

Chapter 4. Existing Protection Measures

4.1 INTRODUCTION

In addition to the regulations discussed in Chapter 3 on water quality, protective measures have been adopted by various watershed towns (see the UVLSRPC Buildout Study in the Appendices). This chapter provides information on protective measures including local regulatory controls, land use controls, and information on protected land.

4.2 REGULATORY PROTECTION

Local regulations can help protect water quality by directing development away from ecologically sensitive areas, by guiding the location of construction and development projects, and by prohibiting high risk land uses in specific areas. Local regulations include zoning bylaws and ordinances, subdivision regulations, local health ordinances, and site plan review regulations.

Zoning

Zoning regulates land use, including the size, shape, and permitted uses of lots and structures. Zoning controls where people live and where they work. The purpose of this land use control mechanism is to separate incompatible land uses in order to protect the public from health risks and to guide development to appropriate districts.

Ideally, zoning regulates land use in order to meet the goals set forth in a municipality's master plan. In a master plan, a community describes how it wants to look in the future. It is the zoning regulations that help implement this vision.

In 1995, the Upper Valley Lake Sunapee Regional Planning Commission completed a two phase study estimating development buildout and then evaluating the effects of phosphorus on water quality in Lake Sunapee as a result of full buildout. This study and the 2006 update include a detailed town by town analysis of resource protection zoning codes. This summary is included in the appendices.

The zoning categories include: Village (0.5 acre), Residential (1 acre) Rural residential (1.5 acres – 3.0 acres) Agricultural (4.0 acres) and Conservation (10 – 25 acres). All communities have either Shoreland Overlay, Water Resources or Wetland Conservation District ordinances.

See **Map 6** Generalized Zoning in the Lake Sunapee Watershed

Zoning District Type and Lot Size

While most of the watershed land area is zoned for residential use, 23% is protected as conservation lands. In addition, steep slope and wetland protections also limit potential development near resource areas. Most of the shoreline is zoned for residential lot sizes between 1.5 and 3.0 acres. New London has the most conservation zoning with the Agricultural and Conservation Districts ranging from 4.0 acres to as much as 25 acres. Commercial development within the watershed is limited to the Route 103 corridor in Newbury and limited Village and Mixed Uses in Sunapee.

Lower density residential zoning (three acre minimum), provides better protection of water resources than high density residential zoning because larger lot sizes can help to limit impervious area associated with residential development. Imperviousness, as mentioned in Chapter One, hinders the natural rate of the hydrological cycle. As residential development becomes more dense, negative impacts on water resources tend to increase from the addition of more cars, roads, residential heating fuel storage, pets, and other sources of waste material. Commercial and industrial land uses typically have the greatest impacts on water quality because these zones tend to create large amounts of impervious cover and they tend to create the greatest amounts of unfiltered stormwater.

Soils Based Lot Sizing

New London, Springfield and Sutton have provisions in their zoning ordinances or subdivision regulations to determine lot size based upon soils and slope characteristics. The purpose of soil based lot sizing is to determine appropriate lot size that safeguards public health. This determination is based upon soil texture, slope, and the ability of a site to process nitrogen in leachate from septic systems.

Wetland and Stream Buffers

Buffers are the single most effective protection for water resources (Connecticut River Joint Commissions, 1998). Buffers consist of strips of vegetated land along wetlands, streams, lakes, and ponds. These transition zones filter polluted runoff and are often complex ecosystems that provide important habitat. Buffers catch and filter out pollutants such as sediments, nutrients, and debris from surface runoff. Depending upon the width and species composition in a buffer zone, 50-100% of the sediments and nutrients will settle out and be absorbed by plants. Wider forested buffers are more effective than narrow grassy buffers. Buffers also help to regulate surface water flow by slowing the velocity of runoff. By slowing the rate of surface flow, water can infiltrate and recharge groundwater resources. Buffers also help to stabilize banks which, in turn, helps to limit erosion. Plant roots in the buffer zone help to hold soil together.

All of the watershed communities have some provisions for wetlands and/or shoreland setbacks and buffers.

Steep Slope Protection

Steep slopes are highly vulnerable to erosion. When erosion occurs, sediment is transported to nearby water bodies. Increased sediment loading can lead to increased turbidity in water bodies. Turbidity has numerous negative effects on fisheries, water supplies, wetlands, and recreation (Jeer et al. 1997). For example, sediment additions can lead to increased surface water temperatures. High temperatures result in decreased dissolved oxygen concentrations in the water and have negative impacts on fisheries. Increased sediment loads may also negatively impact water supplies by damaging water treatment equipment, thereby driving up the cost of operation. In addition, sediments can require increased drinking water disinfection treatment which in turn can lead to unhealthful disinfection byproducts.

