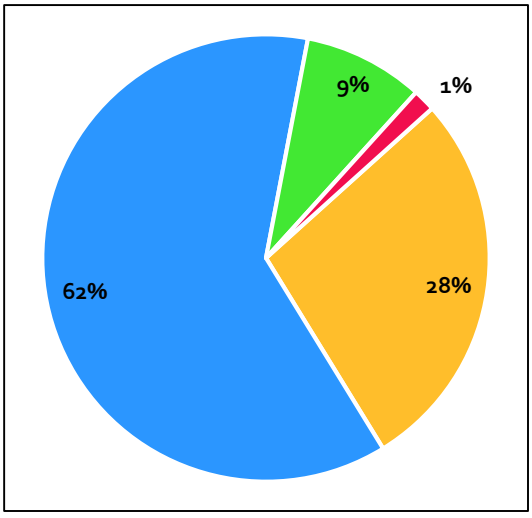
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Carson Valley Ranch	38	40	100	38	35	47	18	41	44	41
Clear Creek Golf Course	56	69	64	70	70	59	17	62	60	70
IVGID Wetlands	335	265	170	226	223	240	365	222	229	214

Customer Service and Compliance Duties

Public Works service and compliance responsibilities range from answering customer inquiries to ensuring water is safe to drink by inspecting backflow prevention devices. Customer service requests show the annual demand for Public Works services, which average 1,250 requests per year. The number of plans reviewed by Public Works is an indicator of how active the construction industry is in this service area. Solid Waste Enforcement Actions are tallied when reliable reports are submitted.



Public Works Crew - Circa 1990



Backflow Prevention Device Inspections

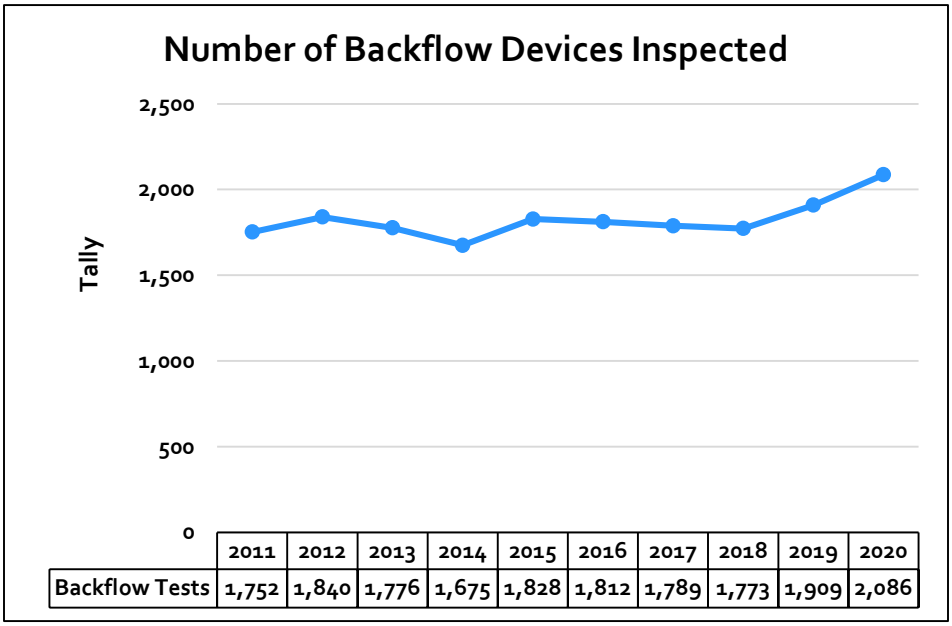
One other way to assure consumer confidence is to check that backflow devices are working properly within residents' homes that contain a boiler and/or irrigation system. Backflow devices and annual inspections are required by the Nevada State Health Department.

Backflow Prevention Device - Photo Courtesy of Watts (www.watts.com)

These devices provide a mechanical separation between potable and non-potable water, to prevent a backwashing of possibly contaminated water back into the drinking water system. This can happen if, for example, there is a sudden drop in water pressure and water sitting in a garden irrigation system gets sucked back into the home's water supply. A backflow device would prevent this from happening.

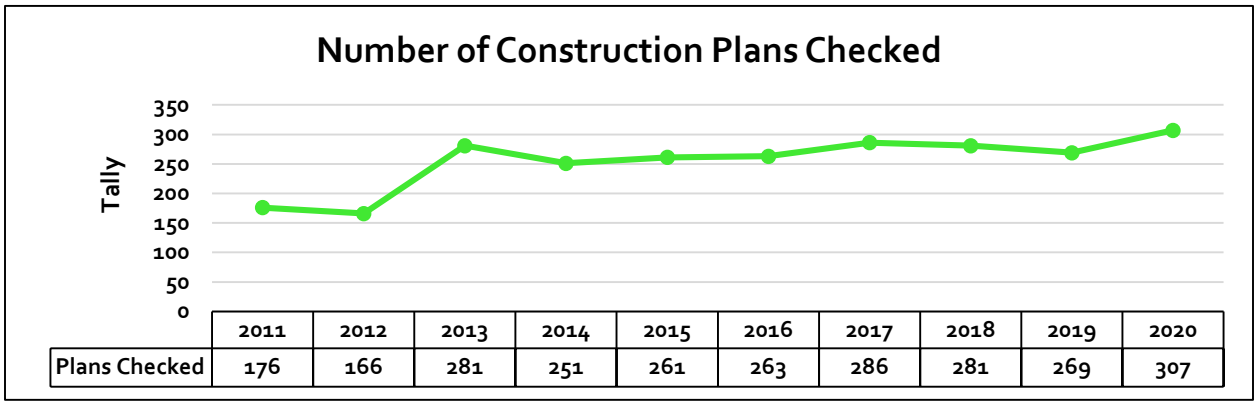
Devices that are tested and pass are calculated in statistics that are analyzed later in this section alongside other compliance and customer service figures.

IVGID's backflow inspection program is a model used statewide as an example of consumer protection.

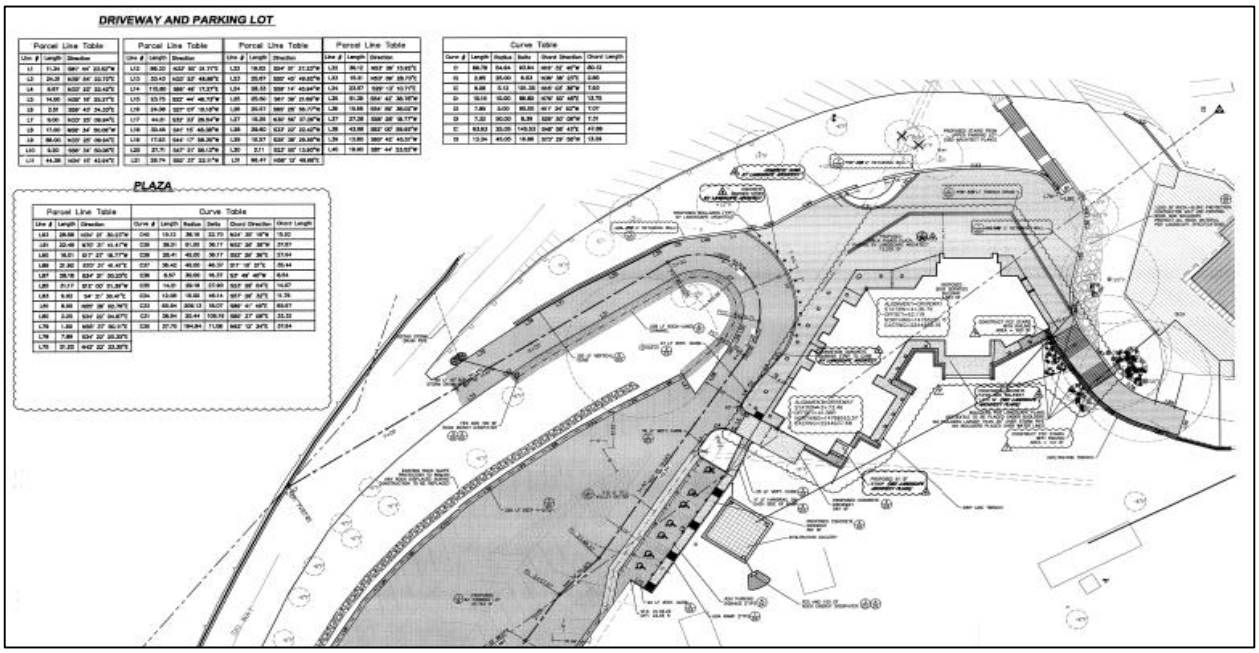


	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Backflow Tests	1,752	1,840	1,776	1,675	1,828	1,812	1,789	1,773	1,909	2,086

Construction Plan Checks

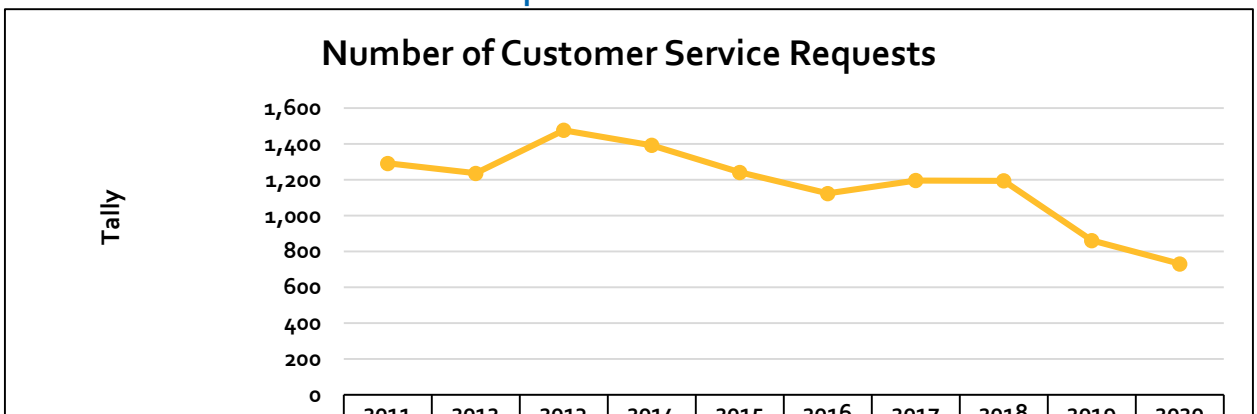


	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Plans Checked	176	166	281	251	261	263	286	281	269	307



Construction Plans such as the Diamond Peak Skier Services Building (Shown Above) Are Inspected by Public Works Staff for Compliance with Water, Sewer and Solid Waste Building Codes

Public Works Customer Service Requests



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Customer Service Requests	1,292	1,237	1,477	1,393	1,242	1,124	1,197	1,195	862	731

NATURAL RESOURCE MANAGEMENT

Introduction

Natural resource consumption is important to track because this information describes the overall impact that an individual or organization has on Earth's systems. Spreadsheets are used to track data related to consumption and cost of resource management. Graphical displays within this report help paint the picture of Public Works' impact. The data analyzed in this annual report refer only to the resource consumption made by Public Works as an organization itself and does not include information from other IVGID venues nor does it include data related to resource consumption of residential, commercial or community resource consumption and cost. The Environmental Protection Agency offers the "Energy Star® Portfolio Manager®" for anyone to use for free to help document their own impact on the Earth. Please visit portfoliomanager.energystar.gov for more information.

Environmental Considerations

Sustainability metrics within Public Works divisions typically compare standard indicators such as effluent flows and bio-solids generation with resource use such as electricity consumption. These indicators allow Public Works to compare our sustainability performance to similar sized utilities. This report is not meant to be a complete inventory of those sustainability indicators, but future reports will at least measure fleet fuel consumption and certain employee statistics as more information is gathered, organized, and interpreted.

A major sustainability indicator that only begins to scratch the surface in this report are Greenhouse Gas (GHG) Emissions caused by the consumption of natural resources. Greenhouse Gas Emissions include airborne chemicals such as Carbon Dioxide that contribute to global rise in temperatures and changes in climate over time. Future reports will track this information in more detail as emissions are inventoried.

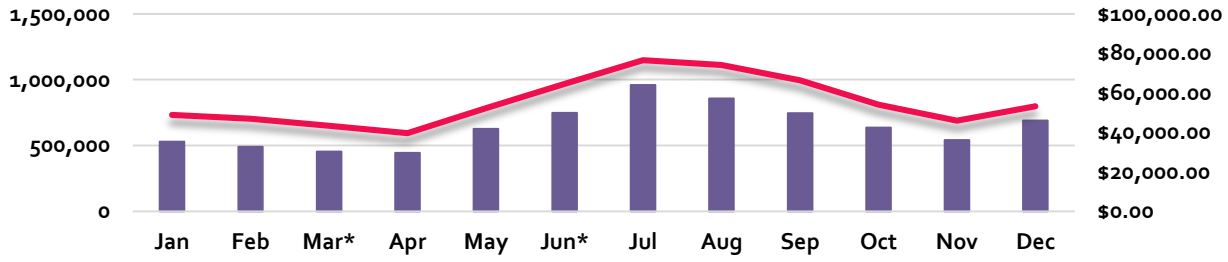
Finally, all environmental considerations will be under evaluation in comparison to standards set by the U.S. Environmental Protection Agency, Nevada Department of Environmental Protection, Washoe County, and the Tahoe Regional Planning Agency in addition to any other applicable industry standards. IVGID Public Works' performance on these indicators will help determine goals for reducing emissions in future operations and promoting sustainability initiatives.

Economic Considerations

Economic considerations for Public Works include expenses related to resource use.

Detailed financial information for Public Works and IVGID as a whole can be found online at: https://www.yourtahoeplace.com/ivgid/financial-transparency/budget

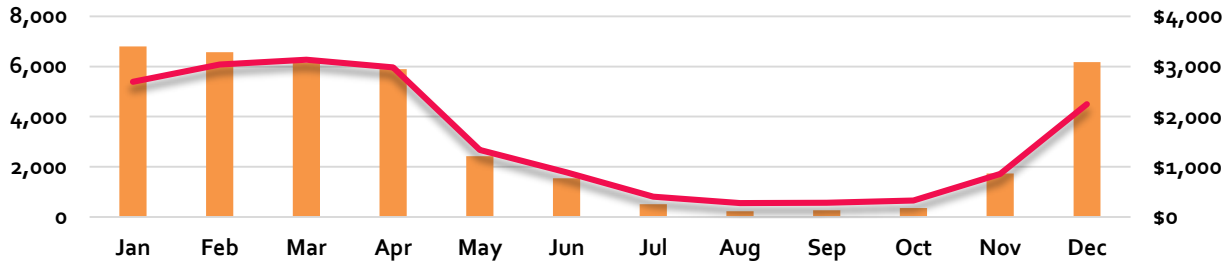
Electricity Consumption Summary



Totals: 7,839,249 kWh / $674,830.49

Consumption (kWh) Cost ($)

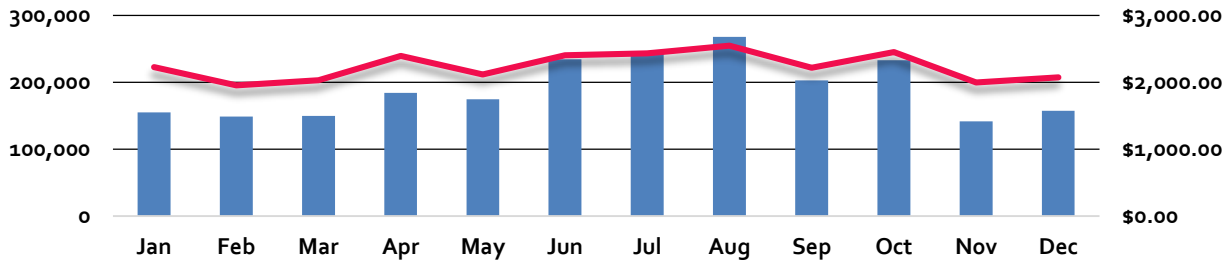
Natural Gas Consumption Summary



Totals: 41,617 therms / $41,172.36

Consumption (therms) Cost ($)

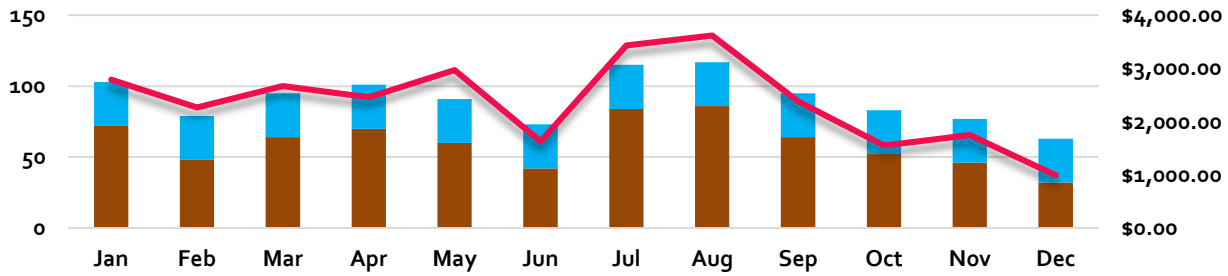
Water Consumption Summary



Totals: 2,290,952 Gallons / $26,835.76

Consumption (gallons) Cost

Waste and Materials Summary



Totals: 1,092 Cubic Yards / $28,494.03

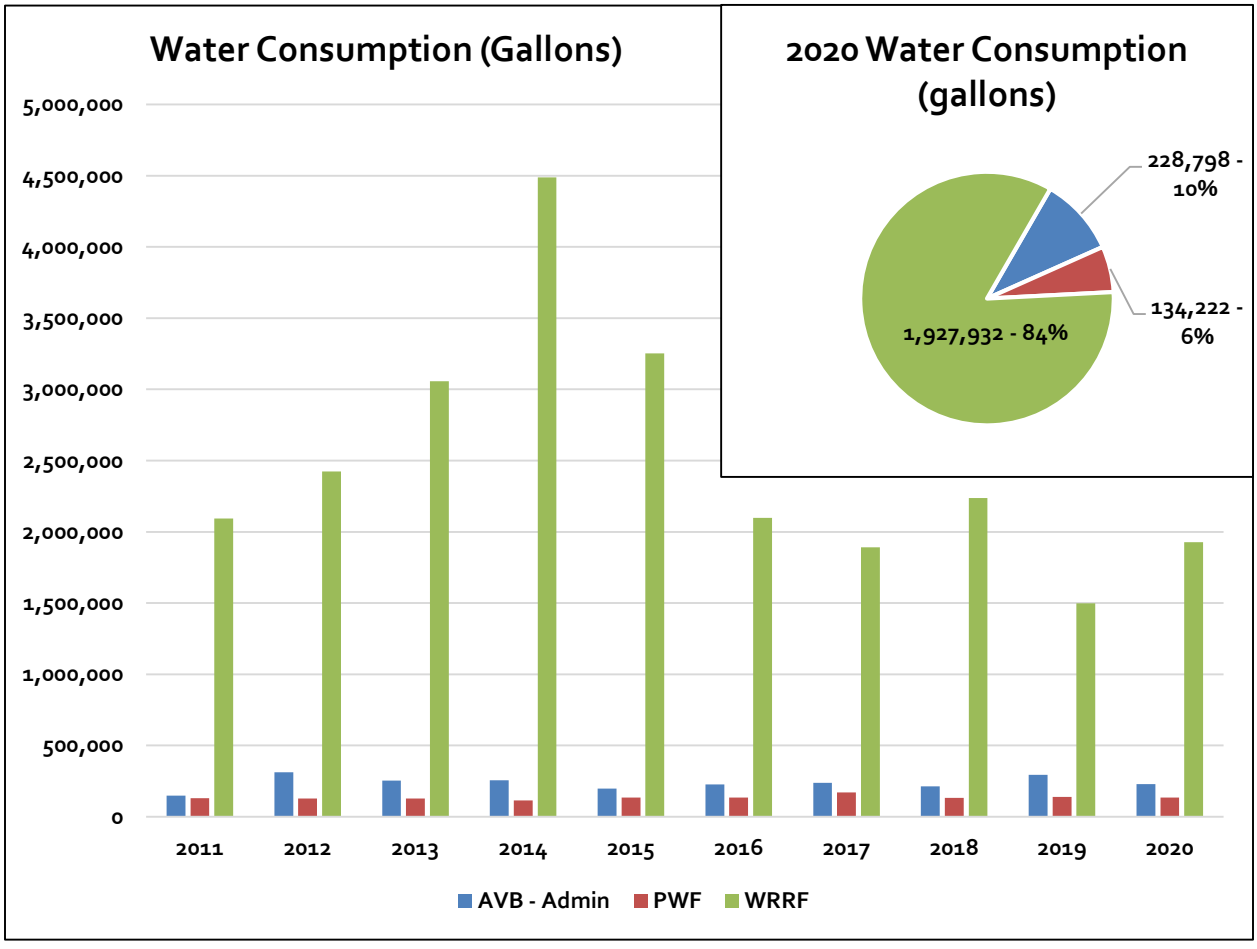
Landfill Volume Recycling Volume Cost ($)

Water

The source of fresh water is an extremely valuable resource. Used to supply public drinking water, Source Water is untreated water from streams, rivers, lakes or underground aquifers. The source of drinking water for many Tahoe Basin communities, including Incline Village and Crystal Bay, is Lake Tahoe. The water is pumped out the lake via intake pipeline, managed in the Burnt Cedar Water Disinfection Plant and delivered to customers.

