

**Lake Wilderness
Citizen Advisory Committee
Special Meeting
February 26, 2019
6:00 PM to 7:00 PM**

Lake Wilderness Lodge – Rainier Room
22500 SE 248TH Street
Maple Valley, WA 98038

- | | |
|---|-------|
| 1. Call to Order | Chair |
| 2. Roll Call | Staff |
| 3. Approval of Agenda | Chair |
| 4. Approval of the draft October 16, 2018 Meeting Minutes | Chair |
| 5. Public Comment (three minutes per person) | Chair |
| 6. Reports | Staff |
| a. 2018 Volunteer Lake Monitoring Reports | Staff |
| 7. Continued Business | Chair |
| a. Budget discussion | Staff |
| b. Wilderness Stormwater in flow follow up | Staff |
| c. Update on Nature Vision | Staff |
| 8. New Business | Chair |
| a. Election of Committee Chair and Vice Chair | Staff |
| b. Open Public Meetings & Public Records | Staff |
| c. 2019 Work plan discussion | Staff |
| d. Maple Valley Shoreline Master Plan | Staff |
| e. Scheduling 2019 meetings | Staff |
| f. Lake Wilderness Trail CIP Update | Staff |
| 9. Public Comment | Chair |
| 10. Next Meeting | Chair |
| 11. Adjourn | Chair |

Draft
Lake Wilderness
Citizen Advisory Committee Meeting
October 16, 2018
Lake Wilderness Lodge
Rainier Room
6:00 PM to 7:00 PM

1. CALL TO ORDER

Chair Wichelmann called the meeting to order at 6:00 pm.

2. ROLL CALL

Ms. Pistoll took roll call and noted we have a quorum. The following committee members were in attendance: Pat Anderson, Paul Eaton, Laurie MacKenzie, Sam Whitman, Paul Wichelmann, and Diana Pistoll. Linda McMonagle had an excused absence.

3. APPROVAL OF AGENDA

A motion was made and seconded to approve the agenda without changes. Motion carried 5-0.

4. APPROVAL OF JULY 24, 2018 MEETING MINUTES

A motion was made and seconded to approve the July 24, 2018 meeting minutes with the following changes: Page one, Item 2, Roll Call, change the semi-colon to a colon after the word "attendance". In the second paragraph on page 2 under item 5 Public Comment delete the phrase "installed on a member's dock". Under Item 7 Continues Business item c. Education Update on Nature Vision, in the first sentence add the word "to" between "wanted" and "shared". Under New Business, item a. Post treatment outcome, in the last sentence change "Mike Mayer's" to "Mike Meyer's". And under item c. recruitment of 2019-2020 members in the last paragraph of the second paragraph change "Briget" to "Bridget". Motion carried 5-0

5. PUBLIC COMMENT

Dave Barber – 23020 SE Lake Wilderness DR. S, Maple Valley WA said that the lake has never looked better. He said the water is clear, and there's no cyanobacteria blooms and the treatment really knocked back the Big-leaf pondweed. He said the product AquaTechnex used did a great job on the pondweed.

Terry Higashiyama – 21621 SE 259th Street, Maple Valley, said that she and her husband Dennis have lived on Lake Lucerne for decades and they are both now retired and wanted to attend the meeting to learn more about the lake because they are having issues with the lake vegetation at Lake Lucerne; primarily big leaf pondweed.

6. REPORTS

a. AquaTechnex Survey & Treatment Report

Discussion ensued about AquaTechnex's Survey and Treatment Report. A question was asked about a Eurasian milfoil plant that was initially reported to have been located by Alternate Member, McMonagle's dock. Member Anderson said that plant that was initially thought to be there could not be confirmed and AquaTechnex did not identify it either. Ms. Pistoll said she called AquaTechnex to clarify that very question, and they too said it was not found.

Chair Wichelmann concurred with Member Anderson and Mr. Barber about the lake looking exceptionally good. He said the lake was also very clear and he measured a remarkable 7.5 meters with the Secchi disk, meaning that he had good visibility to the 24 foot depth.

Mr. Anderson said that he had noticed a spot of filamentous algae that look sort of blueish and he thought it might be the start of a cyanobacteria bloom but it was on the bottom. Vice Chair Eaton said he took one of the informal side trails to the shoreline, off of the Lake Wilderness Trail, and he said he notice a small patch that looked similar; as though a bloom was beginning.

b. LWPA Volunteer Patrol Survey Maps

The volunteer milfoil patrol completed their patrol in August 2018 and found no Eurasian milfoil. Because no plants were found a map was not produced.

c. Draft 2018 Annual Report

A motion was made and seconded to approve the 2018 Annual Report without changes. Motion carried 5-0.

d. Washington State Lake Protection – White Paper

Ms. Pistoll said the white paper written by AquaTechnex for the Washington State Lake Protection Association and is included in the agenda for information only on the new herbicide ProcellaCOR. Approval for use in Washington State waters is pending approval of the Department of Ecology, however, approval is imminent.

7. CONTINUES BUSINESS

a. Budget Discussion

Ms. Pistoll reviewed the budget in the agenda packet and said that King County has invoiced for the swimming beach program which was \$7,748. AquaTechnex has invoiced for the fall survey and the lake permit; \$1,514.98 and \$618. respectively, however, none of those have processed through the system and therefore are not shown on the budget summary in the agenda packet. She noted that Nature Vision will do some classroom workshops this fall but no work has yet been invoiced this fall.

She said she requested an additional \$3000 in the 2019 budget for a survey in Pipe Lake and Lake Lucerne, however, she noted that the 2019/20 budget has not yet been approved by Council. She said the last survey was done by boat-only in September 2016. She said she also requested \$20,000 in 2019 for Lake Wilderness treatment in the event that cyanobacteria bloom scum formation appear prior to the large public in-water event like a triathlon.

b. Wilderness Stormwater in flow follow up

Ms. Pistoll said Maple Valley has been receiving applications for the Stormwater Manager position and once that individual is on board the potential illicit discharge along the slope of the trail will be turned over to that person. She said the last sampling that was done was May 4, 2017. She noted that the King County Capital Improvement Project came in over budget and the project is currently on hold therefore she does not know at this juncture whether there will be any trail construction on 2019.

c. Education Update on Nature Vision

Ms. Pistoll said Nature Vision's has some classwork scheduled for this fall and winter as shown on their October 8, 2018 registration sheet. She said that Nature Vision reports that their programs ramp up in the spring and they expect to see that same uptick in registrations in 2019 that they saw in 2018.

She said she did discuss the idea of having the Nature Vision program fall under the surface water program and when the City's new Stormwater Manager comes on board she will discuss that with that individual.

8. NEW BUSINESS

a. Open Government Trainings

Ms. Pistoll said this is a reminder that those who have not done their Open Government Meetings and Public Records Retention training need to do the training and print their form of completion and provide it to the City. She said this training is required of all city volunteers serving on committees.

b. Recruitment of 2019-2020 members

Ms. Pistoll said that Paul Wichelmann regular voting member position is set to expire at the end of December 2018. She said she will begin recruitment on Friday, October 19th. She said applications will be posted to the website on Friday. She said any current members wishing to apply must fill out an application. She said an Alternate member could also apply for a regular voting member position even if they hadn't completed their full term as an alternate.

c. Lake Wilderness Beach House update

Ms. Pistoll said that the Beach House is substantially complete and final completion is anticipated at a Council Meeting in October. She said that the restrooms in the Beach House will be locked up on the weekends with signage directed people to the facilities by the playground. She said that Maple Valley's IT Department is initiated a project to get fiber pulled to the beach house, and possible to the Lodge. She said the beach house will have a digital sign, and they have deployed a pilot camera for parks security that they are testing. She also noted that logging work and vegetation removal will be completed in October at the Summit Park site that is located approximately behind the Les Schwab Tire store. She said construction fencing will be installed around the site and then grading will begin. She said athletic light poles are expected to arrive and be set by mid-October 2018.

9. PUBLIC COMMENT

There were no public comments.

10. NEXT MEETING

The next regularly scheduled meeting will be determined by the new committee following Maple Valley City Council appointment of newly recruited applicants. She said applicants will need to attend a Council meeting for interviews and appointments. Ms. Pistoll said she will outreach to appointees to attempt to schedule the first meeting in 2019 during February.

11. ADJOURN

A motion was made, seconded, and approved 5-0 to adjourn. The meeting adjourned at 6:55 pm.

LAKE WILDERNESS 2018

Lake Stewardship Monitoring Report

King County Water & Land Resources Division
Science & Technical Support Section
www.kingcounty.gov/EnvironmentalScience

Summary & Recommendations

Thank you to Renato Santos, Dan Tift, and Paul Wichelmann, the volunteer monitors for Lake Wilderness.

The key takeaways from the 2018 monitoring season are:

- Lake Wilderness continued to have fairly clear water, with moderate nutrient concentrations and algal growth.
- An algal bloom was sampled for toxin testing in mid-July. No algal toxins were detected in this sample.

The Lake Stewardship Program recommends:

- Stay alert for toxic algae blooms in Lake Wilderness – increase people’s awareness of toxic algae, and their ability to identify which algae are potentially toxic. Any potentially toxic blooms should be reported to the King County Lake Stewardship Program and sampled for toxin analysis.
 - Explore why total nitrogen concentrations have been increasing over time. If this increase continues, it could lead to more algal blooms in the future.
 - Monitoring is a key part of good lake stewardship, building a valuable long-term dataset to guide lake management and detect any future problems. Continue to monitor Lake Wilderness through the Lake Stewardship Program.
-

In this report:

- **What We Measure & Why**
- **Water Quality Results & Trends**
 - 2018 monitoring results
 - Long-term annual averages
 - Trends over time
- **Trophic State**
 - Trophic state indices
 - Comparison map
- **Supplemental Data**
 - Summary statistics
 - Hydrology: Lake level and precipitation
 - Year-round Secchi depth and water temperature
 - Water column profile
 - Total alkalinity
 - Water color

What We Measure & Why

- **Secchi depth** is a measure of water clarity or transparency. Secchi depth is shallower when there are more suspended particles in the lake, such as sediment or algae. Secchi depth is also affected by water color, often from tannins or other naturally occurring organic molecules.
- **Water temperature** can affect the growth rates of plants and algae. In addition, cooler or warmer water temperatures favor different species of fish and other aquatic organisms.
- **Chlorophyll-a** is a measure of the amount of algae in a lake. Chlorophyll-a is a pigment necessary for algae to photosynthesize and store energy.
- **Phosphorus** and **nitrogen** are naturally occurring nutrients necessary for growth and reproduction in both plants and animals. Increases in nutrients (especially phosphorus) can lead to more frequent and dense algal blooms.
- The **ratio of total nitrogen to total phosphorus (N:P)** indicates whether nutrient conditions favor the growth of cyanobacteria (blue-green algae). When N:P ratios are near or below 25, cyanobacteria can dominate the algal community. This is important because cyanobacteria have the ability to produce toxins.

