



Glossary of Terms

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|---|-----------------------------|
| Acre foot | Meadow |
| Agricultural Water Management Plan (AWMP) | Miner's inch |
| California Environmental Quality Act (CEQA) | Program |
| Carryover storage | Project |
| Climate change | Purchased Water |
| Community Investment Program | Raw water |
| Conservation | Runoff |
| Consumptive Use | Service area |
| Cost of Service | Strategic Plan |
| Dams | Supply source |
| Drought | Surface Water |
| Drought Plan | Tailwater |
| Evapotranspiration | Treated water |
| FERC Relicensing | Urban Water Management Plan |
| Forest health | Vegetation management |
| Groundwater | Water |
| Headwaters | Water management |
| Hydropower | Water planning projections |
| Hydrologic cycle | Water quality |
| Infrastructure | Water rights |
| Irrigation | Water Supply |
| Instream Flow | Water year |
| | Watershed |
| | Yuba-Bear Project |





Acre-foot

An acre-foot is a common way to measure water volume and use. One acre-foot of water equals about 326,000 gallons, or the amount of water necessary to cover one acre to a depth of one foot. It is typically enough water to supply 2.5 single-family households of four for a year.

The NID water supply system relies on diverting snowmelt runoff and capturing runoff flows in District reservoirs for use during the irrigation summer when runoff is reduced. The District's water rights, including diversion and storage, total approximately 450,000 acre-feet, although the amount that is actually available for use is less due to temporal differences between water rights, runoff season, and irrigation season needs.

Agricultural Water Management Plan (AWMP)

The Agricultural Water Management Plan (AWMP) addresses NID's water system with information about the District's delivery to roughly 5,200 agricultural customers who irrigate about 33,000 acres. The Plan focuses on past water usage, conservation efforts, and other management elements.

The AWMP includes a description of the service area, water uses, water resources, and a comparison of water supply and water demands. Also described are the District's water supply reliability, water use efficiency information, water shortage allocation policies, and the Drought Management Plan.

The NID Board of Directors approved the 2020 AWMP on April 14, 2021. The AWMP is required by the Agricultural Water Management Planning Act (Act) (California Water Code Section 10820(a)), which requires all agricultural water suppliers that provide water to 10,000 or more irrigated acres within their service area to prepare an AWMP.

[2020 Agricultural Water Management Plan](#)

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) serves a foundation for the state's environmental protection efforts. The law requires that projects with the potential for significant impacts on the physical environment undergo an environmental review.

Passed in 1970, it requires lead agencies to prepare and submit for public review environmental impact reports (EIRs) on major projects under their purview with potentially significant environmental impacts.

Carryover storage

Carryover is the end-of-year reserves of water in storage to enhance the ability to continue delivering water to all beneficial uses. It is a portion of water that NID needs for the next year's delivery. In 2021, the District's carryover storage target (at the end of October) was a minimum of 105,000 acre-feet in storage.

During drought, with overall decreased water levels, the District may need to increase withdrawals from storage reservoirs and reduce end of year carryover storage to meet demands. To ensure there is appropriate carryover, the Board of Directors may escalate its drought restrictions.



Climate change

Climate change is the long-term alteration of temperature and weather patterns. During the past 150 years, human industrial activity has been largely attributed to the increased levels of atmospheric carbon dioxide produced by the use of fossil fuels.

The California Environmental Protection Agency, California Energy Commission and California Natural Resources Agency have concluded:

- Precipitation patterns are changing, with more rain, less snow and shrinking glaciers in the Sierra Nevada
- Less snowpack and earlier springtime melting are reducing hydropower capacity
- Rising sea levels will also worsen coastal flooding and push more salty ocean water into coastal ground-water aquifers Hotter temperatures will also lead to more wildfires of increased intensity Dry weather will lead to more tree deaths and altered vegetation patterns, with some plants moving to higher ground
- More wildlife is expected to change habitat, migrating to higher ground
- Hotter weather also will likely lead to more potentially lethal heat waves and related water shortages and droughts
- Oceans and lakes are likely to see their average water temperatures rise
- Cold periods in winter needed for growing fruits and nuts will be shorter
- Native freshwater fish are particularly vulnerable to climate change, and are at risk of extinction.