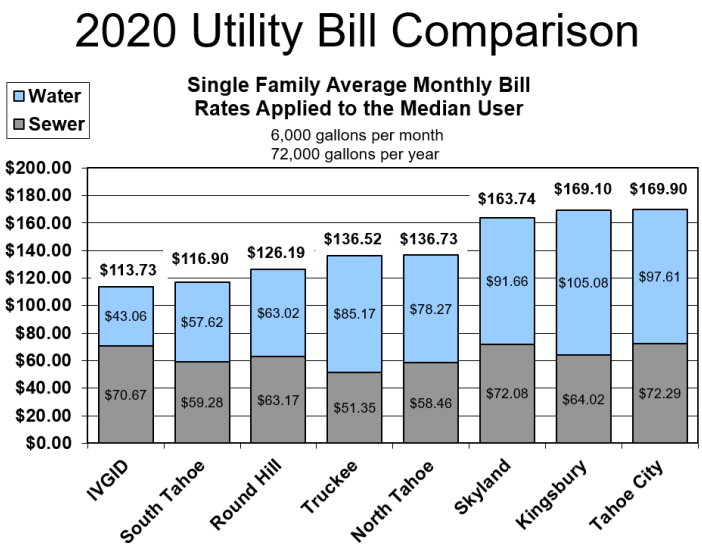
Water Consumption

Public Works delivers treated water to its facilities in addition to all other IVGID venues. Water consumption is metered per regulatory code. Public Works has nine water meters at its properties including the IVGID Administrative Building (AVB-Admin), Public Works Facility (PWF), Water Resources Recovery Facility (WRRF) as well as various pump stations throughout Incline Village and Crystal Bay. This data reflects all water use for Public Works operations and does not include any data from irrigation systems or other IVGID venues such as Diamond Peak Ski Resort, Incline Village Golf facilities or Parks and Recreation operations. Various improvements to infrastructure at district facilities has allowed regular operations to continue while increasing water-use efficiency. Capital improvement projects on the premises at the WRRF caused a spike in water use from 2013 to 2015. Average water use for the WRRF is typically between 1.5 to 2 million gallons of consumption per year.

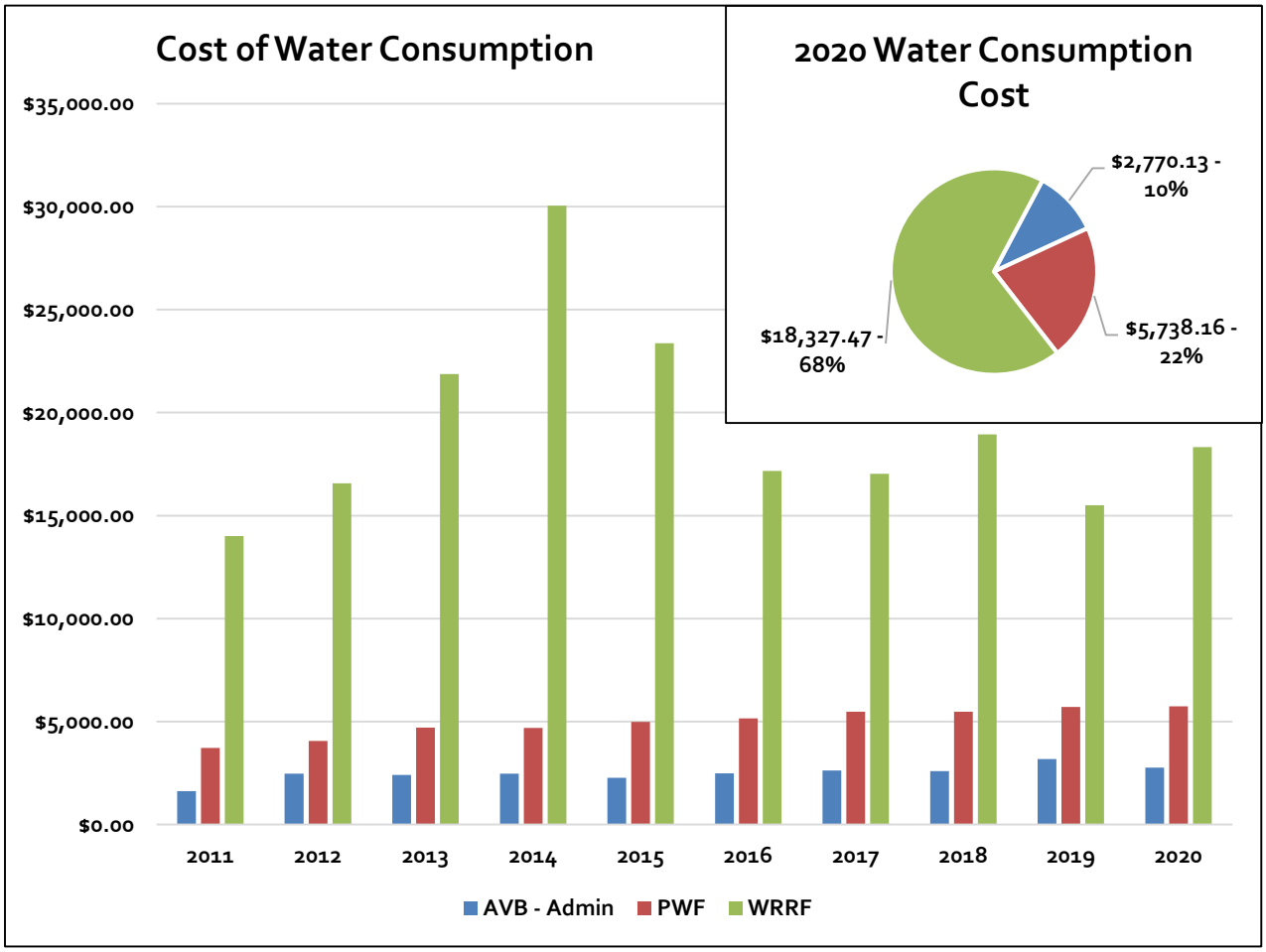


Water Cost

Public Works bills all water meters including those used by IVGID operations. The chart below represents the total water consumption cost for all nine water meters that Public Works uses, but do not include water consumption cost for any irrigation systems, Diamond Peak Ski Resort, Incline Village Golf Facilities, or Parks and Recreation operations.



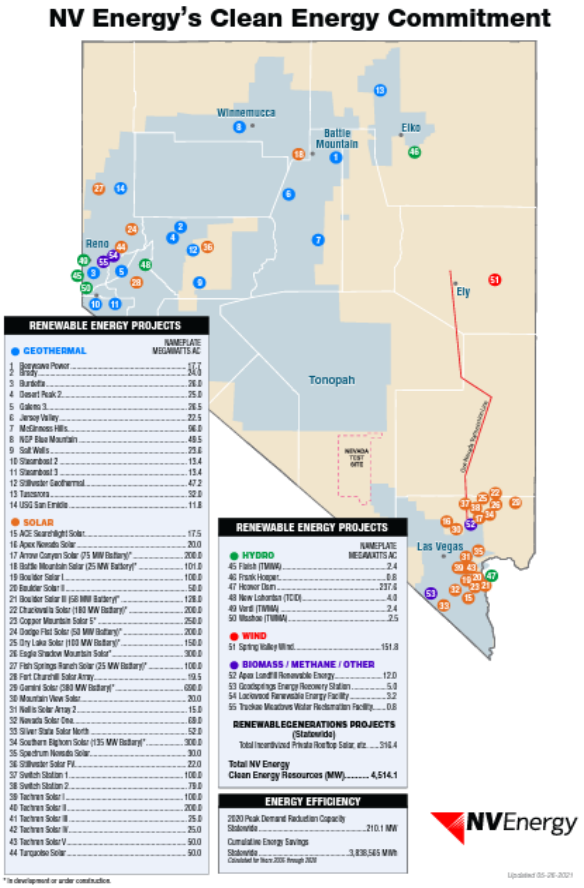
The 2020 utility bill comparison details the single-family average monthly bill rates as it is applied to the median District user. The cost of water consumption as displayed in the charts below depict the rate as it is seen by all water users on their monthly bill for any given property. This includes base charges, capital improvement costs, administration fees, and use for water and sewer services in addition to defensible space funding.

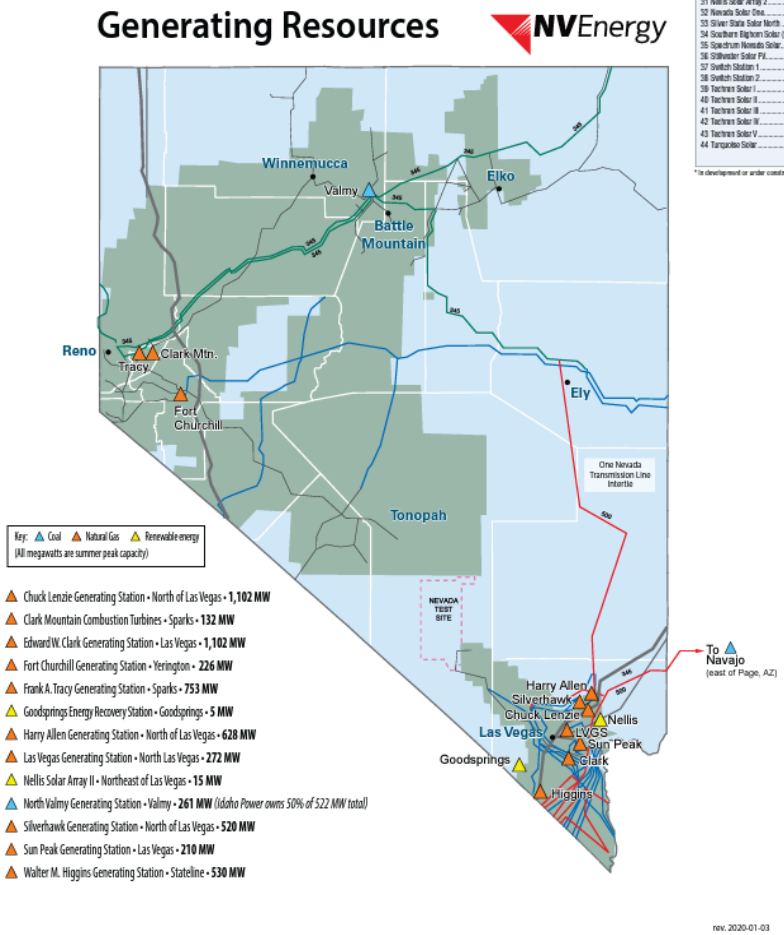


Electricity

NV Energy provides electricity to Incline Village and Crystal Bay. It is nearly impossible to track an electron once it is created because the electricity grid is one system. However, local transmission lines extend to the nearest regional sub-station in Carson City. NV Energy provides information regarding their generation station's and overall grid's portfolio in Northern Nevada, which is broken down by these maps. (nvenergy.com/about-nvenergy/our-company/power-supply).

Most of the electricity generated in Northern Nevada comes from natural gas generation stations and combustion turbines that can produce at least 1,000 megawatts of electricity each. North Valmy Generating Station in north central Nevada can produce 522 megawatts during summer peak capacity using coal. Geothermal hotspots provide the other most common sources of electricity in the state.



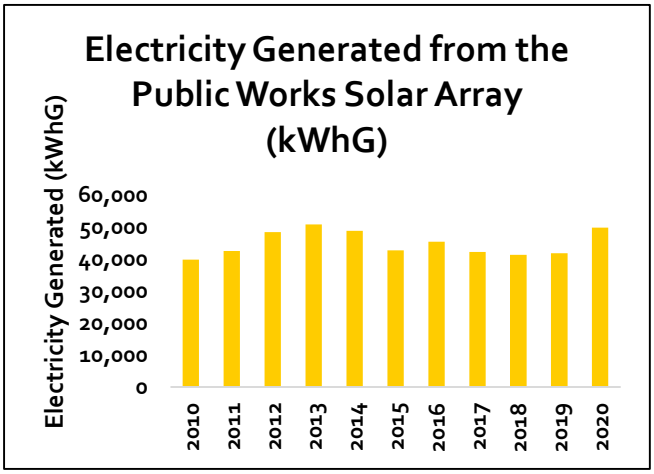


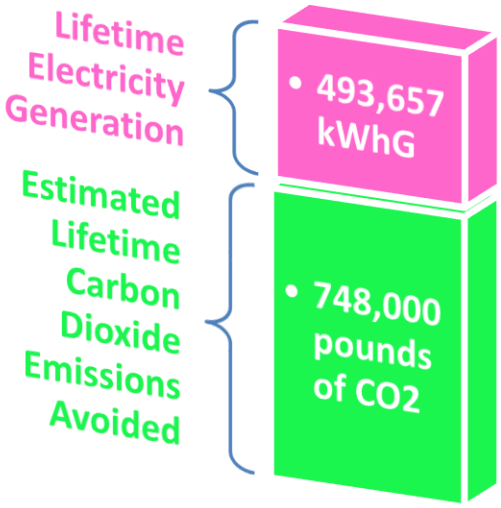
Additional solar power generation stations are being built in the State of Nevada. NV Energy's goal is to reduce the amount of greenhouse gas emissions currently being emitted by the electricty grid. Fossil Fuels encompass approximately two thirds of the electricity generation in Northern Nevada, leaving only a third of electricity generation to renewable energy projects. NV Energy offers incentives to promote renewable energy projects and installation of energy storage solutions for critical infrastructure.

Solar Array Electricity Generation

The installation of one hundred fifty solar-photovoltaic 205-watt panels on the roof of the Public Works Facility took place in January 2010. Public Works owns one of the largest solar arrays in Incline Village, NV including 2540 sq. ft. of solar panel surface. This electricity generation provides approximately 22% of the power need for the building's daytime operations. This system functions without battery storage. It is a grid-tied system so any excess energy produced is returned to the main grid via reverse metering. The approximate cost of this project was $306,000 with $171,000 funded by District capital and $135,000 funded by NV Energy's Solar Generations Program Rebate. The estimated lifetime return on direct investment is approximately $30,000 or at least 10% return for total value and approximately 20% return for District capital fund value. Additional project benefits include an estimated 34 metric tons or 68,000 pounds of Carbon Dioxide emissions that are avoided annually. Over 700,000 pounds of Carbon Dioxide emissions into our atmosphere have been avoided since this project was installed.

Year	kWh Generated	Percent of PWF Total kWh Consumption
2010	39,844	19%
2011	42,504	23%
2012	48,454	24%
2013	50,803	25%
2014	48,814	25%
2015	42,733	20%
2016	45,398	21%
2017	42,173	19%
2018	41,278	19%
2019	42,585	19%
2020	49,821	24%
Average:	**44,878**	**22%**





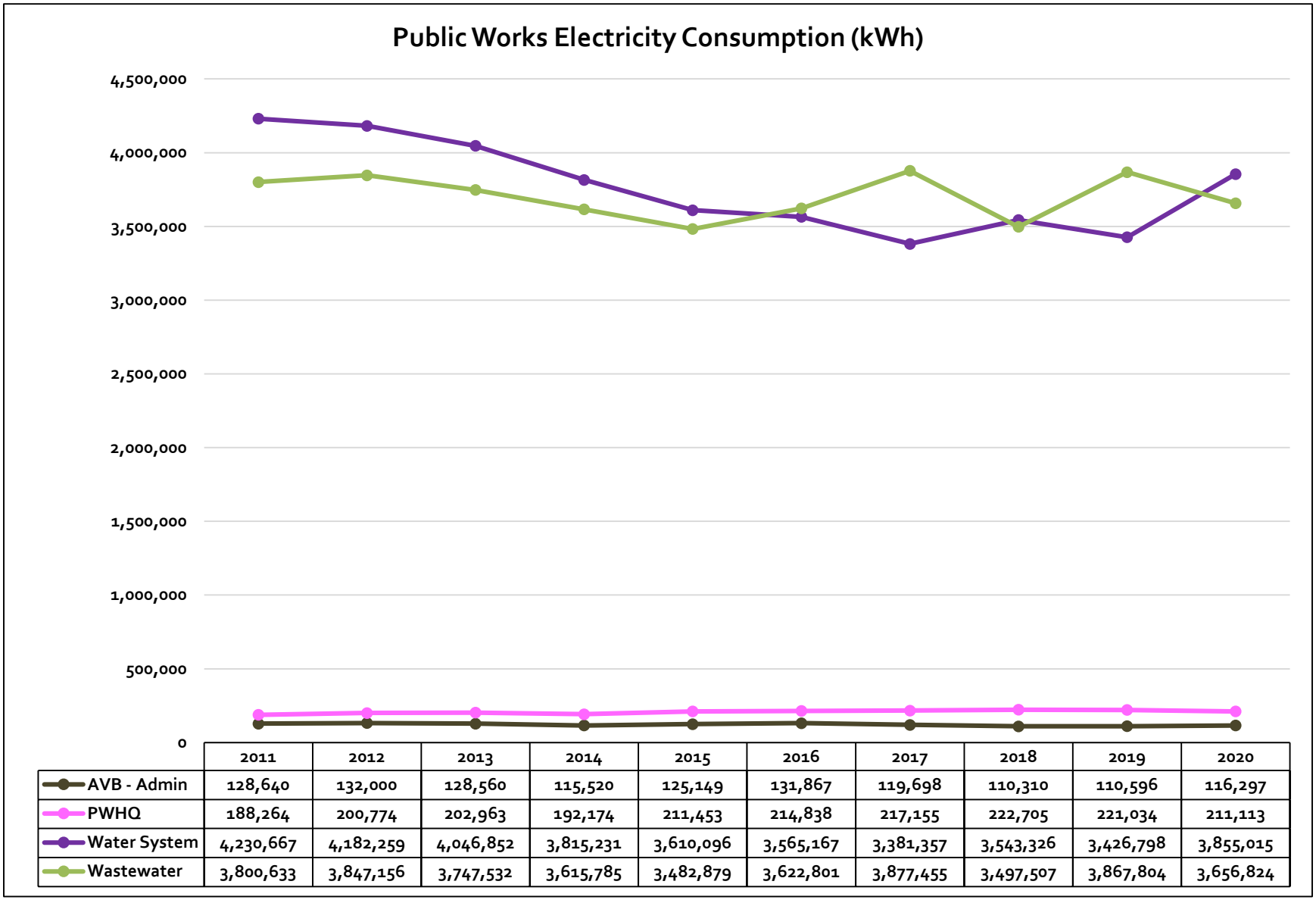
Electricity Consumption

Incline Village and Crystal Bay receives electricity service from NV Energy whose power sources in Northern Nevada include a mix of coal, natural gas, and renewable electricity generation stations. IVGID does not currently participate in a Renewable Energy Credit (REC) program or any other similar programs. Rooftop solar in the Lake Tahoe Basin can be difficult to achieve with local regulations, but the PWF has a small solar array installed on its roof.

