

SLPOA Mission: *To develop the capacity within our community to provide a sustainable lake habitat that will allow all people who live, work and play within its environment an optimal North Idaho experience.*

Dam/Weir Replacement Project Update

by: *Jerry Peterson,*
 SLPOA Board Member

The Idaho Dept. of Lands has stated that it would be more appropriate for a Governmental entity to be responsible for maintenance and control of the dam rather than the possibility of a number of unknown future land owners, thus the name of the applicant on the permit to the Idaho Dept of Lands to construct the new Weir is being changed to the City of Spirit Lake, instead of the current property owner. This is also based on the fact that in 1941, the City had purchased certain water rights together with the “appurtenances” (i.e. dam) from the Spirit Lake Land Co. The current property owner is agreeable to this change, so an amended application naming the City of Spirit Lake as the “Applicant” and the current property owner as the “Agent” has been submitted to the City to review, sign and resubmit.



An MOU (Memorandum of Understanding) between the City of Spirit Lake and SLPOA has also been submitted to the City for their review and approval. It is an agreement that will help the City and SLPOA “work together to complete the planning, permitting, construction and maintenance of a new dam or weir for Spirit Lake”.

Kootenai County has established the OHW (Ordinary High Water) elevation of Spirit Lake to be 2446.1’ (NAVD 88). The current dam is at 2445.9’ and the new Weir is designed to be at 2445.75’ - or about 1 ¾” below the current dam boards but it has a flow capacity over 200% greater or over 3 times as much as the current dam. The design should mitigate flooding around the lake as well as downstream, while maintaining full pool levels for the longest time possible without human intervention or error.

The total estimated cost of the new Weir is \$160,000 and to date SLPOA has raised \$50,511 and had expenditures of \$5,110 for engineering costs, permit fees and fund- raising expenses, which means we are about 1/3 of the way there. We are currently waiting for the City to review and resubmit the application to the Dept of Lands, and we are researching ways to complete funding for this project.

REMEMBER:

- *This is a priority project for our Lake that needs to be completed sooner, rather than later....it will make a difference in our lake levels, our lakefront properties, and the value of these properties.*
- *There are 425 Lake Front parcels and if every one of those gave @ \$377 each, we would meet our goal of \$160,000. That is a cheap one-time price to ensure that you will still be able to access your docks and the lake during low runoff years; have less erosion during high water and still maintain enjoyment and value.*
- “WIIFM”...(What’s In It For Me?...think about it!)
 - Improved Recreation for EVERYONE! • Flood Control (spring run-off)
 - Water Conservation (maximum recreational season) • Improved Fishery • Increased Property Values

Whether you are a property owner or someone who wants to continue to enjoy this beautiful lake, please contribute what you can to this essential project!

Help Us Fund The Spirit Lake Dam Project by Making a Donation Online at: www.friendsofspiritleake.com

Spirit Lake Needs You! by: Paul Sturm, SLPOA Board member

The Friends of Spirit Lake and Spirit Lake Property Owners Association (SLPOA) board members are volunteers committed to sustaining Spirit Lake as a natural resource and asset for the community and region. The Board cannot do all that could and should be done for the lake without the help of people like you who care about Spirit Lake and its community. Your help is needed to sustain and build upon the work of the Association. Here is what you can do.

JOIN

You are invited and encouraged to be a member. Add your voice to and support for the Friends of Spirit Lake. For an annual fee of \$40 your membership supports and contributes to:

- **Successful Grant Awards**
- **Replacement of the Outlet Dam**
- **Managing Invasive Species**
- **Website**
- **Lake Clean-Up**
- **Stabilizing the Mill Pond**
- **Monitoring Water Quality**
- **Input into Initiatives and Actions**
- **Brickle Creek Restoration**
- **Expand or Replace Causeway**
- **Quarterly Newsletter**

Join now on the Website (friendsofspiritlake.com) or mail your membership to SLPOA, PO Box 363, Spirit Lake, ID 83869. If you are already a member, don't forget to keep your annual dues up to date.

