

# Friends of Spanaway Lake



**2018 - Our First Year In Review**

**2019- Our Emerging Game Plan**

# **Mission statement**

- We are a non-profit community organization of local citizens comprised of property owners, users of the lake and other interested parties dedicated to :
  - Preservation of water quality
  - Fish & wildlife habitat enhancement
  - Protection from environmental hazards
  - Education, including communication of lake safety, preservation and protection of property & property rights
  - These objectives will be attained by a combination of citizen engagement & working with local & state government and other appropriate agencies for the continued vitality of Spanaway Lake

# ***We have been busy***

- Elected board members
- Created mission statement
- Established by-laws (501c3 vs lake management district)
- Facebook, website, email, insurance, budgets
- Began to network with the local community including many government agencies & schools
- Grants, Grants & more Grants
- Regular monthly board meetings
- Improved understanding of the science behind water quality issues in Spanaway Lake
- Spring Community BBQ
- Booth at Winterfest

# **Grants Obtained**

- Washington Legislative Allocation-\$26,000
  - Aquatic Plant Survey \$18,000
  - Golf course pipe relocation \$8,000
- Clover Creek Watershed Association \$5,000
  - Picnic
  - Annual meeting
  - Publishing & mail cost
  - Incorporation fees
  - Microscope & lab equipment
  - Water sampling equipment
  - Oxygen/PH monitoring equipment

# ***The Brown & Caldwell Study***

In 2013, Pierce County received \$400,000 from the Washington State Legislature to research & develop a management plan for Spanaway Lake.

The study was delivered to Pierce County in August of 2016 and is a key document to understanding our water quality issues.

This study can be found on our website at [www.friendsofspanawaylake.net](http://www.friendsofspanawaylake.net)

# **THE REALITY OF THE LAKE...**

- The reality is...Spanaway Lake is in Trouble!
  - Algae toxins
    - Advisory days averaged 179 days a year from 2006 to 2016
  - Invasive plants
  - Low Oxygen

These are only a few examples of the challenges that compromise the lake's water quality.



# **North Beach Swimming Area**





# **TOXIC ALGAE & INVASIVE SPECIES**





# **Wind Driven Algae bloom**



# **Water Quality Root Cause**

1. Excessive nutrients
2. Low dissolved oxygen
3. Elevated fecal coliform bacteria

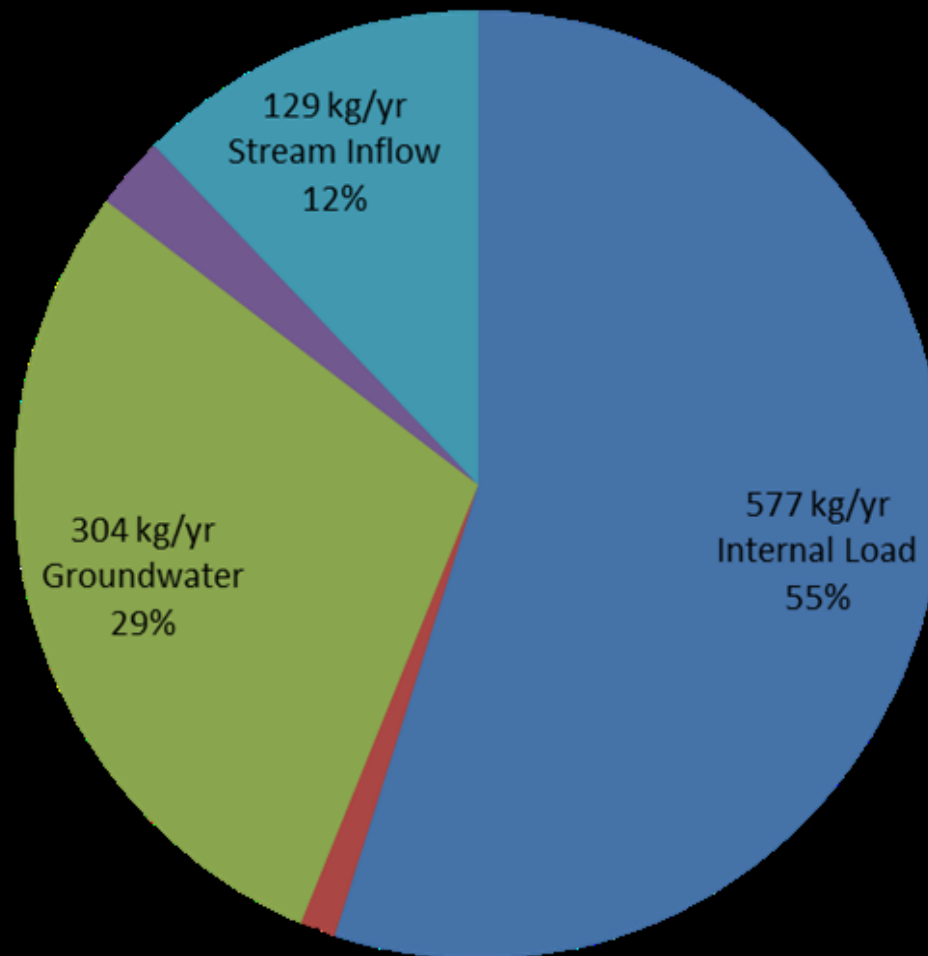
Excessive nutrients are by far the biggest problem and phosphorus is the primary nutrient of concern. Phosphorus contributes to excessive aquatic plant growth and algae blooms.

Excessive algae and plant growth contribute to low dissolved oxygen, resulting in algae toxins

# **Sources of Phosphorus in Spanaway Lake**

- 55% or 577 kg/year comes from internal load
- 29% or 304 kg/year comes from groundwater
  - Of which 17%-20% or 53-89kg from septic tanks which is expected to increase over time
- 12% or 129 kg/year comes from stream flow
- 3% or 26kg/year comes from rain
- 1% or 13kg/year comes from storm water

# *Another view of Phosphorus Sources*



# **How do we improve water quality?**

- Brown & Caldwell lists 40 options
  - Selective withdrawal
  - Public education
- Science is developing new options as algae blooms are a worldwide problem
- The FOSL board is of the opinion that sediment removal is a likely candidate
- Phosphorus fractionation, plant studies and other reports are needed
- If we reduce the TP load by 35%, a more pristine lake would emerge



# **What can you do to support FOSL?**

- Use accepted landscaping practices
  - [www.piercecountywa.gov](http://www.piercecountywa.gov)
- Don't let your landscaping debris get in the lake
- Avoid any soap seepage into the lake
- Properly maintain your septic system
- Donate your time to FOSL
- Sustainable Leadership will be critical
- [Smile.amazon.com](http://Smile.amazon.com)
- Be informed [www.friendsofspanawaylake.net](http://www.friendsofspanawaylake.net)
- We take donations 😊

**Questions or comments?**