



## REPLENISH — Big Bear —

# Defining Our Water Future

*for a thriving Big Bear Valley*

Each year, millions of gallons of our local water is pumped out of the Valley. **Replenish Big Bear** is working to change that—benefiting our environment and community for decades to come.



### OUR WATER

Treated water currently being pumped out of the Valley will be purified and used locally. This new purified water source will meet our current and future needs by increasing water levels throughout the Valley and recharging our groundwater basin, our sole source of drinking water.



### OUR ENVIRONMENT

The purified water will be added to Stanfield Marsh Wildlife and Waterfowl Preserve, providing a constant and drought-proof water source to restore wetland habitat and sustain our area's rare and diverse fish and wildlife.



### OUR COMMUNITY

A new source of water to the lake helps our community thrive by supporting continued recreation in Big Bear's tourism-driven economy, and by increasing ground-water levels in times of drought, which will protect our community's drinking water supply.



*“ Together, we will keep a valuable water resource in the Valley. The benefits of the project will support recreation so our tourism economy can continue to thrive, improve the habitat for our area's fish and wildlife, and protect our essential water supplies for years to come. ”*

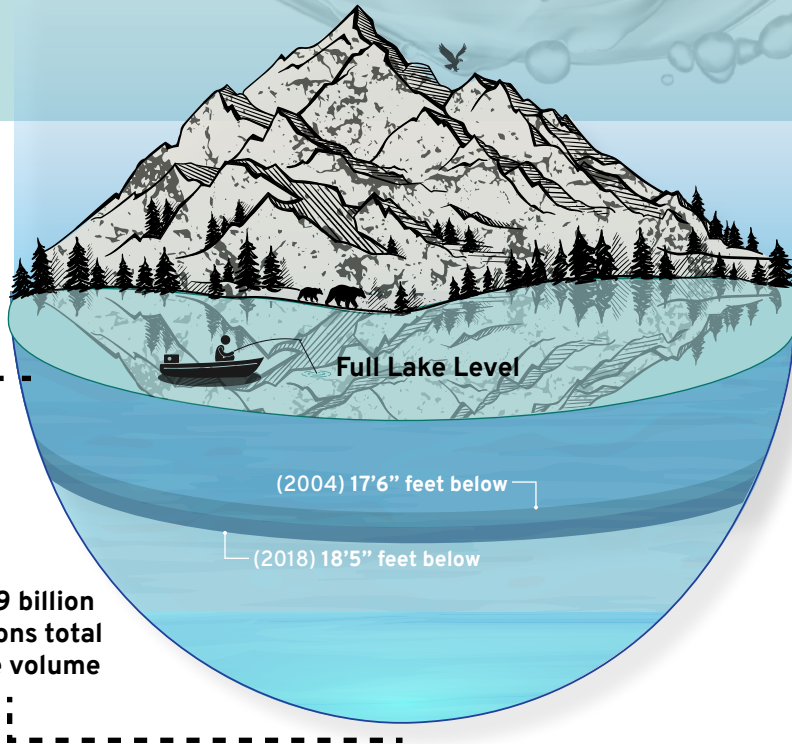
*- David Lawrence, BBARWA General Manager*



## Water makes Big Bear Valley thrive.

The current water cycle is broken. Our only source of water enters as precipitation, then flows into the lake or soaks into the ground to become groundwater. After our community uses groundwater for our potable water needs, it is pumped from the Valley as treated wastewater to irrigate Lucerne Valley crops.

**100%** of the valley's wastewater is disposed of in the Lucerne Valley each year.



Big Bear Lake has seen extremely low levels in the last 20 years and Stanfield Marsh was dry most of the time between 2016 and 2022. Periodic wet periods restore water levels for a time, but extended drought conditions are expected to return in the future and will continue to impact water levels. Varying water levels have significant impacts, including limiting recreation and decreasing healthy habitat for our local wildlife.

**Replenish Big Bear will add nearly 800 million gallons of new water to the Lake each year to help stabilize Lake levels in dry years.**

## *A New Legacy of Water Sustainability*

Replenish Big Bear captures our lost water and puts it to use across the Valley, replenishing lake levels and securing our water future.

Nearly **800 million gallons** of new water to the lake

**179 million gallons** per year of new sustainable groundwater supply

Continuous supply for **145 acres** of habitat

# How it Works



## 1. A HIGHER LEVEL OF WATER TREATMENT

Big Bear's existing wastewater treatment processes will be upgraded with proven treatment technology to produce nearly 800 million gallons of purified water each year that exceeds drinking water standards.

## 2. INCREASED WATER LEVELS

The rest of the purified water will be piped to the Stanfield Marsh and enhance 145 acres of wetland habitat and keep water in the Marsh at all times. Water from the marsh will continuously flow into Big Bear Lake to provide a new source of water to the Lake, which is especially critical in dry years.

