

2020-2030 Lake Sunapee Watershed Management Plan Summary



LSPA, founded in 1898, is a member supported nonprofit organization dedicated to preserving and enhancing the special environment of the Lake Sunapee Region through education, research and collaborative action.

This project was partially funded with funds from Section 319 of the Federal Clean Water Act administered by the NH Department of Environmental Services. The plan was completed with assistance from DK Water Resource Consulting and Stone Environmental.



LSPA

ON THE SURFACE THESE LAKES AND PONDS APPEAR TO BE HEALTHY, BUT THEY REMAIN IN A VERY DELICATE BALANCE

WHY THE NEED FOR A WATERSHED MANAGEMENT PLAN?

Multiple signs indicate the historically high-quality waters in the Lake Sunapee Watershed are threatened. Continued development in the watershed and more frequent severe storm events, due to climate change, pose threats to that balance. LSPA has revised their 2008 plan to satisfy current EPA requirements. Actions in this plan will help improve current water quality to protect this exceptional resource for the future.

WHAT IS THE PURPOSE OF THE PLAN?

This plan will guide LSPA's work with the surrounding communities to reduce the amount of nutrients (specifically phosphorus) entering watershed lakes and ponds in order to preserve and improve water quality. The plan established a goal of reducing the amount of phosphorus entering Lake Sunapee by 100 kg/year, a 7.5% decrease from current levels over the next ten years. To help achieve this goal, 31 individual actions were identified in the following categories:

- Education & Outreach
- Research
- Further Evaluation
- Monitoring and Assessment
- Land Conservation
- Land Use Regulation, Zoning and Ordinances



Additionally, the plan identifies 42 sites where potential restoration measures could be implemented to address erosion and other stormwater issues. Collaboration with the property owners will be necessary to implement these measures.

WHY SHOULD WE BE CONCERNED?

Excessive nutrients entering a waterbody leads to an increase in aquatic plant and algal growth resulting in:

- A reduction in water quality and clarity
- The depletion of dissolved oxygen which is needed for aquatic life such as fish to survive
- Algal and cyanobacteria blooms that can harm people, wildlife and affect recreation and boating activities

This is what a bloom can look like.



A BOAT IN THE COPCO RESERVOIR IN NORTHERN CALIFORNIA CUTS THROUGH TOXIC BLUE-GREEN ALGAE INFESTING THE REGION. (DAVID MCLAIN/ALAMY)

HOW DO NUTRIENTS & POLLUTANTS GET INTO THE LAKE?

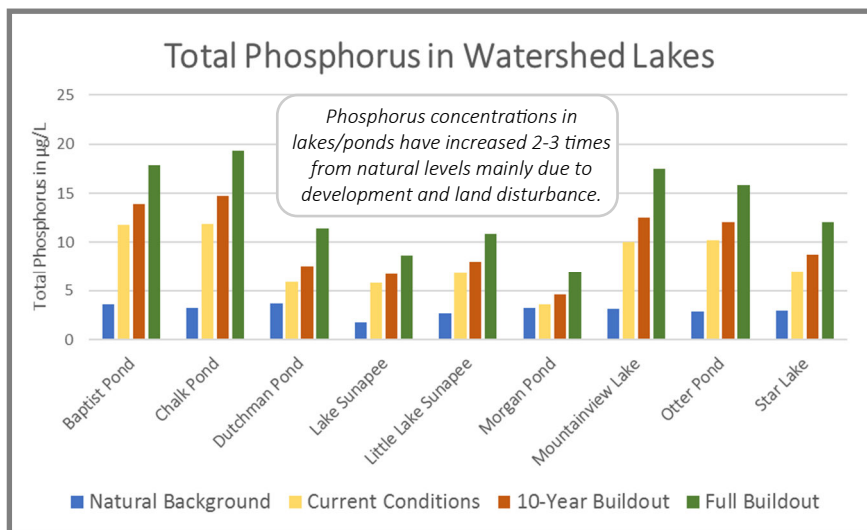
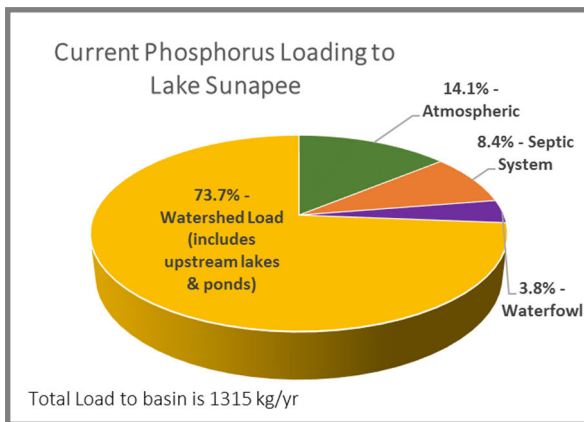
- ⇒ From effluent of failing septic systems and leaking sewer pipes
- ⇒ From stormwater runoff that carries into streams and lakes:
 - Sand, road salt, debris and other pollutants on roads, driveways, and parking areas
 - Eroded soils from loss of trees and vegetation due to land disturbance, roads and development
 - Fertilizers, herbicides & pesticides used on lawns & landscapes
 - Pet and animal waste left on lawns, paths and near roadsides
 - Geese and waterfowl feces on shoreline lawns, beaches and docks (these are areas they are attracted to)

DO YOUR PART: HELP STOP POLLUTANTS FROM ENTERING THE LAKE!