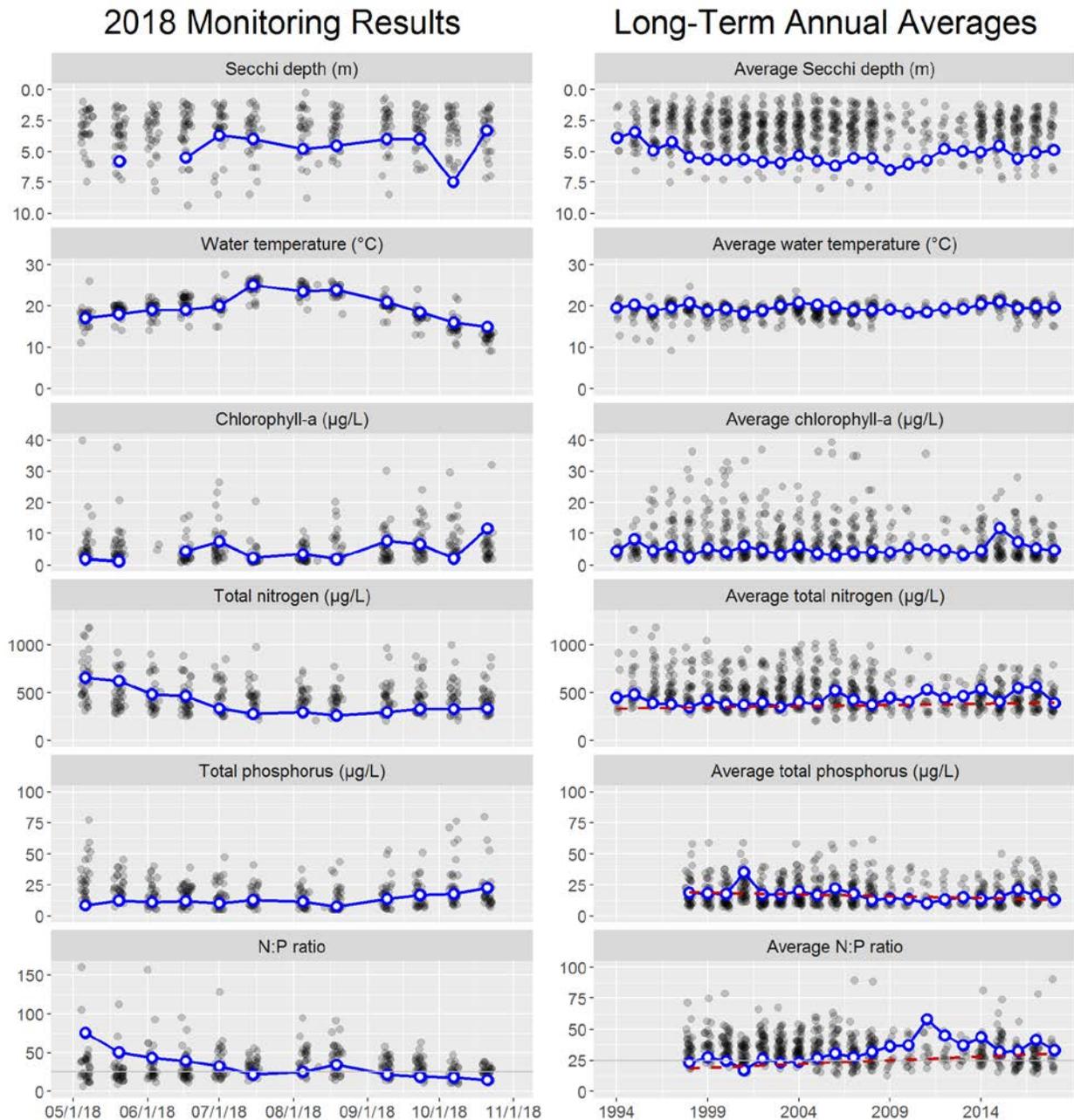
Water Quality Results & Trends

The following graphs show the water-quality parameters that are sampled from May through October, at 1 m depth (additional depths and parameters are measured on profile days; see *Supplemental Data*). The left column of graphs shows results for each sampling

date in 2018, and the right column shows average values for each year (May-October averages).

Data for Lake Wilderness are the blue circles (with white centers) connected by the blue line. Any gaps in the blue line indicate missed samples. To provide some context for these values, the grey points in the background are results for all other lakes in the Lake Stewardship program.

Any long-term trends in Lake Wilderness are drawn with a dashed red line and described further after the graphs. Statistical trend analyses used a seasonal (monthly) Kendall test ($p < 0.05$).



Nitrogen-to-phosphorus (N:P) ratios were periodically below 25, indicating times when the algal community was more likely to be dominated by cyanobacteria (which have the ability to produce toxins).

The table below gives more details about the long-term trends. Results are presented as an average amount and percent of change per decade (the increase or decrease over ten years). Percent change is calculated as the percent of the estimated value in 1994, when monitoring started.

Parameter	Change per Decade	(%)
Total nitrogen	26 µg/L	(7.6%)
Total phosphorus	-2.7 µg/L	(-14%)
N:P ratio	6.1	(38%)

The increasing total nitrogen concentrations and decreasing total phosphorus concentrations have both contributed to an increasing N:P ratio. If the N:P ratio continues to increase, it will become less likely for algal blooms in Lake Wilderness to be dominated by cyanobacteria (which have the ability to produce toxins).

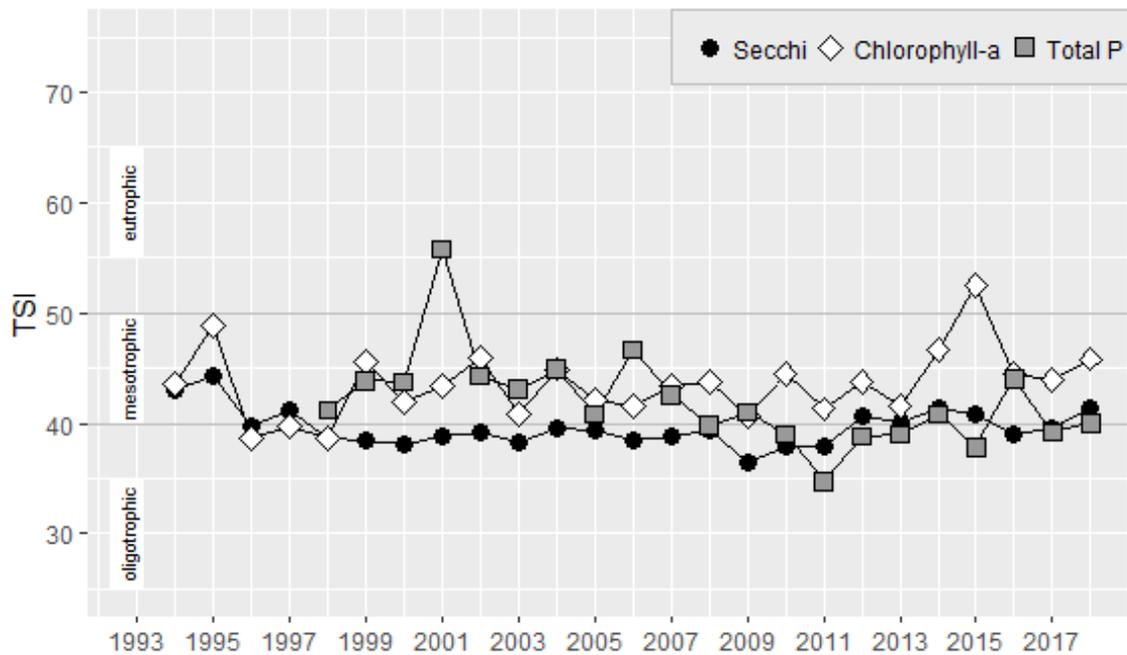
Trophic State

The Trophic State Index (TSI) is a common index of a lake’s overall biological productivity. TSI values are calculated from Secchi depth, chlorophyll-a concentrations, and total phosphorus concentrations. These three TSI estimates are all scaled between 0 and 100.

TSI calculations use average values from June-September, focusing on fairly consistent “summer” conditions. This is in contrast with the annual averages shown above, which also include May and October data.

Oligotrophic lakes (TSI <40) are very clear, with low nutrient concentrations and low algal growth. *Eutrophic* lakes (TSI >50) have less-clear water, with high nutrient concentrations and high algal growth. Eutrophic lakes are more likely to have frequent algal blooms. *Mesotrophic* lakes (TSI 40-50) are in the middle, with fairly clear water, and moderate nutrient concentrations and algal growth. Lakes in lowland King County have a range of different natural trophic states, and human activities may also alter a lake’s trophic state (usually by changing nutrient inputs).

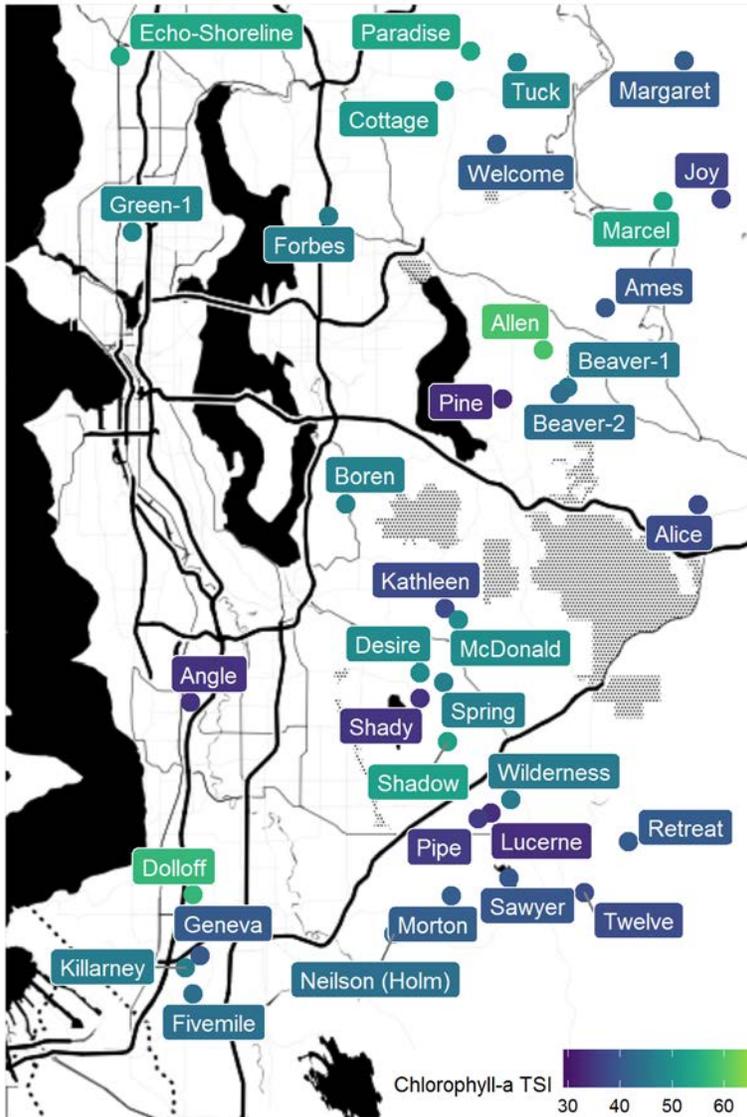
Trophic state indices



In 2018, the TSI values were in or near the mesotrophic range.

