



Advisory Board Newman Lake Flood Control District

SUMMER MEETING

June 21, 2018

Introductions & Purpose of AB Community Meeting

Advisory Board Members

- Karen Stebbins
- Lee Tate
- Suzanne O'Connell
- Karen Taff
- Dennis Rewinkel

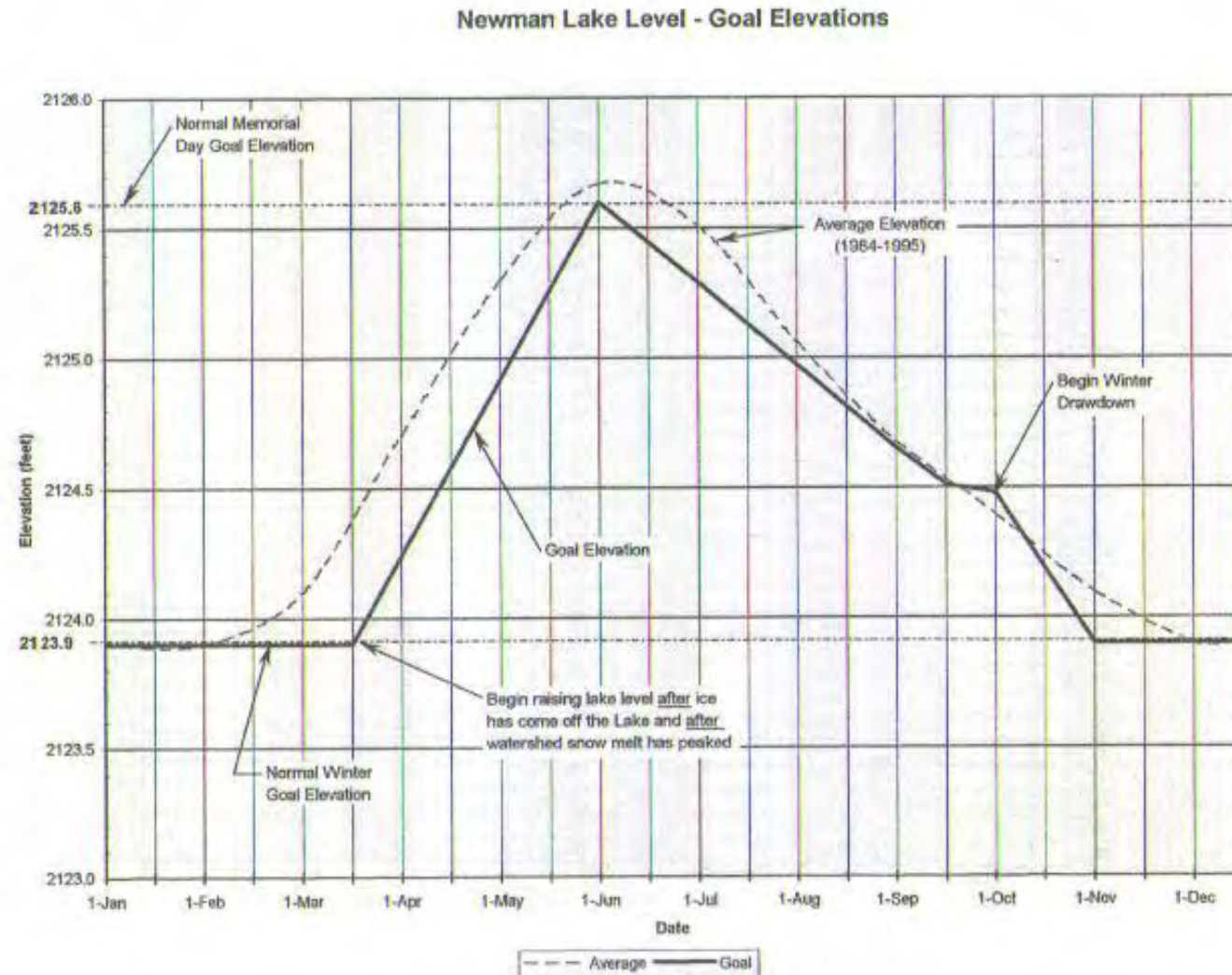
In process of filling 3 open positions

*Advisory Board is made up of 5 voting members & 3 alternates or non-voting members



Operation Plan For 2018 and Future

Flood Control



Water Quality

Aerator Facility Operation

- Operate Aerator System at full capacity when lake is stratified (Spring – Fall)
- Maintain Dissolved Oxygen (DO) levels as high as possible.
- Goal is to maintain oxygen levels in the lower level of the lake (hypolimnion) at 4 mg/l.

Alum Injection System Operation

- Reduce the absolute amount of blue-green algae
- Timed injection of Alum into the lake to reduce Phosphorus availability (i.e. algae nutrients)
- Goal to maintain the Volume Weighted Total Phosphorus below 20 ug/l.