All of the watershed communities regulate development on steep slopes through zoning ordinances.

Erosion Control

Erosion control is another important factor to consider when protecting water quality. Erosion control measures help to prevent increased sediments loads and the negative effects described above. Erosion control measures can require the implementation of best management practices on construction sites.

All of the watershed communities have some level of erosion and sedimentation control requirements for land clearing and development. However, improvements can be made in greater uniformity and clarity with respect to water quality goals, performance standards and guidance criteria.

Shoreline Protection Regulations

Shoreline protection regulations are intended to protect the shoreline of surface waterbodies. Municipalities can enact regulations which are more stringent than RSA 483-B, NH Shoreland Protection Act.

Newbury, New London, Sunapee and Sutton have zoning ordinances which provide shoreland protection. Here again, there is opportunity for creating language which is more uniform in protecting the shores of Lake Sunapee and associated lakes and ponds within the watershed. It might be worthwhile for the SAWC and the LSPA to work toward a regional shoreline protection overlay with clear water quality goals, performance standards and guidance criteria.

Septic setbacks

Septic setbacks protect water quality by requiring a specified distance from waterbodies. State regulations exist which determine these distances.

Lake Sunapee Watershed community zoning does not restrict septic system location more than state requirements, with the exception of Springfield and Sutton. More work can be done here by the SAWC and LSPA to educate local officials on the importance of separation of waste disposal systems from important surface water resources.

Protection Overlay Districts

Protection overlay districts can be created to provide specialized protection for wetlands, floodplains, water supplies or watersheds. These districts isolate and protect specific resources that are not adequately covered in existing zoning regulations. As the name implies, overlay districts are laid on top of existing zoning for the purpose of protecting critical areas. The underlying zoning remains, however, the overlay district adds supplemental requirements and provides additional protection to the resource of interest.

The Town of Sunapee has codified all water resource protection ordinances into a Water Resources Overlay District. This is a practical approach. All of the watershed towns do have overlay districts for either wetlands, shorelines and/or steep slopes. However, there

is no overlay district which provides for consistent and continuous protection for the Lake Sunapee Watershed across all six towns. A watershed protection overlay district would provide for coordinated and effective protection.

Subdivision Regulations

Subdivision regulations can play a significant role in protecting water resources. Subdivision regulations set forth design and engineering standards and construction practices for proposed projects. Project plans must meet these standards in order to gain subdivision plan approval. When subdivision regulations are developed with water resources in mind, these regulations can promote better stormwater drainage and runoff control, environmentally sensitive sewage disposal, and promote designs which implement erosion and sedimentation controls.

Site Plan Review

The purpose of the site plan review process is to promote commercial and multifamily development which is compatible with a community's character and infrastructure. The site plan review process focuses on ensuring that environmental factors such as pollution, noise, and odor are addressed, that natural features are protected, solid waste and waste water disposal are well-managed, and sediment and erosion control is incorporated into development projects. The site plan review process can serve as a vehicle for better protecting water quality if it encourages designs which maintain the hydrological cycle and/or promote techniques to better manage stormwater. Site Plan Review regulations were not reviewed as part of this plan.

Health Ordinances

RSA 147:1, I authorizes local health officers to make regulations that in their judgement are required for the health and safety of the people. Protection of public drinking water supplies clearly falls within this broad grant of power. A health ordinance is typically relatively easy to adopt. It takes effect after it is approved by a municipality's Board of Selectmen, recorded by the town clerk, and published in a newspaper of general circulation in the town, or when copies have been posted in two or more public places in town. Health ordinances were not reviewed as part of this plan.

4.3 LAND PROTECTION

Land ownership for the purpose of conservation is one of the most effective ways to protect water resources. Land ownership through fee simple ownership or conservation easements provides the most control over land use activities. Fee simple ownership refers to complete ownership of all the "bundle of rights" associated with a property. A conservation easement is a permanent legal agreement between a land-owner and a public agency or private nonprofit conservation organization. Conservation easements can limit or restrict how land can be used. By placing a conservation easement on a property, the landowner retains ownership, but transfers some of the development rights to a responsible third party, such as a land trust. The land trust is then responsible for ensuring that the easement restrictions are met.