Electricity Consumption	kWh	Year to Year Difference (kWh)	Year to Year Difference (Percentage)	Difference Compared to 2010 (kWh)	Difference Compared to 2010 (Percentage)
2010	8,353,977	n/a	n/a	n/a	n/a
2011	8,348,204	-5,773	-0.1%	n/a	n/a
2012	8,362,189	13,985	0.2%	8,212	0.1%
2013	8,125,907	-236,282	-2.8%	-228,070	-2.7%
2014	7,738,710	-387,197	-4.8%	-615,267	-7.4%
2015	7,429,577	-309,133	-4.0%	-924,400	-11.1%
2016	7,534,673	105,096	1.4%	-819,304	-9.8%
2017	7,595,665	60,992	0.8%	-758,312	-9.1%
2018	7,373,848	-221,817	-2.9%	-980,129	-11.7%
2019	7,626,232	252,384	3.4%	-727,745	-8.7%
2020	7,839,249	213,017	2.8%	-514,728	-6.2%
Average:	***7,848,021***	***-51,473***	***-0.6%***		

NV Energy collects the most accurate electricity data and readily available records go back to 2009. Overall electricity consumption is measured in kilo-watt-hours (kWh) and has shown a decreasing trend since then. New equipment upgrades and revised operational procedures may be contributing to this trend. Public Works electricity consumption was reduced by over 500,000 kWh in 2020 compared to 2010. On average, Public Works electricity consumption has decreased by approximately 51,000 kWh per year since 2010.

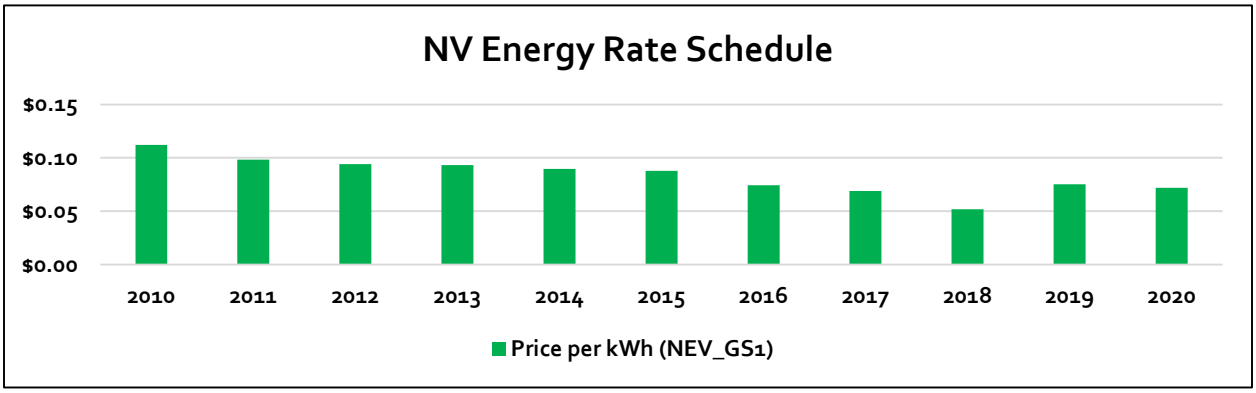
Public Works has 36 electrical meters including at water and wastewater pumps, the Burnt Cedar Water Disinfection Plant (BCWDP), Water Resource Recovery Facility (WRRF), Public Works Facility (PWF), and the IVGID Administrative Office – Anne Vorderbruggen Building (AVB – Admin). The "Other" category listed in the graph tables on the next page includes electricity consumption that is metered at various water reservoirs and at the Wetlands Enhancement Facility. These meters do not include electricity consumption for Diamond Peak Ski Resort, Incline Village Golf Facilities, or Parks and Recreation operations.



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
AVB - Admin	128,640	132,000	128,560	115,520	125,149	131,867	119,698	110,310	110,596	116,297
PWHQ	188,264	200,774	202,963	192,174	211,453	214,838	217,155	222,705	221,034	211,113
Water System	4,230,667	4,182,259	4,046,852	3,815,231	3,610,096	3,565,167	3,381,357	3,543,326	3,426,798	3,855,015
Wastewater	3,800,633	3,847,156	3,747,532	3,615,785	3,482,879	3,622,801	3,877,455	3,497,507	3,867,804	3,656,824

Electricity Cost

Improvements to local energy infrastructure under NV Energy's management has affected electricity rates. While electricity consumption is going down for Public Works operations so are electricity rates. The table depicting the NV Energy Rate Schedule is an example of electrical rate decrease for most meters associated with Public Works operations. A decrease in electricity rates allows the District to be more cost-efficient per kilo-Watt-hour (kWh) in performing regular duties across all venues.



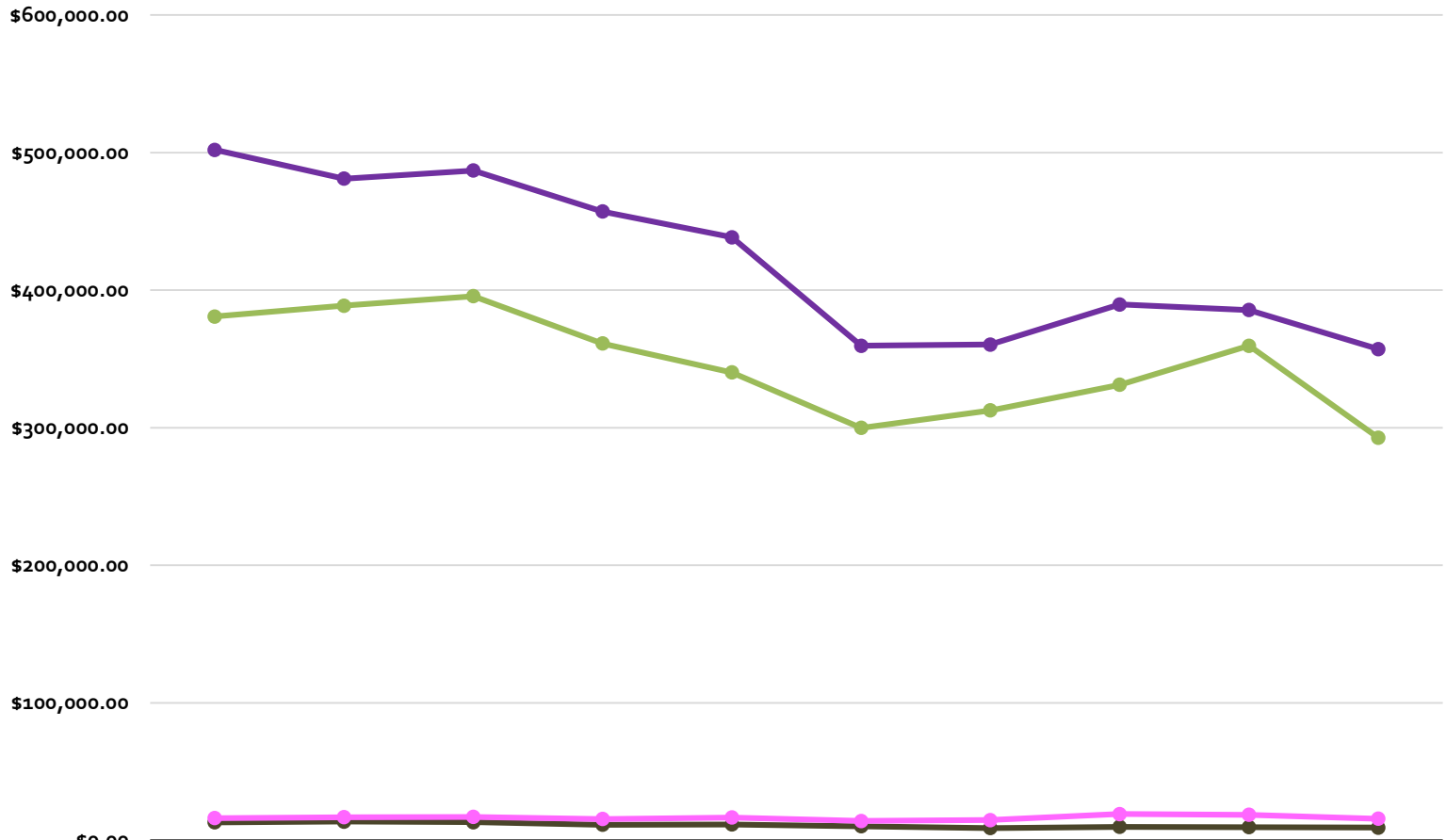
NEV_GS1 = General Service - Commercial (Less than 10,000 kWh/month)

The cost to NV Energy in 2020 was almost $300,000 less expensive than it was in 2010. Electricity consumption at Public Works has decreased by approximately 6% since 2010 while the electricity cost has decreased by approximately 30% over the same time. On average, Public Works electricity cost has been reduced by nearly $29,000 per year since 2010.

Electricity Cost	American Dollars	Year to Year Difference	Year to Year Difference (Percentage)	Difference Compared to 2010	Difference Compared to 2010 (Percentage)
2010	$965,520.75	n/a	n/a	n/a	n/a
2011	$911,903.00	-$53,617.75	-5.6%	n/a	n/a
2012	$900,139.19	-$11,763.81	-1.3%	-$65,381.56	-6.8%
2013	$912,722.86	$12,583.67	1.4%	-$52,797.89	-5.5%
2014	$845,254.23	-$67,468.63	-7.4%	-$120,266.52	-12.5%
2015	$806,778.17	-$38,476.06	-4.6%	-$158,742.58	-16.4%
2016	$683,814.43	-$122,963.74	-15.2%	-$281,706.32	-29.2%
2017	$696,830.02	$13,015.59	1.9%	-$268,690.73	-27.8%
2018	$749,714.40	$52,884.38	7.6%	-$215,806.35	-22.4%
2019	$773,166.28	$23,451.89	3.1%	-$192,354.47	-19.92%
2020	$674,830.49	-$98,335.79	-12.7%	-$290,690.26	-30.11%
Average:	***$810,970.35***	***-$29,069.03***	***-3.3%***		

The graph and table on the next page display the electricity cost to Public Works over the same period as measured by the electricity consumption data on the previous page.

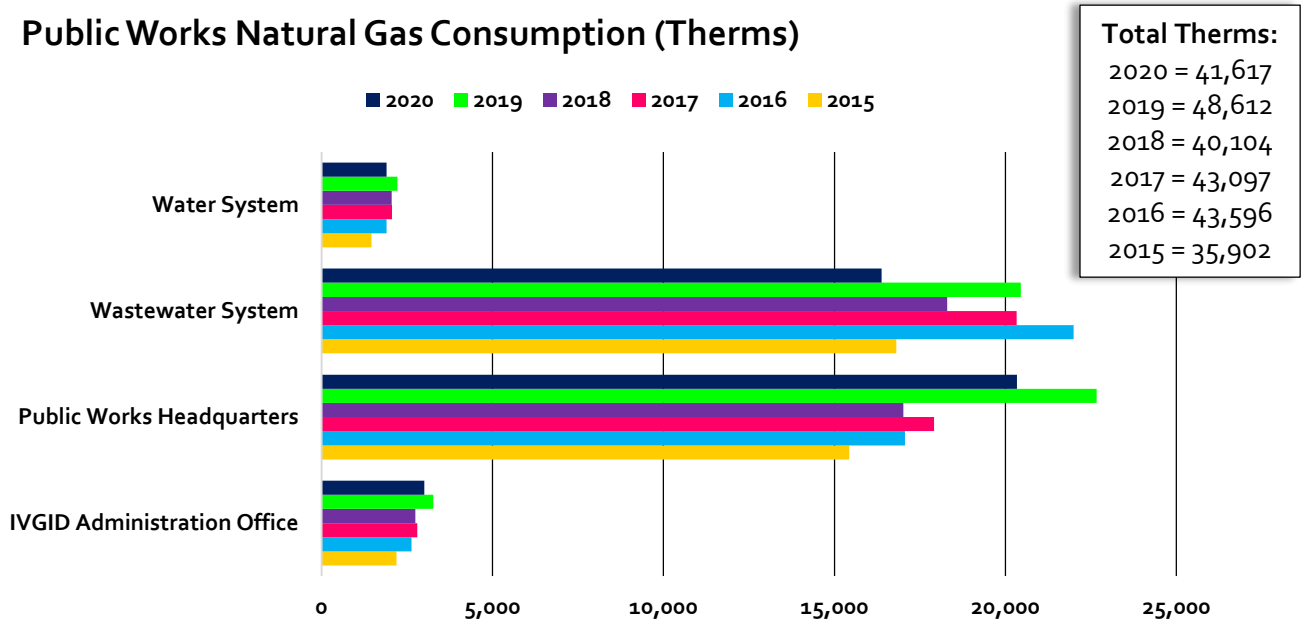
Cost of Public Works Electricity Consumption

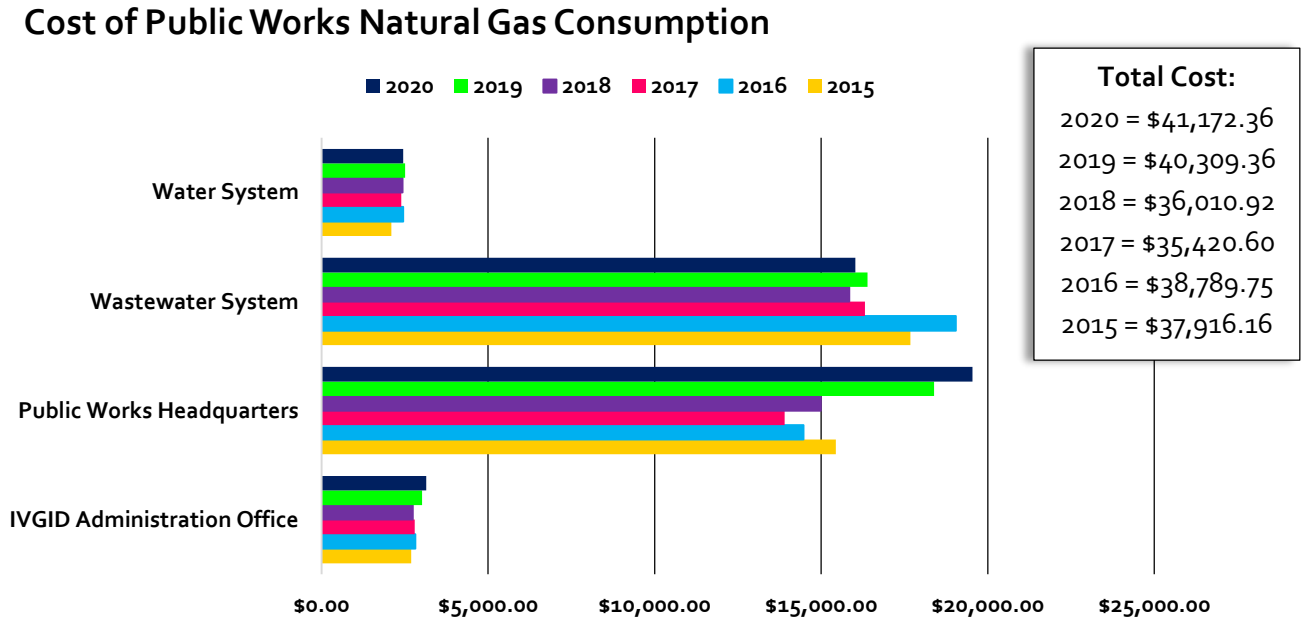


	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
AVB - Admin	$13,082.10	$13,628.64	$13,225.95	$11,374.22	$11,569.17	$10,304.37	$8,967.12	$9,829.92	$9,564.53	$9,231.96
PWHQ	$16,142.16	$16,808.34	$17,048.41	$15,565.33	$16,647.40	$14,103.11	$14,798.11	$19,098.92	$18,531.04	$15,684.33
Water System	$501,886.23	$481,026.03	$486,919.28	$457,096.15	$438,423.60	$359,515.67	$360,464.09	$389,579.31	$385,528.78	$357,174.01
Wastewater System	$380,792.51	$388,676.18	$395,529.22	$361,218.53	$340,138.00	$299,891.28	$312,600.70	$331,206.25	$359,541.93	$292,740.20

Natural Gas

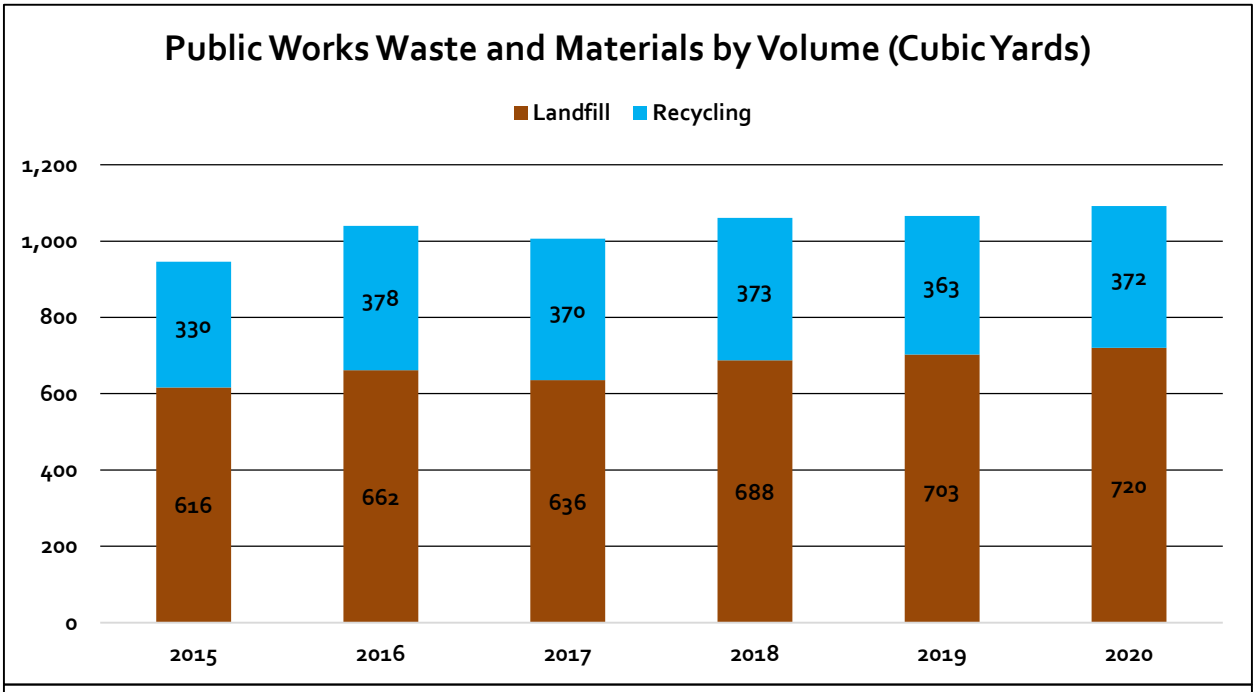
Natural Gas is provided to our area by Southwest Gas Corporation (SGC), which is a subsidiary of Southwest Gas Holdings, INC. SGC provides energy to more than 2 million customers in Arizona, Nevada, and parts of California. SGC states "As an abundant source pf energy, natural gas is an American foundation fuel, helping to increase our energy security. We believe that developing clean natural gas energy sources is critical to reducing greenhouse gas emissions, and providing an affordable and sustainable energy blend." The PWF and the WRRF use the most amount of natural gas primarily for heating purposes. Public Works facilities have seven natural gas meters at its properties including the IVGID Administrative Building.