2018 Budget Composition

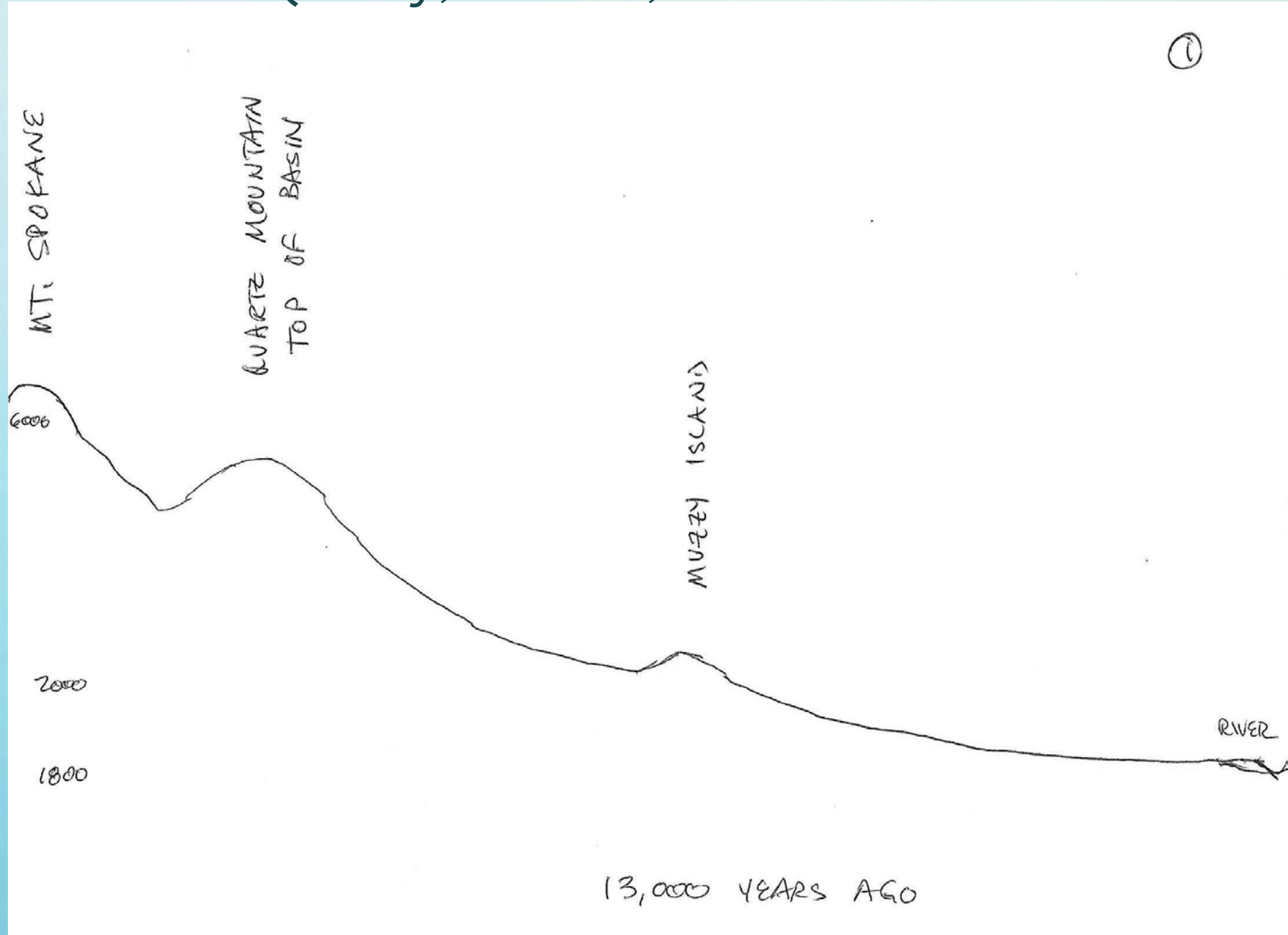
Income

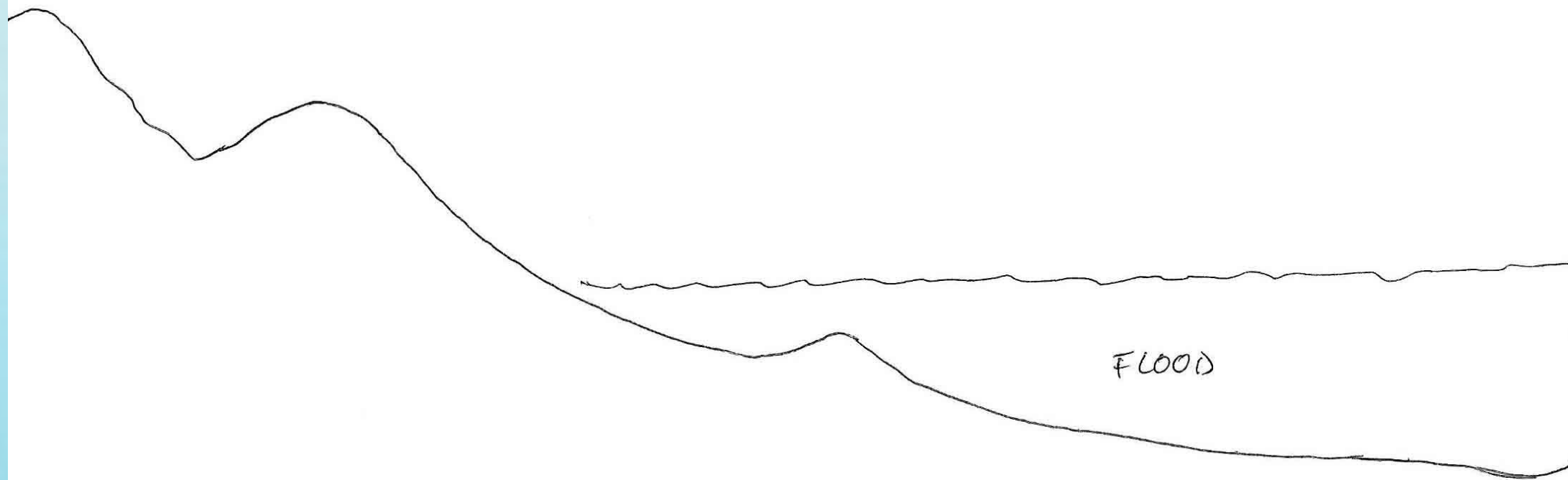
Assessments	\$238,700
Grant Reimbursements	\$ 60,261
Other	\$ 1,050
Total	\$ 300,011

Expenses

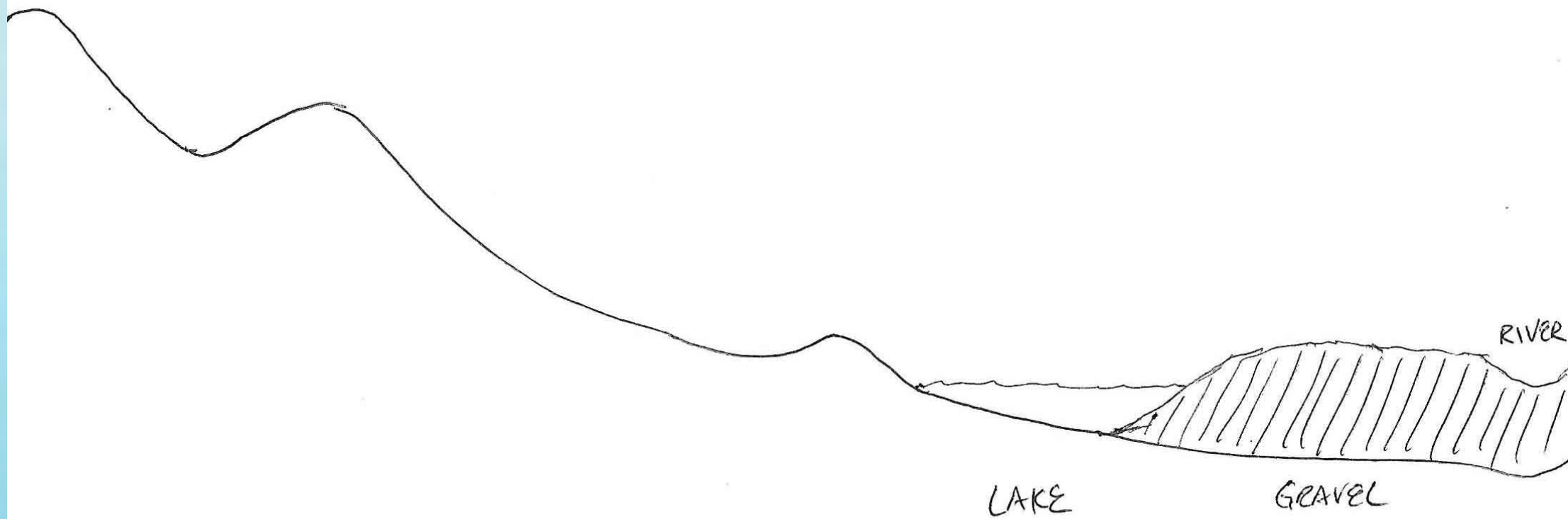
	Flood Control	Water Quality	Total
District Staff (Labor)	37,538	51,957	89,495
Support Agreements (Monitoring, permits, etc.)	4,350	36,611	40,961
Facility Operation/Maint./Repair	4,295	96,925	101,220
Overhead (Taxes, Ins., Printing, Travel, etc.)	1,885	3,250	5,135
Subtotal	48,068	188,743	236,811
Added to Reserves	40,587	22,612	53,200
Total Expenditures	88,655	211,355	300,011