Comparison map

For a comparison with other lakes, this map shows the trophic state for each lake in the King County Lake Stewardship program in 2018. The color of each circle indicates the lake's average chlorophyll-a TSI value for the year.



Supplemental Data

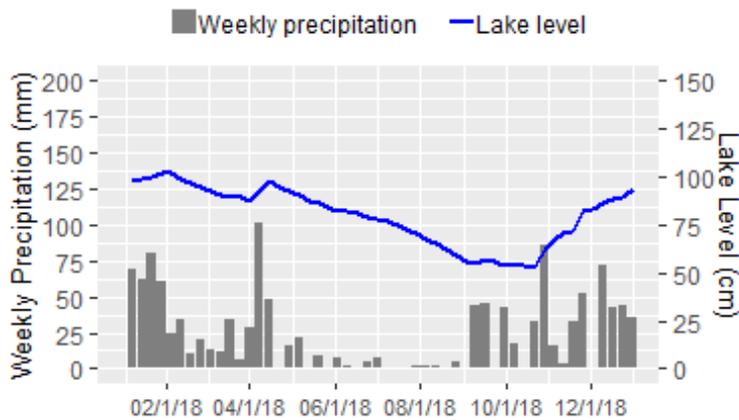
Summary statistics

This table summarizes data from 2018 (1 m depth only), giving the minimum, mean (average), and maximum values for each parameter. This includes summary statistics for the full 2018 calendar year for Secchi and temperature, which were measured year-round, and May-October summary statistics for all parameters. To reduce biases from missing data or changes in sampling frequency, monthly means were calculated and then averaged to give an overall mean.

Parameter	Minimum	Mean	Maximum
Full-year statistics			
Secchi depth (m)	2.5	4.2	7.5
Water temperature (°C)	5.0	13.7	25.0
May-October statistics			
Secchi depth (m)	2.5	4.8	7.5
Water temperature (°C)	13.5	19.6	25.0
Chlorophyll-a (µg/L)	1.2	4.6	11.7
Total nitrogen (µg/L)	263.0	391.7	657.0
Total phosphorus (µg/L)	7.6	13.2	22.7
N:P ratio	14.9	33.1	75.5

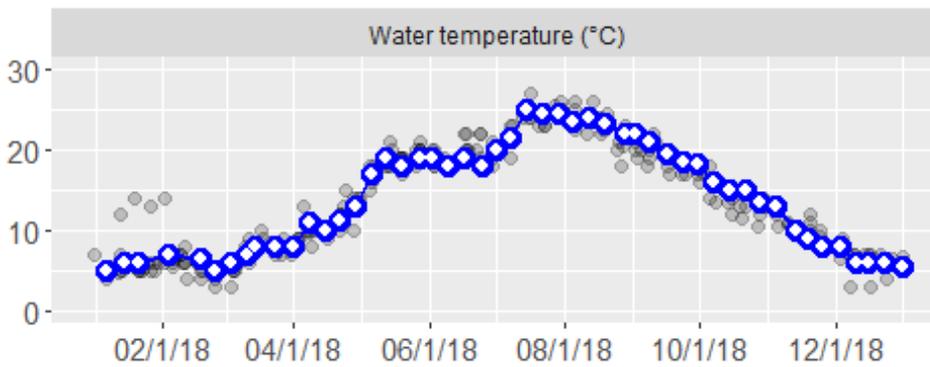
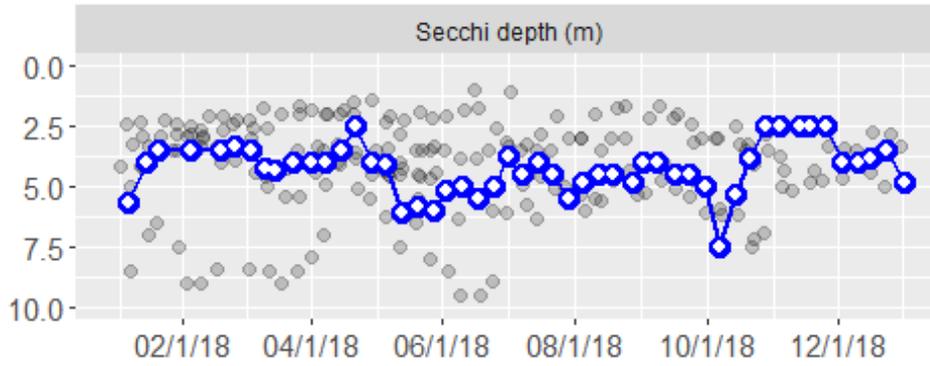
Hydrology: Lake level and precipitation

Lake level and precipitation were recorded year-round. Bars show total weekly precipitation, and the line shows average weekly lake level.



Year-round Secchi depth and water temperature

Secchi depth and water temperature (at 1 m depth) were measured weekly in 2018. The blue circles (with white centers) and blue line are data for Lake Wilderness. Gaps in the line indicate missed sampling dates. Grey points in the background are results for all other lakes in the Lake Stewardship program.



Water column profile

In May and August, water was collected at the mid-lake sampling station from three depths in a water-column profile: 1 m, the middle depth of the water column, and 1 m from the lake bottom.

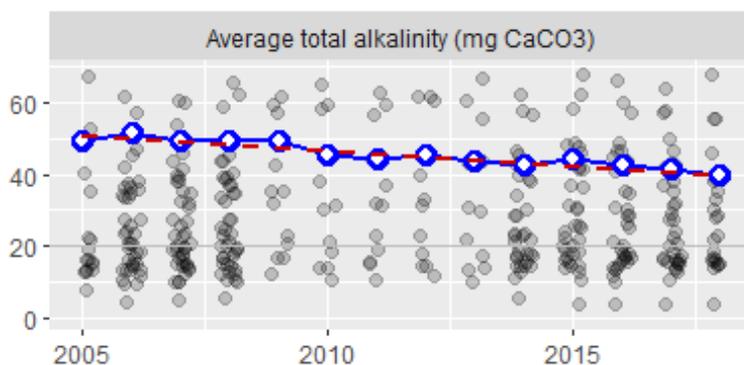
Date	Depth	Temp	Chlor	Pheo	TN	NH3	NO2/3	TP	OPO4
5/20/2018	1.0	18.0	1.2	(1.4)	625	50.1	359.0	12.3	0.7
	4.0	15.3	4.2	(1.3)	659	–	–	14.7	–
	8.5	9.5	25.5	19.9	510	42.2	17.0	83.8	2.9
8/19/2018	1.0	23.8	1.9	(2.0)	263	4.9	(10.0)	7.6	0.6
	4.0	22.5	2.8	(2.0)	287	–	–	6.4	–
	8.5	12.0	349.0	(32.0)	1900	18.5	(10.0)	287.0	7.6

* Parameter abbreviations are: chlorophyll-a (Chlor), pheophytin (Pheo), total nitrogen (TN), ammonia (NH3), nitrate/nitrite (NO2/3), total phosphorus (TP), orthophosphate (OPO4). Depth is in m, temperature is in °C, and all other parameters are in µg/L. Dashes indicate parameters that were not analyzed for a given sample. Values below the method detection limit (MDL) are enclosed in parentheses and have the value of the MDL substituted.

Total alkalinity

A lake’s ability to resist acidification, also called its buffering capacity, is measured as “total alkalinity.” Lakes with total alkalinity less than 20 mg CaCO₃ are considered sensitive to acidification. We measured total alkalinity in May and August (on profile-sampling days) at 1 m depth. In 2018, the average total alkalinity of these two samples was 40 mg CaCO₃.

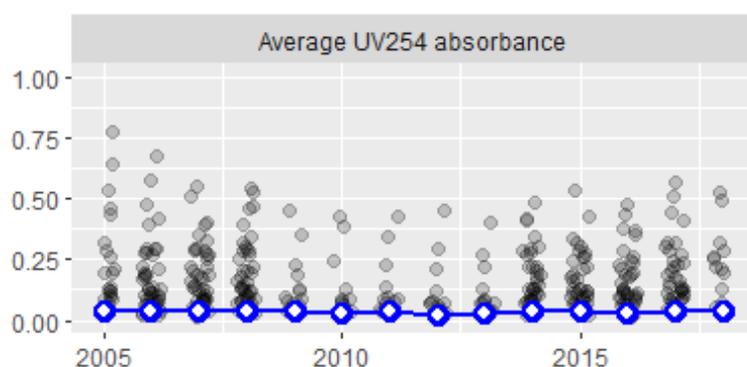
The blue circles (with white centers) and blue line are annual average alkalinity values for Lake Wilderness. Grey points in the background are results for all other lakes in the Lake Stewardship program. The dashed red line shows the long-term trend in alkalinity, with an average change of -9.8 mg CaCO₃ (-19%) per decade.



Water color

Water color affects a lake's water clarity (and Secchi depth). Water color is measured by shining a specific wavelength of ultraviolet light (254 nm) through a filtered water sample and measuring the percent that was absorbed. We measured UV254 absorbance in May and August (on profile-sampling days) at 1 m depth. In 2018, the average UV254 absorbance of these two samples was 0.04, on a scale where 0 is no absorbance (perfectly clear) and 1 is complete absorbance (perfectly opaque).

The blue circles (with white centers) and blue line are annual average UV absorbance values for Lake Wilderness. Grey points in the background are results for all other lakes in the Lake Stewardship program.



King County

Department of Natural Resources and Parks
Water and Land Resources Division
Science and Technical Support Section
King Street Center, KSC-NR-0600
201 South Jackson Street, Suite 600
Seattle, WA 98104
206-477-4800 TTY Relay: 711
www.kingcounty.gov/EnvironmentalScience

LAKE LUCERNE 2018

Lake Stewardship Monitoring Report

King County Water & Land Resources Division
Science & Technical Support Section
www.kingcounty.gov/EnvironmentalScience

Summary & Recommendations

Thank you to Jay Adams, the volunteer monitor for Lake Lucerne.

The key takeaways from the 2018 monitoring season are:

- Lake Lucerne continued to have clear water, with low nutrient concentrations and low algal growth.
- Secchi depths in Lake Lucerne have gotten deeper (clearer water) over time.
- Algal blooms were sampled for toxin testing in May. Toxin testing found microcystin and anatoxin present, at concentrations below the Washington State Recreational Guidelines.