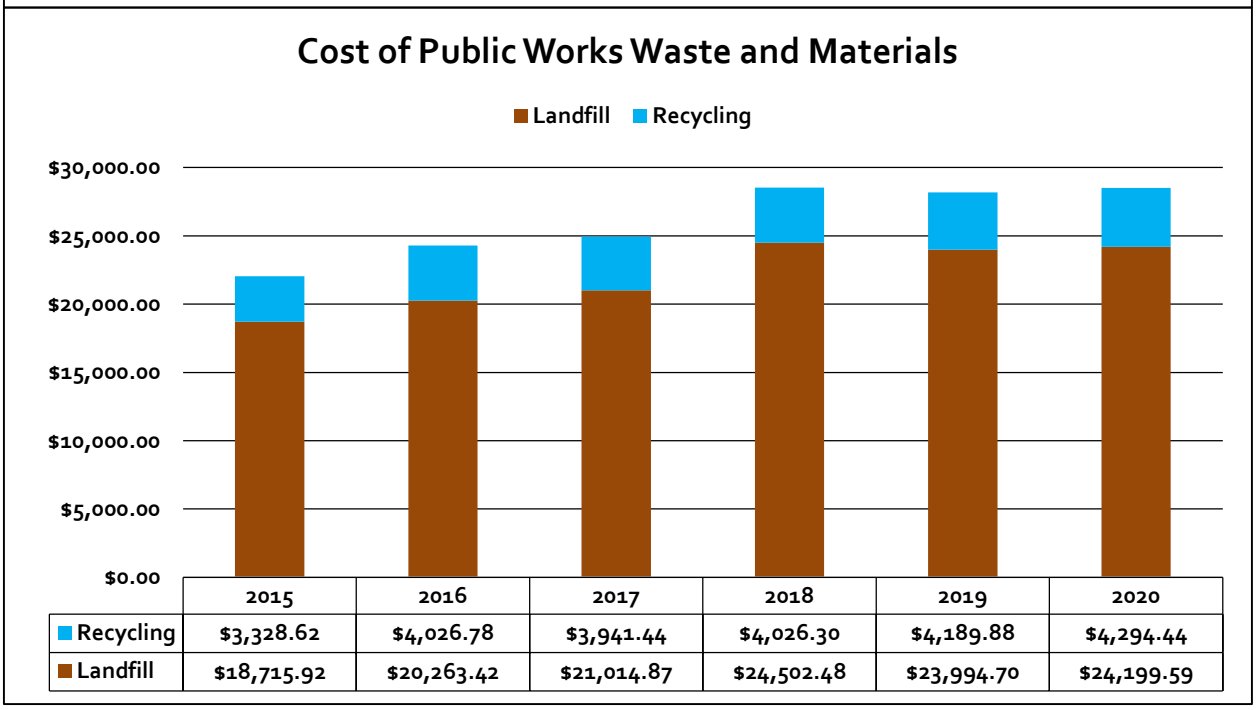




Waste and Materials

Landfill and recycling services are offered to the District by Waste Management, Inc. Public Works produces typical solid waste along with grit from the WRRF as well as occasional special project wastes and hazardous waste. Public Works operations generate approximately 1,000 cubic yards of waste and materials per year. Recyclable materials made up 34% of the total waste generated by Public Works in 2020, yet the cost of recycling only accounts for 15% of the total bill. Public Works has three landfill dumpsters, three recycling dumpsters and three dumpsters for special materials or events. Hazardous materials are managed as they are produced in accordance with all local, state, and federal regulations.





	2015	2016	2017	2018	2019	2020
Recycling	$3,328.62	$4,026.78	$3,941.44	$4,026.30	$4,189.88	$4,294.44
Landfill	$18,715.92	$20,263.42	$21,014.87	$24,502.48	$23,994.70	$24,199.59

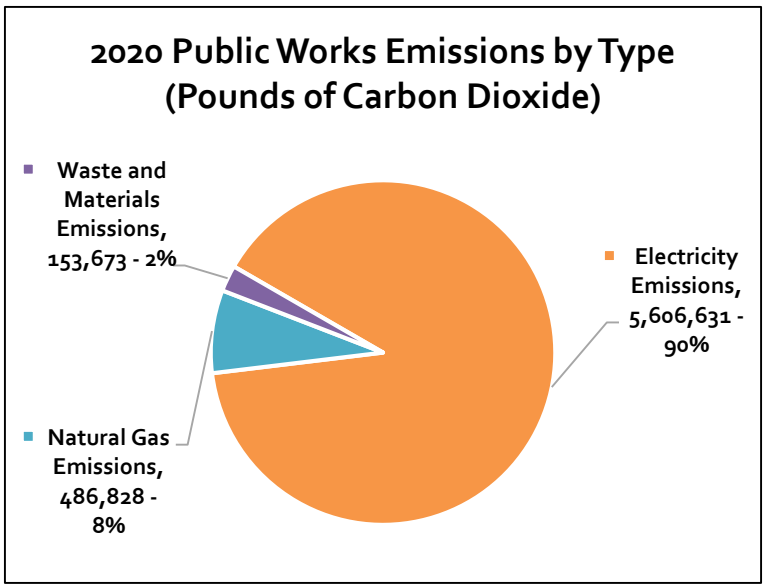
GREENHOUSE GAS EMISSIONS

Introduction

Greenhouse gases are types of chemical compounds that exist in the Earth's atmosphere, like water vapor, carbon dioxide, and methane. Many scientific findings show that practices like fuel use, raising cattle, and factory production have caused the release of more greenhouse gases than our planet is used to having in its atmosphere. Too much of the sun's heat is being trapped by the increased levels of these gases, which leads to warmer temperatures and changes in climate.

The Environmental Protection Agency provides several online tools that can help determine greenhouse gas emissions. The Energy Star® Portfolio Manager® is free to use for any size organization and can even be utilized for residential properties. The Greenhouse Gas Equivalencies Calculator can turn those emissions numbers into relatable information for most people. The tools allow the user to upload information regarding natural resource consumption so that emissions analysis can be estimated. Natural resource information is found by reviewing previous utility bills or inquiring the user's utility services for historical records for a given account.

The estimated greenhouse gas emissions for Public Works operations based on information included in this report resulted in 6,467,954 pounds of carbon dioxide emitted into the atmosphere during 2020. This is not inclusive of all available data that influence emissions at Public Works. Further analysis of fleet information is needed to determine a more accurate approximation of emissions.



Greenhouse Gas Equivalencies

6,467,954 pounds of carbon dioxide (CO_2) emissions are equivalent to:

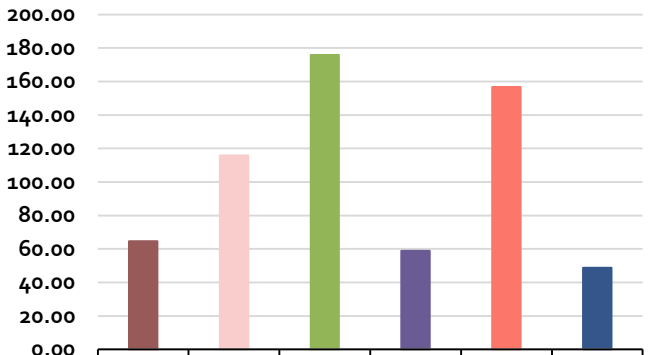
- *Carbon dioxide emissions from burning through 119,802 propane cylinders for barbeques.*
- *Greenhouse gas emissions from driving an average passenger vehicle 7,282,331 miles.*
- *Carbon dioxide emissions generated from fully charging 356,876,970 smartphones.*
- *Carbon sequestered by 48,511 tree seedlings grown for ten years.*

ENVIRONMENTAL QUALITY

Climate Monitoring

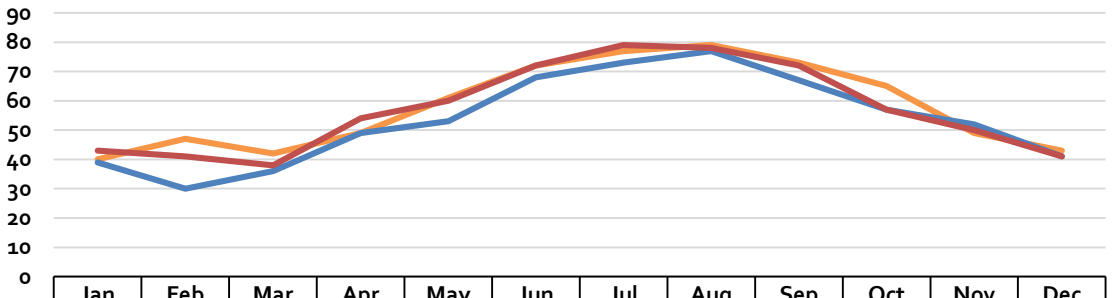
The weather station at the Incline Village Visitor's Center records local temperatures and precipitation. It was installed in 2014 at 969 Tahoe Blvd. in Incline Village, Nevada. The Tahoe City weather station near the headwaters of the Truckee River has been logging consistent data since 1903. Records of the past five years for Incline Village and records for Tahoe City ranging back to 1961 are included to give an overview of the region's climatic conditions.

Incline Village Total Precipitation (Rain and Melted Snow in Inches)



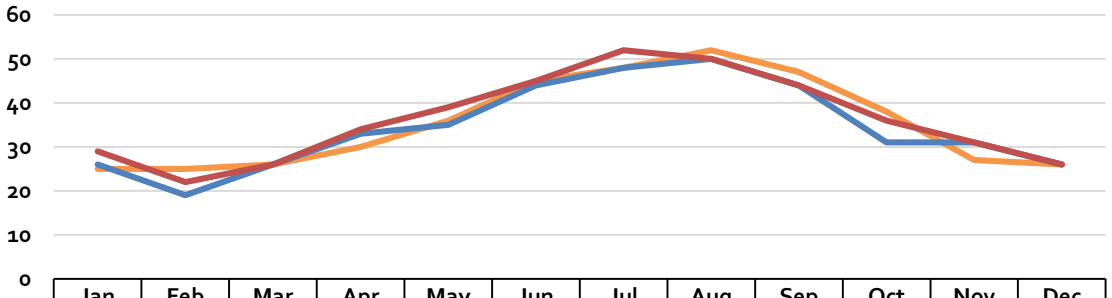
	2015	2016	2017	2018	2019	2020
Inches	64.67	115.83	175.82	58.99	156.72	48.77

Incline Village Average High (°F)

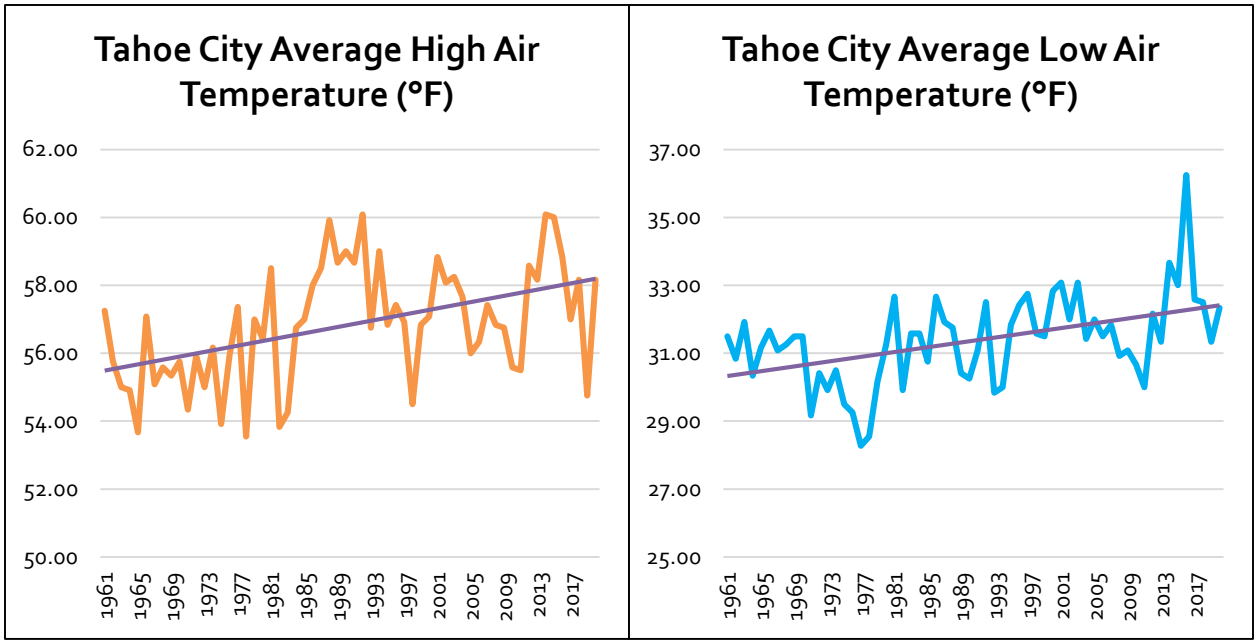


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	40	47	42	49	61	72	77	79	73	65	49	43
2019	39	30	36	49	53	68	73	77	67	57	52	41
2018	43	41	38	54	60	72	79	78	72	57	50	41

Incline Village Average Low (°F)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	25	25	26	30	36	45	48	52	47	38	27	26
2019	26	19	26	33	35	44	48	50	44	31	31	26
2018	29	22	26	34	39	45	52	50	44	36	31	26



Air Quality Conditions

According to the Environmental Protection Agency, "The AQI is an index for reporting daily air quality. It tells you how clean or unhealthy your air is, and what associated health effects might be a concern. The AQI focuses on health effects that you may experience within a few hours or days after breathing unhealthy air. The AQI is calculated for four major air pollutants regulated by the Clean Air Act: ground level ozone, particle pollution, carbon monoxide, and sulfur dioxide. For each of these pollutants, EPA has established national air quality standards to protect public health." The greater Lake Tahoe region continues to suffer from smoke produced by wildfires in the late summer months; otherwise, air quality is exceptional.

Smokey sunrise at Public Works

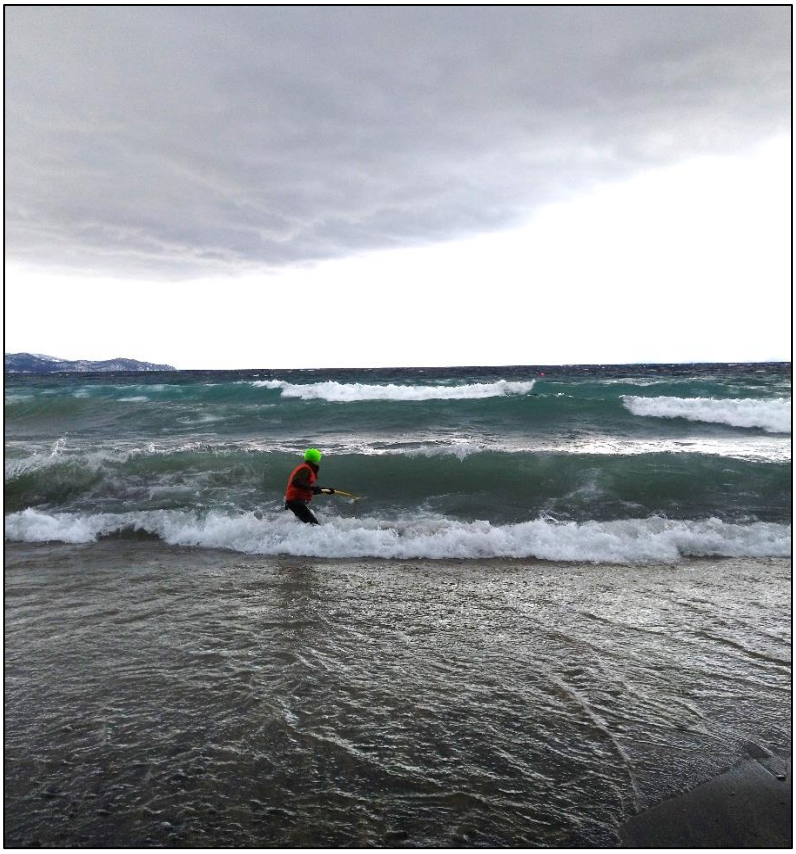
Air Quality Index (AQI) Values	Levels of Health Concern	Colors
When the AQI is in this range:	*...air quality conditions are:*	*...as symbolized by this color:*
0 to 50	Good	Green
51 to 100	Moderate	Yellow
101 to 150	Unhealthy for Sensitive Groups	Orange
151 to 200	Unhealthy	Red
201 to 300	Very Unhealthy	Purple
301 to 500	Hazardous	Maroon