VOLUNTEER

There are a variety of volunteer opportunities such as writing articles, phone calling, monitoring water quality and doing physical work on and around the lake. Volunteers are needed to more adequately and quickly respond to needs and to complete identified projects. Visit the website (friendsofspiritlake.com) to get more information and to sign up. Alternatively you may contact any one of your board members.

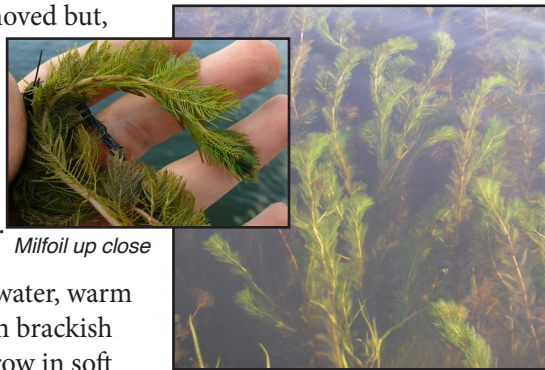
SERVE ON THE BOARD

The SLPOA Board is seeking to fill current and future open board positions. You do not have to be a lake front property owner. You can apply to be a board member on the website (friendsofspiritlake.com) or submit a short bio and rationale for your membership on the board to: SLPOA, PO Box 363, Spirit Lake, ID 83869.

Spirit Lake Invasive Species and Fishery Update by: Doug Freeland, SLPOA Board member

As discussed last year at the annual property owners meeting we need to continue to be aware of the milfoil infestation in Spirit Lake. Over 400 acres of our lake are accessible to the growth of milfoil. Over the past few seasons little has been found and removed but, there was more last year than in 2018. Keep in mind this plant is very adaptable. It has been found in cold water, warm water, and even brackish water. It can grow in soft mud and compact substrate. It has been found in stagnate waters in pond and lakes or in fast running rivers and streams. It doesn't like sand very much but if it gets a foothold it will hold silt in behind it too develop its own environment. I have even removed it from heavy rocky areas such as Rocky Beach.

Though not much was found last summer it was too much. About 80 pounds was taken in September from the area just south of Brickel Creek. This is a good indicator that the plant is still infesting the area where we have dense outcroppings of indigenous plants such as Elodea and pond weed. This means the milfoil is small and impossible to find in the dense native plants.



Milfoil up close

Milfoil viewed from the surface

It can grow for a couple years undetected. These small plants fragment every year to spread throughout the area under the native plants. By the time they get tall enough to see and remove they have already started to spread - unseen - under the other weeds. Most of the lake has been free to milfoil for 6 to 10 years. That is good news but should not be taken for granted. Milfoil is to a lake what cancer is to a person. Even in remission it should be monitored and evaluated continually. A fragmented piece from the Brickel Creek area floats to Shields Bay undetected for a few years and we are talking about chemicals once again.

Please continue to educate yourself and your family. One grandchild just out snorkeling for the fun of it, may be the person that finds our next infestation breakout. We can all work together to keep this aquatic monster at bay.

As a foot note to our milfoil dilemma our fishery is doing well. Fish and Game says the Chinook stocked on 2016 are reaching their harvesting size. The experiment is proving the results they were attempting to develop. The daily bag limit is two fish a minimum of 20 inches long. Anglers are requested to get involved in the fish study of Spirit Lake. Drop boxes are located at both Maiden Rock launch and the main Fish and Game boat launch across from Fireside Park. Pertinent information like how to identify, how to provide samples, etc. are available at the drop box sights.