The Lake Stewardship Program recommends:

- Stay alert for toxic algae blooms in Lake Lucerne – increase people’s awareness of toxic algae, and their ability to identify which algae are potentially toxic. Any potentially toxic blooms should be reported to the King County Lake Stewardship Program and sampled for toxin analysis.
 - Monitoring is a key part of good lake stewardship, building a valuable long-term dataset to guide lake management and detect any future problems. Continue to monitor Lake Lucerne through the Lake Stewardship Program.
-
-

In this report:

- **What We Measure & Why**
- **Water Quality Results & Trends**
 - 2018 monitoring results
 - Long-term annual averages
 - Trends over time
- **Trophic State**
 - Trophic state indices
 - Comparison map
- **Supplemental Data**
 - Summary statistics
 - Water column profile
 - Total alkalinity
 - Water color

What We Measure & Why

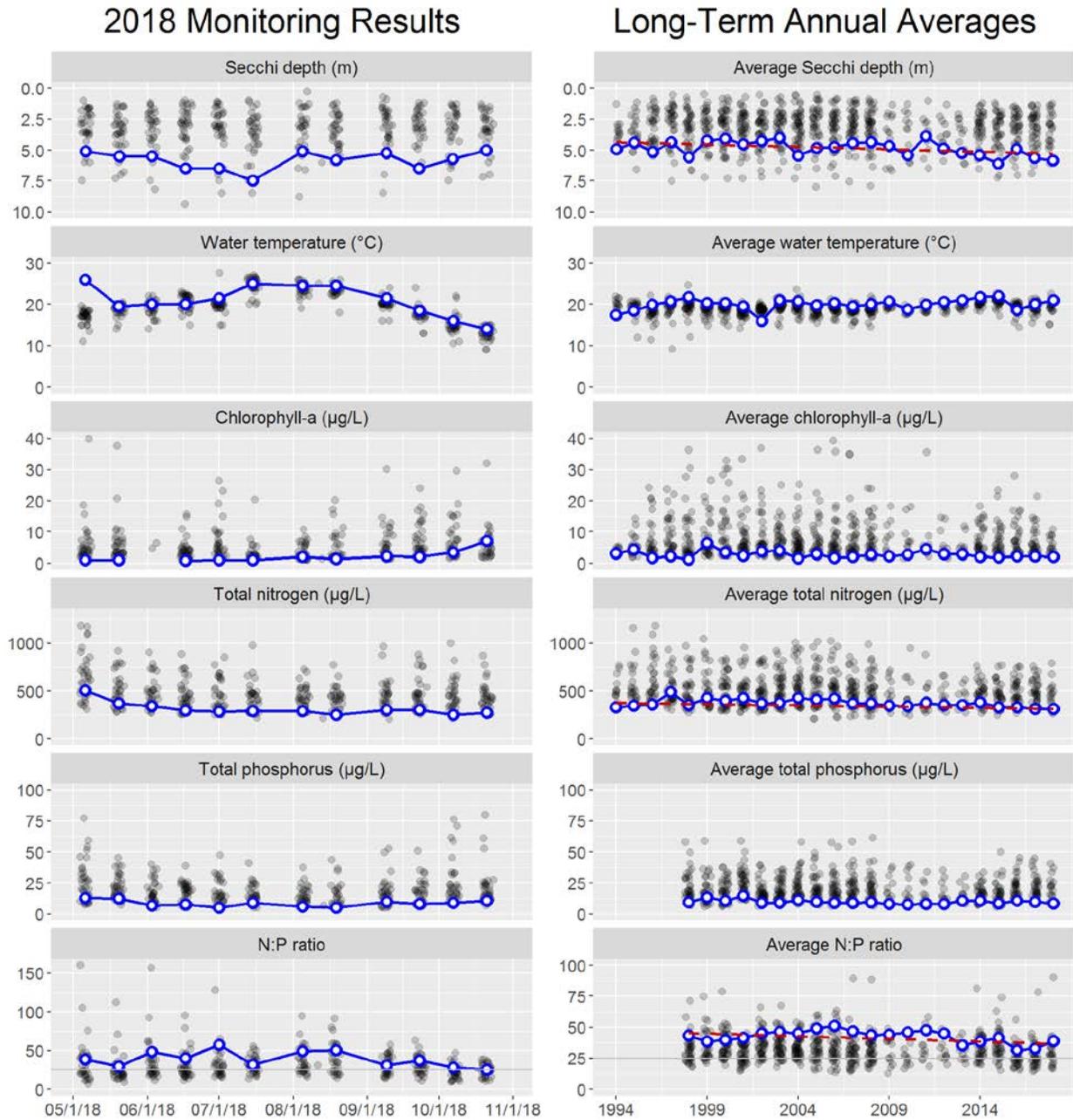
- **Secchi depth** is a measure of water clarity or transparency. Secchi depth is shallower when there are more suspended particles in the lake, such as sediment or algae. Secchi depth is also affected by water color, often from tannins or other naturally occurring organic molecules.
- **Water temperature** can affect the growth rates of plants and algae. In addition, cooler or warmer water temperatures favor different species of fish and other aquatic organisms.
- **Chlorophyll-a** is a measure of the amount of algae in a lake. Chlorophyll-a is a pigment necessary for algae to photosynthesize and store energy.
- **Phosphorus** and **nitrogen** are naturally occurring nutrients necessary for growth and reproduction in both plants and animals. Increases in nutrients (especially phosphorus) can lead to more frequent and dense algal blooms.
- The **ratio of total nitrogen to total phosphorus (N:P)** indicates whether nutrient conditions favor the growth of cyanobacteria (blue-green algae). When N:P ratios are near or below 25, cyanobacteria can dominate the algal community. This is important because cyanobacteria have the ability to produce toxins.

Water Quality Results & Trends

The following graphs show the water-quality parameters that are sampled from May through October, at 1 m depth (additional depths and parameters are measured on profile days; see *Supplemental Data*). The left column of graphs shows results for each sampling date in 2018, and the right column shows average values for each year (May-October averages).

Data for Lake Lucerne are the blue circles (with white centers) connected by the blue line. Any gaps in the blue line indicate missed samples. To provide some context for these values, the grey points in the background are results for all other lakes in the Lake Stewardship program.

Any long-term trends in Lake Lucerne are drawn with a dashed red line and described further after the graphs. Statistical trend analyses used a seasonal (monthly) Kendall test ($p < 0.05$).



Lake Lucerne’s low nutrient concentrations and nitrogen-to-phosphorus (N:P) ratios above 25 both typically indicate that Lake Lucerne is not likely to have algal blooms dominated by

cyanobacteria (which have the ability to produce toxins). Contrary to this expectation, however, there was a toxin-producing algal bloom in May.

The table below gives more details about the long-term trends. Results are presented as an average amount and percent of change per decade (the increase or decrease over ten years). Percent change is calculated as the percent of the estimated value in 1994, when monitoring started.

Parameter	Change per Decade	(%)
Secchi depth	0.39 m	(8.9%)
Total nitrogen	-28 µg/L	(-7.4%)
N:P ratio	-4.3	(-9.1%)

Secchi depths in Lake Lucerne have gotten deeper (clearer water) over time. Nitrogen concentrations have also decreased, though it is not clear whether this is causing the deeper Secchi depths.

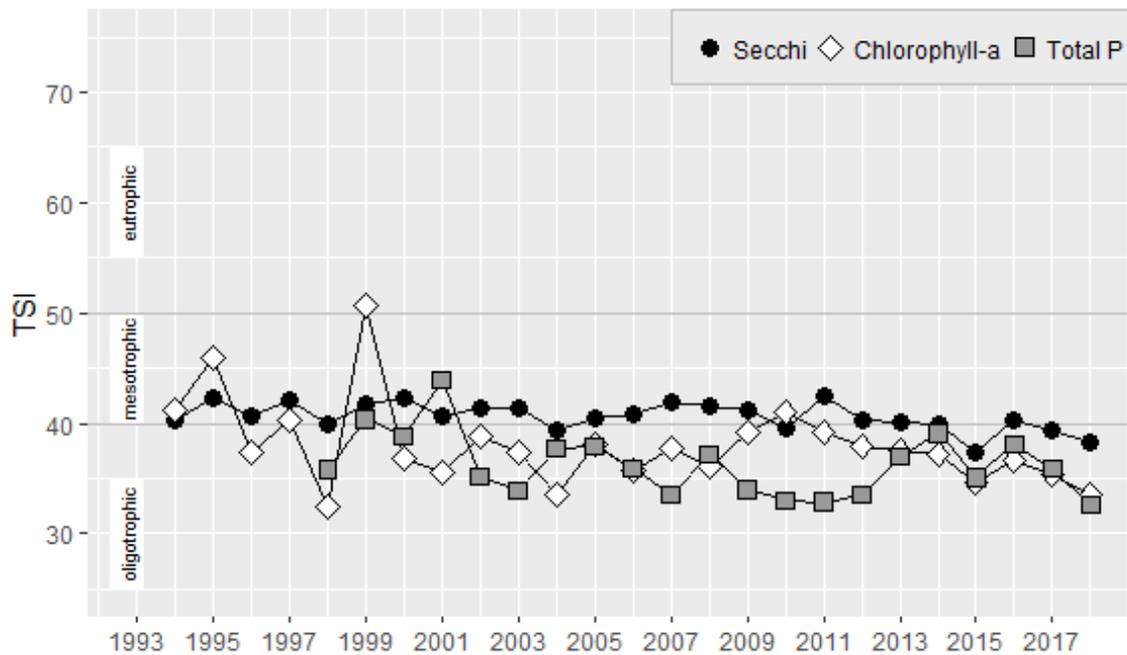
Trophic State

The Trophic State Index (TSI) is a common index of a lake’s overall biological productivity. TSI values are calculated from Secchi depth, chlorophyll-a concentrations, and total phosphorus concentrations. These three TSI estimates are all scaled between 0 and 100.

TSI calculations use average values from June-September, focusing on fairly consistent “summer” conditions. This is in contrast with the annual averages shown above, which also include May and October data.

Oligotrophic lakes (TSI <40) are very clear, with low nutrient concentrations and low algal growth. *Eutrophic* lakes (TSI >50) have less-clear water, with high nutrient concentrations and high algal growth. Eutrophic lakes are more likely to have frequent algal blooms. *Mesotrophic* lakes (TSI 40-50) are in the middle, with fairly clear water, and moderate nutrient concentrations and algal growth. Lakes in lowland King County have a range of different natural trophic states, and human activities may also alter a lake’s trophic state (usually by changing nutrient inputs).

