VALLEY SOIL & WATER
CONSERVATION DISTRICT

Welcome!

North Fork Payette River Watershed Coalition

Grab refreshments, explore the watershed maps, and introduce yourself to others. The workshop will begin shortly.

North Fork Payette River Watershed Coalition

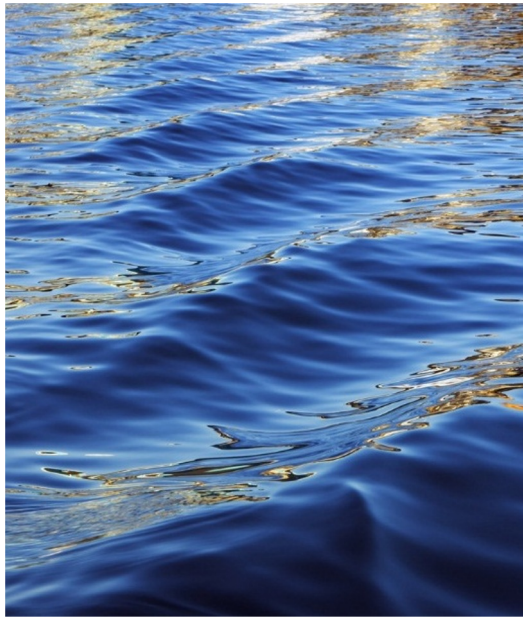
April 25, 2024

Historical Lessons Learned

Ken Roberts

Former Chairman of the Cascade Reservoir Coordinating Council

Roberts Ranch Inc.
Donnelly, ID
(Family owned and operated since 1901)



Some Important History about Valley County

- Soils
  - Highly fertile volcanic soils
  - Primarily Sandy Loam
  - High organic matter
  - Low PH
  - Mineral Apatite – a naturally occurring source of phosphorus (Gold Fork tributaries)
  - Highly compacted due to limited rotation – Has a negative effect on infiltration rates.
  - Most agriculture land above Cascade Dam has a very high water table.
- Valley in the mountains
  - Natural basin
  - The "Cascading Payette" at Cascade
- Well established stakeholders – Timber, Agriculture, Local Communities, State and Federal Interests, and now rapidly growing Recreation Industry.

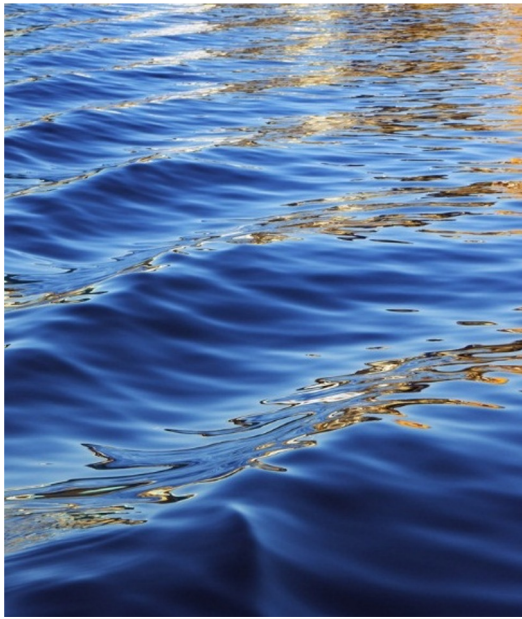
2019 Oats south of Gold Fork River

Observations:

- Just the way it is:
  - Background levels of Phosphorus
  - Soil characteristics
  - Spring Runoff
- BMP's are effective in reducing nutrient loading.
- Agriculture and Forest production remove nutrients from watershed.
- Costs of implementing BMP's must be economically feasible for those who participate.
- Loss of Agriculture lands to housing reduces the ability to remove nutrients from the watershed.

So What Works ?

Some principles with a history of success.



Efforts in the 1990's and early 2000's

- City of McCall
  - Wastewater storage
  - Land application - J-Ditch project
- North Lake Sewer and Water District improvements
  - Service area expansions into existing subdivisions that had septic systems.
  - Modern treatment facility
  - Land Application
- Best Management Practices identified and ranked. (limited implementation due to inadequate cost share funding).
  - Conversion to sprinkler irrigation
  - Pump back projects
  - Fencing of riparian areas and buffers
  - Stock water development

2020 Russet Burbank Seed Potatoes South of Gold Fork River

Opportunities

- Stilling basins or Impoundments
  - Large Scale
    - Lake Fork Creek
    - Gold Fork River
    - Payette River
  - Small Scale
    - Private ponds
- Summer run-off pump backs
  - Boulder Creek
  - Mud Creek
  - Willow Creek
- Conversion to Sprinkler Irrigation
- Fencing livestock off Lake
  - Develop stock water locations
  - Reasonable setback (Buffer Zones)
- The new 4,828. Explore small early release to minimize erosion.
- Explore alternatives to summer release of flow augmentation within the reauthorization of NPA.

2020 Export Timothy Hay North of Gold Fork River

Agriculture Incentive Based BMP's

- Prioritize BMP's
- Voluntary participation is vital
- Cost share percentage must motivate participation on private land.
- Access multiple funding sources from beneficiaries of a healthy Payette River, Lake Cascade, and Basin.
  - Individual landowners who implement the BMP projects.
  - Cities
  - County
  - State
  - Federal
    - BOR, BPA
- Seek Ongoing Dedicated Funding Sources
  - Local, State, and Federal

2019 Organic Oats for human consumption North of Gold Fork River

Collaboration is Key

- Identify and involve **all** Stakeholders
  - Private
  - Public
- Competing interests can work successfully together, if there is a common goal.
- Work towards an attitude of - Yes, if…

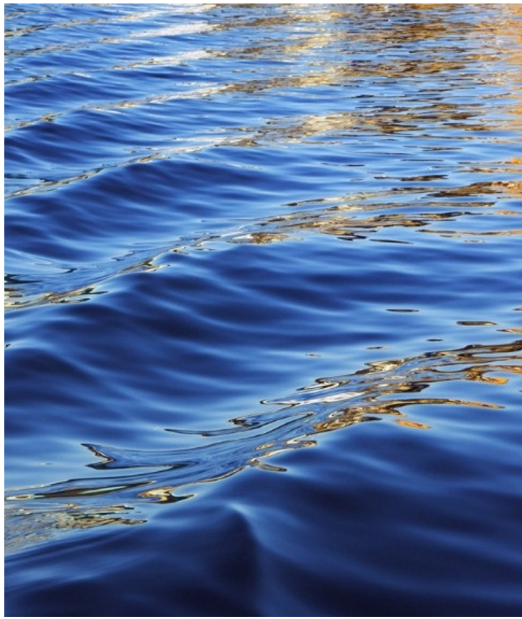
Thank you for the opportunity to present today.

Contact Information:

Ken Roberts
PO. Box 1177
Donnelly, ID 83615
208-630-3761
kenaroberts@hotmail.com

Brief history - VSWCD's water quality work from 1987 to the present.

Art Troutner
VSWCD Board Chairman



Valley Soil Conservation District

1982 Annual Report

natural resources that sustain us all. Stewardship observances also provide an opportunity to draw the public's attention to local resource problems and efforts being made in the community to help solve them.