Washoe County Air Quality Index

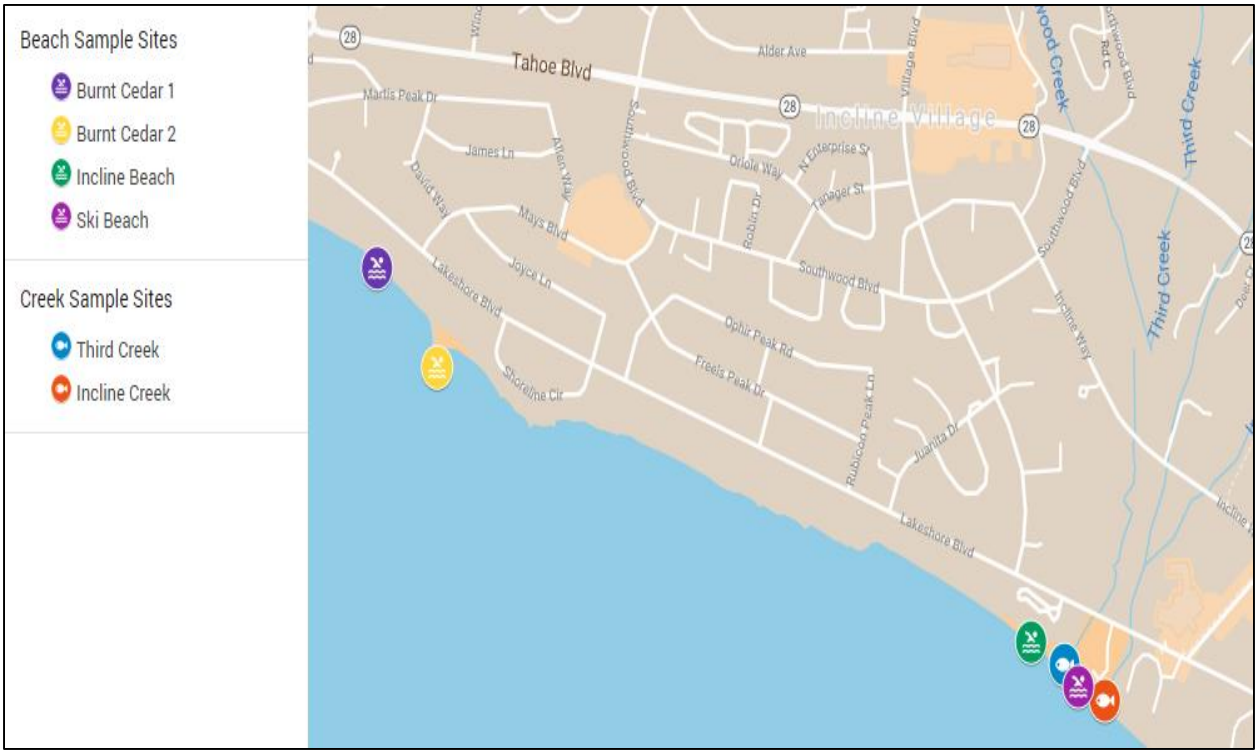
2020

Nearshore Site Monitoring

One way of protecting local water quality is to monitor and consistently observe the environment for any changes over time. Waste Not staff members grab water quality samples from IVGID owned properties to help build a databank supporting our natural resource. Staff has been monitoring and recording water quality data at Burnt Cedar Beach and Jetty, Incline Beach, Ski Beach, Third Creek, and Incline Creek since 2004. Beach-site water quality parameters include general observations, temperature, turbidity, total coliform, and fecal coliform. Dissolved Oxygen (DO) and Total Dissolved Solids (TDS) are measured at creek-sites in addition to beach-site parameters.

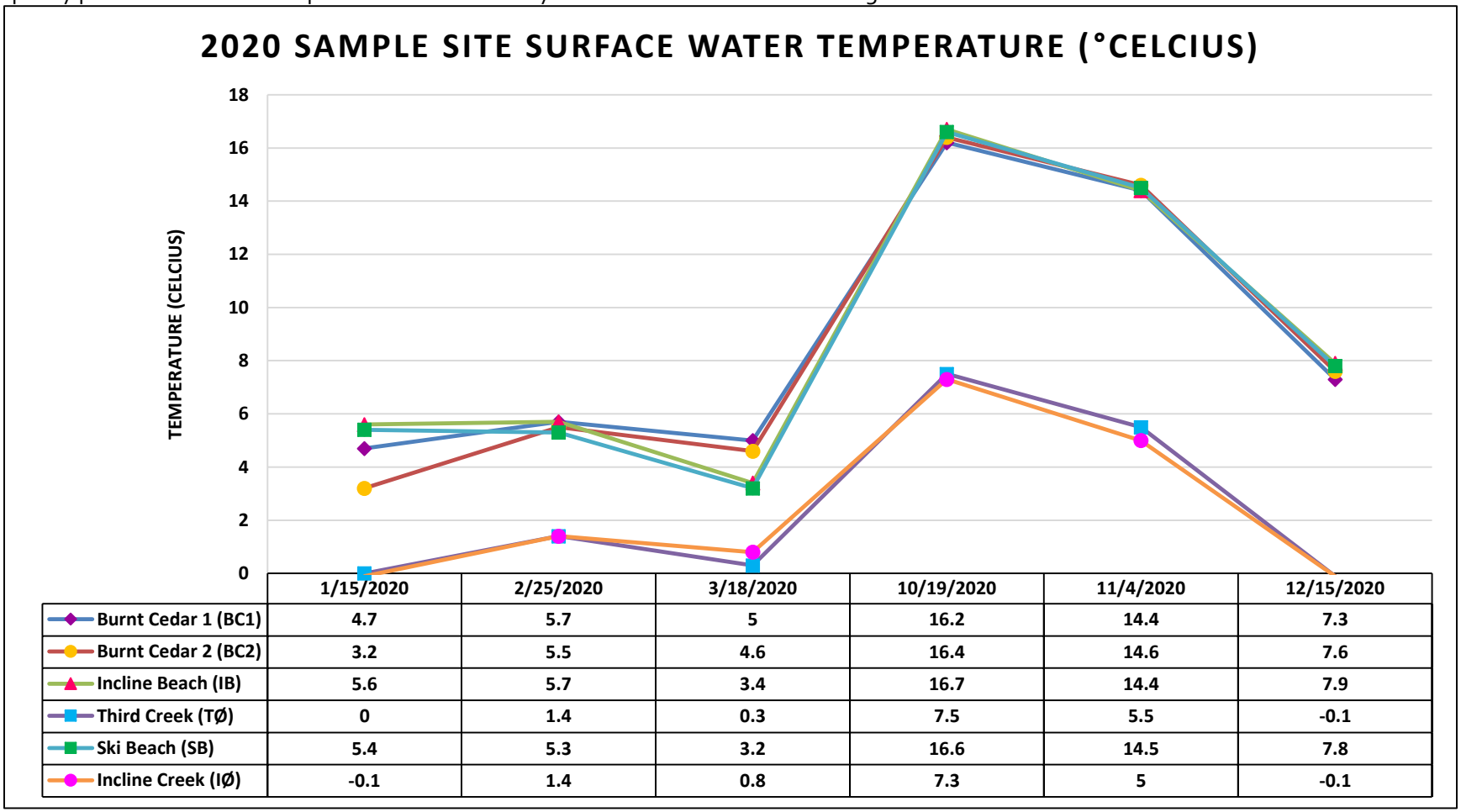


Staff are qualified to gather water quality samples with minimal environmental disturbance. It is never advised to enter the stream zone. The aquatic ecosystem habitat is fragile and personal safety can be compromised.

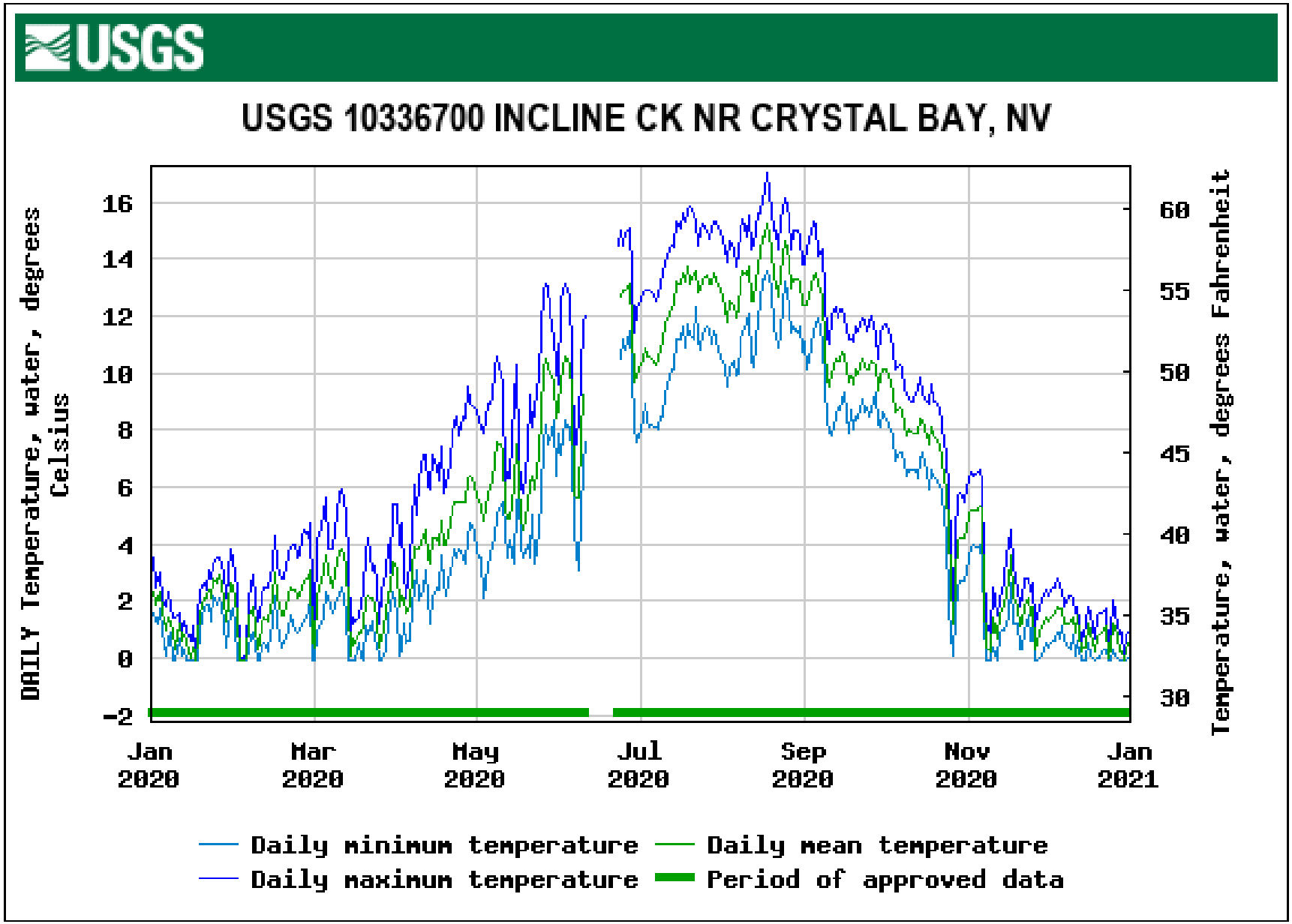


Nearshore Sample Site Data

A total of six individual sample events were conducted at random by Waste Not staff in 2020 to record the parameters described earlier in this section. The data is presented in graphical form but could include possible errors related to human interaction, unexpected weather events or unanticipated activities that occurred upstream or nearby. Water quality affects the local ecosystem in many tangible and invisible ways. It influences the health of vegetative, aquatic, and terrestrial organisms that utilize the water for basic needs. It also influences the health of the people who utilize the resource for recreation and as the primary source for drinking water. This chart presents temperature as a basic water quality parameter. Water temperature is measured by hand at the site surface utilizing a calibrated instrument.

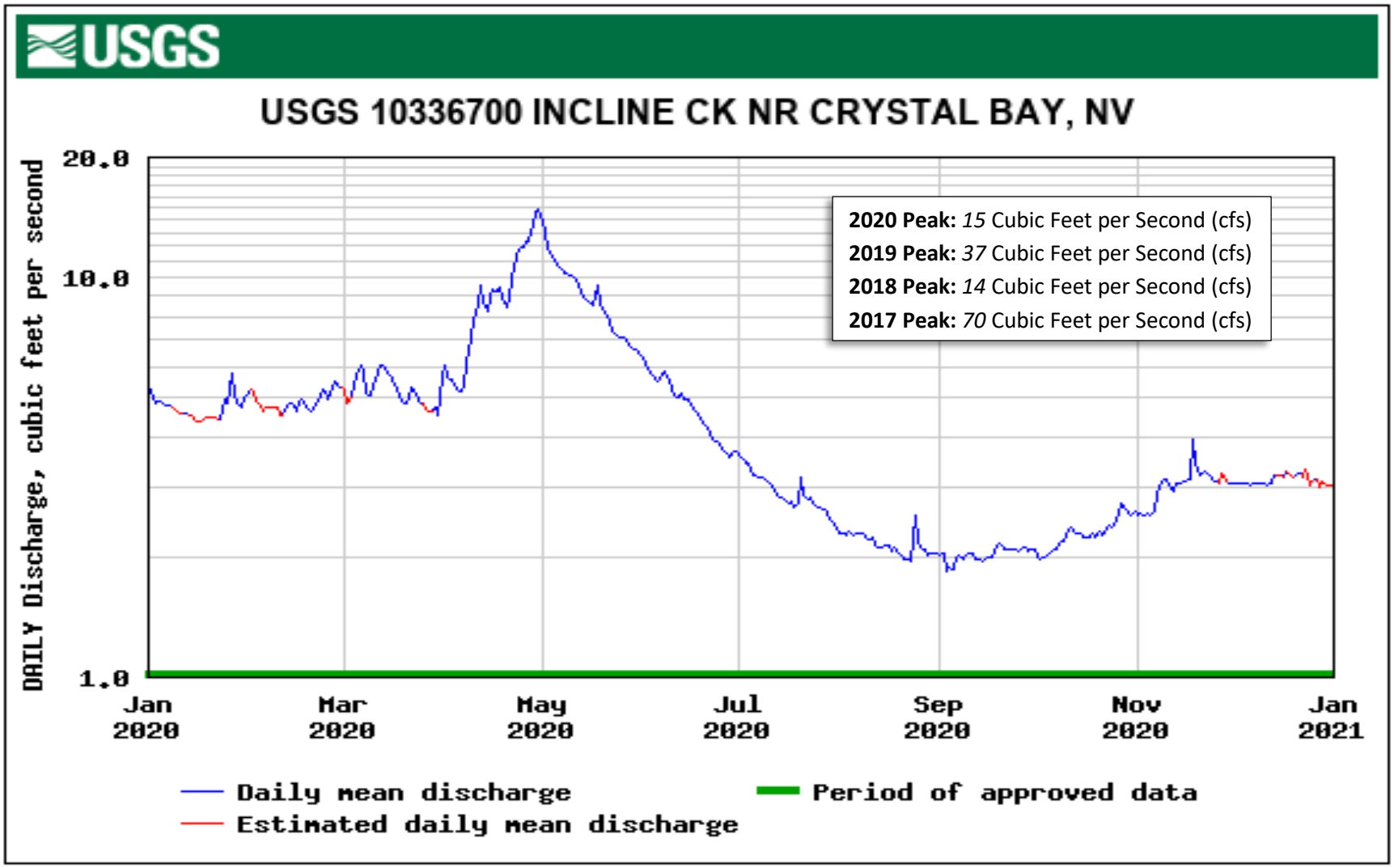


	1/15/2020	2/25/2020	3/18/2020	10/19/2020	11/4/2020	12/15/2020
Burnt Cedar 1 (BC1)	4.7	5.7	5	16.2	14.4	7.3
Burnt Cedar 2 (BC2)	3.2	5.5	4.6	16.4	14.6	7.6
Incline Beach (IB)	5.6	5.7	3.4	16.7	14.4	7.9
Third Creek (TØ)	0	1.4	0.3	7.5	5.5	-0.1
Ski Beach (SB)	5.4	5.3	3.2	16.6	14.5	7.8
Incline Creek (IØ)	-0.1	1.4	0.8	7.3	5	-0.1


USGS
USGS 10336700 INCLINE CK NR CRYSTAL BAY, NV
DAILY Temperature, water, degrees Celsius
Temperature, water, degrees Fahrenheit
16
14
12
10
8
6
4
2
0
-2
60
55
50
45
40
35
30
Jan 2020
Mar 2020
May 2020
Jul 2020
Sep 2020
Nov 2020
Jan 2021
Daily minimum temperature
Daily mean temperature
Daily maximum temperature
Period of approved data

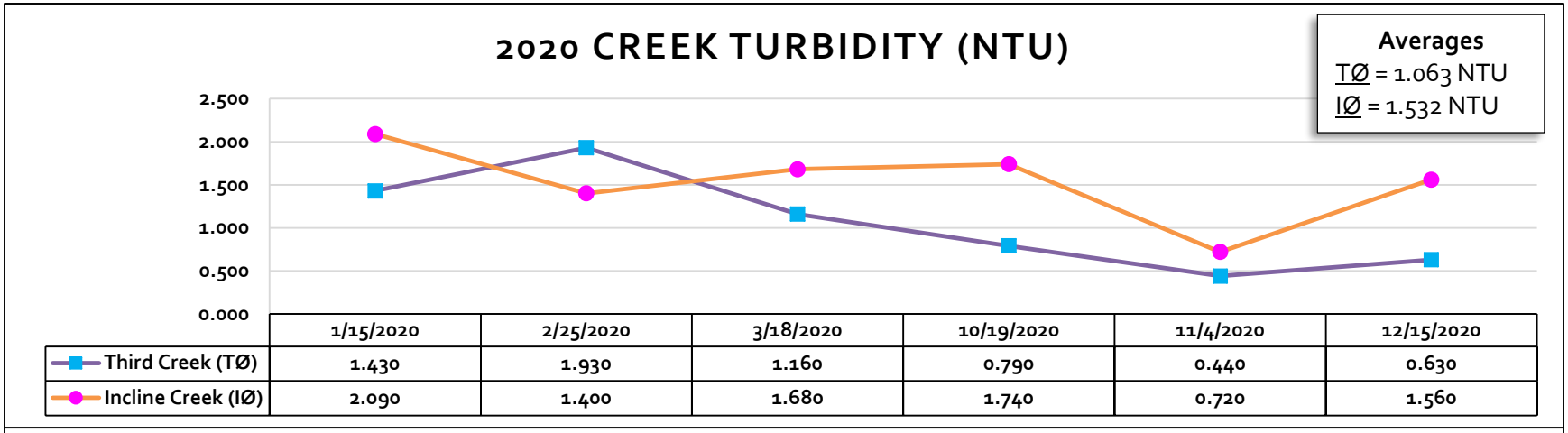
Incline Creek Water Flows

The chart below depicts the water flow discharge from Incline Creek as it is measured by the United States Geological Survey (USGS) monitoring station located near Lakeshore Boulevard. This is measured as Cubic Feet per Second (CFS) and typically peaks during the early summer as the snow melts. The water from Incline Creek joins the lake in between Ski Beach and Hermit Beach.