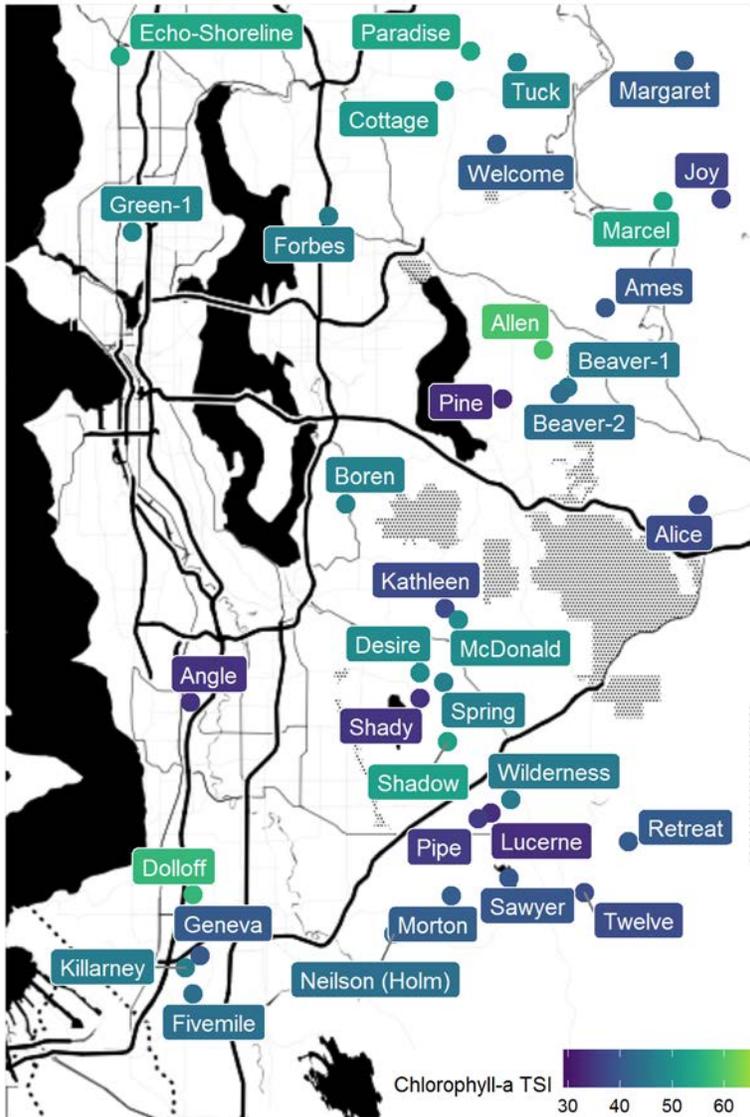
Trophic state indices



In 2018, the TSI values were in the oligotrophic range.

Comparison map

For a comparison with other lakes, this map shows the trophic state for each lake in the King County Lake Stewardship program in 2018. The color of each circle indicates the lake's average chlorophyll-a TSI value for the year.



Supplemental Data

Summary statistics

This table summarizes data from May-October 2018 (1 m depth only), giving the minimum, mean (average), and maximum values for each parameter. To reduce biases from missing data or changes in sampling frequency, monthly means were calculated and then averaged to give an overall mean.

Parameter	Minimum	Mean	Maximum
Secchi depth (m)	5.0	5.8	7.5
Water temperature (°C)	14.0	20.9	26.0
Chlorophyll-a (µg/L)	0.7	1.9	7.1
Total nitrogen (µg/L)	253.0	313.7	504.0
Total phosphorus (µg/L)	5.0	8.6	13.1
N:P ratio	25.2	38.8	57.2

Water column profile

In May and August, water was collected at the mid-lake sampling station from three depths in a water-column profile: 1 m, the middle depth of the water column, and 1 m from the lake bottom.

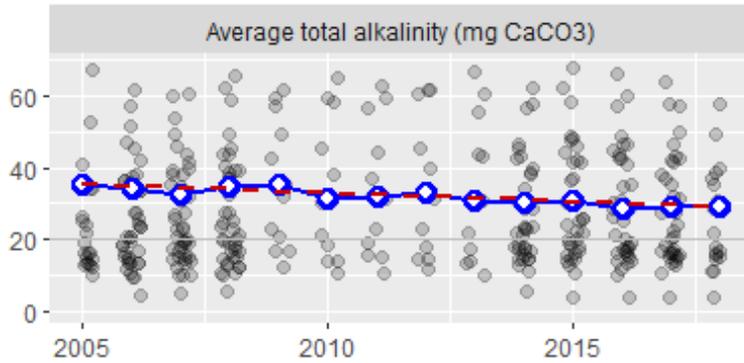
Date	Depth	Temp	Chlor	Pheo	TN	NH3	NO2/3	TP	OPO4
5/20/2018	1.0	19.5	1.0	(1.2)	371	33.7	113.0	12.6	0.6
	5.0	10.0	23.7	(2.2)	527	–	–	41.6	–
	10.0	7.2	–	–	428	28.3	111.0	50.1	3.4
8/19/2018	1.0	24.5	1.4	(2.5)	253	3.5	(10.0)	(5.0)	(0.5)
	5.0	20.0	5.5	(2.5)	249	–	–	8.3	–
	8.8	8.0	–	–	346	(2.0)	(10.0)	82.2	1.3

* Parameter abbreviations are: chlorophyll-a (Chlor), pheophytin (Pheo), total nitrogen (TN), ammonia (NH3), nitrate/nitrite (NO2/3), total phosphorus (TP), orthophosphate (OPO4). Depth is in m, temperature is in °C, and all other parameters are in µg/L. Dashes indicate parameters that were not analyzed for a given sample. Values below the method detection limit (MDL) are enclosed in parentheses and have the value of the MDL substituted.

Total alkalinity

A lake's ability to resist acidification, also called its buffering capacity, is measured as "total alkalinity." Lakes with total alkalinity less than 20 mg CaCO₃ are considered sensitive to acidification. We measured total alkalinity in May and August (on profile-sampling days) at 1 m depth. In 2018, the average total alkalinity of these two samples was 29 mg CaCO₃.

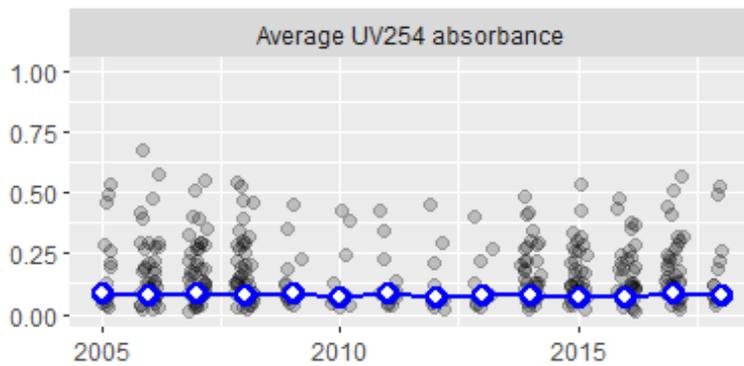
The blue circles (with white centers) and blue line are annual average alkalinity values for Lake Lucerne. Grey points in the background are results for all other lakes in the Lake Stewardship program. The dashed red line shows the long-term trend in alkalinity, with an average change of -5.46 mg CaCO₃ per decade.



Water color

Water color affects a lake’s water clarity (and Secchi depth). Water color is measured by shining a specific wavelength of ultraviolet light (254 nm) through a filtered water sample and measuring the percent that was absorbed. We measured UV254 absorbance in May and August (on profile-sampling days) at 1 m depth. In 2018, the average UV254 absorbance of these two samples was 0.08, on a scale where 0 is no absorbance (perfectly clear) and 1 is complete absorbance (perfectly opaque).

The blue circles (with white centers) and blue line are annual average UV absorbance values for Lake Lucerne. Grey points in the background are results for all other lakes in the Lake Stewardship program.



King County

Department of Natural Resources and Parks
Water and Land Resources Division
Science and Technical Support Section
King Street Center, KSC-NR-0600
201 South Jackson Street, Suite 600
Seattle, WA 98104
206-477-4800 TTY Relay: 711
www.kingcounty.gov/EnvironmentalScience

PIPE LAKE 2018

Lake Stewardship Monitoring Report

King County Water & Land Resources Division
Science & Technical Support Section
www.kingcounty.gov/EnvironmentalScience

Summary & Recommendations

Thank you to Tom Sullivan, the volunteer monitor for Pipe Lake.

The key takeaways from the 2018 monitoring season are:

- Pipe Lake continued to have clear water, low nutrient concentrations, and low algal growth.
- Pipe Lake has one of the deepest Secchi depths (clearest water) of any lake in the Lake Stewardship program. Secchi depths have been getting even deeper over time.
- Long-term trends suggest that water quality in Pipe Lake has been improving over time, with decreasing nitrogen, phosphorus, and chlorophyll concentrations in addition to the deeper Secchi depths.
- An algal bloom was sampled for toxin testing in early May. Toxin testing found very low concentrations of algal toxins, well below the Washington State Recreational Guidelines.

The Lake Stewardship Program recommends:

- Monitoring is a key part of good lake stewardship, building a valuable long-term dataset to guide lake management and detect any future problems. Continue to monitor Pipe Lake through the Lake Stewardship Program.
-
-

In this report:

- **What We Measure & Why**
- **Water Quality Results & Trends**
 - 2018 monitoring results
 - Long-term annual averages
 - Trends over time
- **Trophic State**
 - Trophic state indices
 - Comparison map
- **Supplemental Data**
 - Summary statistics
 - Water column profile
 - Total alkalinity
 - Water color