The Soil Stewardship Week observance, by its very nature, is one to be joined in by everyone who shares a sense of personal responsiblity for the care of soil, water and the other vital

VALLEY SOIL CONSERVATION
STATEMENT OF
DISBURSEMENTS
AND CHANGES IN CASH BAL
YEAR ENDED DECEMBER

RECEIPTS:
County Appropriation
State of Idaho
U.S. Treasury

Valley Soil Conservation District

1978 Annual Report

1978 District Board of Supervisors

Paul Kleint, Chairman
Paul Takeuchi, Vice-Chairman
John Kwader, Secretary
Harvey D. Florence, Treasurer
John Hasbrouck, Member
Tom Welsh, Associate Member
Larry Redmon, Associate Member

om the Board:

annual report is how we feel we can best provide local
s, ranchers, organizations, agencies and other con-
on - minded individuals information on our district
m and accomplishments.
ervation is everyone's responsibility and we urge you
act our local office and share ideas and concerns with
working together, we can do more towards protecting
ural resources for future use.
ced budgets in the Soil Conservation Service have
the technical assistance available through Soil
vation Districts across the state and it was no dif-
in the Valley Soil Conservation District. We ex-
ed several personnel changes throughout the year,
loped provide assistance to Brundage Watershed
g. Even with these restrictions, we were able to
the services shown in this annual report.

nservation complishments

various projects that were completed under the
sion of Soil Conservation personnel in 1978 were as
drains installed by Ed Cruzen and Urig Bros;
protection practice on the Jake Maki ranch;
on water structures were built on the farms of Tilda
Paul Kleint and N.C. Lodge; Tom Welsh added a

EXHIBIT E
IDAHO SOIL CONSERVATION DISTRICTS STATEMENT OF ASSETS AND LIABILITIES
DECEMBER 31, 1978

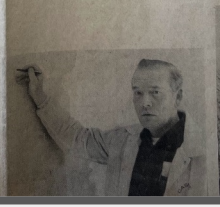
ASSETS	
CURRENT ASSETS:	
Cash in Bank	813.61
Short Term investments	5,000.00
Accounts Receivable	00.00
Other	00.00
Total Current Assets	5,813.61
FIXED ASSETS:	
Land	00.00
Buildings	00.00
Machinery and Equipment	00.00
Office Furniture & fixtures	840.71 *
Vehicles	00.00
Total Assets	6,654.32

LIABILITIES AND FUND BALANCE	
CURRENT LIABILITIES:	
Accounts Payable	00.00
Portion of Long-term debt due within 1 yr.	00.00
Other	00.00
Total Current Liabilities	none
LONG TERM DEBT:	
Mortgage on Building	00.00
Mortgage on Equipment	00.00
Total Liabilities	none
FUND BALANCE, JANUARY 1	21.07
CHANGE IN FUND BALANCE	792.54
FUND BALANCE, DECEMBER 31	813.61
Total Liabilities and Fund Balance	813.61

*IBM Typewriter	625.00
Konica Camera	75.00
Eastman Camera	20.71
Projector	50.00
Projector Screen	62.00

VALLEY SOIL CONSERVATION DISTRICT
1978

1978 District Board of Supervisors, left to right, John Hasbrouck, Paul Takeuchi, Paul Kleint, and Harvey Florence.



Soil district gets $114,050 to continue pollution control

New grant follows completion of 15 erosion-control projects on Lake Cascade, North Fork

BY TOM GROTE
The Star-News

The Valley Soil and Water Conservation District has received a grant of $114,050 to continue its efforts to prevent pollution from entering Lake Cascade and the North Fork of the Payette River.

The Idaho Department of Environmental Quality awarded the grant, which includes $103,000 to match efforts of others to keep sediment from getting into the lake and river, district Manager Kay Coski said.

The new grant, to be spent over the next two to three years, continues the efforts of a previous grant of $105,000 that the district used on a variety of projects in partnership with local, county, state and federal agencies as well as landowners, volunteers and local schools, Coski said.

The projects completed from the previous grants kept nearly 2,000 tons of sediment out the North Fork watershed, which includes Lake Cascade, as well as nearly 6,000 pounds of nitrogen and about 3,000 pounds of phosphorus, according to IDEQ figures.

See **GRANT**, *Page 2*

Above: Star News Article 2016

Top left: 1988 shoreline erosion east side of Cascade Reservoir

Top right: 1988 McCall Sewage Treatment Plant (point source phosphorus discharge upstream of Cascade Reservoir) 1

Bottom center: Proposal to Environment Water Quality Bureau Cascade Reservoir October 1988 Proposal

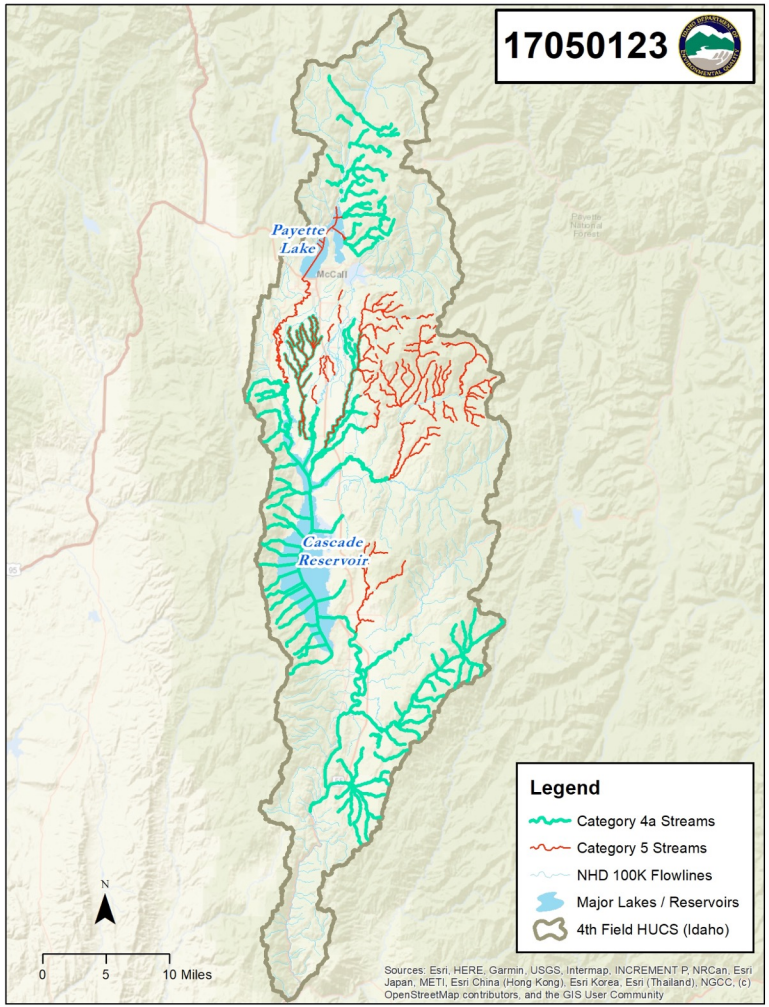
Left: 1995 - 2004
VSWCD Projects and Activities
Below: 2013 Boulder Creek Restoration

North Fork Payette River Watershed

State of the Water Quality

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

Dani Terhaar
DEQ Boise
Surface Water Quality Analyst



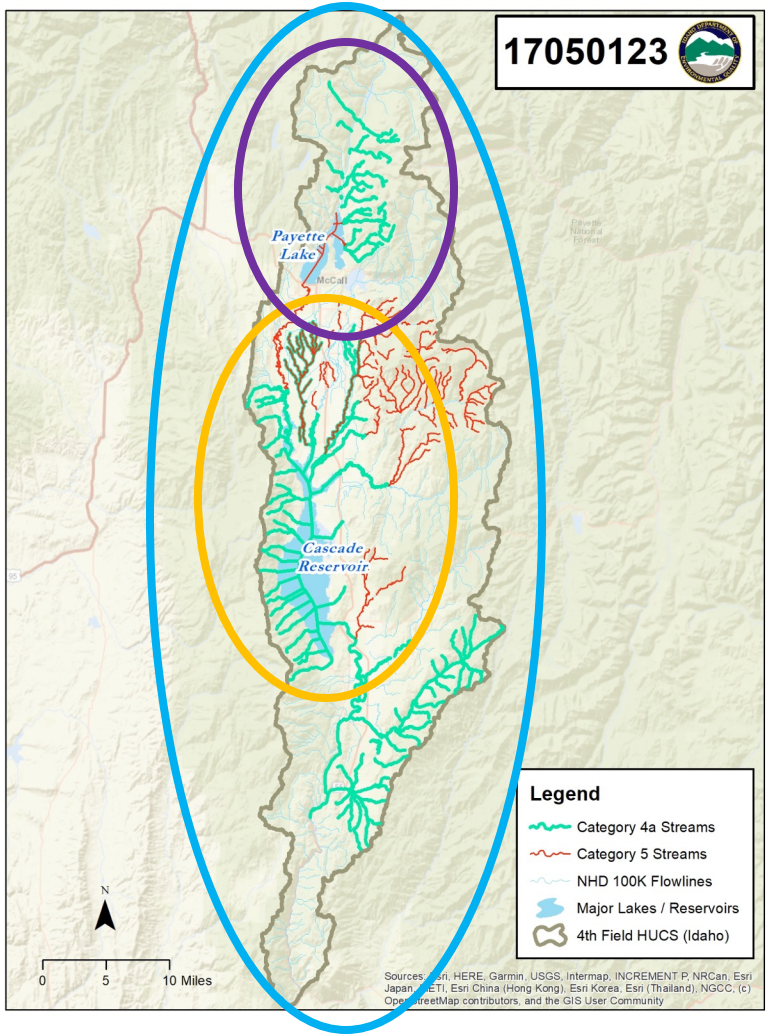
Overview

Cities: McCall, Cascade, Donnelly

Length: 113 miles
Area: watershed over 900 miles^2

Salmon River mountains headwaters
through Long Valley & Round Valley
into steep, narrow canyon to Banks

Green – have TMDLs
Red – needs more information



We will look at…

Lake Cascade

Payette Lake

The rest of the NF Payette River

But first…

What is DEQ's role?