Approximately 7,202 acres, 23% of the watershed, is protected as either public or private conservation land (Map 4). Conservation land fairly well distributed across the watershed. The largest blocks are the Sunapee State Park, the Gile State Forest and the Hay Reservation.

Many water departments throughout the state own or purchase land in order to protect water supplies. Water systems and associated customers who have had the foresight to purchase land to protect their sources are likely to benefit from reduced public health risks and lower treatment costs. NH DES promotes this practice through the land protection grants program. To better protect water resources into the future, key properties for conservation should be identified and conserved by a variety of partners.

4.4 OTHER PROTECTIVE MEASURES

Nearly all water supply watersheds extend beyond the municipalities that they serve, making protecting of these resources challenging. In the 1890's the Water Purity Act was passed in NH which provided rules to better protect the Lake Sunapee watershed. Env-Ws 386.64 "Protection of the Purity of Lake Sunapee and its Watershed" codifies a set of restrictions for protecting the water quality of the lake. For example:

A person shall not build, continue, or maintain any privy, pig-pen, stable, or other building or structures in which horses, cattle, swine or other livestock or fowls are kept, within 75 feet of Lake Sunapee's, high water mark, or within 75 feet of any bay, cove, or inlet thereto, or within 75 feet of any stream tributary to said lake, bays, coves or inlets;

4.5 CONCLUSIONS

It is important to note that while the purpose of protective measures such as local regulatory controls, land use controls, and administrative rules may be valid, without adequate enforcement, protective measures are ineffective. Implementation of existing protective measures is necessary to safeguard water quality within the watershed.

Chapter 5. Inventory of Potential Pollution Sources

5.1 INTRODUCTION

An inventory of potential sources of contamination was created in order to identify areas where remedial and preventative measures in the watershed are necessary. The inventory was developed from a variety of sources. These sources include NH DES source water assessment reports for public drinking water supplies, a database search using the NH DES on-line OneStop Database, review of information provided by GRANIT GIS data layers and two watershed tours.

The PCS reports for Sunapee Water Works, Lake Sunapee, Chalk Pond, Georges Mills, Granliden, Lake Sunapee Trading Post, Meadowbrook at Sunapee, Mount Royal Academy and New London/Springfield are available in the appendices.

Three types of pollution sources were reviewed as part of this inventory: nonpoint sources of pollution, point sources, and lake contact sources. Nonpoint sources of pollution contribute pollutants in an indirect pathway. As rainwater or snowmelt wash past exposed pollutants on the land's surface or in soils, water transports these pollutants into surface water or groundwater, later emerging in streams, lakes, and coastal waters. This type of pollution is the accumulated result of many small actions whose origins are difficult to trace. Nonpoint source pollution may come from many places and many different types of land use including agricultural land uses, residential development, and transportation corridors.

In contrast, point source pollution can be traced to a specific point of discharge, such as a pipe, channel, or ditch connected to a wastewater treatment plant, sludge lagoon, or landfill. Point sources are usually directly piped and often require permits. For the purposes of this plan, commercial, industrial, and municipal activities which require a state permit are considered to be a point source due to their known location. In comparison to nonpoint sources, point sources are often more readily managed by direct regulatory management.

Lake contact sources of pollution include recreational activities such as swimming, boating activities, snowmobiling, and use of the lake by float planes. Recreational use of source waters and the supporting land-based infrastructure necessary to support recreational activities increase the potential for microbial, physical, and chemical contaminants to enter the drinking water supply.

5.2 REVIEW OF NONPOINT POLLUTION SOURCES

Seven general categories of nonpoint source pollution were identified in the watershed. These sources include:

- Site Development and Lot Conversion
- Agricultural Land Use
- Recreation Activities
- Residential Land Use

- Transportation Corridors
- Stormwater Management
- Utility Right-of Ways

Site Development and Lot Conversion

Site development and lot conversion occur or have the potential to occur throughout the watershed. During site development and lot conversion the ground is typically disturbed altering vegetation and hydrological processes. Site development and lot conversion can be sources of sediment if drainage, grading, and re-vegetation are not well-planned and controlled. The sediment that is washed into surface waters from construction sites is considered to be the greatest single nonpoint source pollutant. Impacts of sedimentation on fisheries include reduction in water clarity, increases in water temperature which decrease dissolved oxygen levels, and filling in of spawning habitat. Impacts of sedimentation on wetlands include reduction in flood storage capacity. Sedimentation can also have negative impacts on drinking water supplies by damaging water treatment pumps, increasing treatment costs, and increasing the production of unhealthful disinfection byproducts.