2017 Poor Water Quality, Causes, Solutions & Predictions for 2018

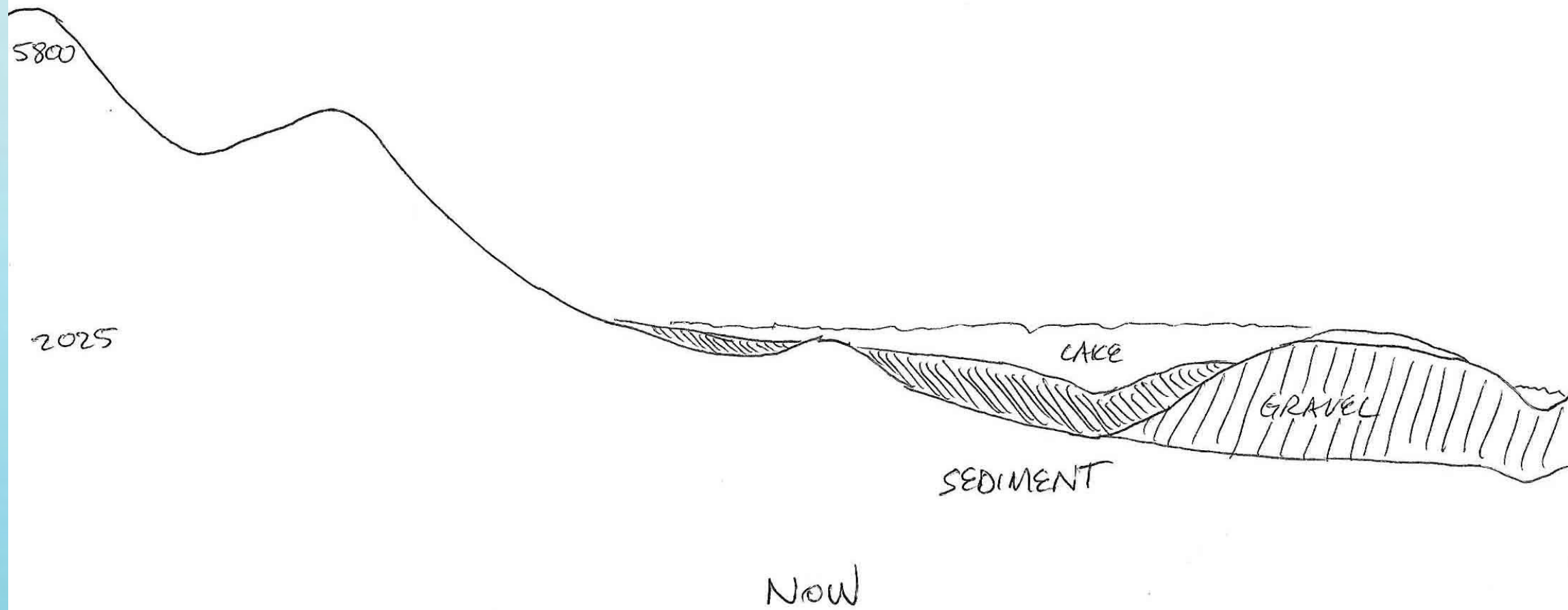




12,500 YEARS AGO



12,000 YEARS AGO



Perfect Storm Conditions

- Started off with oxygen deficit from 2016
- Early Snow Melt – Run Off Exceeded Ditch Capacity
 - Run Off Exceeded Ditch Capacity
 - Flooded Upstream Fields
 - Brought in Flooded Fields Nutrients
- Longest Dry Spell in History – No Flushing
- Hottest Summer in Decades – More Evaporation
- Result is High Concentration of Nutrients for Algae Growth
- August & September Very Bad Lake Conditions

We All Want Clear Water

- Cloudy Water Comes Mostly From Algae – Browns, Greens, Blue Greens
- Algae Comes From Nutrients
- Nutrients come from Streams, Organics, Sediments and Cabins (People Load)
- Nutrients are Primarily Phosphorus & Nitrogen
- To Get Clear Water, Remove Phosphorus Sources