What is a TMDL?

Total Maximum Daily Load

Comprehensive pollution assessment & budget

Sets regulatory targets/limits

Many pieces of this puzzle…

What is your role?

Lake Cascade

Big, fun lake in the mountains!

Phosphorus, chlorophyll, oxygen, pH

Nuisance Algae & Nutrients

Prone to excessive aquatic plants and cyanobacteria

harmful algal bloom HAB if toxic

Fish and cattle kills prompt watershed management plan (WMP)

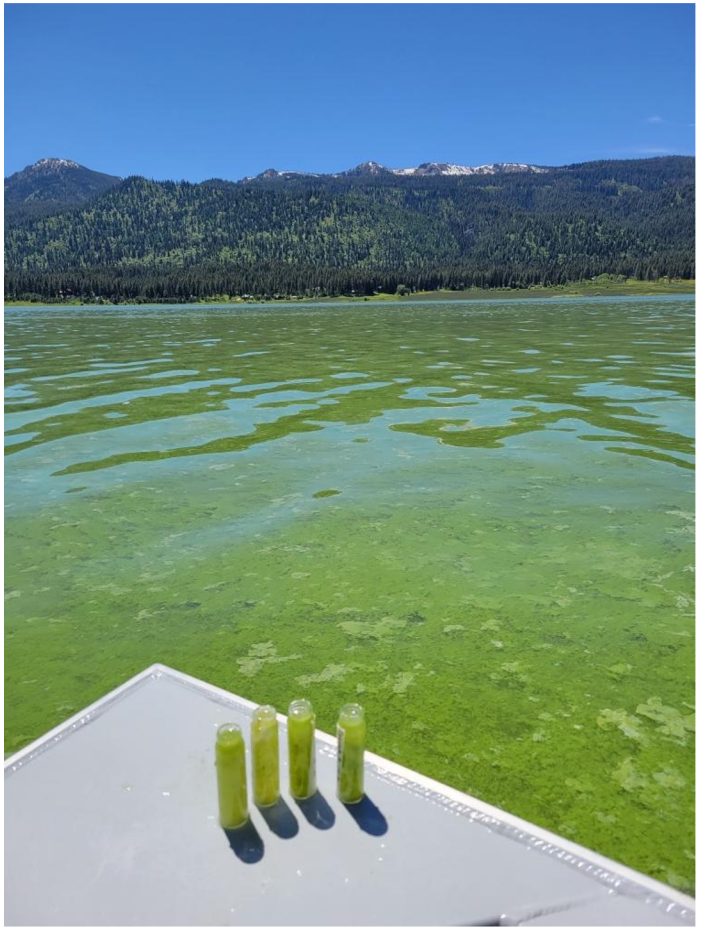
Serves as TMDL

Reduce phosphorus load

& sediment

Cut off food supply

Let lake restore itself



Lake Cascade

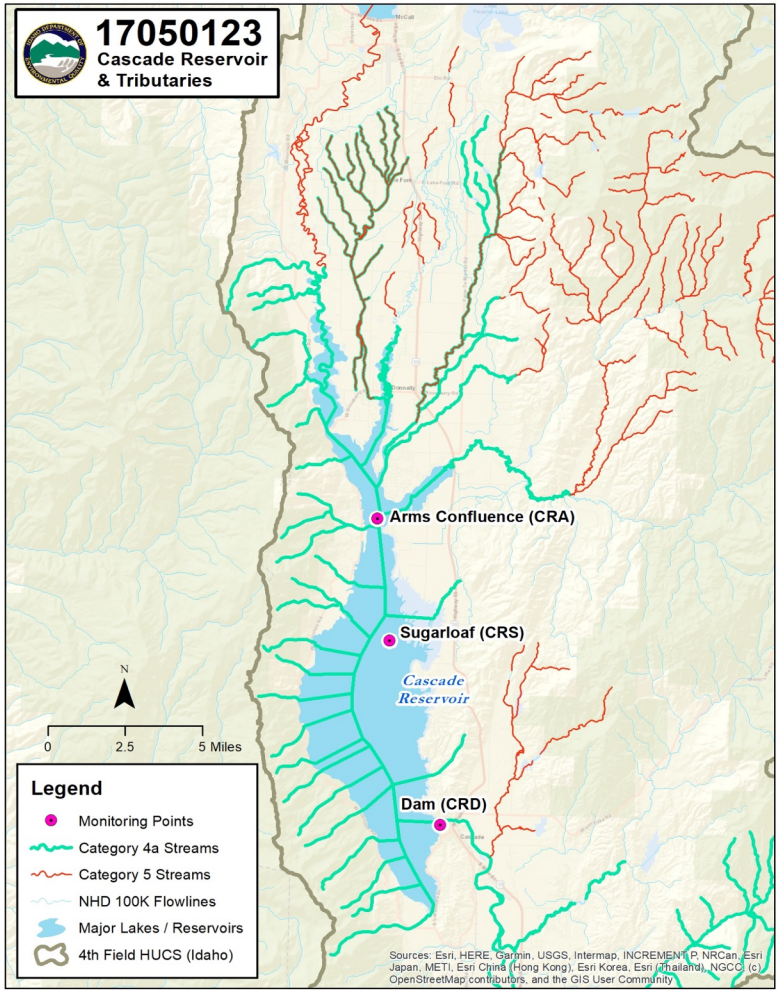
Cascade Reservoir Watershed Management Plans

Phase I -1996

Phase II – 1999

TMDL addendum 2011

Parameter	Target	Critical Period
Phosphorus (total)	≤ 25 µg/L	May–September
Chlorophyll-a	≤ 10 µg/L	May–September
Dissolved oxygen	≥ 6.0 mg/L	Year-round
pH	6.5 ≥ pH ≤ 9.0	Year-round