NID's snowpack-based supply and delivery strategy could be extensively impacted by changing temperatures and precipitation. District analysis included projecting future hydrologic conditions and their potential effect on NID water supplies, specifically watershed runoff. The approach, State and Global Climate Model (GCM) datasets incorporated, assumptions, and results of the analysis are documented in the technical memorandum "Hydrologic Analysis Technical Memorandum – Final Report" (HDR, 2020)

The modeling results indicate NID should expect changes to the existing runoff patterns. In addition to the District's own supply and demand impacts, climate change could also affect NID with respect to statewide needs and local agriculture.

State policies, regulations, and legal impacts could likely impact NID's supply availability for local use. Local climate change impacts will likely affect current supply source options.

Climate change could have an effect on NID supply requirements, operational strategies, and infrastructure requirements. In addition to supply and demand issues, NID also expects impacts to its other responsibilities. Watershed impacts will affect forest management practices, implementation of the FERC license requirements, and increase catastrophic fire risk. Existing recreation opportunities may be altered or not available under certain conditions. Hydropower generation, which provides significant revenue to the District, may be shifted into less beneficial market pricing periods. Hydropower generation may also decrease as the normal high revenue summertime generation period may not have the water supply to generate as in the past.

Enhancing climate change resiliency is an important element for all levels of water resources. The State is pursuing numerous avenues to quantify potential issues and develop mitigation alternatives. NID will follow these efforts and participate as available.

The District is committed to controlling its own water resources in a self-determining manner per its strategic plan. The Plan for Water is NID's vehicle to assess climate change impacts and develop and implement mitigation strategies and modifications to operate within climate change.



Community Investment Program (CIP)

NID's Community Investment Program (**CIP**) began in 2009 as a response to the Board of Director's objective to expand water services to existing customers. This was a result of the Sauers Report that outlined the need of the District to set goals to provide infrastructure to areas that pay taxes to the District.

The program is comprised of four sections, District Financed Waterline Extensions (DFWLE), Assessment District (AD), Community Facility Districts (CFD), and New Fire Hydrants. The program is budgeted through the Engineering Department with an allocation of approximately 1 million dollars annually.

The program is intended to assist groups with obtaining treated water service to their property by extending waterlines utilizing District financing. These services include items such as preliminary design, permitting including California Environmental Quality Act (CEQA), costs estimates, final design, bidding, financing, construction management, installing water meters, and establishing a customer's account.

<https://nidwater.com/community-investment-program/>

Conservation

Water conservation is the practice of using water efficiently to reduce unnecessary water usage.

For treated water, NID conservation practices include specifying new or retrofit plumbing including ultra-low flush toilet replacement programs, installing or developing leak detection programs, developing water education programs, and financial incentives.

Conservation measures for irrigation have been proposed in three areas: irrigation management including improved water measurements and accounting and irrigation efficiency practices; physical improvements such as lining canals or ditches to reduce losses; automation of canal structures improvements such as canal flow measuring devices; and institutional adjustments.

As the demand for water increases, NID recognizes that greater progress is needed in water conservation as a critical part of the overall strategy for managing water resources efficiently. Conservation measures once thought unnecessary now are considered essential for meeting future water demand.

Consumptive Use

Consumptive water use is the total seasonal water loss from an area of land that is evaporated, transpired, incorporated into plant growth and crops, consumed by humans and livestock, or otherwise removed from the immediate water environment.

Typically, water withdrawn for agriculture is consumptive water. Drinking can also be consumptive use unless the water is recaptured in sewer systems, re-treated and then re-used. Raw water for irrigation also is a consumptive use.

A water use is non-consumptive when the water remains in or is immediately returned to a stream from which it was extracted. For example, hydroelectric power generation and recreational uses are considered to be non-consumptive.





Cost of Service

Every five years NID conducts a Cost of Service Study to provide the basis for determining the rates charged to customers for providing water. The District must ensure that operating and capital costs are covered and a sufficient reserve fund is maintained for emergencies.

NID is unique in its ability to subsidize the costs to provide water service using hydropower revenues. For example, the 2020 budget anticipated \$13.6 million in hydropower revenues subsidized the cost to deliver water.

The [2020 Cost of Service Study](#) was completed at the direction of NID's Board of Directors on April 24, 2019. The 2020 study included specific allocations between raw and treated water customers and the cost to deliver water to customers by water delivery system and zone.

Dams

A dam built across a stream or river holds water back to store water, control flooding, and generate hydro-power. Most reservoirs are formed by constructing dams constructed from concrete, timber, masonry and earthen materials.