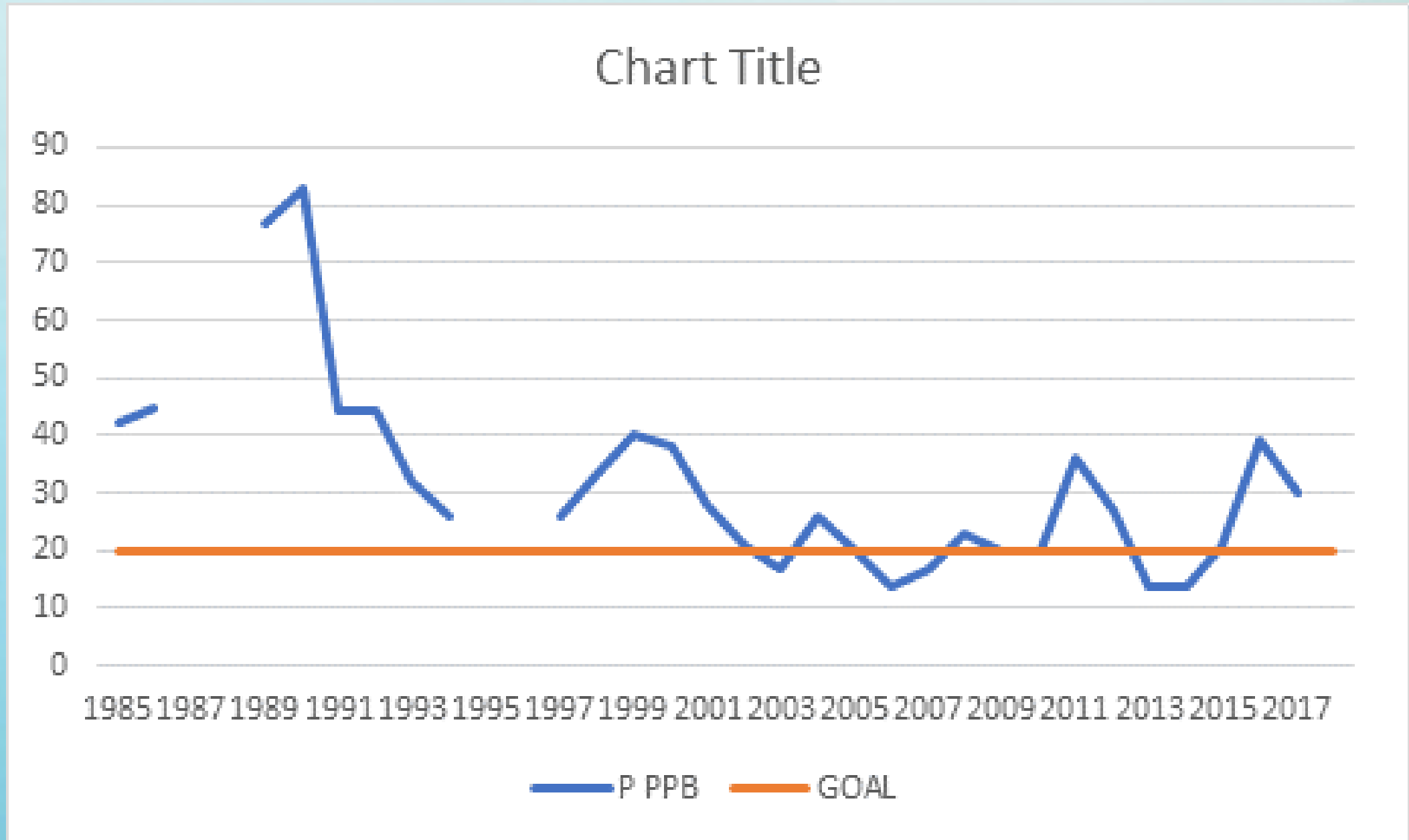
All Lakes are Dying

- People Control the Rate of Decline
- All Nutrients in the Basin End Up in the Lake
- Some Nutrients are Flushed Down the Ditch to the Sump
- Nutrients are Not Removed Today so They Accumulate in the Lake
- Septic Systems Digest Organics and Bacteria
- Septic System Do No Treatment of Phosphorus
- Septic System in Entire Basin Contribute Same as if On Shoreline

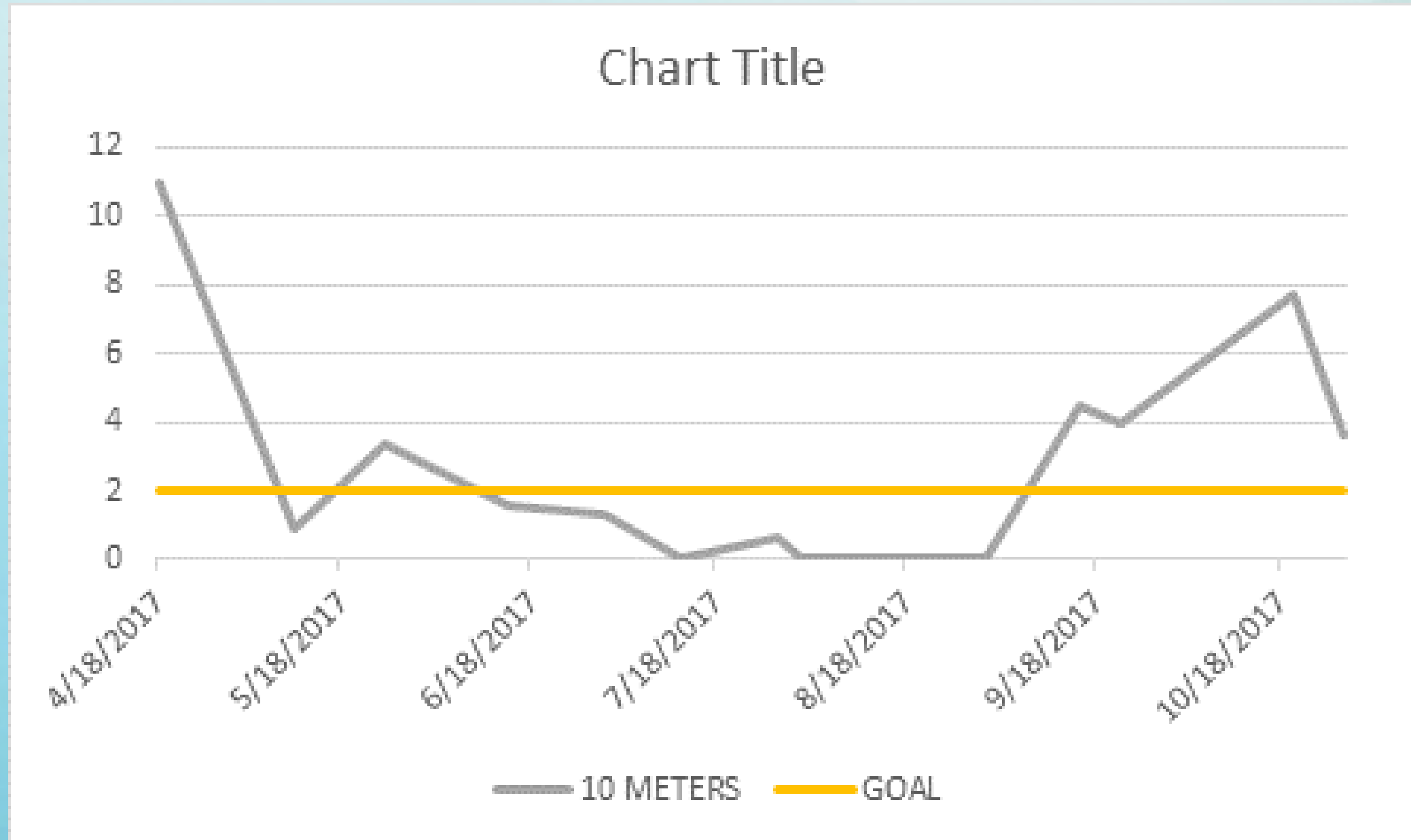
What Can We Do?