Status - Degrading

Goal – reduce TP inputs by 37% and maintain for 5 years

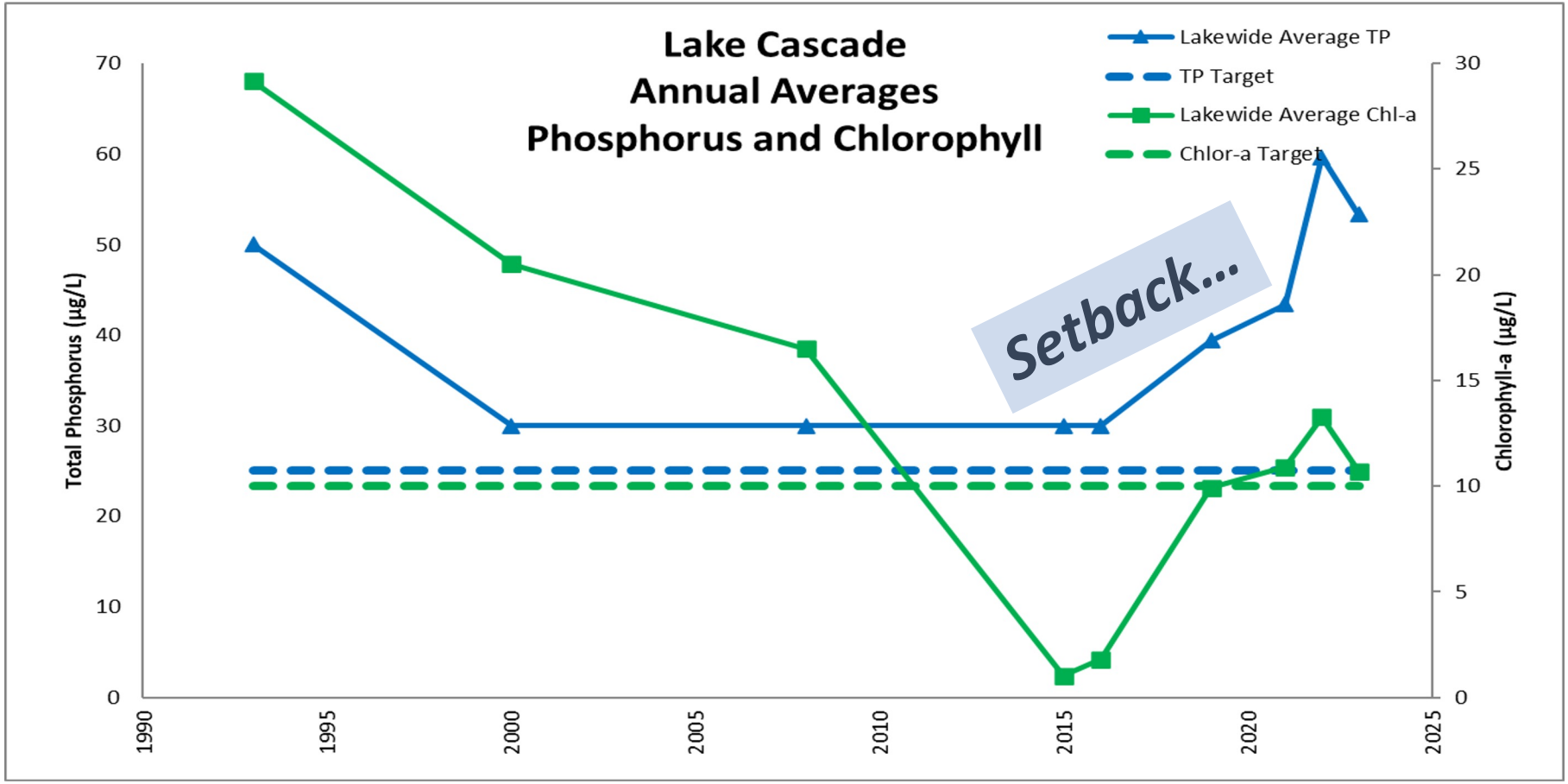
In-lake concentration goal ever attained. Controls all others.

	1993[a]	2000	2008	2015	2016	2019	2021	2022	2023
TP	No	No	No	No	No	No	No	No	No
Chlor	No	No	No	Yes	Yes	Yes	No	No	No
DO	Yes	[b]	[b]	Yes	Yes	Yes	Yes	No	No
pH	[b]	[b]	[b]	Yes	Yes	Yes	Yes	Yes	Yes

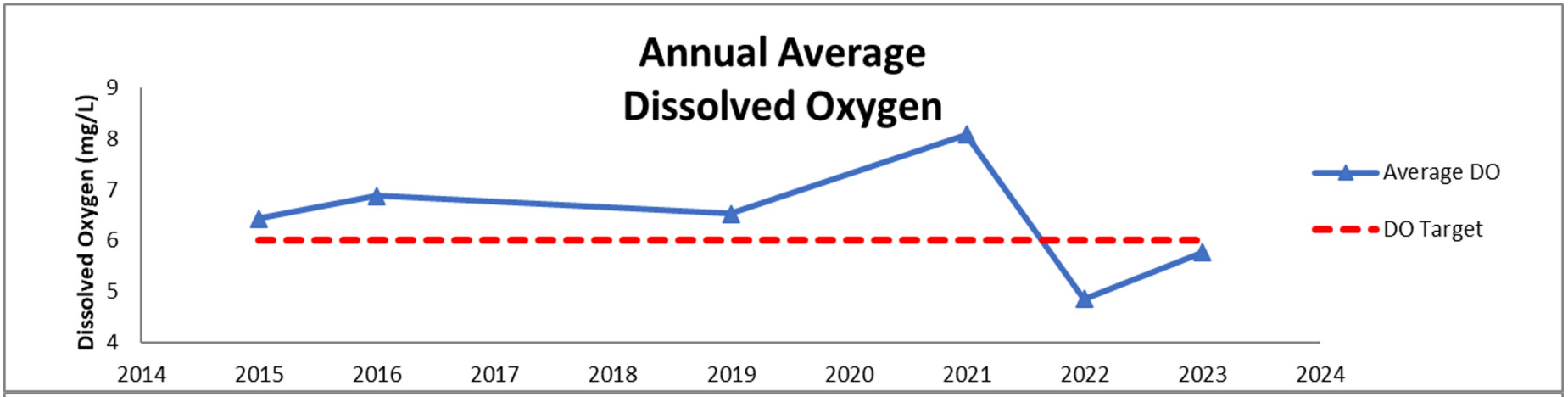
a. Results from 1993 predate TMDLs.

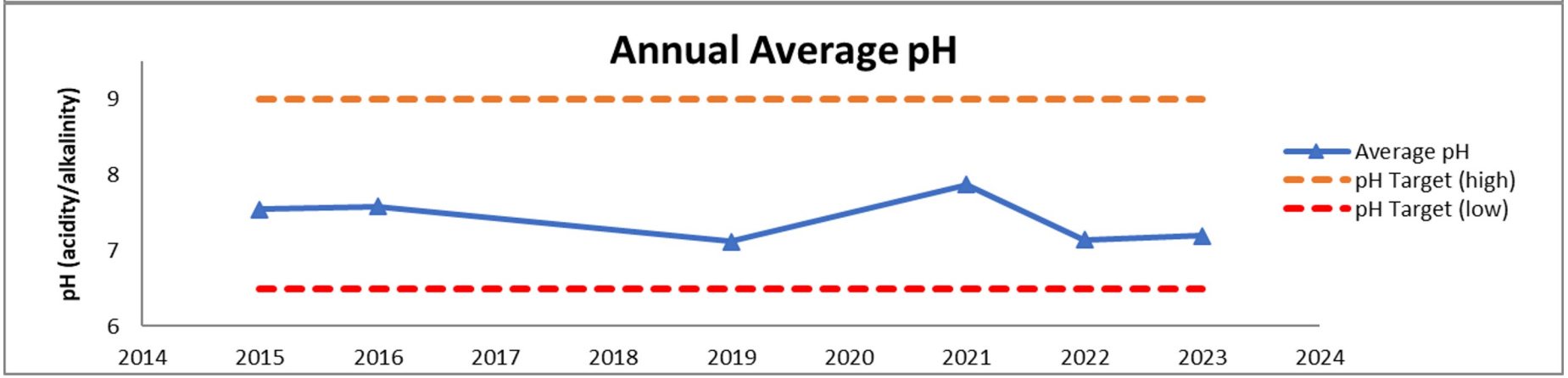
b. Insufficient data

-1 -2 -3 -3



30-Year History and Trends





30-Year History and Trends

Payette Lake

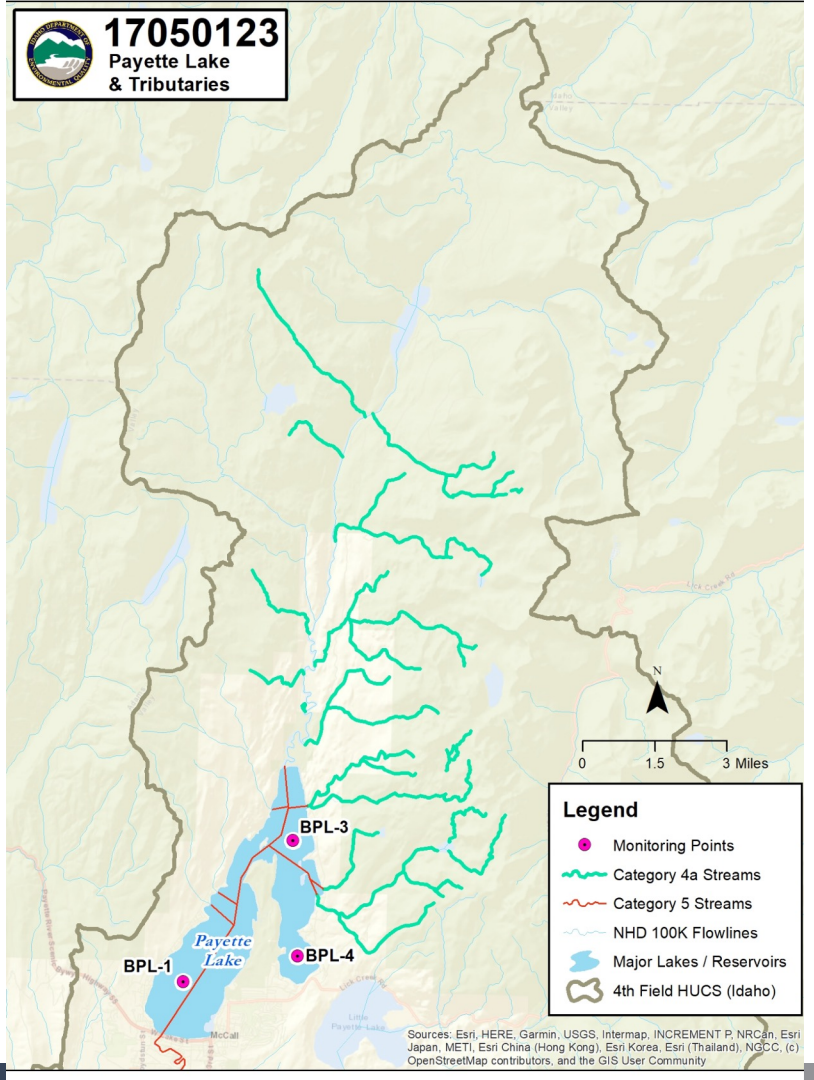
Deep glacial lake!