Nine of NID's dams provide major water storage before distributing the water to downstream customers. In total, the District owns and operates 15 dams under the jurisdiction of the California Department of Water Resources Division of Safety of Dams (DSOD). All of these dams, with the exception of Loma Rica Airport and Deer Creek, are also under the jurisdiction of the Federal Energy Regulatory Commission (FERC).

NID performs weekly visual dam safety inspections, detailed dam safety inspections, and monthly dam instrumentation readings. During the winter months, when some of the higher elevation dams are not accessible, aerial inspections are performed by helicopter about once a month. Horizontal and vertical displacements of the dams are surveyed by NID according to survey intervals set for each dam, with the exception of Loma Rica Airport, Jackson Lake, and Milton Diversion dams.

Drought

Drought is an extended period of limited or no precipitation. A severe drought in 1976-1977 served as a wake-up call for the state and focused attention on a water conservation movement. Recent droughts have occurred in 2012–2016 and 2021.

NID's water supplies are vulnerable to drought and are expected to be further impacted by climate change. The District's supply system relies on snowmelt runoff, as well as capture and storage in reservoirs to release during the irrigation season. During droughts, runoff is reduced, and the District must manage its storage and customer demands to meet requirements.

Drought Plan

NID maintains a Drought Plan to be implemented when a drought emergency is declared by the District's Board of Directors, pursuant to California Water Code (CWC) §10632.

The plan provides guidance to staff and customers to help minimize drought or water supply shortage impacts. It identifies drought action levels, appropriate agency responses, water demand reduction goals, and provides recommended demand management measures to assist customers in water conservation.

The Drought Plan is included in the District's [2020 Urban Water Management Plan \(UWMP\)](#).





Evapotranspiration

Evapotranspiration is the process by which water vapor is released into the air from the soil and by plants through the pores of their leaves.

In 2020 NID conducted a comparison of the evapotranspiration of applied water with the total applied water. The survey found 109,016 acre-feet of water was purchased by agricultural customers. Evapotranspiration of this applied water was 90,660 acre-feet.

FERC Relicensing

The Federal Energy Regulatory Commission (FERC) requires relicensing of NID's Yuba-Bear Hydroelectric Project. The Yuba-Bear Project is located within three major river basins, the Middle Yuba River, South Yuba River, and Bear River, in Sierra, Nevada, and Placer counties.

Here, NID owns and operates 15 dams under the jurisdiction of the California Department of Water Resources Division of Safety of Dams (DSOD). All of these dams, with the exception of Loma Rica Airport and Deer Creek, are also under the jurisdiction of FERC.

Both DSOD and FERC perform annual dam safety inspections. In addition, FERC requires NID to hire an independent consultant to inspect the dams and perform a Potential Failure Mode Analysis every 5 years. Other supporting documents and reports are often updated during the 5-year independent consultant inspection and evaluation.

Forest Health

Forest health has been defined as the ability of a forest to recover from natural and human-caused stressors, according to the United States Forest Service (1992).

Healthy forests are essential for sustainable management, yet like other ecosystems are subject to a number of threats that can cause tree mortality or reduce their ability to provide a full range of goods and services.

Dense forests utilize more water for normal evapotranspiration which reduces the water yield from forested watersheds. Additionally, removing small trees and shrubs from the forest which would historically have been cleared through naturally occurring periodic fire decreases competition for limited resources such as water and sunlight, and increases the overall health of the forest.

NID's forest management projects are essential for protecting the watersheds on which the District depends for its water. These projects include fire hazard mitigation and hazard tree removal, forest community improvement, and habitat restoration.

Most recently, in a collaborative effort with CalFire, US Forest Service, and Sierra Conservancy, NID has been working to reduce the density of the forested area on and around District land.

A current focus of NID's forest health work is occurring in the Deer Creek / Scotts Flat Watershed because of the high ignition potential in this area, and the significant consequences for water storage, water quality and District infrastructure if a wildfire burned there.





Groundwater

Groundwater is created mostly through snowmelt and rain seeping into the soil, broken underground rocks.

The infiltrating water moves underground through small openings within porous material, called aquifers. It moves gradually to points of discharge, such as lakes and rivers. The water also can flow naturally to the surface via seepage or springs.

NID does not use groundwater as an existing or planned source of water supply due to limited groundwater availability. The majority of the District has no groundwater aquifer (per California Department of Water Resources Bulletin 118) except a very small portion of the District's service area in Lincoln, which is on the eastern boundary of the Sacramento River Basin, North American Sub-Basin.