- Control Phosphorus in Sediment, Preventing Release by Oxygen Injection
- Reduce Phosphorus in Water by Alum Injection
- Sequester Phosphorus from Streams
- Reduce Shoreline Erosion
- Sequester Phosphorus from Cabins
- Reduce other Sources, Fireplaces & Pits, Dead Fish, Fertilizers, Grass Clippings, Leaves, Needles, Pollen
- Basin Plants Pull Phosphorus from Soil
- When Plants Die, Phosphorus is Released Back into the Soil
- Remove Dead Plants and Ash from Basin

Phosphorus History Chart

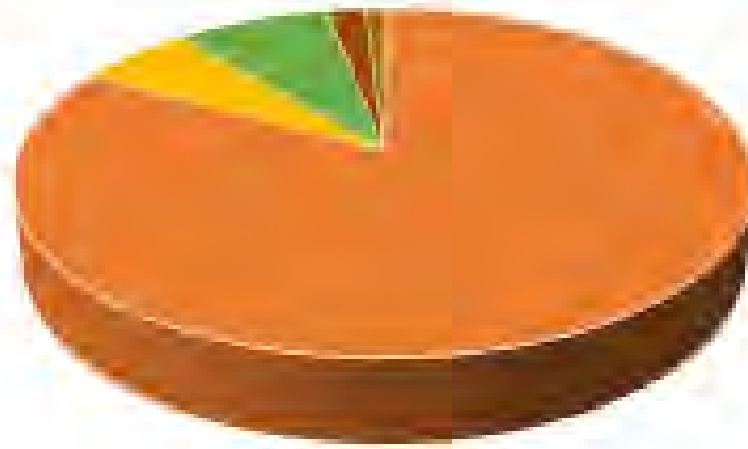


Dissolved Oxygen Monthly Chart



Phosphorus Sources

1985 PHOSPHORUS SOURCES



- Sediment
- Influent streams
- Septic systems
- Organic matter needles, leaves, pollen
- Boating

Community Estimate

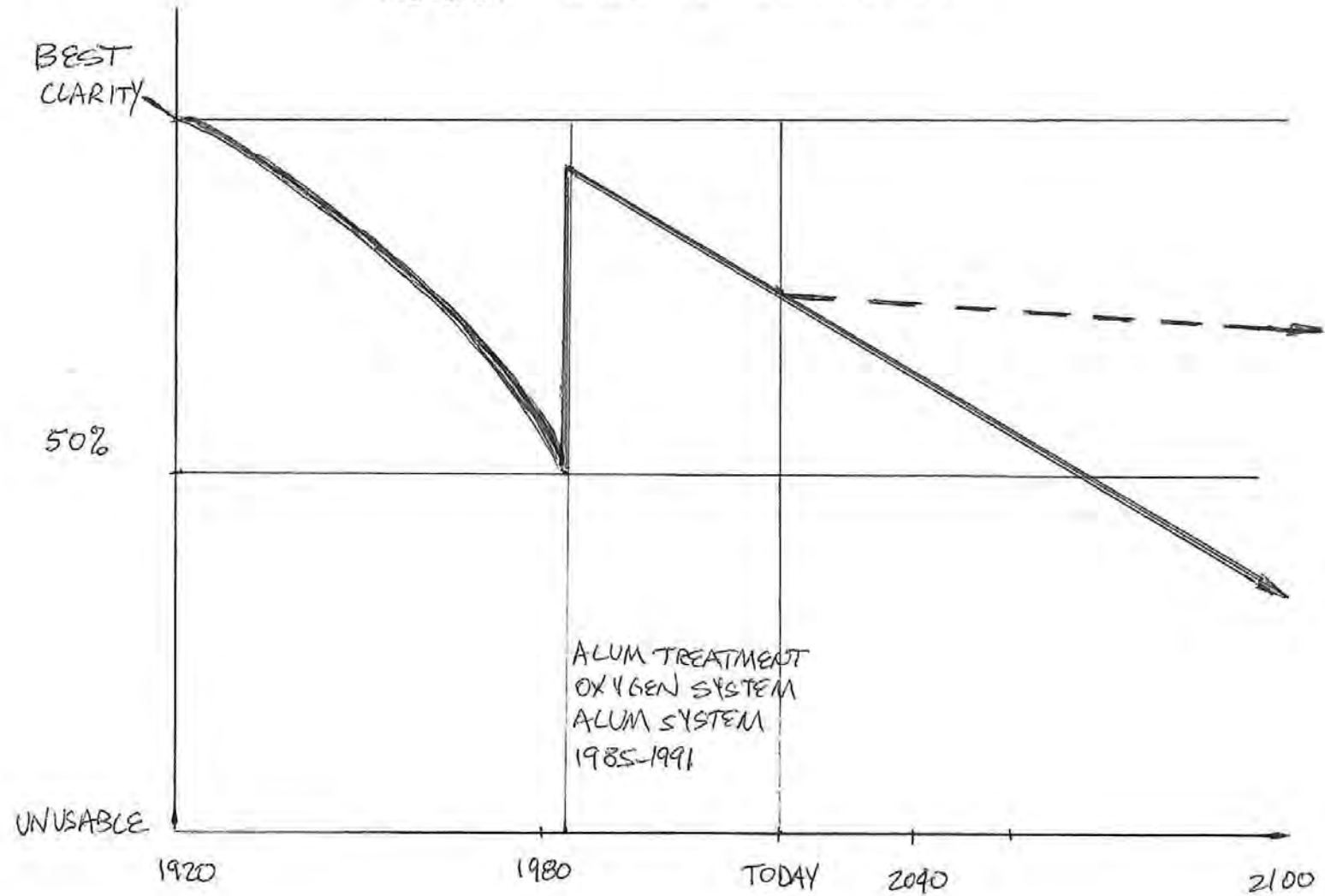
SOURCES	1985	FACTOR	CHANGES	NOW
SEDIMENT	83%	20%	OXYGEN AND ALUM SYSTEMS	17%
STREAMS	6%		RUNOFF CONTROL, LESS LOGGING	
SEPTIC	8%		CONVERSIONS, REMODELS, MOAB	
ORGANICS	2%			
BOATING	1%		MORE RECREATION NOW	
TOTAL	100%			?

Long Term Plan

- Current Zone District Manages
 - Lake Level
 - Sediment Phosphorus with Oxygen (Summer)
 - Water Column Phosphorus with Alum (Spring & Fall)
 - Milfoil
- Zone District Does Not Manage:
 - Basin Activities, Logging, Agriculture, Roads
 - Other Invasive Species: Mussels, Jellyfish, Aquatic Weeds
 - Fish, Carp Disruption of Sediment (Lake Spokane)
 - Shoreline Erosion
 - Septic System Effluent, Cesspools
 - Boater Recreation