Phosphorus, chlorophyll, oxygen

Protected by Legislative Act

Are current or historic activities threatening Payette Lake?

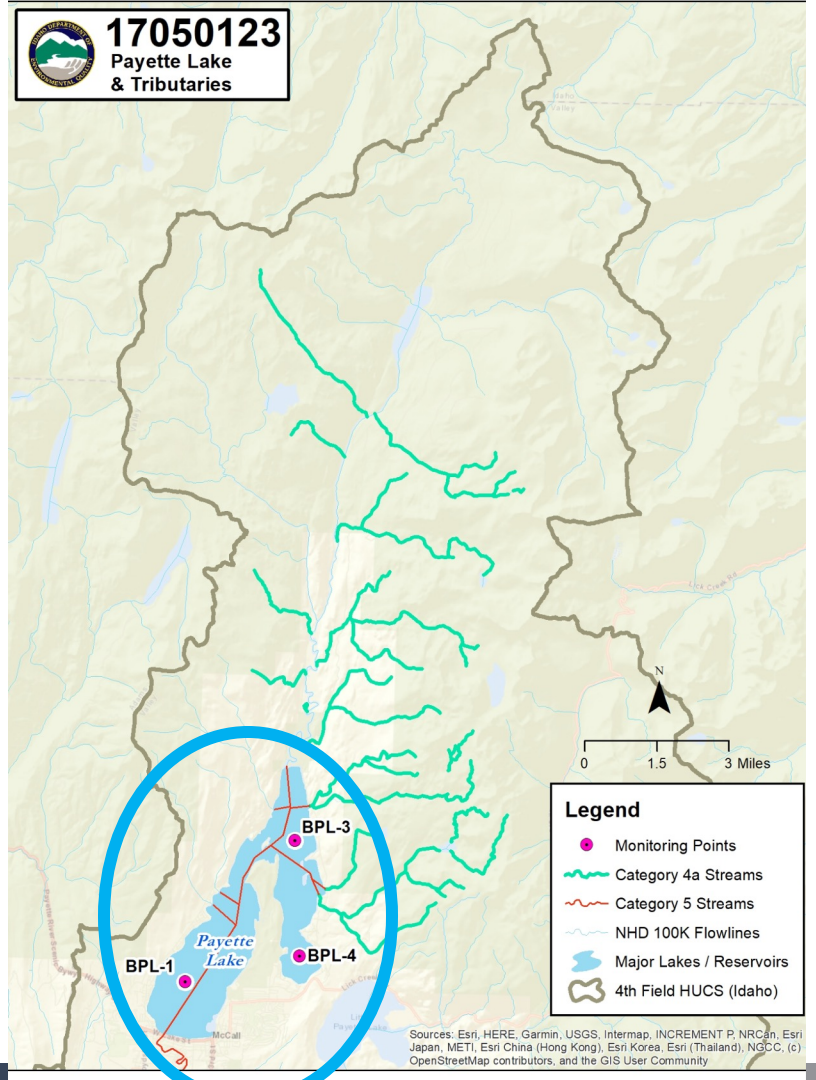
High quality lake, indicates degradation



A Note On Mercury…

Impaired – not right for a TMDL

- Based on 2008 fish tissue report
- 2010 water sample results were *below criteria*
- Believed wind deposited, sediment bound
- No flowing source, *no loads to reduce*



Payette Lake

- 1993 – Big Payette Lake Water Quality Act
- 1997 – Eutrophication Potential Study Report
- 1998 – Payette LMP

  Big Payette Lake Management Plan and Implementation Program

LMP targets – similar to TMDL

Establish signals and watch trends

LMP Objectives

Lake-wide nutrient controlled trends

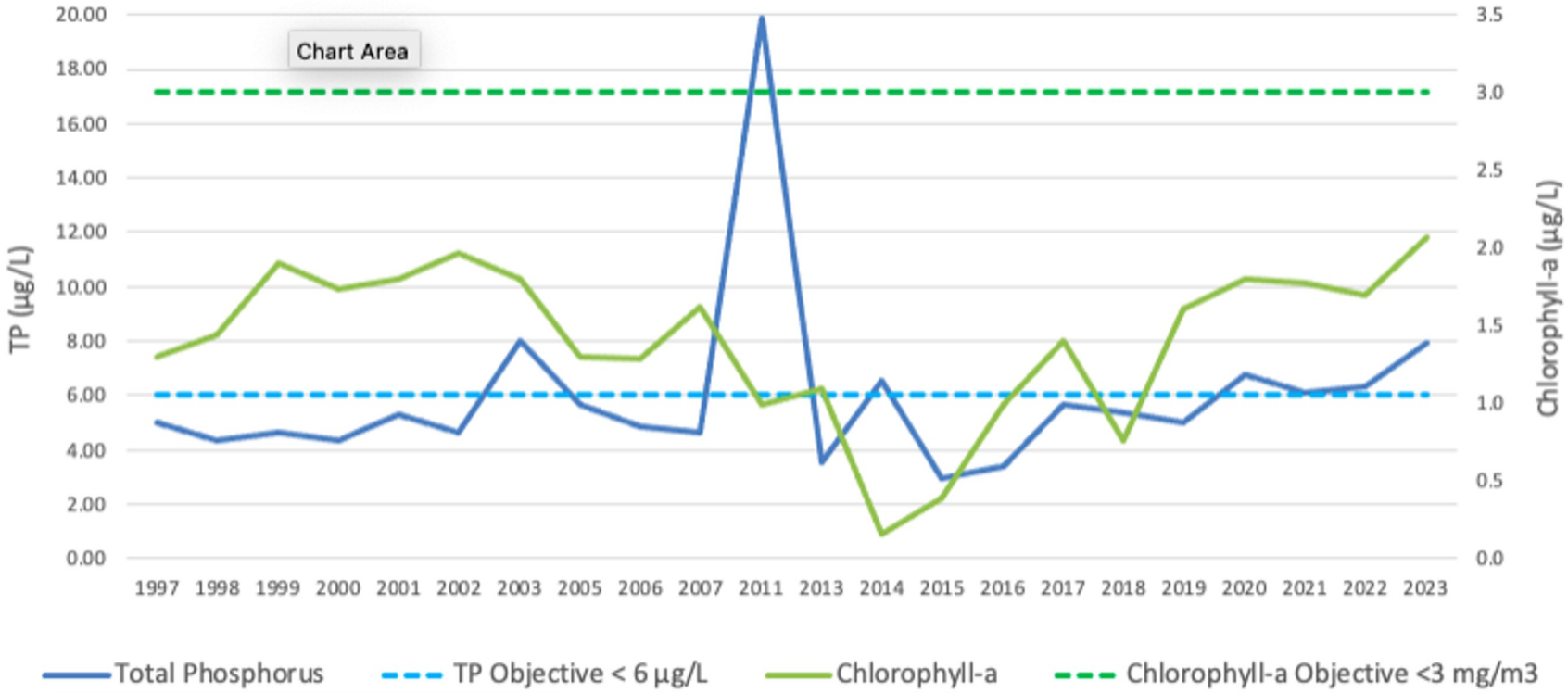
Eye on anoxia in southwest basin (downtown McCall)

Parameter	Objective	Location	Period
TP	median ≤ 6 µg/L	Light penetrating zone	May – Sep
Chlorophyll-a	median ≤ 3 µg/L	Light penetrating zone	May – Sep
DO [a]	minimum ≥ 6 mg/L	Top[b]	Jun – Sep
	median ≥ 3 mg/L	Bottom[b]	Jun – Sep

a. The DO objectives apply to the southwest basin only.