Headwaters

Headwaters are the source of a stream or river. Two-thirds of California's surface water supply originates in these mountainous and typically forested regions.

NID water originates as snowmelt found in 70,000 acres of high elevation watershed near the headwaters of the Yuba River, Bear River and Deer Creek.

Hydropower

Hydroelectric power is produced when water released from a reservoir turns a turbine connected to a generator. It's a clean, renewable energy source that won't pollute the air like fossil fuels.

The District has seven power plants that generate enough electricity to supply the equivalent of more than 60,000 homes. NID has a generation capacity of 82.2 megawatts, produces an average 375 million kilowatt hours of energy each year, and sells its electrical output to the Pacific Gas & Electric Co.

NID began producing electricity in 1965 with the completion of the \$65 million Yuba-Bear Power Project. The original project included the Chicago Park and Dutch Flat powerhouses and, in 1980, the Rollins and Bowman powerhouses were added. Additional small power plants were added during the 1980s at Scotts Flat and Combie reservoirs to make use of existing water releases.

The District has power sales agreements that market NID's electricity to the Pacific Gas & Electric Company and the Northern California Power Agency.

NID Power Plants (Capacity/megawatts)

Chicago Park 39.0

Dutch Flat 24.57

Rollins 12.15

Bowman 3.6

Combie South 1.5

Scotts Flat 0.875

Combie North 0.5

Total: 82.2 megawatts





Hydrologic cycle

The hydrologic cycle, or water cycle, is the continuous circulation of both surface water and groundwater. It is the exchange of moisture among oceans, the atmosphere land.

Water evaporates to become clouds. The clouds condense to become rain and snow. And add a repeat. Whether solid, gas or liquid, each form of water remains part of the cycle and are recycled from form to form and from use to use.

Infrastructure

NID's water is stored in an extensive system of nine reservoirs. To get water to farms, residences and businesses, the District maintains 500 miles of canals and 400 miles of treated water pipelines. The District also operates seven hydroelectric plants and six water treatment plants.

Irrigation

Irrigation is the process of applying a supply of water to grow crops or plants. The supply is obtained from either surface water or groundwater, and is used to optimize agricultural production when the amount of rain is insufficient.

About 90 percent of all water delivered by NID (about 5,600 agricultural customers) is used to irrigate about 32,000 acres in Nevada and Placer counties.

Instream Flow

Instream use is how water is used in a stream channel and river system. This flow refers to the water discharge at least partly controlled by a dam or diversion structure.

There are many different uses of instream flow, including competing uses for water, such as irrigation, public supply, recreation, hydropower, and aquatic habitat.

Meadow

A meadow is a large field of grass and plants such as ferns and wildflowers. The Sierra Nevada is home to some of the nation's largest, biologically richest and most functional meadows. Meadows, typically found near the headwaters, serve as nature's sponge to absorb and store water and also to function as a filter. Meadows are vital to forest health, yet are so dependent on melted snowpack are put at risk with climate change, pollution, invasive species and wildfire.

NID has worked with the Sierra Nevada Conservancy on a project to improve the natural ability of English Meadow to store and release water in a more self-sustaining manner. The District, with its partners, assessed existing conditions associated with peak and annual streamflow, water temperature, groundwater level, flora and fauna, forest condition, and archaeology.

The Sierra Nevada Conservancy provided a Watershed Improvement Grant to facilitate the development of a Forest Management Plan to guide fire fuels reduction, forest thinning and tree removal from the meadow and its immediate watershed.





Miner's inch

A miner's inch is the rate of water flow through a standard water box and measured by an orifice one-inch in diameter through a two-inch thick plank with a head of six inches.

The majority of NID's irrigation customers purchase water from April 15 through October 14 based on miner's inches.

Program

A program is comprised of multiple projects that are managed and coordinated as one. A program has the objective of achieving policy outcomes and benefits for the District.

Project

A project is a focused, singular effort with a specific deliverable, defined duration and budget. NID project types include waterline extensions, potential waterline extensions, master meter, approved projects (not submitted), private fire services, and potential private fire services.

Waterline extension projects are defined as projects requiring an extension of an existing waterline, while potential waterline extensions are waterline extension projects that are in a preplanning phase.

Purchased Water

NID has an agreement with the Pacific Gas and Electric Company (PG&E) to purchase water under a contract. This is surface water that generally originates from the same watershed as the District's surface water supply.