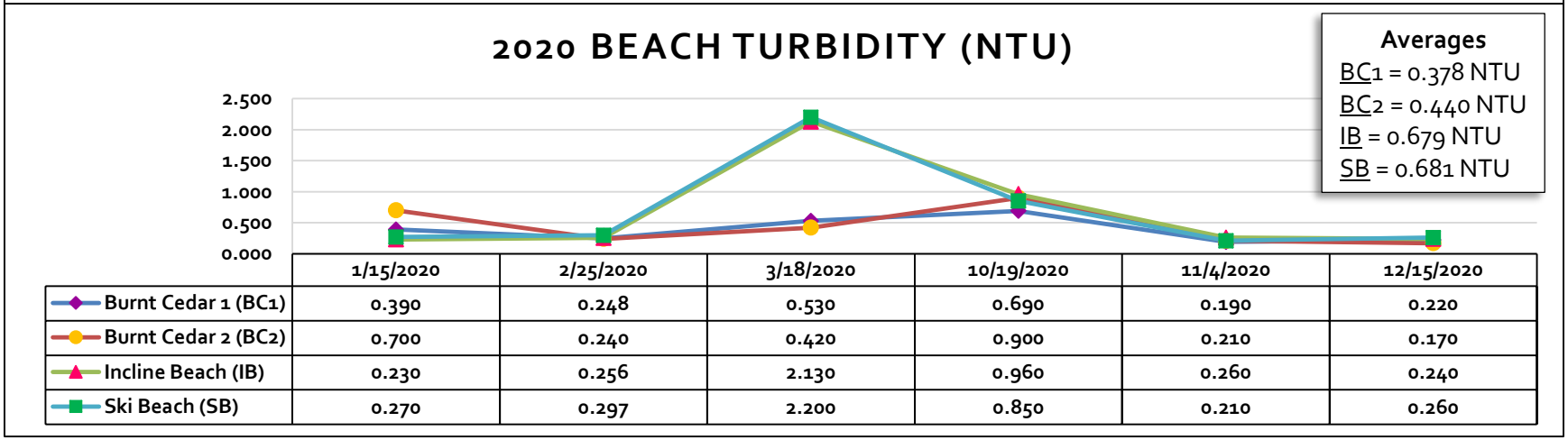


Turbidity Results

The measurement of turbidity is a key test of water quality. Turbidity is the cloudiness or haziness caused by large numbers of individual particles that are generally invisible to the naked eye. Turbidity can indicate high stream flows or other disturbances that may be occurring upstream of the sample point. Turbidity is measured as NTU, which stands for Nephelometric Unit and examines scattered white light. A sample is gathered by hand and brought to Public Works' Nevada state-certified laboratory for turbidity analysis with calibrated equipment. The Tahoe Regional Planning Agency (TRPA) has determined that littoral Lake Tahoe turbidity shall not exceed 3 NTU or shall not exceed 1 NTU for waters of Lake Tahoe that are not directly influenced by stream discharges (*LTIMP, 2002*).



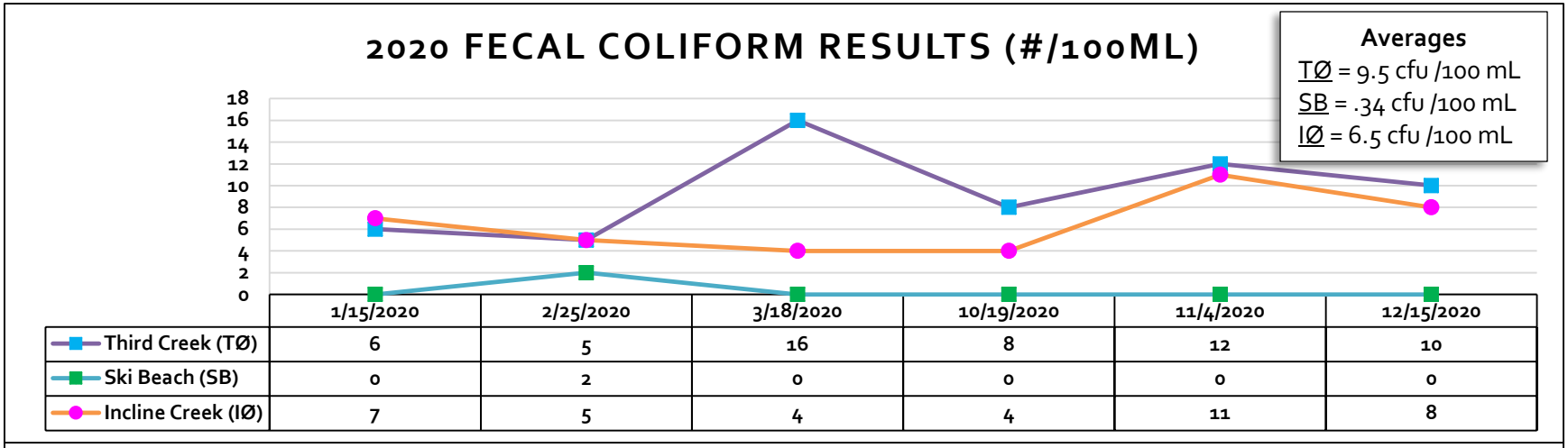
	1/15/2020	2/25/2020	3/18/2020	10/19/2020	11/4/2020	12/15/2020
Third Creek (TØ)	1.430	1.930	1.160	0.790	0.440	0.630
Incline Creek (IØ)	2.090	1.400	1.680	1.740	0.720	1.560



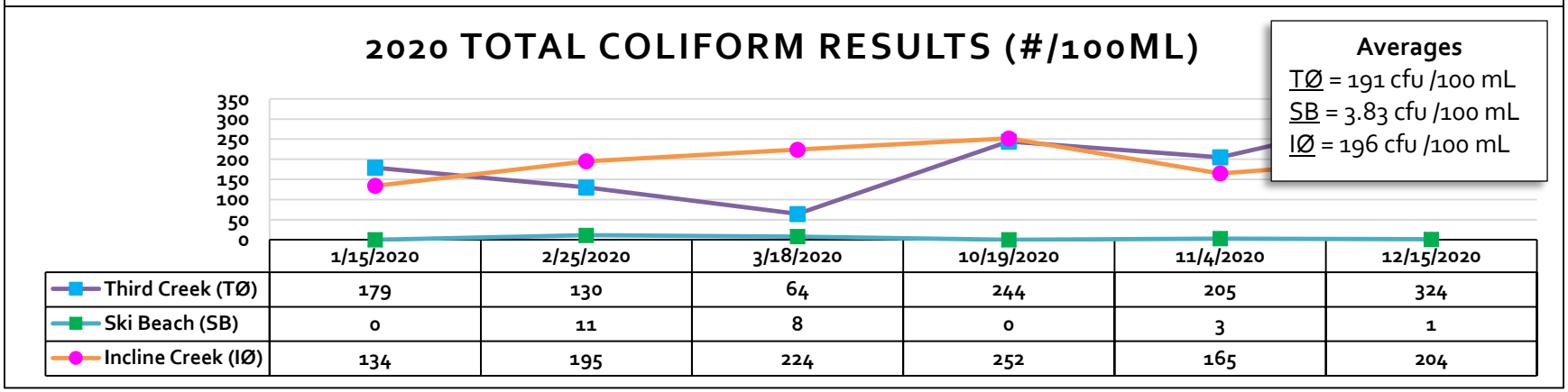
	1/15/2020	2/25/2020	3/18/2020	10/19/2020	11/4/2020	12/15/2020
Burnt Cedar 1 (BC1)	0.390	0.248	0.530	0.690	0.190	0.220
Burnt Cedar 2 (BC2)	0.700	0.240	0.420	0.900	0.210	0.170
Incline Beach (IB)	0.230	0.256	2.130	0.960	0.260	0.240
Ski Beach (SB)	0.270	0.297	2.200	0.850	0.210	0.260

Coliform Results

Coliforms are a broad class of bacteria found naturally in the environment. Coliform can include animal feces or other disease-causing organisms. Coliform results are recorded as colony forming units (cfu) per 100 milliliter by tallying viable bacterial cells in a sample. Fecal coliform is measured using the same method but with a separate indicator. Ski Beach coliform results have been included alongside results from Third Creek and Incline Creeks for comparison. Burnt Cedar and Incline Beach sites are not visualized in these charts because results are negligible. The presence of coliform can be attributable to wildlife and other organisms, however human influence increases these levels. The Environmental Protection Agency (EPA) has established the Total Coliform Rule (TCR), which prohibits any presence of coliform in drinking water. These results represent untreated littoral and riparian water samples collected by hand in a variety of conditions.



	1/15/2020	2/25/2020	3/18/2020	10/19/2020	11/4/2020	12/15/2020
Third Creek (TØ)	6	5	16	8	12	10
Ski Beach (SB)	0	2	0	0	0	0
Incline Creek (IØ)	7	5	4	4	11	8



	1/15/2020	2/25/2020	3/18/2020	10/19/2020	11/4/2020	12/15/2020
Third Creek (TØ)	179	130	64	244	205	324
Ski Beach (SB)	0	11	8	0	3	1
Incline Creek (IØ)	134	195	224	252	165	204

COMMUNITY ALLIANCE

Introduction

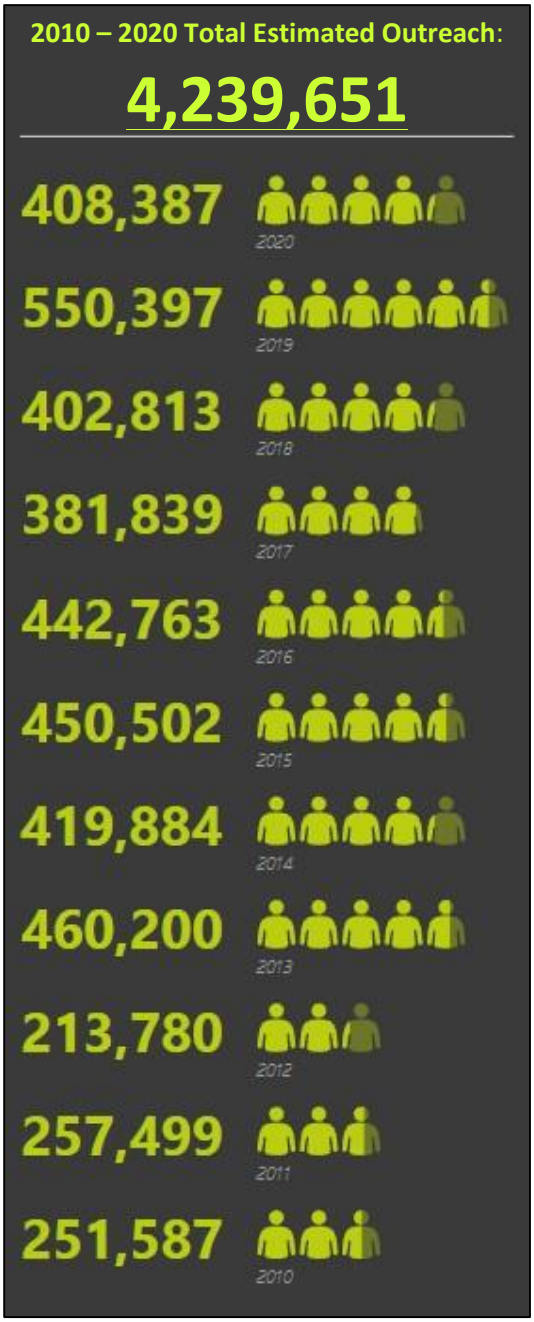
Public Works has participated in community outreach, involvement and education for 28 years through services provided by the Waste Not program. Public Works outreach also includes newsletter inserts in every utility bill, plus staff available in person and by phone to answer customer questions. Waste Management, Inc. conducts its own outreach per services offered.

Joe leading STOKE Interpretive Tours at Diamond Peak

Waste Not Program

The Waste Not Program is best described as the Community Conservation Services for the District. Waste Not assumes most responsibilities that would resemble an Environmental Health and Safety or Ecosystem Services Division that other utilities, institutions or municipalities have developed. Staff come from a diversity of backgrounds, but all members have a passion for Lake Tahoe's protection and enhancement.

Waste Not's mission is to empower sustainable living by providing conservation programs and services for our community in the areas of watershed protection, water conservation, recycling, household hazardous waste, living with wildlife and the Tahoe environment. Waste Not is part of IVGID's Public Works Department, it also serves as the home agency for the Tahoe Water Suppliers Association (TWSA).



ACTIVE FACEBOOK PAGES:

- IVGID PUBLIC WORKS
- BEAR SMART - INCLINE VILLAGE
- DRINK TAHOE TAP

ACTIVE WEBSITES:

- *ivgidhhw.org*
- *yourtahoeplace.com*
- *bearsmartinclinevillage.org*
- *tahoeh20.org*
- *drinktahoetap.org*

www.drinktahoetap.org

Public Outreach

In 2020, an estimated 400,000 persons received the Public Works, Waste Not and TWSA messages via radio, TV, print and web publications, phone and email inquiries, live classes, community forums, custom presentations, site tours and contact at over 40 regional events.

Sarah conducting the Water Taste Test at Earth Day

Employees produce custom brochures, posters, flyers, factsheets, stickers, magnets and buttons, refillable water bottles, reusable grocery bags, dog-waste collection supplies and other items. Waste Not uses local print, online resources and social media outlets to promote information, services and events. Digital publications increased due to COVID-19.

2020 is the 28th anniversary of the Waste Not Program, which celebrates a rich history of environmental impact management ranging from watershed protection, solid waste containerization and reduction to public education on a wide variety of topics. Please See Appendix B for a detailed list of projects that the Waste Not Program has contributed to over the past 28 years.

Volunteers from the "Tahoe Blue Crew" cleaning up litter

Event Coordination, Participation and Support

Community events are supported throughout the year by Waste Not staff members on behalf of IVGID and TWSA. Most events are coordinated in partnership with other agencies, non-profits, and businesses. The table below lists priority special events but is not inclusive of all events that staff participate in in any given year. COVID-19 affected participation and availability of public events.

EVENT NAME	EVENT DATE (S)	ATTENDANCE
The Science of Cocktails at the UC Davis Tahoe Environmental Research Center	JANUARY 31	*300*
Mountain Interpretive Tours at Diamond Peak Ski Resort	JANUARY 11, FEBRUARY 8, MARCH 7	*30*
Community Appreciation Day at IVGID	FEBRUARY 9	*150*
Snapshot Day at Waterman's Landing	MAY 16	*10*
"Tahoe Blue Crew" Clean Up Events hosted at Aspen Grove	JUNE 13, JULY 5, SEPTEMBER 1 - 30	*55*

Tahoe Blue Crew

Waste Not is now a Blue Crew Team Leader for the community of Incline Village and Crystal Bay. Three annual community clean ups are organized each year to fulfill the requirements of the program initiated by the League to Save Lake Tahoe. In addition to three annual events, the team has designated Sweetwater Road as it's litter hotspot to continually monitor. Sign up to become a Blue Crew Leader and adopt your own hotspot, today! https://www.keeptahoeblue.org/our-work/shoreline-protection/tahoe-blue-crew-why

Joe is a Tahoe Blue Crew Leader

School Lessons

Waste Not staff offers an average of 20 annual educational programs on stream science, recycling, and wildlife awareness to students in the Incline Village/North Shore schools (Pre-K to college). In the summer months, lessons are offered at regional youth organization camps. On-site tours of the Public Works water and sewer operations and Waste Not's technical services are offered upon request.

Joe teaching students about sourcewater protection at the beach

Be #1 at Picking up #2

At Lake Tahoe and many other areas throughout the United States, people have become concerned about the effects of accumulated dog waste on water quality. Dog waste, like any waste, may contain a variety of microbes, some of which could cause disease. Examples of diseases that can potentially be transmitted from dogs to humans through feces include Salmonella, Giardia, E-Coli, and Cryptosporidium.

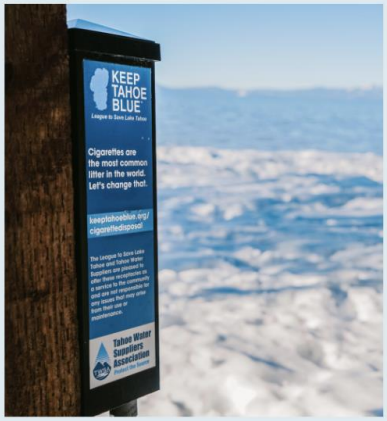
The Tahoe Water Suppliers Association and Public Works sponsor waste stations to encourage dog owners to clean up after their pets. These stations are placed in high impact areas and monitored by volunteer or partner agency staff. Dozens of sponsored stations are currently in use in Incline Village and Crystal Bay. Nearly 100 sponsored stations have been distributed throughout the Lake Tahoe Basin via partners of the TWSA.

Take Care Tahoe

Take Care Tahoe is a collective group of more than 30 organizations that love Lake Tahoe and want to see more people connect with this beautiful natural environment. The Take Care™ campaign has been designed for use at parks, hotel lobbies, piers, restaurants, beaches or trails. Really, anywhere within reach of people who might be making simple mistakes that are hurting our environment. To find out more information, see upcoming events, and request a media toolkit for an agency, business and/or property, visit: www.takecaretahoe.org.

Dirty Butts

Thanks to the Phillip Morris Corporation and Keep America Beautiful, the Tahoe Water Suppliers Association secured a grant to distribute 250 cigarette disposal canisters throughout the Lake Tahoe region. In partnership with the League to Save Lake Tahoe, more than 100 of these canisters were distributed by the end of 2020, diverting pounds of toxic cigarette butts from disturbing our watershed.



FACTS ABOUT CIGARETTE LITTER

- It is full of toxic chemicals that can leach into waterways
  - Toxic chemicals such as benzopryene, formaldehyde, arsenic, lead, acetone, cadmium, nicotine, benzene, butane, ammonia etc. in the cigarette filter dissolve in the water.
- It is a threat to wildlife that accidentally ingest discarded butts
- It is a fire hazard
- It is the main item found during community litter cleanups
- It is the No. 1 most littered item in the world
- It is not biodegradable

Graphic courtesy of the League to Save Lake Tahoe

Micro-Plastics Outreach and Research Grant

Microplastics are a subcategory of plastic pollution that has a widespread effect on the environment. Microplastics pollution can be found in terrestrial and aquatic environments. Microplastics enter through multiple conduits, including municipal wastewater and nonpoint source pollution pathways such as stormwater runoff, wind action, and litter. The U.S. Environmental Protection Agency (EPA) has awarded $97,000 in grants for projects to address microplastic pollution in Lake Tahoe. The projects include a study led by the UC Davis Tahoe Environmental Research Center (TERC) to gather more data on the movement and types of plastics in Lake Tahoe as well as a public education-focused source reduction pilot project led by the Incline Village General Improvement District, in partnership with the Tahoe Water Suppliers Association and others. Both projects are managed by the Nevada Division of Environmental Protection (NDEP) with the aim of reducing sources of plastic pollution.

Drink Tahoe Tap® branded water bottles for sale at Raley's Markets

This partnership was extended to Raley's in Incline Village which became the first major Tahoe area business to encourage their customers not to buy single-use water bottles. Instead, the grocer is asking its patrons to consider purchasing DRINK TAHOE TAP® branded reusable Klean Kanteen water bottles. This opportunity encourages reduction of single-use plastics that contribute to the microplastic problem.

LET'S TALK TRASH

Bear Smart Program

Waste Not staff provides education and outreach to residents, visitors, and local businesses on general wildlife issues with an emphasis on proper trash storage. Services include: media and outreach, presentations, a bear box rebate program reestablished July 2014, on-site assistance with bear box location, research of wildlife-resistant trash carts and peer community programs.