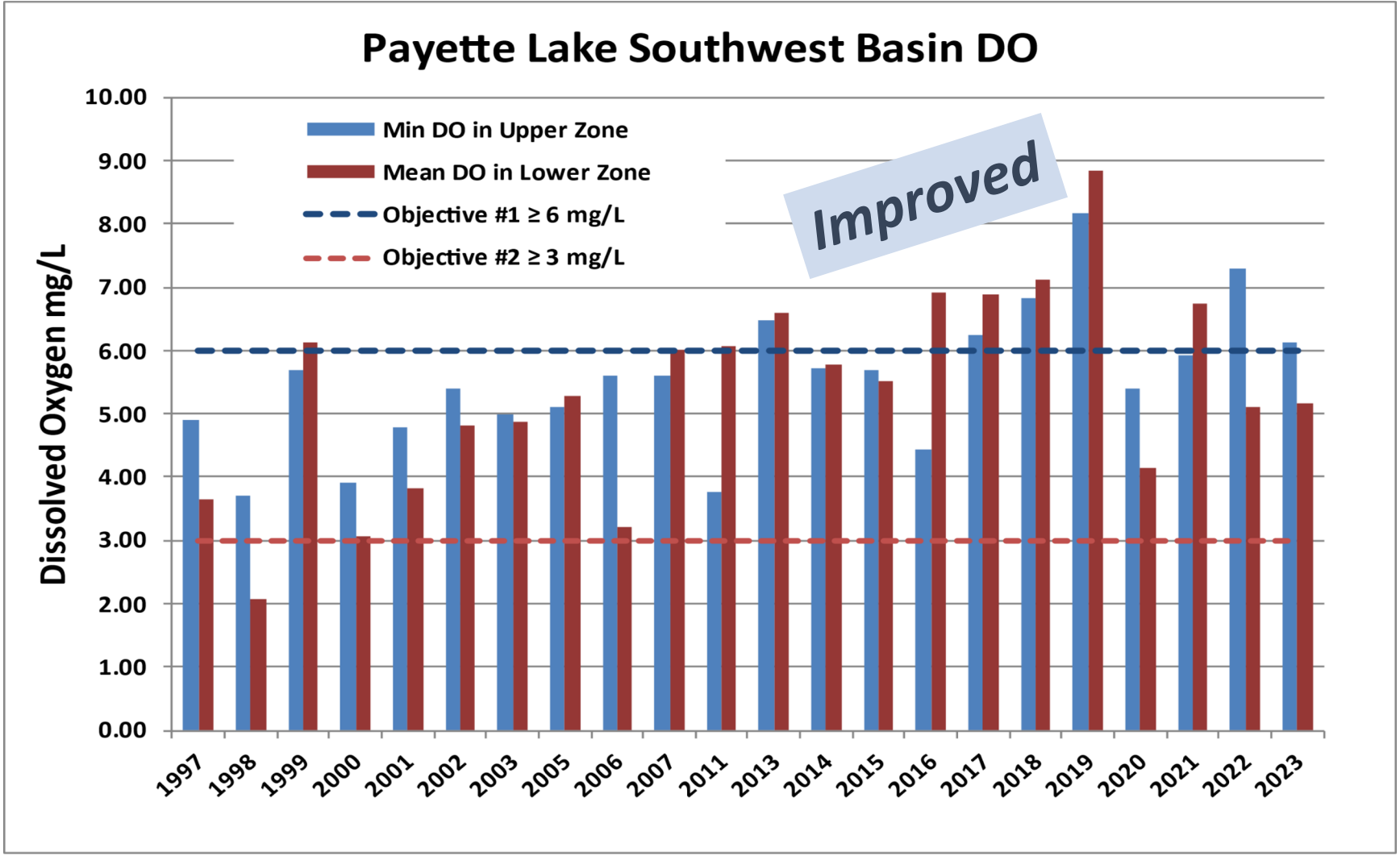
b. Above and below 61.5 m.

Payette Phosphorus & Chlorophyll



Occasional exceedances

Close relationship


Payette Lake Southwest Basin DO
Dissolved Oxygen mg/L
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
Min DO in Upper Zone
Mean DO in Lower Zone
Objective #1 ≥ 6 mg/L
Objective #2 ≥ 3 mg/L
Improved
1997
1998
1999
2000
2001
2002
2003
2005
2006
2007
2011
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023