What We Measure & Why

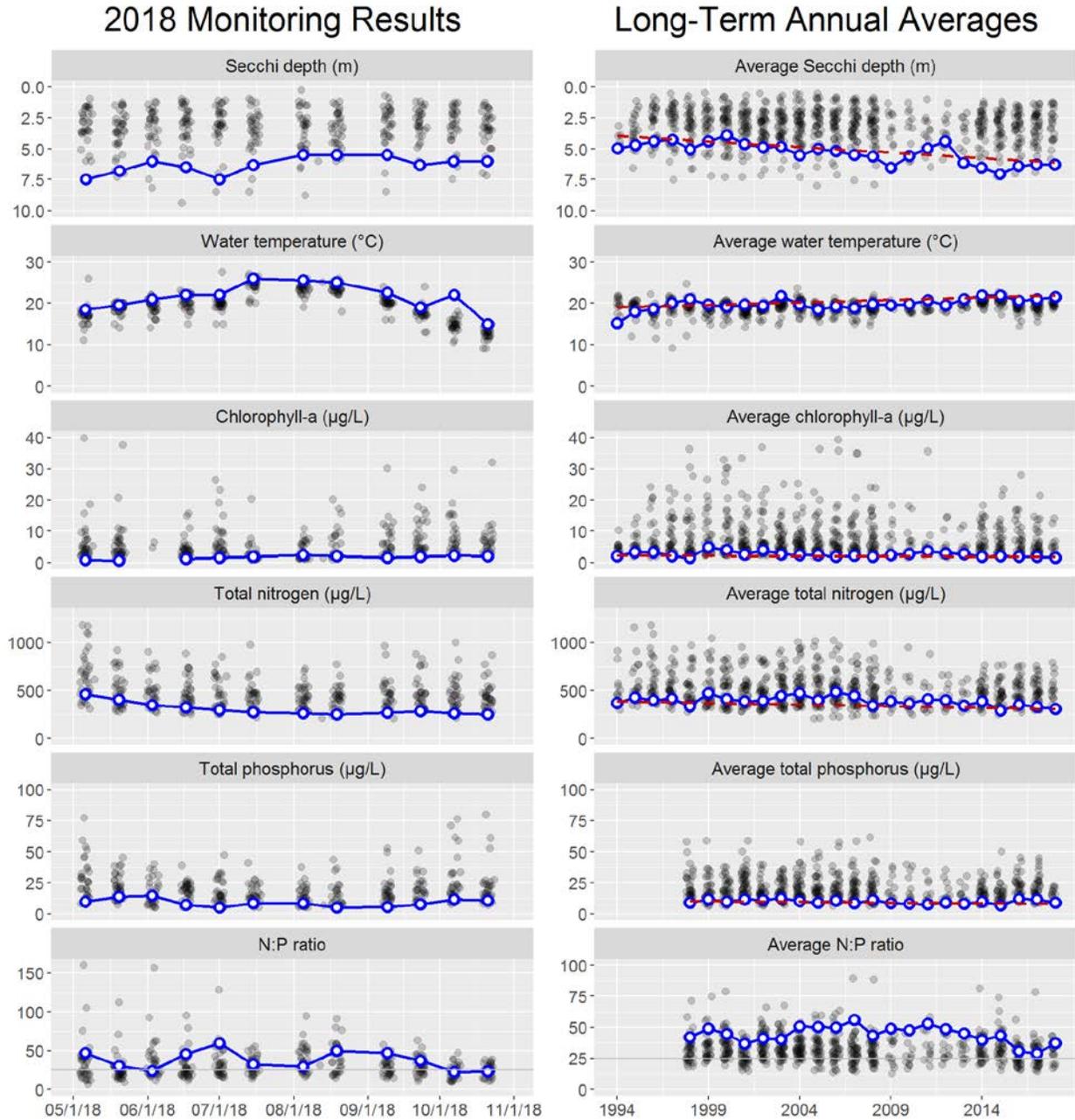
- **Secchi depth** is a measure of water clarity or transparency. Secchi depth is shallower when there are more suspended particles in the lake, such as sediment or algae. Secchi depth is also affected by water color, often from tannins or other naturally occurring organic molecules.
- **Water temperature** can affect the growth rates of plants and algae. In addition, cooler or warmer water temperatures favor different species of fish and other aquatic organisms.
- **Chlorophyll-a** is a measure of the amount of algae in a lake. Chlorophyll-a is a pigment necessary for algae to photosynthesize and store energy.
- **Phosphorus** and **nitrogen** are naturally occurring nutrients necessary for growth and reproduction in both plants and animals. Increases in nutrients (especially phosphorus) can lead to more frequent and dense algal blooms.
- The **ratio of total nitrogen to total phosphorus (N:P)** indicates whether nutrient conditions favor the growth of cyanobacteria (blue-green algae). When N:P ratios are near or below 25, cyanobacteria can dominate the algal community. This is important because cyanobacteria have the ability to produce toxins.

Water Quality Results & Trends

The following graphs show the water-quality parameters that are sampled from May through October, at 1 m depth (additional depths and parameters are measured on profile days; see *Supplemental Data*). The left column of graphs shows results for each sampling date in 2018, and the right column shows average values for each year (May-October averages).

Data for Pipe Lake are the blue circles (with white centers) connected by the blue line. Any gaps in the blue line indicate missed samples. To provide some context for these values, the grey points in the background are results for all other lakes in the Lake Stewardship program.

Any long-term trends in Pipe Lake are drawn with a dashed red line and described further after the graphs. Statistical trend analyses used a seasonal (monthly) Kendall test ($p < 0.05$).



Nitrogen-to-phosphorus (N:P) ratios were periodically below 25, indicating times when the algal community was more likely to be dominated by cyanobacteria (which have the ability to produce toxins).

The table below gives more details about the long-term trends. Results are presented as an average amount and percent of change per decade (the increase or decrease over ten years). Percent change is calculated as the percent of the estimated value in 1994, when monitoring started.

Parameter	Change per Decade	(%)
Secchi depth	0.88 m	(22%)
Water temperature	1.2 °C	(6.1%)
Chlorophyll-a	-0.2 µg/L	(-8.8%)
Total nitrogen	-33 µg/L	(-8.6%)
Total phosphorus	-1.1 µg/L	(-10%)

Long-term trends suggest that water quality in Pipe Lake has been improving over time, with decreasing nitrogen, phosphorus, and chlorophyll concentrations, and deeper Secchi depths. The trend of deeper Secchi depths (clearer water) in Pipe Lake is especially noticeable. On average, Secchi depths in recent years have been about 1.5 m deeper than they were in the mid-1990s when monitoring began.

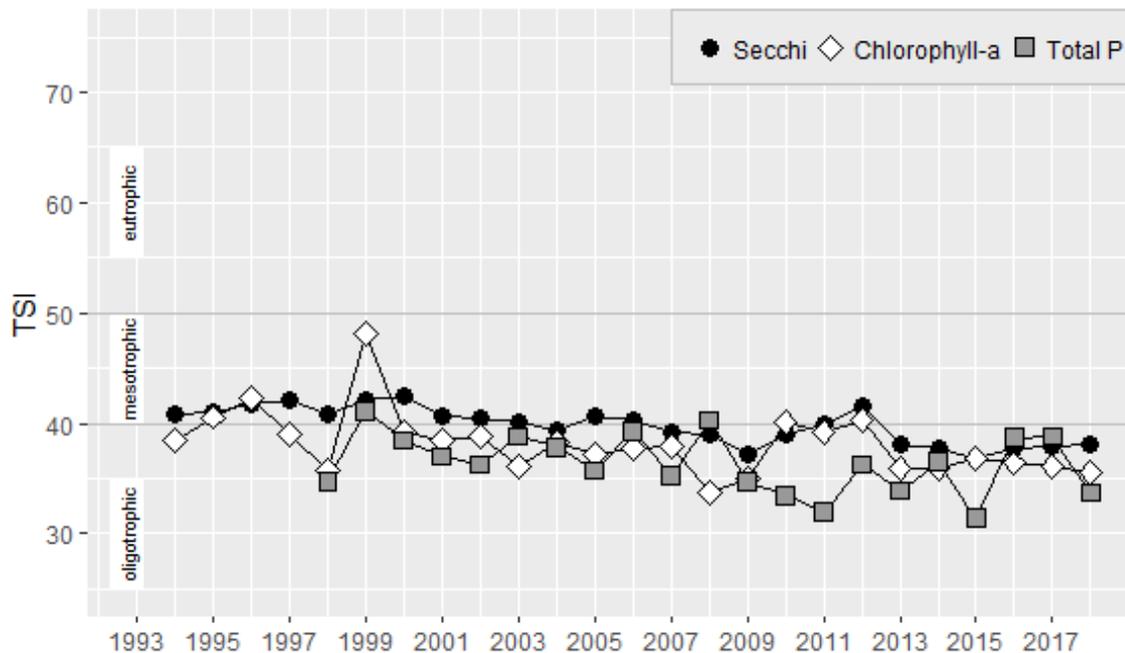
Trophic State

The Trophic State Index (TSI) is a common index of a lake's overall biological productivity. TSI values are calculated from Secchi depth, chlorophyll-a concentrations, and total phosphorus concentrations. These three TSI estimates are all scaled between 0 and 100.

TSI calculations use average values from June-September, focusing on fairly consistent "summer" conditions. This is in contrast with the annual averages shown above, which also include May and October data.

Oligotrophic lakes (TSI <40) are very clear, with low nutrient concentrations and low algal growth. *Eutrophic* lakes (TSI >50) have less-clear water, with high nutrient concentrations and high algal growth. Eutrophic lakes are more likely to have frequent algal blooms. *Mesotrophic* lakes (TSI 40-50) are in the middle, with fairly clear water, and moderate nutrient concentrations and algal growth. Lakes in lowland King County have a range of different natural trophic states, and human activities may also alter a lake's trophic state (usually by changing nutrient inputs).

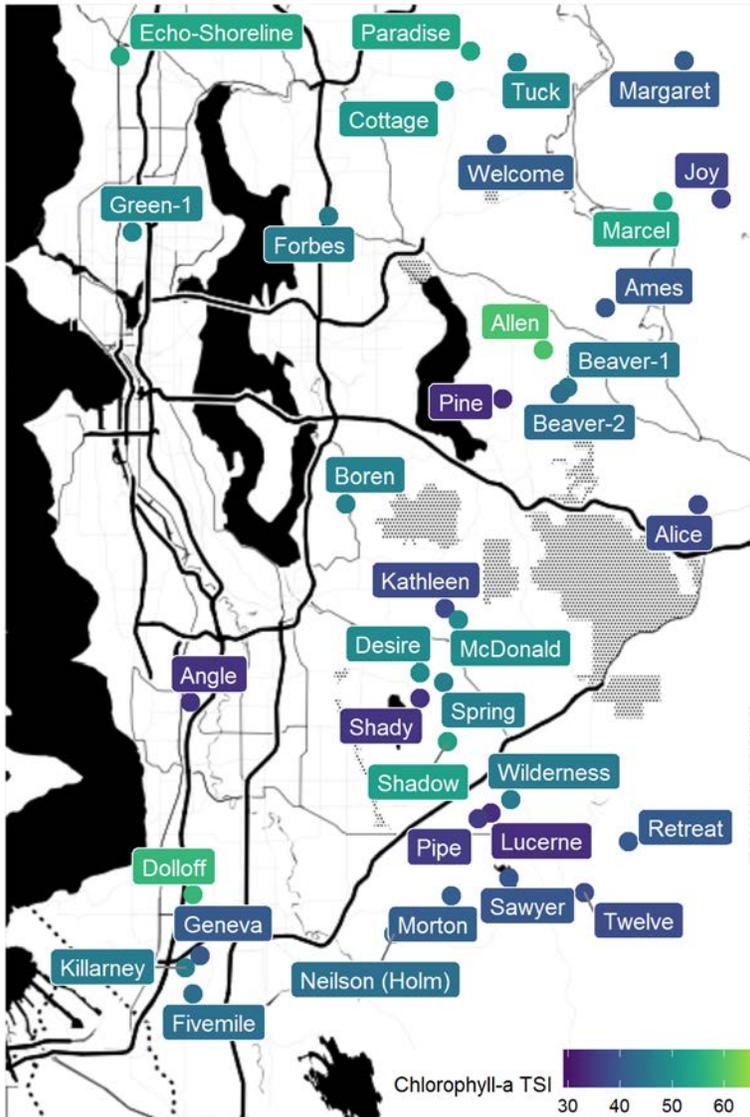
Trophic state indices



In 2018, the TSI values were in the oligotrophic range.

Comparison map

For a comparison with other lakes, this map shows the trophic state for each lake in the King County Lake Stewardship program in 2018. The color of each circle indicates the lake's average chlorophyll-a TSI value for the year.