Agricultural Land Use

According to the NH DES Source Water Assessment, agricultural land use in the watershed was assessed as a “medium” threat. This classification was based upon computer-interpreted satellite imagery. For the purposes of this inventory, golf courses and timbering are included under agricultural land use.

Recreation Activities

Recreation activities occur on the waterbodies and surrounding land base. Water contact activities include motor-boating, use of private watercraft, use of seaplanes, swimming, fishing, sailing, kayaking, canoeing and other non-motorized boating. During the winter snowmobiling, and ice fishing occur. Recreational activities on the land base include hunting, use of all terrain vehicles, horseback riding, alpine skiing and mountain biking.

Residential Land Use

Residential land use poses threats to water resources from several sources. For example, potential contamination sources include residential fuel storage, septic systems, landscape care, and household hazardous waste.

Pesticides and Pharmaceuticals

A new generation of toxic contaminants includes compounds such as endocrine disruptors (EDCs), pharmaceutically active compounds (PhACs) and personal care products (PCPs). Endocrine disruptors interfere with the natural hormonal balance of an animal. The compounds include some natural products such as soy or alfalfa or man made products such as detergents and pesticides. These enter the waste stream through a variety of non-point source means, such as residential septic systems and agricultural runoff. The American Water Works Association (AWWA) Research Foundation has identified these compounds as a priority research area for potential human health impacts through drinking water supplies (see web links page for further information).

Because of reported cases of fish and amphibian developmental and reproductive anomalies, the US EPA has also funded several research grants examining the potential health effects of these compounds in drinking water.

It would be worthwhile for the watershed community to be attentive to occurrences of malformations, and developmental and reproductive abnormalities in fish, amphibians and water fowl.

Residential Heating Fuel Storage

Residential heating fuel tanks are potential sources of contamination because they are prone to leaks due to line breakage, corrosion, and fitting and filter leaks. Over-filling of tanks is also a concern. The primary pollutants associated with residential heating fuel are volatile organic chemicals which can have negative impacts on fisheries and human health.

The location of residential heating fuel tanks is significant. For example, residential heating fuel tanks consist of aboveground storage tanks which are located outside and inside tank installations which are usually located in a basement. There are two common concerns associated with outside tanks. Above ground storage tanks should be located on an impermeable surface to prevent leaching of fuel spills into the groundwater and the tank themselves should be protected from harsh weather conditions. Tanks may tip over or become damaged due to ice and snow. Often tanks are not located on an impermeable surface and do not have weather protective structures. Inside tanks are typically located in finished or unfinished basements. Finished basements provide some spill or leak containment. In contrast, unfinished basements do not have a physical barrier which helps to contain spills. Finished basements may also have sump pumps to alleviate wet conditions. Although useful for removing water, sump pumps can accidentally pump fuel or fuel-contaminated water into groundwater resources or directly into surface water.

Wastewater Disposal

Everything that goes down the drain, into the toilet, dishwasher, and clothes washing machine goes to some type of waste water disposal system. In the watershed there are two general categories of wastewater disposal systems: a system associated with an individual home and a municipal sewer system. The majority of households in the watershed dispose of their waste water using individual systems which include septic systems, cesspools, and holding tanks. Of these three types of disposal systems, septic systems are the most common. Much of the land area near the center of the town of Sunapee and along the lake shore is sewered.

When wastewater disposal systems fail they can be sources of bacteria, viruses, and protozoa which can cause gastrointestinal illness. They can also be sources of pollutants from improper disposal of household hazardous waste. Both types of systems, sewers and individual wastewater disposal systems are capable of failure. Municipal sewer systems are typically managed by professional staff. Individual systems, on the other hand, often receive less attention after they have been installed. Typically the

homeowner is responsible for ensuring proper system operation and maintenance. Septic systems should be maintained by pumping out wastes approximately every 3-5 years.