North Fork Payette River

Everything else – all about fish

Sediment, Temperature

Possibly failing biota and habitat scores

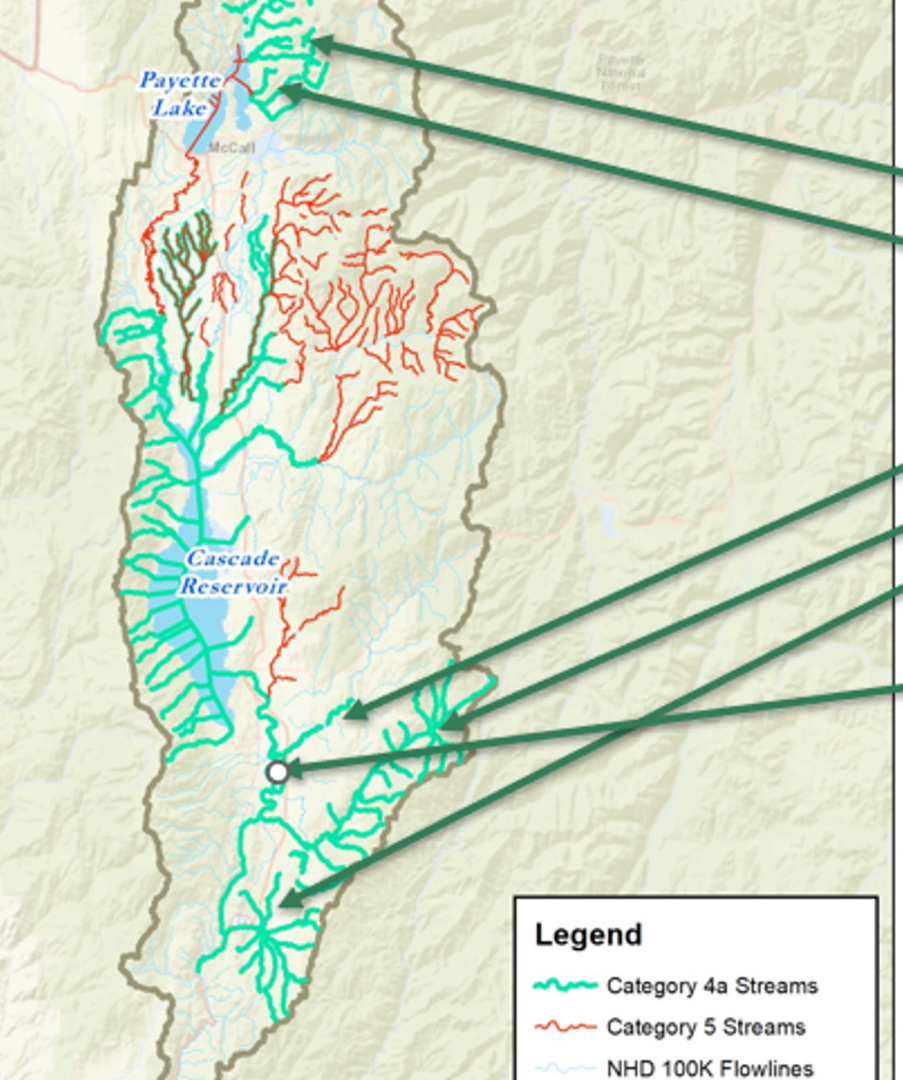
NF Payette River

Above and below Payette,
not tributaries to Cascade

2005 TMDL for other streams

Sediment and Temperature

Some failing biota and habitat assessments



Temperature –

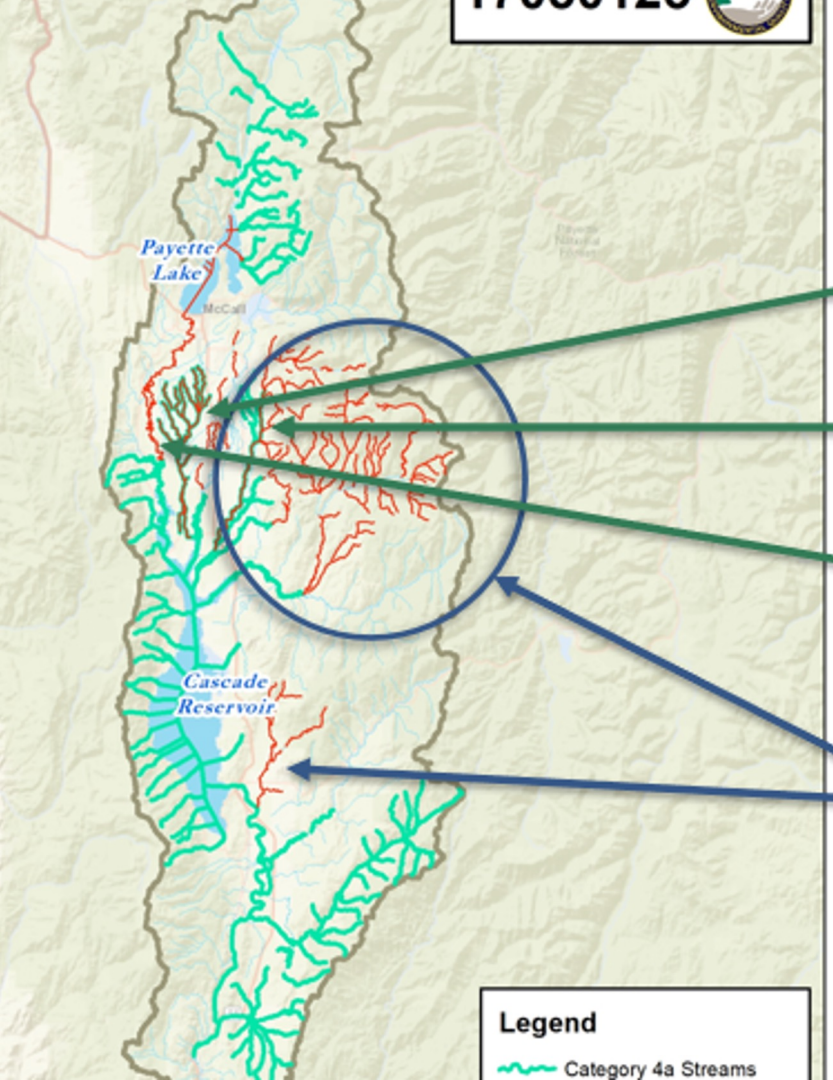
- Box Creek
- Fall Creek

Sediment –

- Big Creek
- Clear Creek
- Round Valley Creek

North Fork Payette River below Cascade

- Delist for nutrients and temperature
- TMDL for sediment (erosion)



Status:
New impairments to assess

Mud Creek
add bacteria

Boulder Creek (3rd order)
add temperature

NFPR (between Payette and Cascade lakes)
impaired for temperature

Beaver creek, Kennally/Rapid/Sloans creeks, Boulder/Willow creeks, Lake Fork
failing biota and habitat assessments

Dani Terhaar

208-373-0274
Danielle.Terhaar@deq.Idaho.gov

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

Water Quality Analyst
Boise Region

Melissa Jayo

Hydrologic Technician

Water Operations Group
Middle Snake Field

Office, Boise, Idaho

— BUREAU OF —
RECLAMATION

unding Opportunity No. R24AS00299

SMART Environmental Water
ces Projects

l Year 2024 and Fiscal Year 2025

tment of the Interior

April 202

Bureau of Reclamation's Grants

Facing the American's West serious water challenges one project at a time.

WaterSMART

(Sustain and Manage America's Resources for Tomorrow)

Eligibility to Apply

WaterSMART does *NOT* fund individual or privately-held lands.

- State
- Tribes
- Irrigation and Water Districts
- Municipal Districts
- Non-profit organizations working with the above entities.
- Special Units of Government

National Association of Conservation Districts

WaterSMART Program Grants

Planning & Design

- Aquatic Ecosystem Restoration Program
- Applied Science
- Drought Contingency Plans
- Cooperative Watershed Management Program
- Water Marketing Strategy Grants
- Water Conservation Field Services Program
- Basin Studies
- Planning & Project Design Grants

Science and Tools

- Applied Science Tools
- Reservoir Operations Pilots
- Water Management Options Pilots
- Drought Resiliency Projects
- Water Conservation Field Services Demonstration Projects

Implementation Projects

- Drought Resiliency Projects
- Water and Energy Efficiency Grants
- Small-Scale Water Efficiency Projects
- Environmental Water Resources Projects
- Aquatic Ecosystem Restoration & Protection Projects
- Title XVI
- Water Recycling and Desalination

Why is this Plan Needed?

At an October 2011 Boise River Workshop, over 120 participants identified the most important next step to enhance the Boise River; "Continue this group and develop a plan."

In early 2011, interested local stakeholders came together to plan a workshop on environmental enhancement opportunities on the Boise River. All interested individuals and organizations were welcome to participate to foster an open and inclusive planning process. An Organizing Committee that included non-profit and for-profit staff, volunteers and agency representatives agreed on the goal of the workshop, "To increase opportunities for public and private ecosystem enhancement of the Lower Boise River by establishing networks, building knowledge, envisioning possibilities and tackling challenges."

The workshop, titled "From Vision to Reality," brought 106 of the area's practitioners, experts, academics, decision makers, and active citizens together for a substantive discussion about the challenges and opportunities for environmental enhancement of the Boise River. The results of the workshop, as measured from breakout session input and an online survey, identified key enhancement goals and interests, challenges to enhancement, approaches to enhancements and key next steps. Participants identified that the most important next step to enhance the Boise River was to "Continue this group and develop a plan."

Following the workshop, a group of interested organizations came together to form the Boise River Enhancement Network (BREN). This group received a grant from the Bureau of Reclamation's WaterSMART program to establish a watershed group and write a watershed enhancement plan. BREN then used the results of the workshop to design a process and to identify key subject areas on which to focus the effort. This plan is a result of these efforts to provide the essential next step in the enhancement of the Boise River.

Approaches to Restoration

Please rate the following approaches to restoration/enhancement on the Boise River (Preferred, Acceptable, Of Limited Use, Unacceptable).

Planning Grant

Cooperative Watershed Management Program

Eligible Projects

- Watershed group development
- Restoration planning
- Restoration project design

Funding – FY2024

No cost-share required

Up to $300,000 in federal funding

Water and Energy Efficiency Grants (WEEG)

Eligible Projects

- Canal lining and piping
- Flow measurement
- SCADA and automation
- Hydropower
- Municipal Water Projects

Funding

- Funding opportunity FY 2024
- Group I: $500,000; 2 yrs
- Group II: $2,000,000; 3 yrs
- Group III: $5,000,000; tentative

Other Considerations

- Points for connection to on-farm projects funded by NRCS
- Can phase projects
- Quantify water savings

Small-Scale Water Efficiency Program (SWEP)

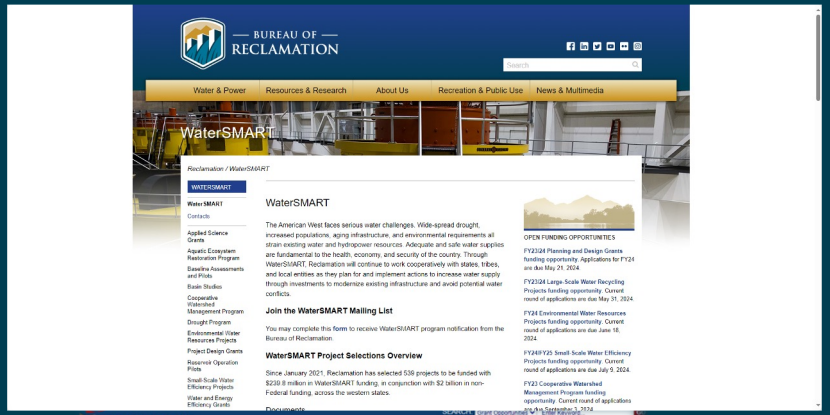
Eligible Projects

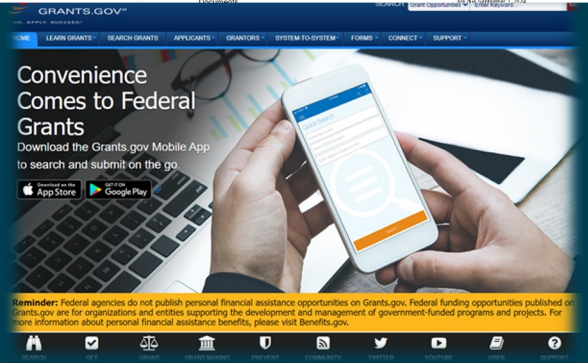
- Canal lining and piping
- Flow measurement
- SCADA and automation