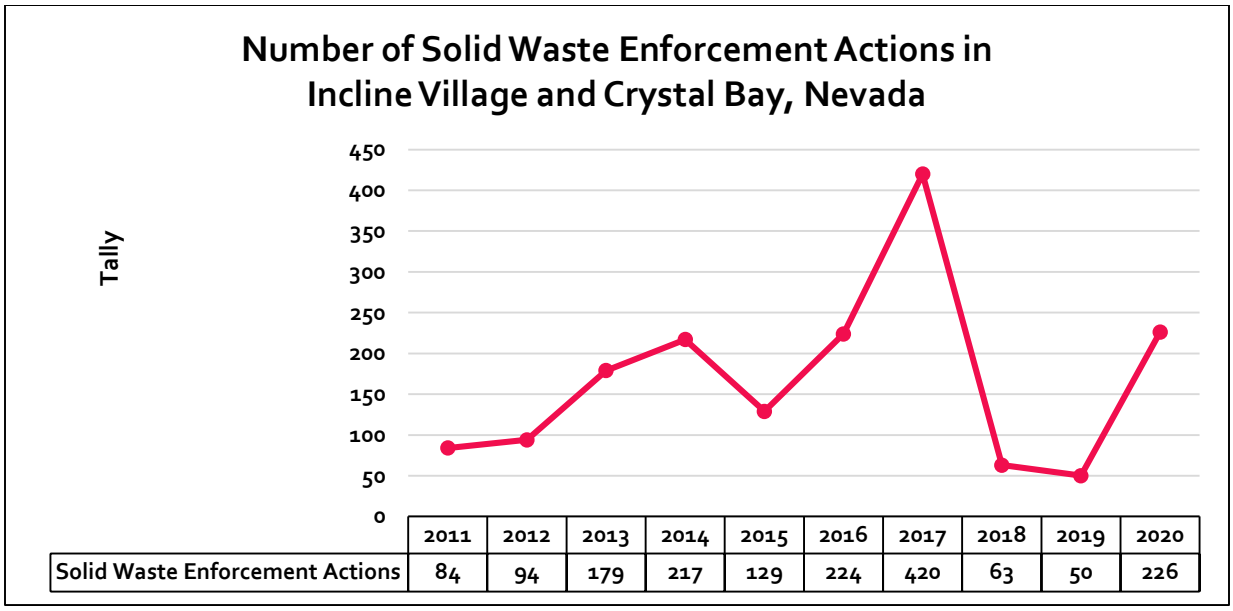
Staff works closely with Waste Management, Inc. on service standardization and compliance. Bear Smart information is placed on dumpster enclosures. Waste Not's Bear Smart Program provides education on proper solid waste management with a goal to reduce human/bear conflict. Solid waste enforcement has been a long-term community focus. Please see www.bearsmartinclinevillage.org and www.inclinevillage.wm.com for more information and additional resources.

Solid Waste Enforcement

The IVGID Board of Trustees approved a new solid waste franchise agreement with Waste Management, Inc. in 2016 based on recommendations from a Solid Waste Committee put together by the IVGID General Manager to evaluate options, problems, and feedback from community members.

All residents have been distributed one 64-gallon rolling cart for landfill bound waste and one 64-gallon rolling cart for comingled recyclables to both be collected once per week. Residents have the option to upsize to a 96-gallon cart or downsize to a 32-gallon cart and are able to return the recycle cart according to the individual property's needs. Wildlife Resistant Carts are available in 96-gallon and 64-gallon sizes for properties that want to prevent or have had issues with wildlife. Bear Shed service is available at the lowest monthly service rate for properties that have metal garbage can enclosures installed to incentivize best practices for securing waste and reducing human conflict with wildlife.

Enforcement of the solid waste ordinance has occurred since at least 2010 and increased significantly in 2017 due to a "Zero Tolerance" policy that imposes a cart upgrade and fine structure for ordinance violations such as overflowing waste or apparent wildlife interaction. Please see Appendix C for a complete description of qualifying violations of Ordinance One in addition to possible remediation actions for residential and commercial properties. The number of trash callouts record the number of actionable issues found by a technician.



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Solid Waste Enforcement Actions	84	94	179	217	129	224	420	63	50	226

Incline Village and Crystal Bay Solid Waste Containment Summary	2018	2019	2020
Number of Residential Bear Sheds	1,279	1,341	1,515
Number of Locking Wildlife Carts	442	489	502
Number of Standard Residential Carts	2,450	2,345	2,153
% Locking Containment (Residential)	41%	44%	52%
% Locking Containment (Commercial)	100%	100%	100%
% Locking Containment (Overall)	71%	72%	76%

Community Landfill Waste and Recycling

Waste Management provides weekly landfill bound and recycling collection services to Incline Village and Crystal Bay residents, in addition to a transfer station where residents may dispose of excess waste or recycling. Services are available to residents and commercial properties 365 days throughout the year except during severe weather events. Waste Management, Inc. (WM) accepts yard waste during designated timeframes throughout the year. WM also accepts sharps, construction debris and collects holiday trees curbside during a designated timeframe after the Christmas holiday. The Incline Village and Crystal Bay single stream municipal recycling rate is 26% for 2020. The recycling rates for Washoe County and the State of Nevada are 33% and 22%, respectively (*ndep.nv.gov/nevada-recycles/resources/reports*). The national recycling rate is 32% (*census.gov*).

Accepted Materials:

- Glass
- Rigid Plastics
- Aluminum, Steel and Tin
- Paper, Paperboard and Cardboard

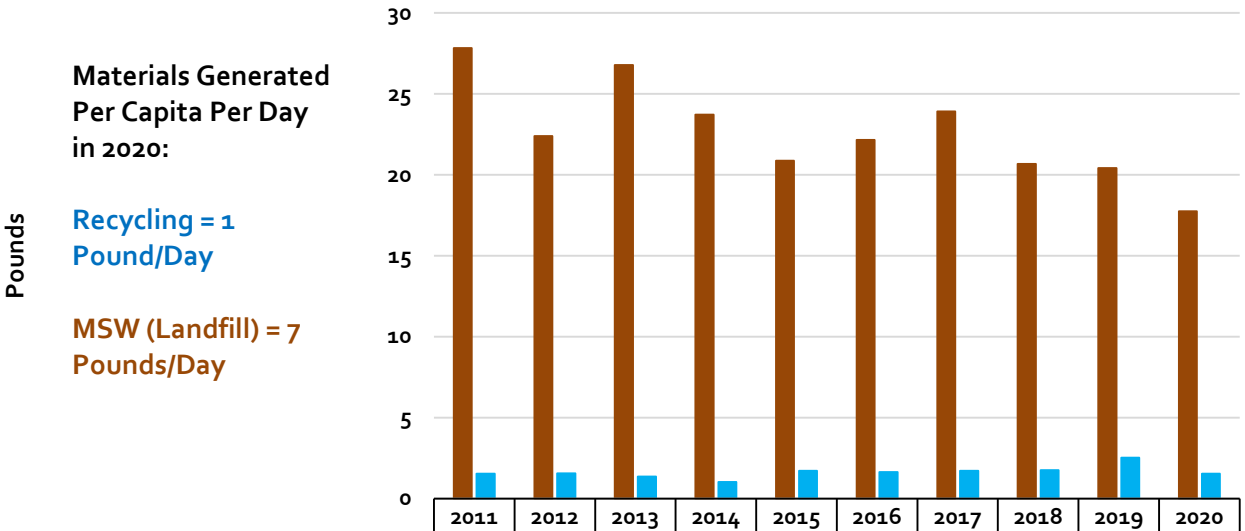
Incline Village and Crystal Bay Solid Waste Summary	2018	2019	2020
Recycling Rate Considering All Community Programs	28%	31%	26%
Route Collected Material Solid Waste (MSW) - Tons	4,845	5,600	4,804
Landfill Bound Waste (Route, Transfer Station, and Construction/Debris) - Tons	13,278	13,110	13,055
Single Stream Mixed Commodities Municipal Recycling - Tons	1,133	1,619	1,132

Daily Materials Generated per Household (lbs.)

Materials Generated Per Capita Per Day in 2020:

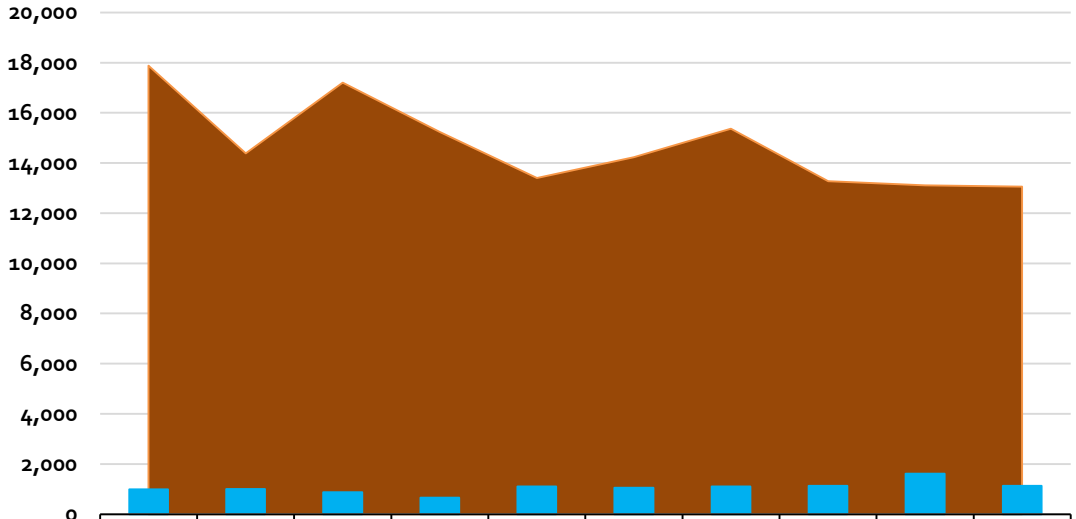
Recycling = 1 Pound/Day

MSW (Landfill) = 7 Pounds/Day



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Landfill Generated Per Household Per Day	28	22	27	24	21	22	24	21	20	18
Recycling Generated per Household Per Day	1.5	1.6	1.4	1.0	1.7	1.6	1.7	1.8	2.5	1.5

Crystal Bay & Incline Village Total MSW/Landfill vs. Total Recycling Weight (tons)



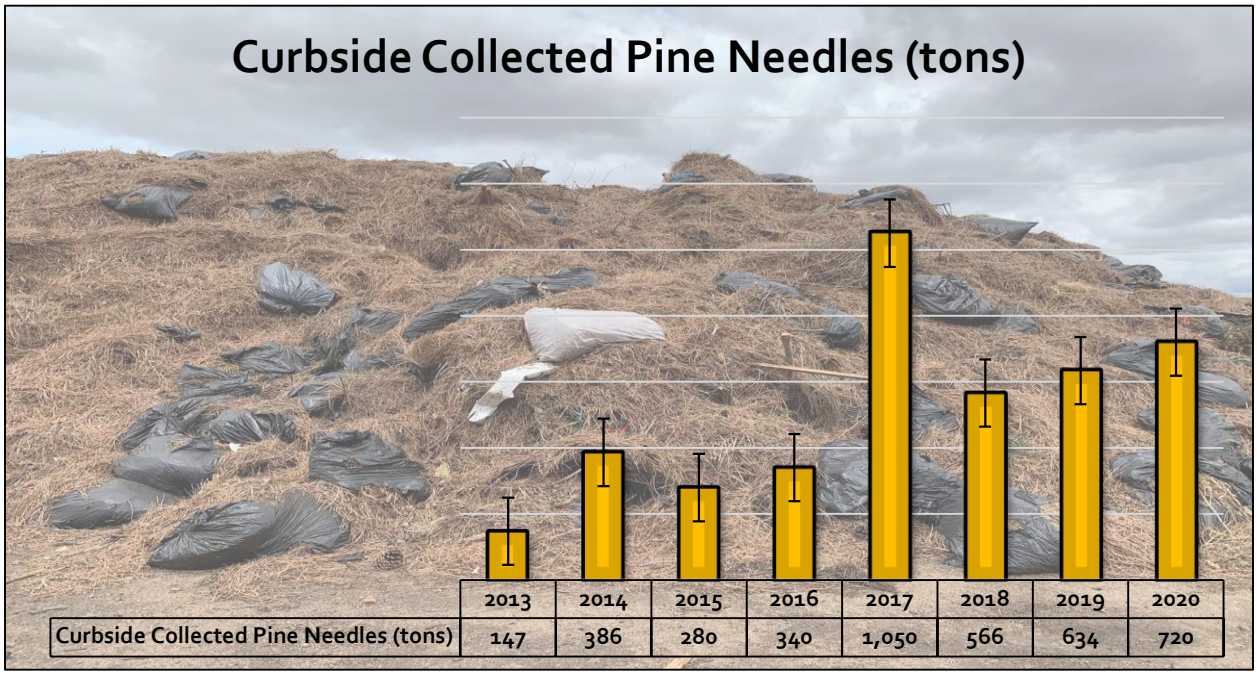
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total Landfill (tons)	17,875	14,389	17,200	15,237	13,407	14,229	15,368	13,278	13,110	13,055
Total Recycling (tons)	993	999	874	657	1,099	1,052	1,105	1,133	1,619	1,132

Total Landfill (tons) Total Recycling (tons)

The total amounts of community recycling and landfill materials are displayed on the graphs above. These figures include all route collected materials plus materials brought by customers to the Incline Village Transfer Station that include construction/demolition materials and miscellaneous items.

Specialty Waste Streams

Pine Needles and Yard Waste



	2013	2014	2015	2016	2017	2018	2019	2020
Curbside Collected Pine Needles (tons)	147	386	280	340	1,050	566	634	720

Collection of pine needles and associated yard debris increased from 12 weeks per year to 16 weeks per year with approval of the new waste franchise agreement that was implemented in 2017. The Diamond Peak Ski Resort parking lot was the home of a drop-off "pine needle pile" beginning in 1997. Since the curbside program started in 2013, a total of 4,123 tons (more than 9 million pounds) of pine needles have been collected by WM and processed by Full Circle Compost in Carson City. WM collected a grand total of 91,549 qualifying pine needle/yard waste bags in 2020.

Christmas Trees

Christmas Tree Recycling has taken place since 1997. Christmas trees are dropped off by residents or collected by WM during a designated timeframe and processed at Preston Field in Incline Village. The North Lake Tahoe Fire Protection District chips the trees for use as mulch and ground cover on District properties. An average of 20 tons of mulch are produced from approximately 1,500 discarded trees annually.

Christmas Trees ready for chipping at Preston Field

Joe and Sarah organizing the community's hazardous waste for proper disposal.

Community Household Hazardous Waste and Electronic Waste

Each person in the United States produces an average of 4 pounds of household hazardous waste each year for a total of about 530,000 tons per year in the United States of America. The average U.S. household produces more than 20 pounds of household hazardous waste per year. As much as 100 pounds can accumulate in the home, often remaining there until the residents move out or conduct an extensive cleanout (www.*epa.gov*).

Public Works staff collects Household Hazardous Waste (HHW) and Electronic Waste (E-Waste) from Incline Village and Crystal Bay residents with valid proof of residency. Hazardous waste is collected and treated by CleanEarth in Sacramento, California. All electronic waste is captured by Intelligent Lifecycle Solutions in Sparks, Nevada. At least two staff members with HAZWOPER (Hazardous Waste Operations and Emergency Response) certifications must be present during operational hours to ensure that all safety and regulatory codes are properly enforced.

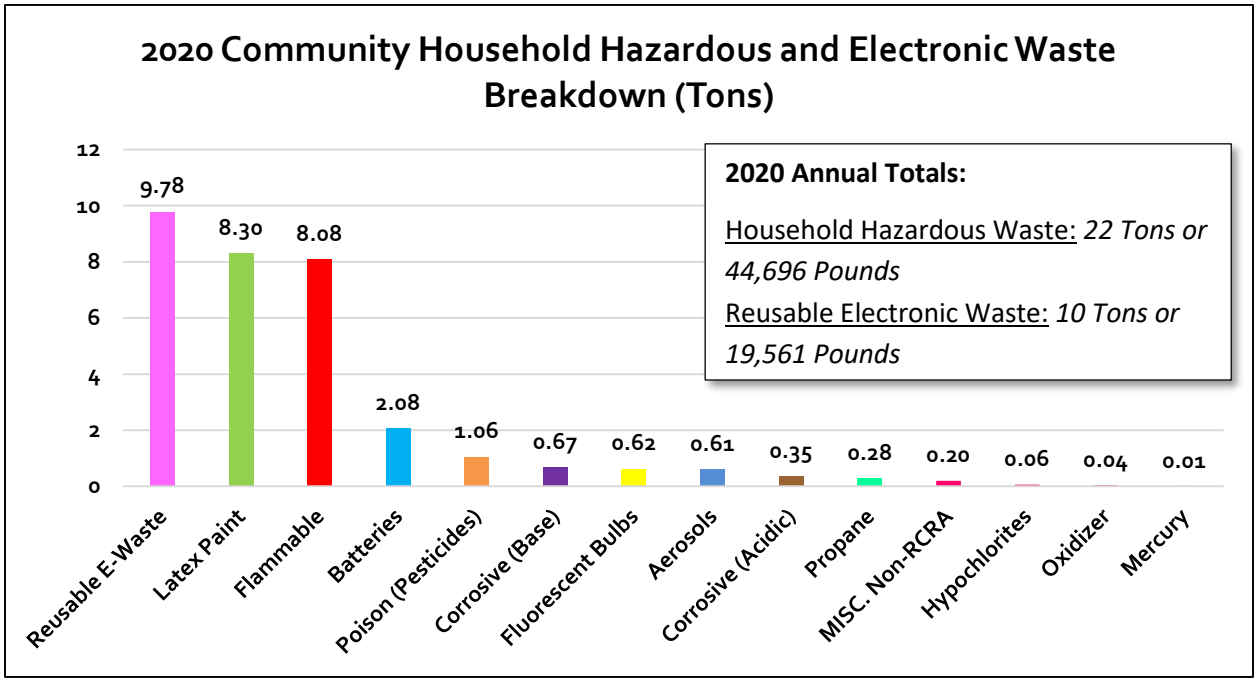
The pandemic forced the program to initially close and then shift its Tuesday and Thursday afternoon open hours to an appointment-only system with social distancing measures in place. The program reopened in June serving a total of 517 customers through November before closing for winter.

CleanEarth

Intelligent Lifecycle Solutions

According to the U.S. Census Bureau, there are 4,032 households in Incline Village and Crystal Bay, Nevada. Therefore, the community's household average was 11 pounds of hazardous waste and 5 pounds of electronic waste. Households in this community produce less hazardous waste than the national average of 20 pounds per year.

The number of customer interactions tracks how many individuals presented their IVGID Pass or other proof of residency to gain access to this service throughout the year. The individual is a representative of the household and no information is gathered to indicate the amount of waste that was produced per capita from that household. Some individuals come more than once per year and each drop-off interaction is counted toward the total number of customers served. HHW customers brought an average of 57 pounds of hazardous waste and 25 pounds of electronic waste per visit in 2020.