When septic systems function properly they can process household organic waste and destroy disease-producing bacteria. The most commonly approved system consists of a septic tank connected to a leach field. Wastewater first flows to the septic tank where heavy solids sink to the bottom. Grease, oils, and lighter solids rise to the top where they form a layer of scum. Beneficial bacteria which are naturally present in materials that are flushed into the system, decompose the biodegradable waste. Liquids flow from the tank to the leach field where unhealthful bacteria, viruses, and some phosphorus are removed. Eventually the filtered water flows to the water table (CRJC, 1994). A failed system jeopardizes public health, is a neighborhood nuisance, and negatively impacts water quality in the watershed.

According to the NH DES Source Water Assessment Reports, septic systems in proximity of water supply wells were assessed as having a “High” risk for the Lake Sunapee Watershed.

It is difficult to assess current levels of septic system maintenance in the watershed. It does not appear that any of the watershed communities collect information on septic system maintenance. There are no septic system maintenance ordinances, tracking programs, or municipal septic system programs present in the watershed. The purpose of septic system ordinances is to promote inspection and periodic pump-outs to prevent system failure. A tracking program is a non-regulatory way to ensure that septic systems are functioning. The program typically requires registration of all systems and encourages routine system inspections and pumpings. Under a municipal system, the municipality assumes responsibility for maintenance and repair of septic systems. Homeowners are charged an annual fee for this service.

Prior to executing a purchase and sale agreement for any "developed waterfront property" using a septic disposal system, an owner is required to engage a permitted subsurface sewer or waste disposal system designer to perform an on-site assessment study (RSA 485-A:39). "Developed waterfront property" means any parcel of land which is contiguous to or within 200 feet of a great pond as defined in RSA 4:40-a and upon which stands a structure suitable for either seasonal or year-round human occupancy. A “great pond” is defined in RSA 4:40 as "... a public water body of more than 10 acres." The site assessment study is required whenever any part of the property is within 200 feet of the great pond, not merely when the structure or the septic disposal system is within 200 feet of the water. Relevant Law includes RSA 4:40-a, 485-A:2, 485-A:39 and Administrative Rule Env-Ws 1025.

Lawn care

Nutrients and pesticides are common pollutants associated with lawn care and gardening activities. Pesticides are sources of synthetic organic chemicals. These chemicals can be washed from lawns during a rain event, transported to surface water where they can bioaccumulate in fish tissue. Once these chemicals enter the drinking water supply they

can pose potential health risks. Fertilizers are a source of nutrients such as Nitrogen and Phosphorus. Excess additions of these nutrients to waterbodies can result in increased frequency and mass of algal blooms. Algal blooms tend to increase water treatment costs, cause odors and poor taste and in some cases the blooms can be toxic.

Transportation Corridors

Transportation corridors include roads, highways, and railroad right-of ways. Roadways serve as potential sources of contamination because these impervious surfaces accumulate de-icing materials and chemicals from automobiles. Stormwater runoff carries these pollutants to nearby waterways and groundwater.

The NH DES Source Water Assessment report ranked transportation corridors as having a “medium” risk in the watershed. Water quality data collected by the Volunteer Lake Assessment Program for Lake Sunapee and the other lakes and ponds found specific conductivity levels to be at levels indicative of “human impact”. Conductivity is a measure of water’s ability to conduct electricity, and therefore a measure of the water’s ionic activity and content. The higher the concentration of ionic (dissolved) constituents, the higher the conductivity level is of the water.

Conductivity is generally found to be a good measure of the concentration of total dissolved solids (TDS) and salinity in a waterbody. Road salt, non-point source pollution (for example, agricultural run-off) and industrial inputs tend to increase conductivity levels as their intensity and frequency increase. Because of the elevated conductivity levels present in the Sunapee Watershed, and the number of road and stream crossings, contaminants from roadways is one of the primary suspected sources.

Stormwater Management

Stormwater runoff occurs when the capacity of soils and vegetation to absorb water from precipitation is exceeded and water flows across the land’s surface. In developed areas, natural vegetation and permeable soils are replaced by tracts of impervious surfaces such as roads, parking lots, rooftops, driveways, sidewalks, and compacted fill. Because water cannot penetrate the impervious surfaces, it runs off into gutters and storm drains picking up toxins and suspended solids along the way. In undeveloped areas, water infiltrates the soil where some pollutants can be treated by natural processes. In contrast, in developed areas, the rate of stormwater runoff increases allowing for less time for natural pollutant treatment and increasing the volume of water flow.