Supplemental Data

Summary statistics

This table summarizes data from May-October 2018 (1 m depth only), giving the minimum, mean (average), and maximum values for each parameter. To reduce biases from missing data or changes in sampling frequency, monthly means were calculated and then averaged to give an overall mean.

Parameter	Minimum	Mean	Maximum
Secchi depth (m)	5.5	6.3	7.5
Water temperature (°C)	15.0	21.5	26.0
Chlorophyll-a (µg/L)	0.7	1.6	2.3
Total nitrogen (µg/L)	248.0	306.2	458.0
Total phosphorus (µg/L)	5.0	9.0	14.7
N:P ratio	22.6	37.3	59.4

Water column profile

In May and August, water was collected at the mid-lake sampling station from three depths in a water-column profile: 1 m, the middle depth of the water column, and 1 m from the lake bottom.

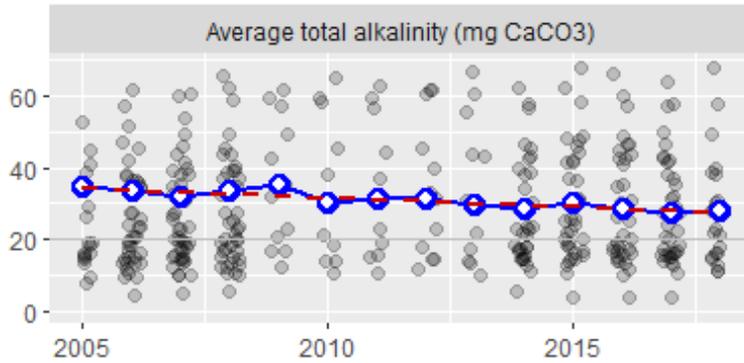
Date	Depth	Temp	Chlor	Pheo	TN	NH3	NO2/3	TP	OPO4
5/20/2018	1	19.5	0.7	(1.3)	406	32.6	136.0	13.6	0.8
	10	9.5	(0.6)	(1.3)	500	–	–	11.1	–
	19	7.0	–	–	582	31.8	342.0	41.1	9.2
8/19/2018	1	25.0	2.0	(1.4)	248	2.3	(10.0)	(5.0)	(0.5)
	10	8.5	1.2	1.7	453	–	–	8.0	–
	19	7.0	–	–	585	383.0	(10.0)	115.0	4.6

* Parameter abbreviations are: chlorophyll-a (Chlor), pheophytin (Pheo), total nitrogen (TN), ammonia (NH3), nitrate/nitrite (NO2/3), total phosphorus (TP), orthophosphate (OPO4). Depth is in m, temperature is in °C, and all other parameters are in µg/L. Dashes indicate parameters that were not analyzed for a given sample. Values below the method detection limit (MDL) are enclosed in parentheses and have the value of the MDL substituted.

Total alkalinity

A lake's ability to resist acidification, also called its buffering capacity, is measured as "total alkalinity." Lakes with total alkalinity less than 20 mg CaCO₃ are considered sensitive to acidification. We measured total alkalinity in May and August (on profile-sampling days) at 1 m depth. In 2018, the average total alkalinity of these two samples was 27.9 mg CaCO₃.

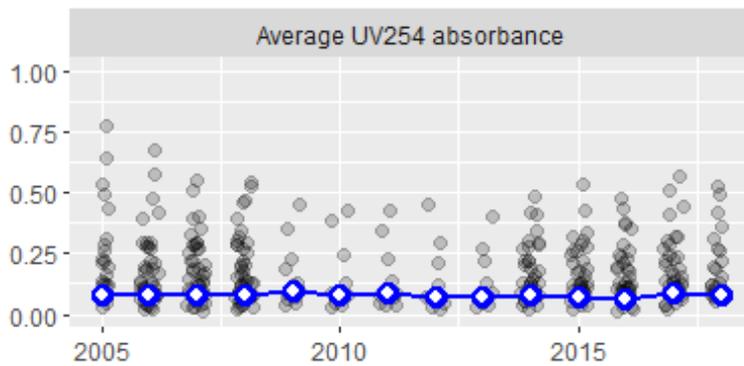
The blue circles (with white centers) and blue line are annual average alkalinity values for Pipe Lake. Grey points in the background are results for all other lakes in the Lake Stewardship program. The dashed red line shows the long-term trend in alkalinity, with an average change of -5.31 mg CaCO₃ per decade.



Water color

Water color affects a lake's water clarity (and Secchi depth). Water color is measured by shining a specific wavelength of ultraviolet light (254 nm) through a filtered water sample and measuring the percent that was absorbed. We measured UV254 absorbance in May and August (on profile-sampling days) at 1 m depth. In 2018, the average UV254 absorbance of these two samples was 0.08, on a scale where 0 is no absorbance (perfectly clear) and 1 is complete absorbance (perfectly opaque).

The blue circles (with white centers) and blue line are annual average UV absorbance values for Pipe Lake. Grey points in the background are results for all other lakes in the Lake Stewardship program.



King County

Department of Natural Resources and Parks
Water and Land Resources Division
Science and Technical Support Section
King Street Center, KSC-NR-0600
201 South Jackson Street, Suite 600
Seattle, WA 98104
206-477-4800 TTY Relay: 711
www.kingcounty.gov/EnvironmentalScience



Income Statement Account Summary

For Fiscal: 2018 Period Ending: 12/31/2018

	Original Total Budget	Current Total Budget	MTD Activity	YTD Activity	Budget Remaining
Fund: 001 - GENERAL FUND					
Expense					
001-5501000-55360-110100 Salaries & Wages	13,990.00	16,770.00	239.21	7,456.66	9,313.34
001-5501000-55360-210100 Benefits	4,480.00	5,270.00	78.55	2,349.84	2,920.16
001-5501000-55360-410100 Advertising	100.00	100.00	120.75	120.75	-20.75
001-5501000-55360-412331 Aquatic Plant Education Services	5,000.00	9,391.00	579.03	4,852.21	4,538.79
001-5501000-55360-412332 Aquatic Plant Evaluation Services	2,790.00	2,790.00	0.00	3,029.95	-239.95
001-5501000-55360-412333 Aquatic Plant Treatment Services	8,100.00	14,100.00	0.00	5,375.70	8,724.30
001-5501000-55360-499900 Other Miscellaneous	200.00	200.00	0.00	0.00	200.00
001-5501000-55360-512170 KC-Beach Monitoring	7,750.00	7,750.00	0.00	7,748.00	2.00
001-5501000-55360-512171 KC-Lake Wilderness Technical Services	6,000.00	6,000.00	0.00	0.00	6,000.00
001-5501000-55360-512172 KC-Lake Stewardship-Lake Wilderness	10,000.00	10,000.00	9,995.00	9,995.00	5.00
001-5501000-55360-512173 KC-Lake Stewardship-Pipe Lake & Lake Luc	14,430.00	14,430.00	14,430.00	14,430.00	0.00
001-5501000-55360-512174 KC-Hydrilla Project-Pipe Lake & Lake Lucer	2,040.00	2,040.00	0.00	0.00	2,040.00
001-5501000-55360-516120 Intergovernmental License & Permits	550.00	550.00	0.00	309.00	241.00
Expense Total:	75,430.00	89,391.00	25,442.54	55,667.11	33,723.89
Fund: 001 - GENERAL FUND Total:	75,430.00	89,391.00	25,442.54	55,667.11	
Total Surplus (Deficit):	-75,430.00	-89,391.00	-25,442.54	-55,667.11	



Income Statement Account Summary

For Fiscal: 2019 Period Ending: 02/28/2019

	Original Total Budget	Current Total Budget	MTD Activity	YTD Activity	Budget Remaining
Fund: 001 - GENERAL FUND					
Expense					
001-5501000-55360-110100 Salaries & Wages	8,220.00	8,220.00	780.49	1,250.93	6,969.07
001-5501000-55360-210100 Benefits	2,580.00	2,580.00	248.93	398.64	2,181.36
001-5501000-55360-410100 Advertising	100.00	100.00	0.00	0.00	100.00
001-5501000-55360-412331 Aquatic Plant Education Services	8,760.00	8,760.00	782.36	782.36	7,977.64
001-5501000-55360-412332 Aquatic Plant Evaluation Services	3,060.00	3,060.00	0.00	0.00	3,060.00
001-5501000-55360-412333 Aquatic Plant Treatment Services	20,000.00	20,000.00	0.00	0.00	20,000.00
001-5501000-55360-490250 Registration & Training	500.00	500.00	0.00	0.00	500.00
001-5501000-55360-499900 Other Miscellaneous	210.00	210.00	0.00	0.00	210.00
001-5501000-55360-512170 KC-Beach Monitoring	8,070.00	8,070.00	0.00	0.00	8,070.00
001-5501000-55360-512171 KC-Lake Wilderness Technical Services	6,000.00	6,000.00	0.00	0.00	6,000.00
001-5501000-55360-512172 KC-Lake Stewardship-Lake Wilderness	10,460.00	10,460.00	0.00	0.00	10,460.00
001-5501000-55360-512173 KC-Lake Stewardship-Pipe Lake & Lake Luc	15,150.00	15,150.00	0.00	0.00	15,150.00
001-5501000-55360-512174 KC-Hydrilla Project-Pipe Lake & Lake Lucer	5,000.00	5,000.00	0.00	0.00	5,000.00
001-5501000-55360-516120 Intergovernmental License & Permits	620.00	620.00	0.00	0.00	620.00
Expense Total:	88,730.00	88,730.00	1,811.78	2,431.93	86,298.07
Fund: 001 - GENERAL FUND Total:	88,730.00	88,730.00	1,811.78	2,431.93	
Total Surplus (Deficit):	-88,730.00	-88,730.00	-1,811.78	-2,431.93	

**Nature Vision
Schools by Agency**

Schedule Date: From Sep 1, 2017 to Jun 30, 2018;
Sponsor = City of Maple Valley

Glacier Park Elementary

Sponsored by: City of Maple Valley

<i>Teacher</i>	<i>Grade</i>	<i>Program</i>	<i># Class</i>	<i>Date</i>	<i>Invoice#</i>
Christine Wilson	5	Watershed Dynamics	27	06-Dec-17	6447
Holly Hanson	5	Watershed Dynamics	29	06-Dec-17	6447
Chuck Orser	5	Watershed Dynamics	30	06-Dec-17	6447
Sean Kennedy	5	Watershed Dynamics	29	06-Dec-17	6447
Mel Wells	3	Watershed Dynamics	26	08-Feb-18	6516
Kristina Sutherland	3	Watershed Dynamics	26	08-Feb-18	6516
Jennifer Mako	3	Watershed Dynamics	26	14-Feb-18	6516
Wendy Hogan	3	Watershed Dynamics	26	14-Feb-18	6516
Ruth Markert	3	Watershed Dynamics	30	14-Feb-18	6516
Holly Hanson	5	Healthy Water Healthy Soil 4-5	30	11-Jun-18	
Chuck Orser	5	Healthy Water Healthy Soil 4-5	30	11-Jun-18	
Christine Wilson	5	Healthy Water Healthy Soil 4-5	30	11-Jun-18	
Sean Kennedy	5	Healthy Water Healthy Soil 4-5	30	11-Jun-18	
Sean Kennedy	5	Wetland Filters	30	12-Jun-18	
Chuck Orser	5	Wetland Filters	30	12-Jun-18	
Holly Hanson	5	Wetland Filters	30	12-Jun-18	
Christine Wilson	5	Wetland Filters	30	12-Jun-18	