THERE ARE NO SCENARIOS WHERE ADDITIONAL PHOSPHORUS INPUT TO LAKE SUNAPEE WILL IMPROVE LONGTERM WATER QUALITY.

WHAT THE MODELING TELLS US

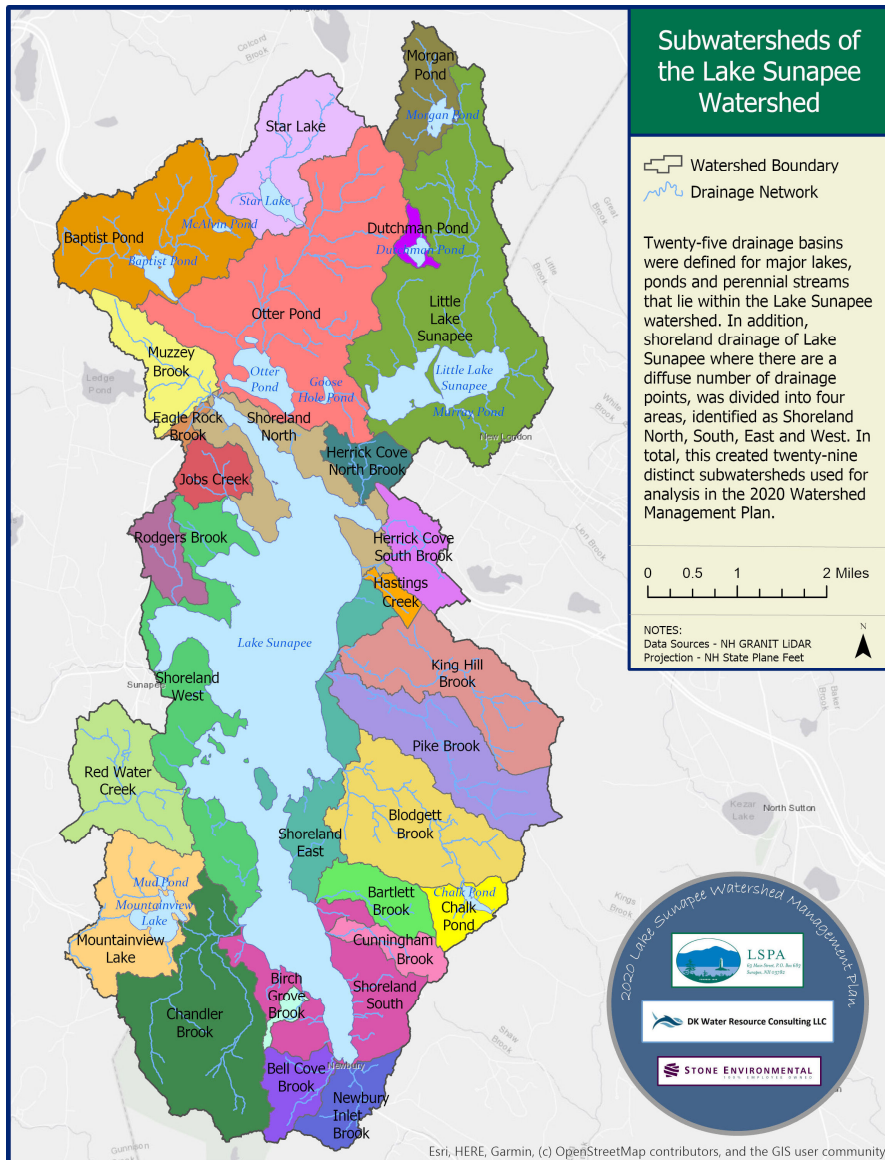
As part of the plan, modeling was done to determine background, current and future scenarios of phosphorus loading to watershed lakes and ponds. Phosphorus is the focus because small increases to lakes and ponds degrades water quality. Most phosphorus loading comes from watershed runoff. This is where we can have the most influence in reducing phosphorus input through our actions and choices.



Natural Background represents the absence of all development and **Full Buildout** represents the potential development of land parcels possible under current zoning.

LAKE SUNAPEE WATERSHED

The plan includes 14 maps describing watershed characteristics. The map below shows 29 distinct subwatersheds used for analysis.



NEARLY 90 PERCENT OF THE PHOSPHORUS LOAD FROM WATERSHED RUNOFF INTO LAKE SUNAPEE IS FROM HUMAN LAND USES AND ACTIVITIES

WHY IT MATTERS

- The watershed has an abundance of high-quality water resources that are under threat
- Property values and tourism are linked to clean surface waters
- Poor water quality is harmful to wildlife and aquatic species such as fish



“AN OUNCE OF PREVENTION IS WORTH A POUND OF CURE”

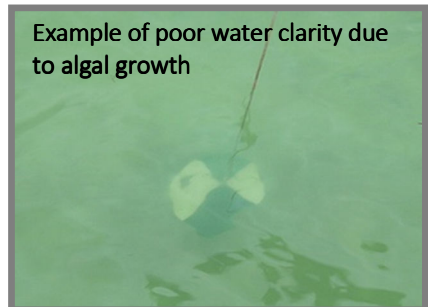
- Ben Franklin

You don't know what
you've got . . .

. . . until it is
gone



This is a Secchi Disk used to measure water clarity



Example of poor water clarity due to algal growth

Images courtesy of DK Water Resource Consulting

KEYS TO SUCCESS

This plan will succeed only if everyone – residents, visitors, businesses, towns, and state officials participate. Will you help us achieve this important goal?



To see the full plan, please visit: www.lakesunapee.org/2020-wmp