The maximum amount available for District purchase is 54,361 acre-feet with reductions in dry years based on the Sacramento Valley Index (SVI).

Raw Water

NID delivers untreated raw water to roughly 6,200 agricultural customers for irrigation of about 33,000 acres. About 90 percent of the District's water deliveries are to raw water customers. These include commercial agriculture, small-scale agriculture and other irrigation uses.

Currently, the District supplies raw water to Placer County Water Agency for treatment, which in turn provides the treated water to the City of Lincoln for retail.

Wholesale services include treated and raw water deliveries. Raw water wholesale connections include City of the Grass Valley Water Treatment Plant, Nevada City Water Treatment Plant, and Nevada City School of Arts.

NID's raw water customers have increased from 5,035 in 2014 to 5,188 in 2020, representing an increase of three percent.





Runoff

Runoff is the natural flow that replenishes surface water as it moves into a watershed, river or stream. It also supplies groundwater by percolating into an aquifer. Runoff comes directly from rain, snow-melt, irrigation or other sources. It is a vital element of the water cycle (and water supply) when it drains into a watershed.

Watershed runoff is NID's primary water supply. The amount of runoff and the manner in which it is used depends upon the amount of water contained in the snowpack and the rate at which the snowpack melts. The most prominent and obvious cause for the fluctuation in natural runoff is the variability in hydrologic conditions, as seen in the wide variations in annual rainfall/snowpack accumulations.

Over the last 30 years runoff has fluctuated from less than 77,378 acre-feet in a dry year (2015) to more than 467,000 acre-feet in a wet year (1995). Average runoff from the Upper Division watershed, including the watershed area feeding Scotts Flat Reservoir, is approximately 221,500 acre-feet.

Climate change could significantly impact the patterns of runoff, because more precipitation will fall as rain and less as snow. Also, warmer temperatures will change runoff patterns.

Service Area

NID's service area encompasses 287,000 acres and covers portions of three counties: Nevada, Placer, and Yuba. The District transports water from high elevation, mountain reservoirs to the lower elevation foothills and into portions of the northern Sacramento Valley near the City of Lincoln.

The District serves 52,000 parcels in its service area. Of those, 25,000 receive NID treated or raw water. It is assumed the remaining 25,000 parcels are served by fractured rock wells or are undeveloped.

Supply Source

The NID water supply system relies on diverting snowmelt runoff and capturing runoff flows, from 70,000 acres of high elevation watershed, in District reservoirs for use during the irrigation summer when runoff is reduced.

The District's water rights, including diversion and storage, total approximately 450,000 acre-feet, although the amount that is actually available for use is less due to temporal differences between water rights, runoff season, and irrigation season needs.

Surface Water

Surface water is water above the ground found in rivers, lakes, wetlands, watersheds and oceans. It is lost through evaporation or through seepage into the ground, where it becomes ground water.

NID's primary source of supply is local surface water derived principally from the Yuba River, Bear River, and Deer Creek watersheds. That water is diverted and stored under the District's pre-1914 and post-1914 appropriative water rights, which allow for a diversion of 450,000 acre-feet.

The District has an extensive system of storage reservoirs that provides surface water supply to the District's six water treatment plants, as well as to raw water customers.





Tailwater

Tailwater is excess surface water from water below a dam or hydropower development or land under cultivation.

Tailwater from higher elevation canals is recaptured in lower elevation canals due to the change in elevation of the extensive distribution system. NID has the right to resell return flows within the District boundaries. Therefore, this water is being recovered and utilized during the irrigation season.

The District maintains 15 automated gaging and telemetry stations within the canal system to increase efficiency and minimize spills. NID plans on increasing the measurement sites at non-recapturable end points, adding up to 10 sites over the next 10 years, assuming budget availability (AWMP).

Treated Water

Portions of the raw water flows are diverted from the canal system into NID's six water treatment plants to undergo a process that improves the quality to make it appropriate for a specific end-use, such as for drinking.

In 2020, The District provided treated water to 19,648 customers. The customer base primarily consisted of single family connections within Placer, Nevada, and Yuba counties.

Treated water wholesale connections include City of Grass Valley and Lake Vera Mutual Water Company.

Drinking water supplied to District customers continues to meet and exceed state and federal public health standards, based on testing results that serve as the basis for the [District's Water Quality Report](#).