LONG TERM PLAN MUST DEAL WITH **ALL** NUTRIENT AND SEDIMENT SOURCES

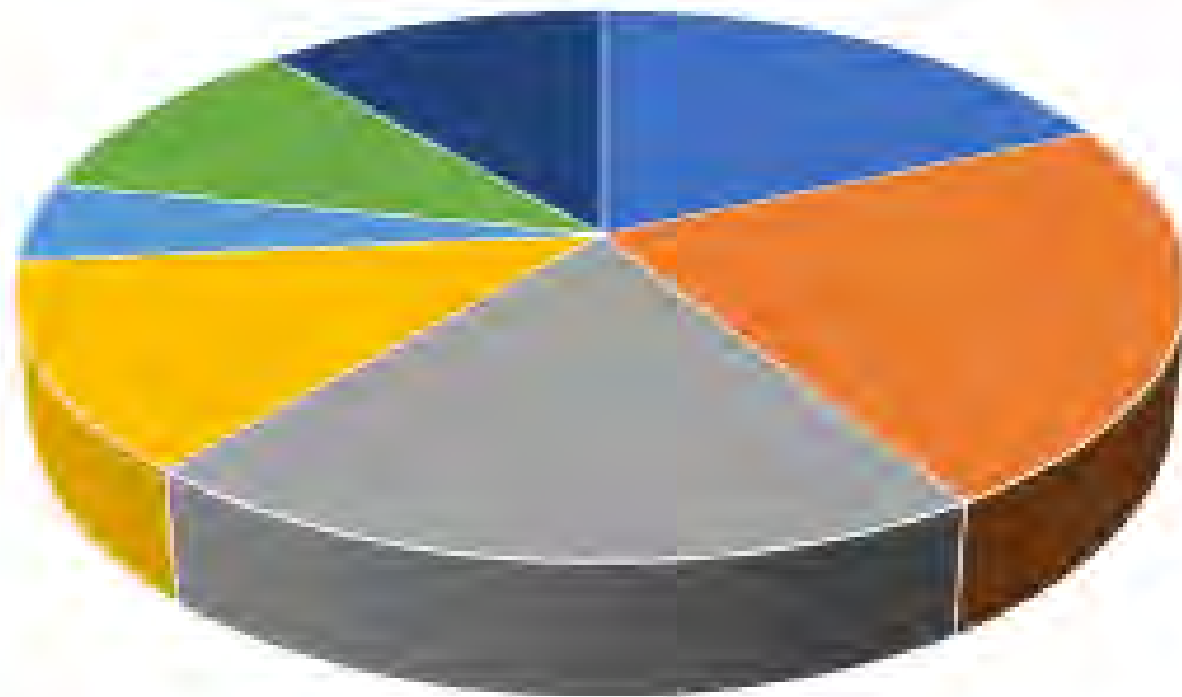
NEWMAN LAKE DEGREADATION



2019 Proposed Budget

Income Assessments			239,000
Expenses	Labor	Purchases	Total
Flood Control	42,102	2,811	44,913
Oxygen System	9,708	46,525	56,233
Alum System	8,573	40,950	49,523
Milfoil	7,003	23,000	30,003
Other Water Quality	5,047	6,495	11,542
WSU Data Collection		26,063	26,063
Admin	19,774	8,035	27,809
Sub-Total	92,206	153,879	246,085

2019



■ FLOOD CONTROL

■ OXYGEN SYSTEM

■ ALUM SYSTEM

■ MILFOIL

■ OTHER WATER QUALITY

■ WSU DATA COLLECTION

■ ADMIN

Assessments



Parcel #:

56031.0521

Taxable Value:

\$1,071,240

NLFCZD Assessment:

\$2179.63



Parcel #:

56091.9022

Taxable Value:

\$933,930

NLFCZD Assessment:

\$249.51



Parcel #:

56031.0507

Taxable Value:

\$578,980

NLFCZD Assessment:

\$1406.19

Assessments



Parcel #:

56034.0409

Taxable Value:

\$361,320

NLFCZD Assessment:

\$70.21



Parcel #:

56032.0608

Taxable Value:

\$227,800

NLFCZD Assessment:

\$553.27



Parcel #:

56033.0144

Taxable Value:

\$132,820

NLFCZD Assessment:

\$322.58

Assessments



Parcel #:

56091.9016

Taxable Value:

\$569,360

NLFCZD Assessment:

\$179.77



Parcel #:

56091.9030

Taxable Value:

\$485,890

NLFCZD Assessment:

\$118.01



Parcel #:

56032.0604

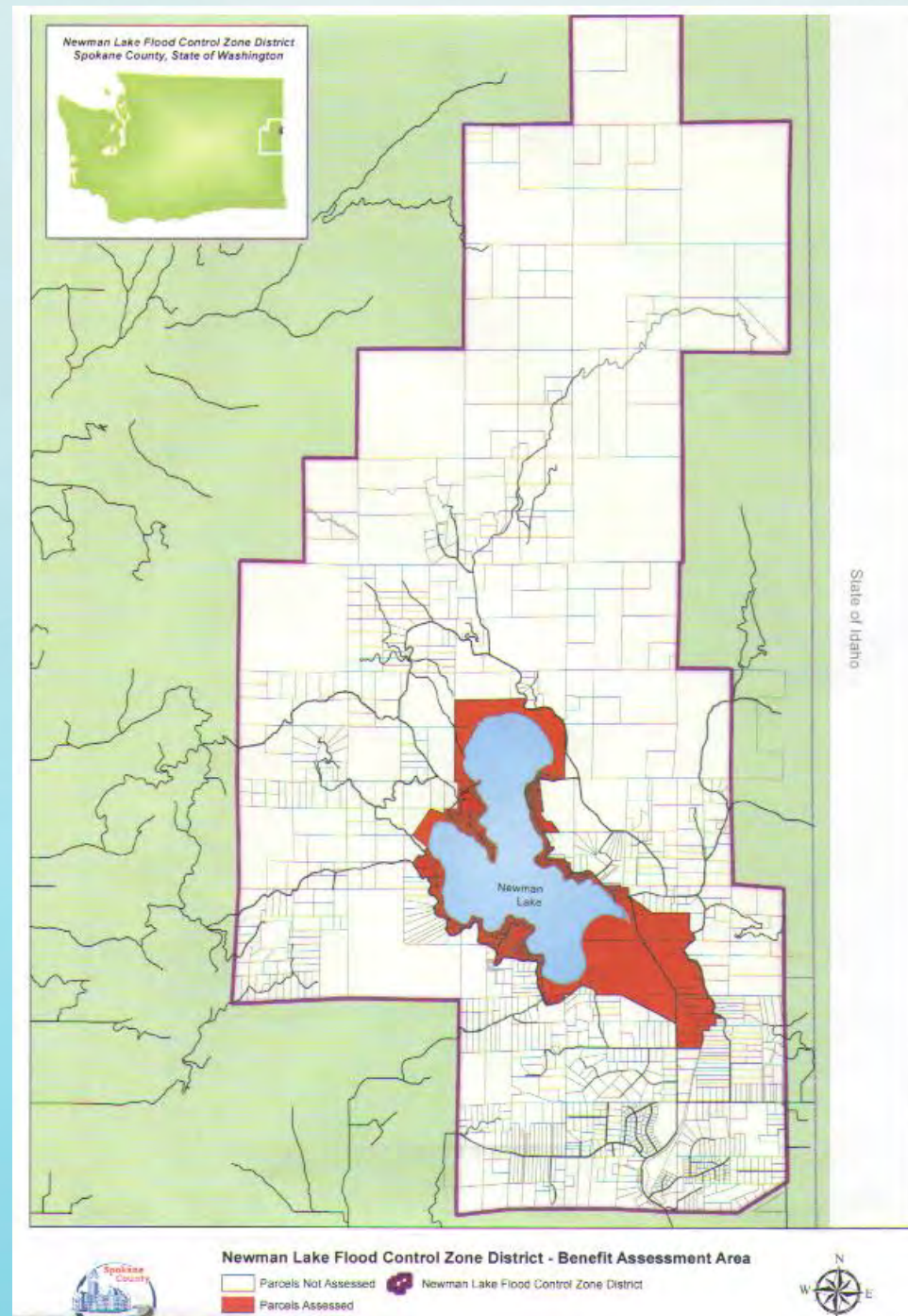
Taxable Value:

\$442,040

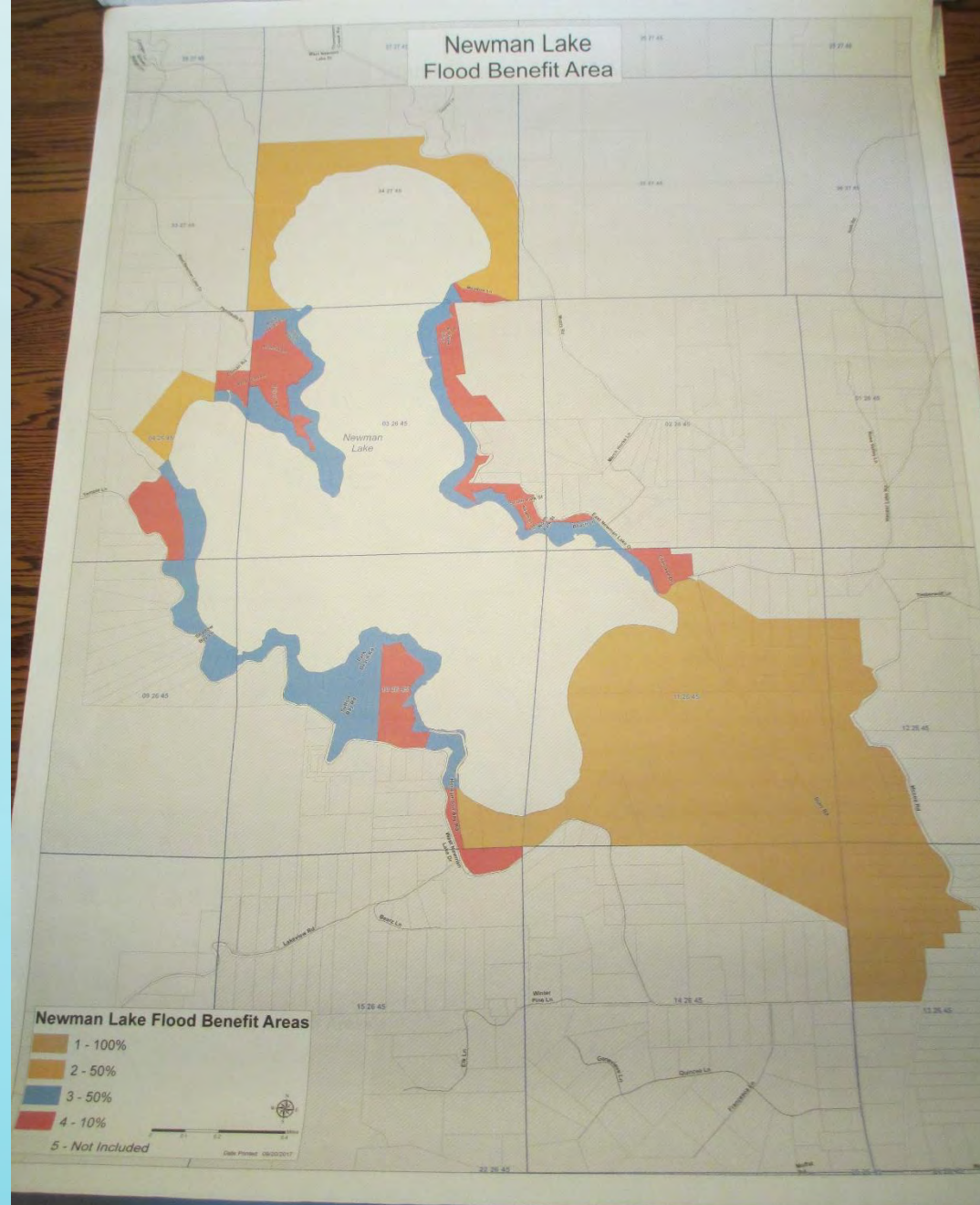
NLFCZD Assessment:

\$1073.60

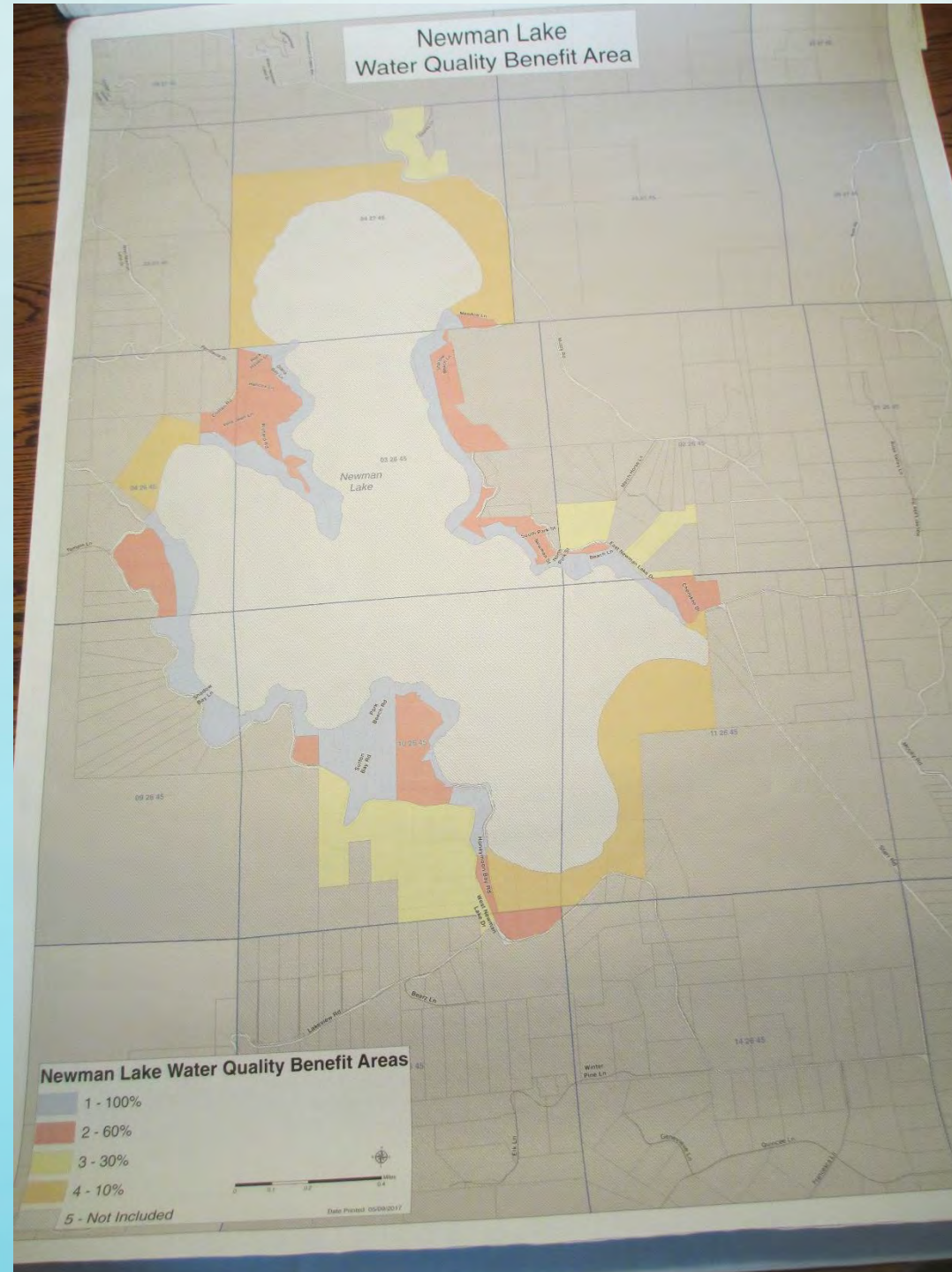
District map



Flood Control Assessment Map



Water Quality Assessment Map



Chelan County

Kittatas County

Liberty Lake

Loon Lake

Moab Irrigation District

Okanogan County

Pierce County

Sacheen Lake

Snohomish County / Lake Stevens

Walla Walla County

Whatcom County

Yakima County

Flood Control

Current Annual Cost:	\$50,000
Scope:	Very typical
Current Funding Method:	770 Parcels Assessed, Unique, Outdated Methodology, Unfairly distributed
Most common Funding Methodology Found:	County Wide Funding, County Controlled
Technology Level:	Low, Operation and Maintenance
Current Long Term Plan:	None, Operate Indefinitely

Flood Control Findings

- No Direct funding comparibles
- No Comparable to narrow definition of “Benefits”
- Visuals are Deceiving
- Does not include the total flooded area
- Gross inconsistencies in taxation

Flood Analysis Map



Water Quality

Current Annual Cost:

\$200,000 (Includes
\$30,000 for Invasive
Species)

Scope:

Common Problem,
Unique Process

Current Funding Method:

770 Parcels Assessed,
Unique Application, Outdated,
Unfairly distributed

Most common Funding Methodology Found: District Wide, County and
State Grants contributing

Technology Level:

High, Continuous monitoring
and trending

Current Long Term Plan:

None, Operate Indefinitely

Water Quality Findings

- No Direct funding comparibles
- No Comparable to narrow definition of “Benefits”
- 85% Funding from Waterfront Parcels
- No controls in place
- No enforcement of violations
- Operated under an inadequate structure (Flood Control Zone District)
- Does not include the total flooded area
- Gross inconsistencies in taxation

Invasive Species

Current Annual Cost:	\$30,000 (Included in Water Quality)
Scope:	Very typical
Current Funding Method:	770 Parcels Assessed, State Grant Supplemented, Unfairly distributed
Most common Funding Methodology Found:	District Wide
Technology Level:	Medium, Inspections, Controls, Evolving Species
Current Long Term Plan:	None, Treat Indefinitely with No Prevention Controls

Invasive Species Findings

- No Controls on Import of Invasive species
- No enforcement of State Regulations
- No prevention facilities for visiting boats
- Very Costly impacts from invasive Species
- Current Danger is Muscles, Hybrid Milfoils
- State already collects funds

Conclusions

- Unique and Outdated District Structure
- District Is long overdue to be Re-Evaluation
- There are gross inequities, mostly due to inaction and time.
- 85% of our funding is spent under the wrong Charter
- No incentive for the District update or change
- Scope of County Services has changed over the years (Health)
- The Community has not exercised its Voice in the District for years
- The Advisory Board has not represented the interest of the community
- The Petition now shows the desire of the community
- The Senator and the Commissioners understand the problem and are searching for an answer
- Power to change now lies with the Board of County Commissioners and the Community

Contact your public officials

Spokane County District 1 Commissioner
Josh Kerns 509-477-2265

Washington State Senator – 4th District
Mike Padden 509-921-2460

- Spread the financial burden for this State Owned Public Lake in a fair and equitable manner.
- Share the expense of maintaining the water quality with ALL of those that contribute, benefit, or use that recreational resource.
- Stop managing the “Water Quality” of the lake to the guidelines of a Flood Control Zone District.

Milfoil Plan

Newman Lake currently has two invasive species:

- Eurasian Milfoil
- Chinese Mystery Snail



Current Milfoil Treatment Methods at Newman Lake

- Herbicide Treatment – 1st week of June (or the 3rd week of June this year)
- Benthic Mat Placement – April through May
- Diver Suction Weeding – Mid June through end of season

Control Methods by Area:

1. Shallow Dock & Swim Areas
 - Diver Suction Weeding – when plants are spread out
 - Benthic Mat Placement – when plants are in small clusters (Mats are 12x15')
2. Deep Large Milfoil Populations – Non-residential Areas
 - Herbicide Treatment – District Treats the North & South Ends of the Lake
 - Diver Suction Weeding – Smaller patches

Survey of Milfoil this year

- Visual Survey was conducted and there is less Milfoil at the 3-4' level than last year.
- WSU has conducted the hydro-acoustic survey that shows all aquatic plants (macrophytes) present, but does not specifically show Eurasian Milfoil.
- There are patches of milfoil found at greater depths and the Zone District hires a suction diver for those areas as they can not be seen by the visual surveying.

Milfoil

The Zone District had to spend \$11,688 this year on milfoil treatment by June 30 to maximize the Department of Ecology grant.

- \$8,766 75% grant
- \$2,922 matching funds from Zone District budget

Karen Kruger with the Zone District has been successful in obtaining grants and private citizens can pay to have their lakefront treated. Currently there is not a grant for next year but Zone District is applying again, even though every year they are told they will not get any more grants.

Future

- We need to keep looking for ways to keep fighting milfoil.
- It will never be eradicated
- We need a wash station
- We need to create a long term strategy for how to treat Newman Lake
- Zebra & Quagga Mussels are the next threat to our lake



Honeymoon Bay Septic Study



Shoreline Erosion Options



Thank You for Attending Tonight!

Make sure you introduce yourself to your Advisory Board Representative.

Please fill out the cards with feedback and follow-up questions for the Advisory Board. What do you want to know more about?

There is someone in the back that can assist you in finding your assessment information on the county website.