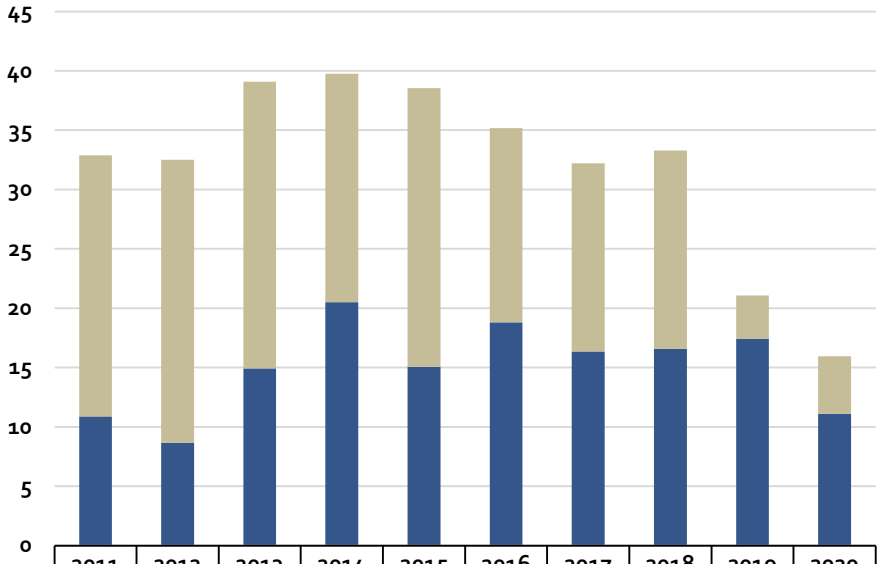


Televisions and CRT Monitors were recyclable as electronic waste through this program until October of 2018. Changes were made to account for overall safety and rising costs of transporting and properly recycling these bulky components. The nearest available place to recycle a television or CRT for the Incline Village and Crystal Bay area is at a company called Intelligent Lifecycle Solutions, Inc. located at 962 East Greg Street in Sparks, Nevada. Hero Environmental is based at 4900 Mill Street #7 in Reno, Nevada. The service can provide curbside collection of hazardous waste and televisions for Incline Village and Crystal Bay residents in addition to a drop off location for hazardous waste items only. Call for pricing, restrictions, and availability.

Intelligent Lifecycle Solutions, Inc.: (775) 690 - 9348

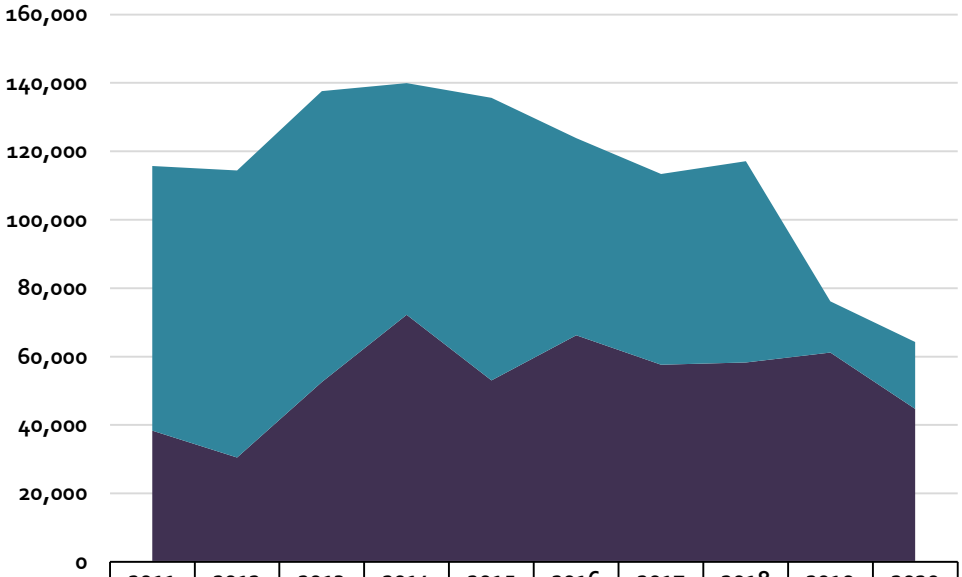
HERO Environmental Services: (775) 900 - 4376

Average Community Household Hazardous and Electronic Waste Produced per Household by Weight (Pounds)



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Average E-Waste Produced per Household (lbs.)	22	24	24	19	23	16	16	17	4	5
Average HHW Produced per Household (lbs.)	11	9	15	21	15	19	16	17	17	11

Household Hazardous and Electronic Waste Processed per Year by Weight (Pounds)



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Electronic Waste Weight (lbs.)	77,434	83,893	85,050	67,726	82,640	57,600	55,820	58,830	14,880	19,561
Household Hazardous Waste Weight (lbs.)	38,320	30,527	52,545	72,192	53,020	66,220	57,586	58,324	61,224	44,696

SUPPLY CHAIN MANAGEMENT

Introduction

Sustainable procurement is an encouraged activity and takes place with goods related to bathroom tissues and kitchen towels among other daily use items. Employee events are typically supplied with reusable cutlery, recyclable materials, and compostable products when appropriate. The checklist presented in this section can be used as a purchasing guide by anybody who wants to plan his or her procurement procedures with environmental, financial, and cultural sustainability in mind.

A policy approved by the Board of Trustees would require these practices for District operations, but no such policy currently exists. Indirect policy benefits related to reduced pollution, avoidance of unlawful manufacturing practices, and ecosystem protection are difficult to quantify especially for an organization of this size. However, procurement policies should not allow wastefulness.

Sustainable Purchasing Checklist

First, determine if the product or service is truly necessary. Purchasing will need to be balanced with issues of product performance, cost, and availability.

Waste Reduction

- ☐ Is the Product Durable?
- ☐ Can the product be easily and economically serviced and maintained?
- ☐ Is the product designed to reduce consumption and minimize waste?
- ☐ Is the product reusable?
- ☐ Is the product technically and economically recyclable in the immediate area?
- ☐ Do facilities and internal collection systems exist to recycle the product?
- ☐ Can the product be returned to the supplier at the end of its useful life?
- ☐ Is the product compostable and are systems in place to compost the product on or off site?
- ☐ Will the product biodegrade over time into harmless elements?

Packaging

- ☐ Is the product necessary?
- ☐ Can the product be eliminated?
- ☐ Is minimal packaging used?
- ☐ Is the product packaged in bulk?
- ☐ Is the package reusable or recyclable?
- ☐ Are recycled materials used to produce the packaging and at what percent post-consumer waste?
- ☐ Can the packaging be returned to the supplier?
- ☐ Is the packaging compostable?

Material Source

- ☐ Are recycled materials used in the product? If so, what percentage?
- ☐ What percentage of post-consumer materials is used?
- ☐ If wood is used in the product, what is its source and how is harvested?
- ☐ Is the product manufactured from tropical rain forest wood?

Energy Efficiency

- ☐ Is the product energy-efficient compared to competitive products?
- ☐ Can the product be recharged?
- ☐ Can the product run on renewable fuels?
- ☐ Does the product require less energy to manufacture than competing products?

Supplier Environment Record

- ☐ Is the company producing the product in compliance with all environmental laws and regulations?
- ☐ What is the company's handling environmental and safety issues?
- ☐ Can the company verify all environmental claims?
- ☐ Does the manufacturer/supplier have a company environmental policy statement?
- ☐ What programs are in place/planned for promoting resource efficiency?
- ☐ Are printed materials available documenting these programs?
- ☐ Has the company conducted and environmental or waste audit?
- ☐ Is the product supplier equipped to bid and bill electronically?
- ☐ Has an environmental life-cycle analysis of the product (and its packaging) been conducted by a certified testing organization, such as Green Seal?

Minimize Transportation

- ☐ Can the required products be obtained from local sources?

CONCLUSION

Moving Sustainability Forward

This report features a few select sustainability measurements that are most important to Public Works operations and its stakeholders. Future reports may give more detail to existing datasets but will also include additional sustainability related measurements, as those datasets are prepared. The meaning of this information is to inform stakeholders, staff, and leadership within the organization of potential improvements that could be made to our overall operational footprint.

Goals for Future Reports

The American Water Works Association reports that energy efficiency measures are easy to implement and enable utilities to document significant cost savings, greenhouse gas emissions, and reduced environmental impacts. Documenting successful and cost-effective sustainable practices related to resource use helps utilities make the case for sustainability. This report assists Public Works in making progress toward achieving a sustainable utility.

COVID-19

The response to the pandemic varied throughout the year depending on available information. The best resource for all local coronavirus information is organized at Washoe County's Regional Information Center. (www.covid19washoe.com)

Drinking Water Disinfection Chamber

Summary

The Incline Village General Improvement District recognizes that the community of Incline Village and Crystal Bay is a system of built, natural, and human networks. IVGID also realizes that we must plan from a regional perspective while implementing local projects and initiatives. Sustainability is an essential behavior in managing a community-wide system. Our environmental resources are pristine yet growing populations, drought, and climate change challenge the resiliency of our community. This challenge demands that organizations and communities within the Lake Tahoe Basin make plans with sustainability as a key strategy element.

IVGID is addressing the sustainability element through long-range principles, a sustainability framework, in addition to this report. In conclusion, it is most efficient to redevelop first, provide efficient infrastructure and support concentrated development. Restoration and enhancement of the environment along with enhancement of recreational and heritage resources will help preserve our local ecosystem. The practice of good communication, civic engagement, leadership, and fiscal responsibility will make the most progress in cultivating a sustainable community.

APPENDICES

Appendix A

INCLINE VILLAGE
GENERAL IMPROVEMENT DISTRICT
ONE DISTRICT ~ ONE TEAM

RESOLUTION NUMBER 1836
ENVIRONMENTAL SUSTAINABILITY RESOLUTION
INCLINE VILLAGE/CRYSTAL BAY, NEVADA

WHEREAS, it is in the interest of Incline Village/Crystal Bay, Nevada to conserve and protect natural resources for current and future generations; and

WHEREAS, IVGID acknowledges that a changing climate poses economic and recreational challenges to the communities of Incline Village/Crystal Bay; and

WHEREAS, IVGID operations have economic, cultural and environmental impacts that are currently not fully evaluated and benchmarked; and

WHEREAS, the evaluation of sustainability topics including but not limited to: Economic Health, Community Health, Safety and Equity, Forest, Biological and Recreational Resources and Management, Solid Waste and Recycling and Water Quality, Resources and Conservation and can provide economic and environmental benefit to the District; and

WHEREAS, Nevada Revised Statutes 278, 332, 338 and 444A and the Washoe County Master Plan have established sustainability-related policies; and

WHEREAS, *the Tahoe Regional Planning Agency has established the Sustainable* Communities Program, Framework and Action Plan; and

WHEREAS, this policy will further contribute to the District's compliance with county, state and regional governing bodies; and

WHEREAS, IVGID being located within the Lake Tahoe Basin and watershed creates an enhanced need for environmental stewardship and leadership; and

WHEREAS, sustainability is an essential behavior of the IVGID core values which are Integrity, Service, Responsibility, Excellence, and Teamwork.

NOW, THEREFORE, BE IT RESOLVED THAT THE BOARD OF TRUSTEES OF INCLINE VILLAGE GENERAL IMPROVEMENT DISTRICT does hereby recognize the importance of environmental sustainability for our organizations and the priority it must play in decision- and policy-making; and encourages the citizens of Incline Village and Crystal Bay, Nevada in taking a proactive role in changing human behavior in embracing sustainable practices to help protect our environment.

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Appendix B

Celebrating 30 Years of Community Conservation Services by IVGID Waste Not (1992 - 2022)

Year Started	Year Ended	# of Years	Program
1992	ongoing	30	IVGID Waste Not Program Founded
1992	ongoing	30	IVGID Curbside Recycling, from source separated crates --> blue bags --> carts!
1997	ongoing	25	IVGID Christmas Tree Recycling / Chipping
1997	ongoing	25	IVGID Household Hazardous Waste (HHW) Drop Off Program
2000	ongoing	22	Snapshot Day – Volunteer Water Quality Sampling Day
1997	2012	15	IVGID Pine Needle Recycling, Diamond Peak Pile maintained
2002	ongoing	20	School Educational Programs
2005	2014	9	IVGID Kids for Conservation event held
2007	2016	9	IVGID Blue Bag Program for Single Stream Recycling
2002	ongoing	20	Tahoe Water Suppliers Association (TWSA) Founded.
2003	ongoing	19	IVGID Watershed Water Quality sampling at beaches and streams
2007	ongoing	15	Community Clean-Up Days
2004	ongoing	18	IVGID Bear Box Rebates
2004	ongoing	18	IVGID Bear Awareness Program (Stash Your Trash/ Bear Smart)
2000	2008	8	Clean Water Team / IVGID watershed water quality sampling
2007	2015	8	AmeriCorps Team Host Site
2009	ongoing	13	Regional Green Business Program Partner
2010	ongoing	12	TWSA's "Drink Tahoe Tap" Campaign & Trademarking
2010	ongoing	12	TWSA Aquatic Invasive Species Workgroups
2010	ongoing	12	TWSA Dog Waste Awareness Campaigns
2002	2017	15	Lake Tahoe Demo Garden
2009	2014	5	"Zero Waste" Program offered
2012	ongoing	10	IVGID Curbside Pine Needle / Yard Waste pickup program
2010	ongoing	12	IVGID E-Waste added to Drop Off Program
2013	ongoing	9	"No Butts on the Beach" Campaign
2014	ongoing	8	"Take Care" Campaign Partnership Member
2015	ongoing	7	IVGID Sustainability Programs Research and Development
2019	ongoing	3	Microplastics Education and Research

Year/ Award / Recognition

2006	American Water Works Association (AWWA) "Exceptional Source Water Protection" Award
2006	Parasol Community Collaboration "Outstanding Event in Education" Award
2005	Northern Nevada GreenUP – "Golden Pine Cone Award"
multi	IVGID "America in Bloom" (multiple years) & "Tree City USA")
2008	Parasol's "Best Environmental Program or Event"
2008	NDEP "Wendell McCurry Source Protection Water Award"
2009	"Positive Environmental Impact Award", North Lake Tahoe Chamber of Commerce
2014	"TRPA Lake Spirit Award", North Shore Agency Representative
multi	"Best Tasting Water in Nevada" (multiple years, IVGID: TWSA)
2016	"Best Tasting Water in America" (TWSA member Glenbrook, National Rural Water Rally)
2018	Diamond Peak "STOKE" Sustainability Certification
2019	Diamond Peak "Golden Pinecone" Award from Northern Nevada GreenUP
2020	American Water Works Association (AWWA) "Exceptional Source Water Protection" Award
2020	TRPA "Lake Spirit Award"; 50th Anniversary edition

Appendix C

INCLINE VILLAGE PUBLIC WORKS

IVGID ORDINANCE ONE (SOLID WASTE):

A Residential service violation shall include but not be limited to:

- Solid waste being placed at the curb on the wrong specified pick-up day or prior to 5:00 a.m. on the pick-up day.
- Solid waste spilled on the property outside the building.
- Solid waste placed at the curb for service on the pick-up day at the proper time but not properly contained within the container.
- Loose or non-contained garbage placed next to the container.
- Overflowing Container.
- Garbage placed in bags next to the container at the curb.
- Anything in the judgement of the Director of Public Works which constitutes a violation of the General Provisions of this Ordinance.
- Yard debris is properly bagged and identified with the collector provided tag for the current year shall only be placed at the curb for pick-up during the annually designated 16-week timeframe for the yard debris program in accordance with the published procedures. All other times of placement at the curb are a violation.

A Commercial Service Violation shall include but not be limited to:

- An overfilled dumpster.
- A dumpster not secured, dumpster not tightly closed and locked or latched (there shall be no gap between lid and bin).
- Solid waste on top of or outside of dumpster.
- Solid waste inside or outside of enclosure.
- Enclosure doors not secured.
- Solid waste spilled around the enclosure.
- Anything in the judgement of the Director of Public Works which constitutes a violation of the General Provisions of this Ordinance.

Authorized Remedies for Non-Compliance:

- Termination of utility service(s);
- Assessment of fees established by the District.

Residential Waste Service Fee Schedule for Non-Compliance with Ordinance Provisions

1st Offense	Mandatory 64 or 96 gallon Enhanced Wildlife Resistant Cart (WRC) Service
2nd Offense	$100 to $999
3rd and Subsequent Offenses	$500 to $999

- Fees are non-refundable except upon relief provided under appeal process or with installation of bear shed within 60 days of billed fee or mutually agreed upon time frame.

Commercial Waste Service Fee Schedule for Non-Compliance with Ordinance Provisions

1st Offense	Up to $999
2nd and Subsequent Offenses	$500 to $999

- Fees are non-refundable except upon relief provided under appeal process or with use of enhanced wildlife resistant dumpster within 60 days of billed fee or mutually agreed upon time frame.
- An empty dumpster is not a violation if left unlatched.

GLOSSARY AND REFERENCES

Acronyms

AL – Action Limit
AWWA – American Water Works Association
AVB – Anne Vorderbruggen Building (IVGID Administrative Offices)
BCWDP – Burnt Cedar Water Disinfection Plant
CAP – Climate Action Plan
CCR – Consumer Confidence Report
CO_2 – Carbon Dioxide
DO – Dissolved Oxygen
EPA – Environmental protection Agency
E-Waste – Electronic Waste
GHG – Greenhouse Gas(es)
HAZWOPER – Hazardous Waste Operations and Emergency Response
HHW – Household Hazardous Waste
IVGID – Incline Village General Improvement District
LEED – Leadership in Energy and Environmental Design
MGD – Million Gallons per Day
NDEP – Nevada Department of Environmental Protection
NTU – Nephelometric Unit
ppb – Parts per Billion
ppm – Parts per Million
SEZ – Stream Environment Zone
STOKE – Sustainable Tourism Operator's Kit for Evaluation
TBD – To be determined
TDS – Total Dissolved Solids
TRPA – Tahoe Regional Planning Agency
TWSA – Tahoe Water Suppliers Association
WEF – Water Environment Federation
WRRF – Water Resource Recovery Facility

Definitions

Adaptation - Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effect, which minimizes harm or exploits beneficial opportunities.

Climate Change - Any long-term change in average climate conditions in a place or region, weather due to natural causes or as a result of human activity.

Greenhouse Gases Emissions – The emission of gases in the earth's atmosphere that reduce the loss of heat into space.

Littoral - Relating to or situated on the shore of the sea or a lake.

Mitigation - A human intervention to reduce the sources or improve the uptake (sinks) of greenhouse gases.

Resilience - The ability of a system to absorb some amount of change, including shocks from extreme events, and recover from them to be able to function and provide essential services and amenities that it has evolved or been designed to provide.

Riparian - Relating to wetlands adjacent to rivers and streams.

Stream Environment Zone - Generally an area that owes its biological and physical characteristics to the presence of surface or ground water.

Sustainability – (1) capable of being sustained; (2a) of, relating to, or being a method of harvesting or using a resource so that the resource is not depleted or permanently damaged ("sustainable techniques") ("sustainable agriculture"); (2b) of or relating to a lifestyle involving the use of sustainable methods("sustainable society"); (3) development that meets the needs of the present without compromising the ability of future generations to meet their own needs; and (4) improving the quality of human life while living within the carrying capacity of supporting ecosystems.

System - The built, natural, and human networks that provide important services or activities.

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