Total # of Programs for School = 17

Total # of Students = 489

Lake Wilderness Elementary

Sponsored by: City of Maple Valley

<i>Teacher</i>	<i>Grade</i>	<i>Program</i>	<i># Class</i>	<i>Date</i>	<i>Invoice#</i>
Jeannie Koon	2	Healthy Water Healthy Soil 2-3	25	03-May-18	6645
Rosemary Lathrop	2	Healthy Water Healthy Soil 2-3	25	03-May-18	6645
Lindsey Pingeon	2	Healthy Water Healthy Soil 2-3	25	07-May-18	6645
Patty Phippen	2	Healthy Water Healthy Soil 2-3	25	07-May-18	6645
Kim Mason	2	Healthy Water Healthy Soil 2-3	25	07-May-18	6645
Jeannie Koon	2	Watershed Ecosystem	25	08-May-18	6645
Rosemary Lathrop	2	Watershed Ecosystem	25	08-May-18	6645
Kim Mason	2	Watershed Ecosystem	25	10-May-18	6645
Patty Phippen	2	Watershed Ecosystem	25	10-May-18	6645
Lindsey Pingeon	2	Watershed Ecosystem	25	10-May-18	6645
Angie Binder	3	WS Dynamics: Enviroscape	25	04-Jun-18	

Lake Wilderness Elementary*Sponsored by:* City of Maple Valley

<i>Teacher</i>	<i>Grade</i>	<i>Program</i>	<i># Class</i>	<i>Date</i>	<i>Invoice#</i>
Cathy Haws	3	WS Dynamics: Enviroscope	21	04-Jun-18	
Laura Bowden	3	WS Dynamics: Enviroscope	27	04-Jun-18	
Callie Nordell	3	WS Dynamics: Enviroscope	25	06-Jun-18	
Melissa Tughan	3	WS Dynamics: Enviroscope	26	06-Jun-18	
Hayley Mathis	3	WS Dynamics: Enviroscope	24	06-Jun-18	

Total # of Programs for School = 16

Total # of Students = 398

Rock Creek Elementary*Sponsored by:* City of Maple Valley

<i>Teacher</i>	<i>Grade</i>	<i>Program</i>	<i># Class</i>	<i>Date</i>	<i>Invoice#</i>
Jennifer Vasile	K	Watershed Ecosystem	19	09-May-18	6645
Nikki Richards	K	Watershed Ecosystem	19	09-May-18	6645
Krissy Riggs	K	Watershed Ecosystem	19	09-May-18	6645
Jenny Tracy	K	Watershed Ecosystem	19	10-May-18	6645
Kristi Collins	K	Watershed Ecosystem	19	10-May-18	6645
Stepanie Gothro	4	Watershed Ecosystem	25	04-Jun-18	
Kate Cross	4	Watershed Ecosystem	25	04-Jun-18	
Jamie Miranda	4	Watershed Ecosystem	25	04-Jun-18	

Total # of Programs for School = 8

Total # of Students = 170

Total # of Sponsored Programs = 41

Total # of Students = 1,057

Nature Vision

Schedule by School by Grade

Schedule Date: From Sep 1, 2018 to Jun 30, 2019; Sponsor = City of Maple Valley

Lake Wilderness Elementary

Date/Time	Program	Room	Staff	Sponsor
Grade 3				
Ashley Glatt				
09-Jan-19 Wed 12:40 PM	Watershed Ecosystem	D206	Rachel K	City of Maple Valley
Cathy Haws				
09-Jan-19 Wed 12:40 PM	Watershed Ecosystem	B201	Scott	City of Maple Valley
Hayley Mathis				
09-Jan-19 Wed 9:00 AM	Watershed Ecosystem	D106	Rachel K	City of Maple Valley
Jill Phillip				
09-Jan-19 Wed 10:35 AM	Watershed Ecosystem	C205	Scott	City of Maple Valley
Laura Bowden				
09-Jan-19 Wed 9:00 AM	Watershed Ecosystem	C207	Scott	City of Maple Valley
Melissa Tughan				
09-Jan-19 Wed 10:35 AM	Watershed Ecosystem	D207	Rachel K	City of Maple Valley

School Programs = 6 Students = 144

Rock Creek Elementary

Date/Time	Program	Room	Staff	Sponsor
Grade 4				
Alyne Durkan				
17-Dec-18 Mon 11:50 AM	Healthy Water Healthy Soil 4-5	P1	Michelle	City of Maple Valley
Eddie Martinez				
26-Nov-18 Mon 11:00 AM	Healthy Water Healthy Soil 4-5	D4	Scott	City of Maple Valley
Jamie Miranda				
26-Nov-18 Mon 1:30 PM	Healthy Water Healthy Soil 4-5	P5	Scott	City of Maple Valley
Kate Cross				
26-Nov-18 Mon 9:00 AM	Healthy Water Healthy Soil 4-5	P6	Scott	City of Maple Valley
Stephanie Clement				
17-Dec-18 Mon 1:30 PM	Healthy Water Healthy Soil 4-5	P2	Michelle	City of Maple Valley

School Programs = 5 Students = 124

Programs = 11 Students = 268

PROCEDURES FOR ELECTION OF OFFICERS

Diana Pistoll (Committee Clerk or Department Director) will call for nominations for the office of Chair.

No one Committee member may nominate more than one person for office until every member wishing to nominate a candidate has an opportunity to do so.

Nominations do not require a second.

Ms. Pistoll will repeat each nomination and call for additional nominations.

When it appears there are no further nominations, Ms. Pistoll will ask once more for further nominations.

If there are no further nominations, nominations will be closed. No motion is necessary to close the nominations.

Voting takes place in the order nominations were made.

Committee members will be asked for a voice vote and a raise of hands.

As soon as one of the nominees receives a majority vote (3), Ms. Pistoll will declare the Chair elected. No vote will be taken on remaining nominees.

If none of the nominees receives a majority vote, Ms. Pistoll will call for nominations again and repeat the process until a single candidate receives a majority vote. A tie vote results in a failed nomination.

If there is only one nominee, Ms. Pistoll will declare that person elected. No vote will be necessary.

Once the Chair has been elected, Ms. Pistoll will turn the Chair over to the elected Chair and the Chair will open nominations for the Vice Chair and follow the election process as for Chair.

HOW TO TAKE ONLINE OPEN GOVERNMENT TRAINING THROUGH THE WASHINGTON STATE ATTORNEY GENERAL'S OFFICE WEB PAGE



STEPS

1. Click [here](#) to access the “Washington State Attorney General’s Office Open Government Training Web Page.”
2. Scroll down to the “Open Government Training Curriculum.”
3. Select the training lesson(s) you need to take. In sum, effective July 1, 2014, within 90 days of appointment/taking office and at intervals of no more than 4 years thereafter:

- Members of multimember **governing bodies** need to take open public meetings training. (Lesson 3). The members who are **elected** local or statewide officials must also take records training. (Lessons 2 and 4).
- Other **elected local and elected statewide officials** must take records training. (Lessons 2 and 4).
- **Records officers** must take records training. (Lessons 2 and 4).
- Although not required, **other public officials and public employees** can take the trainings as well. For example, incumbents in their office/position as of July 1, 2014 are strongly recommended to take the training in 2014 relevant to their position, as described above.

See [RCW 42.30.205](#), [RCW 42.56.150](#), and [RCW 42.56.152](#); and [O & A](#).

4. View the online training lesson(s).
5. When you are done, it is recommended you document the training you received.

More details are below.



- If you need **open meetings training** (see RCW 42.30.205):

Watch the **Open Public Meetings Act** (RCW 42.30) **video*** (16 minutes) **or** review the **PowerPoint**. They are in **Lesson 3**. Lesson 3 is for state and local agencies.



- If you need **records training** (see RCW 42.56.150 and RCW 42.56.152):

Watch the **Public Records Act** (RCW 42.56) **video*** (22 minutes) **or** review the **PowerPoint**. They are in **Lesson 2**. Lesson 2 is for state and local agencies.

+ and

Review the **Records Retention and Management** (RCW 40.14) online tutorial for your position linked in **Lesson 4**. Those tutorials are provided by the [State Archives](#). You can also go directly to those tutorials here:

Local Agencies

- If you are a **local official**, click [here](#) to review the online tutorial.
- If you are a **local employee**, click [here](#) to review the online tutorial.

State Agencies

- If you are a **state official**, click [here](#) to review the online tutorial.
- If you are a **state employee**, click [here](#) to review the online tutorial.



- Last step: If you want to **document the training** (recommended):

- You can use the sample certificate under “**Last Step**” at the bottom of the AGO Open Government Training Web Page.
- **Or**, your agency may have other methods to document training.

If you want more information on the topics covered in these lessons, see the “Other Resources” and other materials linked on the Open Government Training Web Page.

* Note: The videos are accessible through YouTube. State employees are also able to view the videos through the Washington State Department of Enterprise Services online [Learning Management System](#).

Lake Wilderness Citizen Advisory Committee (LWCAC)

2019 Work Program

1. AquaTechnex Aquatic Plant Surveys

- AquaTechnex LLC has been awarded a new Contract (C-19-1551) for years 2019-2020. They will conduct two aquatic plant surveys annually and provide recommendations to the city and LWCAC regarding proposed aquatic plant management actions.
- Aquatic plant management recommendations will be made by AquaTechnex and considered by the LWCAC.

2. Education and Outreach:

- Continue to use the services of Nature Vision for watershed education and outreach.
- Nature Vision (C-17-1398) is a \$10,000 contract with an unspent balance of \$3,756.90. However, teachers are already registering for spring 2019 classes, and it is likely Nature Vision will spend down their contract balance before the end of the June 2019 school year. At 2018 year end, the education budget has an unspent balance of \$4,538.97. Staff will propose a “carry forward” which would require Council approval in June 2019. Staff proposes to use the current 2019 education budget of \$7,977.64 to amend the compensation of Nature Vision’s agreement and also extend the duration to June 30, 2021. And amend the compensation again, should the “carry forward” of \$4,538.97 be approved. If both are approved Nature Vision would have a contract total of \$12,516.61.
- Continue to assist the Lake Wilderness Preservation Association (LWPA) in staffing of the Boat Launch at annual Hooked on Fishing Derby.
- Staff will reach out to Washington Fish and Wildlife to see if they have any new handouts for angler at the Hooked on Fishing Derby.

3. LWPA Volunteer Milfoil Patrol –

- LWPA continues to coordinate their volunteer milfoil patrol findings to the city.