Please note: *Fishing gives our owners and guest of Spirit Lake and excellent opportunity to look for and report Milfoil findings in our lake.*

Spirit Lakes Empire Trails are Growing Again! *by: Dave Krise, SLPOA Board Member*

After nearly 10 years of hard work and dedication by a small group of trail builders Empire Trails were created. In partnership with Inland Empire Paper company eight plus miles of scenic single track trails were opened to the public (*with a \$2.50 hike/bike day pass*) The trails have been enjoyed by thousands of Mountain bikers and hikers each year.

In 2018 over 3 miles of these amazing single track trails between M41 and W. Spirit Lake Road were obliterated during a planned logging operation by IEP. Over the last two years our trail builders have been hard at work restoring old trails and adding all new trails to the area that was logged. To date nearly a mile of trail has been rebuilt. The remainder of restoration, plus many new beautiful trail additions should be reconnected and complete by the end of May. On the map the trails shown in red show the rebuilt, new and proposed trails.



Volunteers are always welcome and needed to help us build and maintain the trails. If you or someone you know can help us go to www.bikespiritlake.com and e-mail us your contact info.

First of a Four Part Series **Spirit Lake and The Mill Pond Mess, Some History and Some Proposals**

By Dave Rodgers written in 2002

Recompiled by Dave Krise, SLPOA Board Member

This informative article was written in 2002 and helps illustrate why SLOPA's continuing effort to replace the old dam and the updating or the replacement of the Causway is so important.

Look for Part 2 of the series in our next newsletter or go online at www.friendsofspiritlake.com to read the entire article.

PART ONE - FORMATION OF SPIRIT LAKE

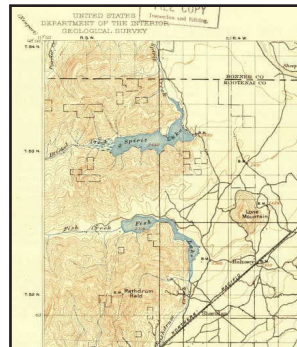
Spirit Lake is unique among the world's lakes. At least parts of it, including the Mill Pond, depend on a "bottom seal" to retain its water. The bottom forms a seal much like a bathtub. If the seal is breached, water will run out like a draining bathtub. It will continue to drain until the currents deposit enough silt to plug the breach. The basic configuration of North Idaho's mountains and valleys were carved out by the glaciers some 15,000 years ago. The essential configuration of Spirit Lake, including the Mill Pond, along with Twin Lakes, Hauser Lake, Newman Lake, and others were probably determined some 12,000 years ago when the last of the great Missoula Floods roared through tile area. Thus, in the thousands of years since the floods, the lake has been shaped by the movement of water, which carried the silt, that formed its vital bottom seal. This paper uses the term "silt" as a convenient reference to silt, clay, sediment, and such other material that may form the seal. The Mill Pond part of the lake is located over deep gravel beds and adjacent to the Spokane Valley and Rathdrum Prairie Aquifer. If its bottom seal is breached the water flows immediately into the gravel beds.

The lake can hold about 54,000 acre-feet of water and has a surface area of 1445.4 acres. There are 70,542 feet of shoreline. The surface area of the Mill Pond is about 50 acres.

EARLY USGS MAPS

In 1903 the U. S. Geological Survey (USGS) published a map of the Rathdrum Quadrangle which included Spirit Lake. It was based on surveys conducted in 1899 and 1901. Up to that time there had been no significant activity on the lake. The shorelines were the same in the year 1903 as in the year 2002. In 1903, however, the Mill Pond was full of water. On the next page is an enlargement of the Spirit Lake section of this early map.

The lake's elevation in 1903 was 2442 feet above sea level. For



USGS 1903 Map

reference purposes, the top edge of the boards at today's Spirit Creek spillway is very close to that 2442 level. Since the 1903 printing there appears to have been one subsequent survey and one new printing by the USGS. The map completed in 1962 shows the water level in Spirit Lake to be 2440 feet as of July of 1961.

The floor of the lake's outlet at the Spirit Creek spillway is 2440 feet above sea level. This controlled the level of the lake, including the Mill Pond, for most of the "last century.