Urban Water Management Plan (UWMP)

The Urban Water Management Plan (UWMP) addresses NID's water system and includes a description of the service area, water use, water supply sources, and a comparison of water supply and water demands during normal, single dry, and multiple-dry years. Also described is the District's water conservation program.

The NID Board of Directors approved the UWMP on July 14, 2021. The plan has been submitted to the State's Department of Water Resources as required by the Urban Water Management Planning Act of 1983 in California Water Code Division 6, Part 2.6, Sections 10610 through 10657.

[2020 Urban Water Management Plan](#)





Vegetation management

NID operates and maintains over 475 miles of irrigation canals in Nevada, Placer and Yuba counties. In an effort to deliver a reliable source of water to customers, the District implements an Integrated Vegetation Management Program to control algae and vegetation that pose challenges to reliable water delivery.

The presence of algae and vegetation within, adjacent and near District irrigation canal systems post a threat to water delivery when algae and vegetation growth consume canal system capacity, impede water flow, clog water intakes, and serve as habitat for other pests.

From April through October, the District implements its aquatic weed control in only those canals where algae and aquatic weed growth impede irrigation water deliveries to customers. Each year, the District plans and publishes a Seasonal Application Schedule to notify nearby water users when aquatic weed control applications are planned for those specific canals, where and when algae and aquatic weeds impede irrigation water deliveries to customers.

District algae and vegetation control practices comply with federal, state and local regulations, including those of the US Environmental Protection Agency, California Environmental Protection Agency, California Department of Pesticide Regulation, State Water Resources Control Board, State Regional Water Quality Control Board, Nevada County Agriculture Commission, Placer County Agriculture Commission and Yuba County Agriculture Commission.

The goal of the Integrated Vegetation Management Program is to implement adaptive management techniques that are environmentally sound, effective, efficient and fiscally prudent. District practices include physical control methods, mechanical control methods, herbicide control methods, and biological control methods.

NID continues to research new and innovative vegetation control methods to add to its Program. These efforts have included trials with UC Davis researchers using acetic acid (household vinegar) applied to dry canal bottoms, barley straw and corn gluten, thermal steaming, burning, tarping, goat grazing and organic herbicide testing.

Water

Water is defined as a clear liquid that has no color, taste, or smell, that falls from clouds as rain, that forms streams, lakes, and seas, and that is used for household purposes, such as drinking and washing.

Water is a finite resource. In fact, of all the water on Earth, just 3 percent is fresh water. And even though it is vital to natural and human communities, fresh water is threatened by many different forces, including overdevelopment, polluted runoff and climate change.

NID delivers both raw water for irrigation and treated water. Starting as pure snowmelt in the high-elevation watersheds, untreated raw water flows through canals and ditches on its way to customers.

Portions of the raw water flows are diverted from the canal system into NID's six water treatment plants to undergo a process that improves the quality to make it appropriate to drink and other household purposes.





Water management

Water management is the control of water resources to maximize beneficial use and minimize damage to life and property. Water management throughout California is shifting to consider urban, agricultural, environmental and social interests.

Being situated at in the headwaters of the watershed that supplies the majority of the state, NID's water resources are highly valuable to downstream interests.

The District's Strategic Plan Goal #3 states that "NID will develop and manage its resources in a self-determining manner that protects and provides local control of the water supply."

The Plan for Water is NID's ongoing effort to develop a community-focused vision and subsequent strategies for implementation.

Water Planning Projections

NID's Water Planning Projections consists of three studies that analyze the hydrology, water supply and water demand that help the District determine if its water storage and delivery system will provide sufficient water to meet customer demands over time and under variable conditions.

The Water Planning Projections are used to prepare a number of planning reports, such as the Urban Water Management Plan and the Agricultural Management Plan required to be updated and submitted to the State of California every five years. They are considered when making decisions about capital improvements to its water storage and delivery system.

The Water Planning Projections will also be used to prepare the District's Plan for Water. The need to update NID's Water Planning Projections is driven by a series of requirements and assumptions, including the new Yuba-Bear System Federal Energy Regulatory Commission (FERC) regulatory requirements, state-derived climate change data, and the state-mandated planning requirements. Together, these requirements and assumptions constitute significantly new planning assumptions and drive the need to update and revise NID's Water Planning Projections when necessary.

There are many models used to make projections. When choosing which model to use, NID worked with its consultant, HDR, and sought to use models that are used and generally accepted by the State of California or other similar agencies.

For more information on how NID uses Water Planning Projections, Click [here](#).