## 3. A SECURE SOURCE OF POTABLE WATER

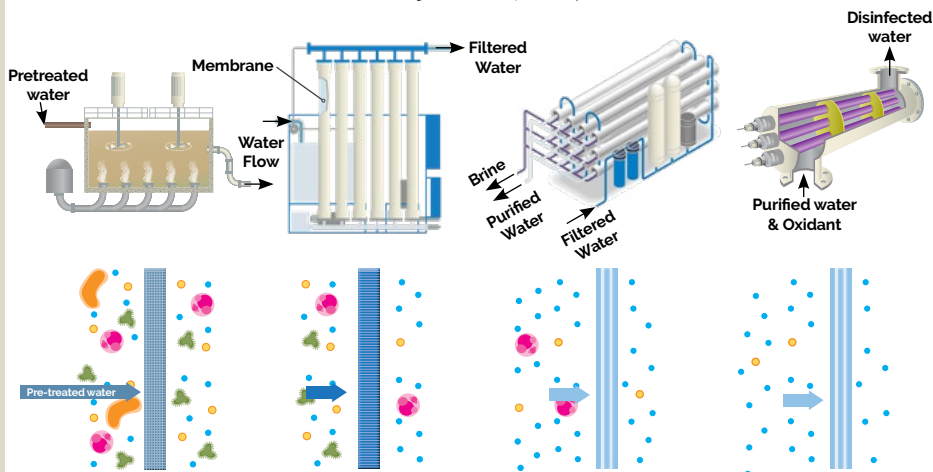
When needed, water can be pumped from the lake to Sand Canyon to soak into the groundwater basin and increase potable water supply. This water could also be used to irrigate the golf course to preserve the groundwater supply. During wet periods, excess water could be used to create additional snow and increase spring runoff.

## 4. HEALTHIER HABITAT FOR OUR FISH AND WILDLIFE

In the future, a small portion of the purified water could be piped via a new pump station and existing water pipelines to Shay Pond, providing a consistent source of water to sustain 10 acres of habitat for the endangered Unarmored Threespined Stickleback fish. Potable water currently used for this purpose can be reserved for the community.

## A Proven Water Treatment Process

Several additional treatment steps to Big Bear's existing treatment process will use proven technology to achieve safe, purified water that exceeds drinking water quality standards.



### Nutrient Removal

Specialized biological processes and chemical treatment remove most of the organics, nitrogen, and phosphorous from the water.

### Filtration

A filtration process uses either permeable membranes or granular media to remove suspended solids and bacteria from the treated water as it passes through the filter.

### Reverse Osmosis

Water is forced under high pressure through reverse osmosis membranes to remove impurities, including salts, bacteria, viruses, pharmaceuticals, and personal care products.

### UV Disinfection & Advanced Oxidation Process

High-intensity UV light disinfects the water by damaging the DNA of microorganisms while the advanced oxidation process uses a non-selective oxidant to destroy trace contaminants.

*Details of this process will be refined and tested to ensure that water quality requirements are consistently met before water is released into the lake. After the discharges begin, frequent testing and reporting will ensure that the water is in compliance with all state and federal regulations. For more information about advanced treatment processes, visit [www.watereuse.org/water-reuse-101/videos/how-reuse-works](http://www.watereuse.org/water-reuse-101/videos/how-reuse-works).*



# Our Path to a *Secure Water Future*

2019

## ONGOING EFFORTS

The project focused on the regulatory process to understand the permits needed, and completed a Lake Analysis to evaluate the impacts of the proposed discharge in the Stanfield Marsh/Lake.

2022

## FUNDING APPLICATIONS

The project has been awarded \$16.9 million in state and federal grants, and is actively seeking more funding opportunities.

## ENVIRONMENTAL CLEARANCE

Environmental assessments are underway to obtain all required approvals and permits.

## PRELIMINARY ENGINEERING

The engineering team will evaluate and confirm the most effective way to deliver the project's goals.

2023

## PILOT FACILITY

A pilot facility will be constructed and operated to confirm that the new treatment processes deliver the intended water quality results.

## FINAL DESIGN

Design details established during Preliminary Engineering will be refined based on pilot testing and finalized for construction.

2024

## CONSTRUCTION

Upgrades to the treatment plant and supporting infrastructure will start in Fall 2024.

2027

## CONSTRUCTION COMPLETE

Start up of the new Water Resource Recovery Facility is anticipated in early 2027.

## CONTACT US



909-584-4018



[www.replenishbigbear.com](http://www.replenishbigbear.com)



[info@replenishbigbear.com](mailto:info@replenishbigbear.com)

Replenish Big Bear is made possible through a collaborative partnership of the following agencies:



Service, Quality, Community