Apparently, the USGS has not measured the lake level since 1961 because the latest map (a 1996 Forest Service revisions) displays the same July 1961 level of 2440 feet.

There has been some conjecture about the Mill Pond being only a narrow stream until the Panhandle Lumber Company built the dam and spillway to form a log pond. The first surveys for the above map were conducted in 1899, eight years before the construction of the sawmill. They show the shorelines of 1899 to be identical to the shorelines of the revised USGS map based on 1961 surveys and published in 1962. The shorelines of 2002 are the same.

It is evident the shoreline of the Mill Pond before the sawmill was identical to the shoreline of the Mill Pond we know today - except today water drains out faster than it flows in.

THE PANHANDLE LUMBER COMPANY

Serious activity first came to Spirit Lake in 1907 when the Panhandle Lumber Company built a sawmill in the outlet area. A few of its structures were on timber pilings over the outlet. Logs were floated into the outlet area and held until they went to the sawmill. Thus, the name, Mill Pond. The lumber company platted what are now the streets of the city of Spirit Lake. Within a year or two the community of Spirit Lake as we now know it had sprung to life. In 1908 the lumber company cleared debris out of the channel at the Spirit Creek outlet and constructed a five-foot

Continued on back



Friends of Spirit lake
 Spirit Lake Property Owners Association
 PO Box 363
 Spirit Lake, ID 83869

Stay Home, Be Safe, and BeWell!

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Mill Pond Mess...Continued

earthen dam. In the center was a spillway with removable planks to control the water levels in the Mill Pond.

The sawmill operated until 1941. It was put out of business when the huge forest fires of 1939 decimated its timber supply. Heat exhaust from the mill was pumped into the pond in a not very successful effort to keep it open during the winter months.

THE CHAUTAUQUA BRIDGE

In 1912 the 918-foot Chautauqua Bridge was built across the neck of the Mill Pond. It was constructed on timber pilings to allow the movement of logs into the Mill Pond. There was an impor-

tant (but probably unintended) benefit from such construction. It permitted the continuation of the historic rate, volume, and pattern of flow from the main body of the lake through the Mill Pond to the outlet at Spirit Creek. For hundreds (possibly thousands) of years this 900-foot wide flow had carried with it the silt and other materials that had maintained the bottom seal in the Mill Pond.



Open Span Chautauqua Bridge

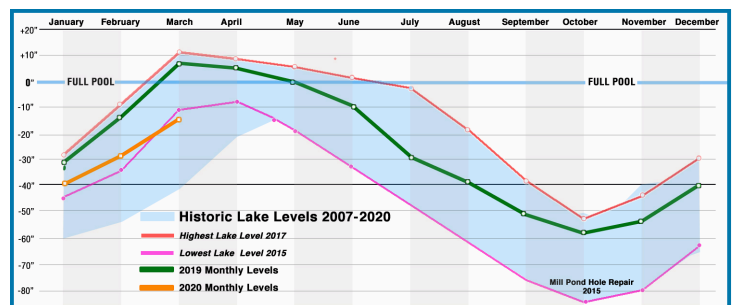
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Lake Conditions and Water Level

by: Sid Wurzburg, SLPOA Board member

On April 1 the lake was 21.125 inches below normal high water. This is low for this time of year compared to recent years, but the water in the Mt. Spokane snow pack is 30% above average, so we should have a full lake this year unless there is some very strange weather.

The lake iced over on Jan. 19th, but never enough to allow ice fishers to venture out. That ice cover lasted less than 2 weeks when warm temperatures and wind cleared the ice from all the main lake West of Tesemini except the shaded South side shore and bays.



Become a “Friend of Spirit Lake” and Join the SLPOA today!

...for only \$40 per year you can be a supporter and ensure a healthy future of your lake.

Become a Member, Donate and Pay online at: friendsofspiritlake.com