According to the Environmental Protection Agency, contaminated stormwater discharges are responsible for the impairment of one-third of all assessed waters in the United States. Common stormwater pollutants include sediments, toxic chemicals (e.g. cyanide, phenolics, and trichloroethylene), metals, oxygen depleting chemicals, fecal coliform, oil, grease, pesticides, fertilizers, and trash.

Little is known about the quality and location of stormwater runoff in the watershed. No water quality monitoring of stormwater has occurred and the identification and location of stormwater inflows is in the very early stages. Also important for determining the

potential volume of stormwater runoff is the percent impervious cover present in the watershed. Research has shown that percent of imperviousness cover in a watershed can be used to estimate current and future water quality of subwatersheds.

Utilities

There are two potential sources of contamination associated with utilities in the watershed: power-line right-of-ways and a sewer system. Pesticides are commonly sprayed to manage vegetation growth on the right-of-ways. Pesticides are sources of synthetic organic chemicals. Prior to spraying, utilities are required to give notice to municipalities.

The Sunapee Sewer System is another potential source of contamination. When sewer systems malfunction or sewer lines rupture, they can be sources of bacteria, viruses, and nutrients. Through proper monitoring and maintenance of the sewer system, potential sources of pollution can be minimized.

5.3 REVIEW OF POINT POLLUTION SOURCES

As mentioned previously commercial, industrial, and municipal activities which require a state permit were considered to be point sources as part of this plan because they are potential sources of contamination and they have a known location. This inventory of point sources in the watershed was created by conducting a state database review using the NH DES OneStop on-line database, a Best Management Practices Survey of Commercial and Industrial entities, a windshield survey, and reviewing available GRANIT GIS data layers.

The full PCS reports for the watershed point source and non-point source threats are available in the appendices.

5.4 LAKE CONTACT SOURCES OF POLLUTION

Motor-boating

According to the NH DES Source Water Assessment Report for Lake Sunapee Water Works, “motorboats, particularly those using two-stroke outboard motors, present a potential threat of contamination of water supplies by gasoline. While gasoline contains many compounds, of particular concern is MtBE, a highly soluble chemical which is a possible human carcinogen and has been shown to produce cancer in laboratory animals”. MtBE can cause kidney and liver damage and creates an increased risk of cancer (NH DES Analytical Requirements for Community Public Water Supplies, 2004). Although EPA has placed MtBE on the Drinking Water Contaminant Candidate List, the Agency has not yet set a maximum contaminant level for this compound. In 2000, NH DES adopted a drinking water standard of 13 ug/L for MtBE.

The American Water Works Association recommends that utilities and other responsible parties monitor water quality to assess the impacts of recreation activities such as motor-boating. In addition, AWWA advises that the water utility should work with other stakeholders to develop an integrated plan to evaluate and, if necessary, mitigate water quality impacts (AWWA, 2004). The American Water Works Association discourages body contact recreation and use of polluting two-cycle gasoline engines in sources that supply public drinking water (AWWA, 2004).

Swimming

Use of lakes for water-based recreational sports, such as swimming, may be considered an asset by many communities. However, in many cases lakes which are used for swimming are also used as the primary source for drinking water supplies. These dual objectives can lead to resource use conflicts. Swimming poses a risk for drinking water supplies which use surface water as a primary source. Swimming is a known source of fecal contaminants in lakes and reservoirs that permit this activity (Stewart et al., 2002). During swimming activities, swimmers may accidentally introduce pathogens, such as *cryptosporidium*, that are resistant to treatment. A recent study on the public health consequences of body-contact recreation found that the placement of recreational activities is an important factor in safeguarding public health. For example by locating swimming activities at a distance from water intake structures, the level of pathogens that enter a drinking water treatment plant can be attenuated (Stewart et al.).

Seaplanes

Lake Sunapee is used for seaplane access and transportation to homes along the shore. Seaplane operations on Lake Sunapee represent less of an environmental risk than carbureted two-cycle engines because seaplane engine exhaust is discharged to the air. In addition, aviation fuel is not mixed with oil so there is less oil present in seaplane exhaust. Furthermore, aviation fuel does not contain MtBE like gasoline powered engines (Seaplane Pilots Association, 2000). Unlike motorboats, seaplanes are required to have annual inspections, pilots are trained and certified, and there is limited contact time with the waterbody.

Env-Ws 386.64 (g)(7) prohibits seaplane use within the contributing area to the Sunapee Water works.

A person shall not use a seaplane in Sunapee Harbor north and west of a line from Russell Point bearing south 45 degrees west to the opposite shore.