Funding

- Up to $100,000 for each grant
- Project ceiling of $225,000

Program	Program Summary	Open	Award Ceiling
Water Conservation Field Services Program (WCFSP)	Planning: water management and conservation plans, system optimization reviews, design of water management improvements, and demonstration	Winter 2025	$50,000
Cooperative Watershed Management Program	Development or expansion of watershed groups	2nd Round 9/3/2024	$300K *No cost-share
Drought Contingency Planning	Develop a Drought Contingency Plan to manage water in drought conditions (2 years)	Winter/Spring	$200K w/ 50% C/S
Applied Science Grants	Development of hydrologic information and water management tools and water supply reliability (2 years)	Spring	$200K w/50% C/S
Project Planning & Design	Develop a site-specific final design of med. To large-scale projects. Planning prior to design application.	21-May-24	$400,000
Small-scale Water Efficiency Projects (SWEP)	Small water efficiency improvements that have been identified through previous planning efforts (2 years)	Winter & Late Summer	$100K/$225K max. Total Project Cost. 50% C/S
Drought Resiliency Projects	Resiliency projects that will help communities prepare for, mitigate, and respond to drought (2-3 years)	Fall/ Early Winter	3 Funding Groups w/50% C/S $500K/$2M/$5M
Water & Energy Efficiency Grants (WEEG)	Emphasis on water conservation and energy efficiency (3 years)	10/30/2024	3 Funding Groups w/ 50% C/S - $500K/$2M/$5M
Environmental Water Resources Projects	Focus on water supply for ecological values with drought and water conservation projects (3 years)	6/18/2024	$5M & 75% cost-share rate
Aquatic Ecosystem Restoration & Protection Projects	Focus on water supply for ecological values with drought and water conservation projects (3 years)	Winter 2025	$5M & 75% cost-share rate





Contact Melissa Jayo @ USBR
Cell: (208) 896-4406
Office: (208) 383-2283
mjayo@usbr.gov

Request to receive email notices of Funding Announcements.

WaterSMART | Bureau of Reclamation (usbr.gov)

www.grants.gov - Find the app for mobile device.

What do needs to completed.

SAMS (System for Award Management) - https://sam.gov

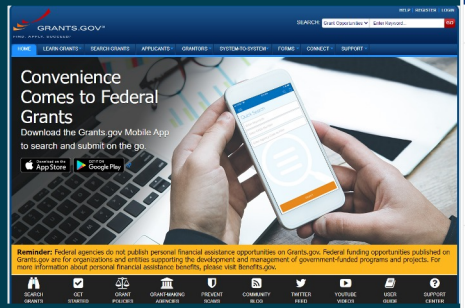
ASAP (Automated Standard Application for Payments)Account - https://asap.gov

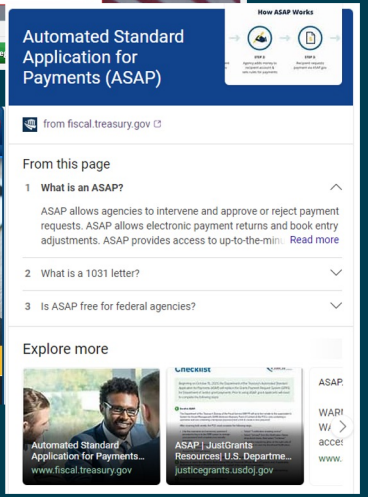
Grants.gov - https://grants.gov

Tips

Going to an on-line application.

Don't wait for the last day to submit.





TimeLine for a WaterSMART Grant

- From Application to Signed Agreement
  - NEPA/Section 106 – to be completed prior *any* project activities starting.
    - ❖ Reach out to Reclamation prior to applying to look the level of compliance, cost, and time to complete.
- Approx. a year from selection ➡signed agreement ➡NTP.
  - When doing your budget and scheduling. Plan accordingly.
- Successful Projects
  - Start with good planning, budgeting, design, scheduling.

Don’t be like Dwella

Questions

Thank you for your time.

Watershed Topics Discussion

- Work in your group to rate each topic.
- Add any topics you don't see listed.
- Hand in your "master answer sheet" when you finish.

Watershed Topics Results

North Fork Payette River
Watershed Coalition

What's Next?

We are all part of the problem and the solution.

VALLEY SOIL & WATER
CONSERVATION DISTRICT

Interactive Mapping Planning Tool

OBJECTIVE:

- Public Input
- Identify Areas of Concern
- For use in Prioritizing Projects and Funding
- Memorialize into the Watershed Restoration Management Plan

Created by: Kara E. Utter,
MSES, BS
Dynamic Visions GIS

Resource for Data Visualization and Feedback from the Public

NFPR Watershed Project Inventory

Legend

Basemap Gallery

Details

Layers

Info

86
Responses

Collapse

Areas of Concern

Concern Location

NFPR Watersheds HUC10

NFPR Watershed Impaired Waterways

Impaired Lakes

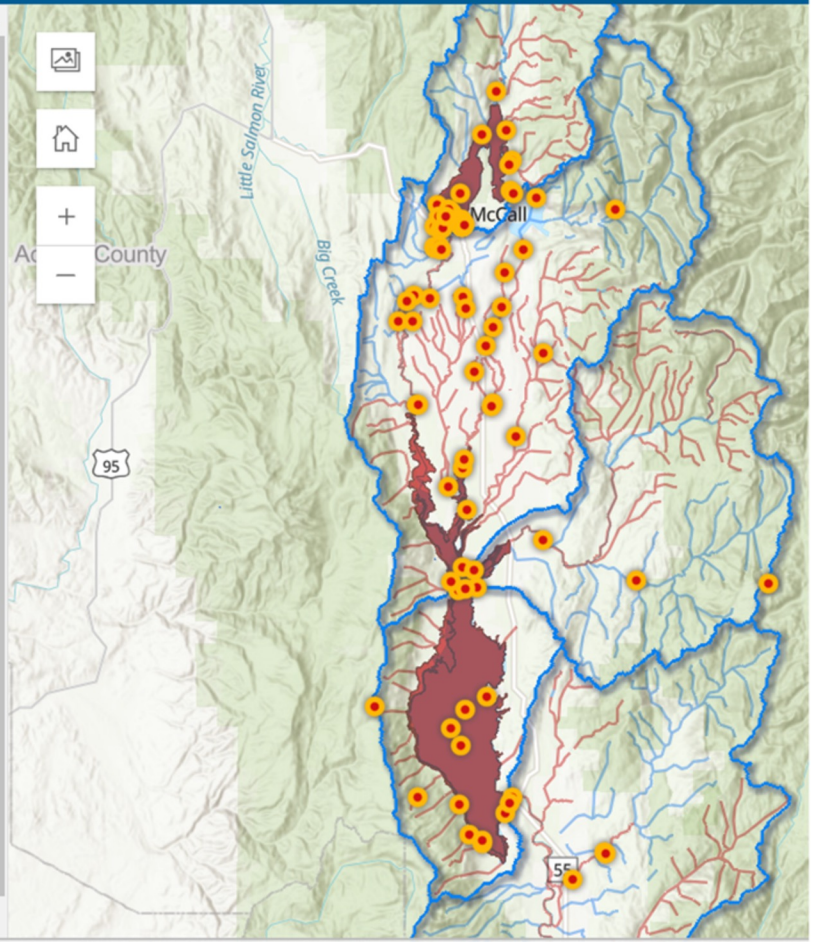
Impaired

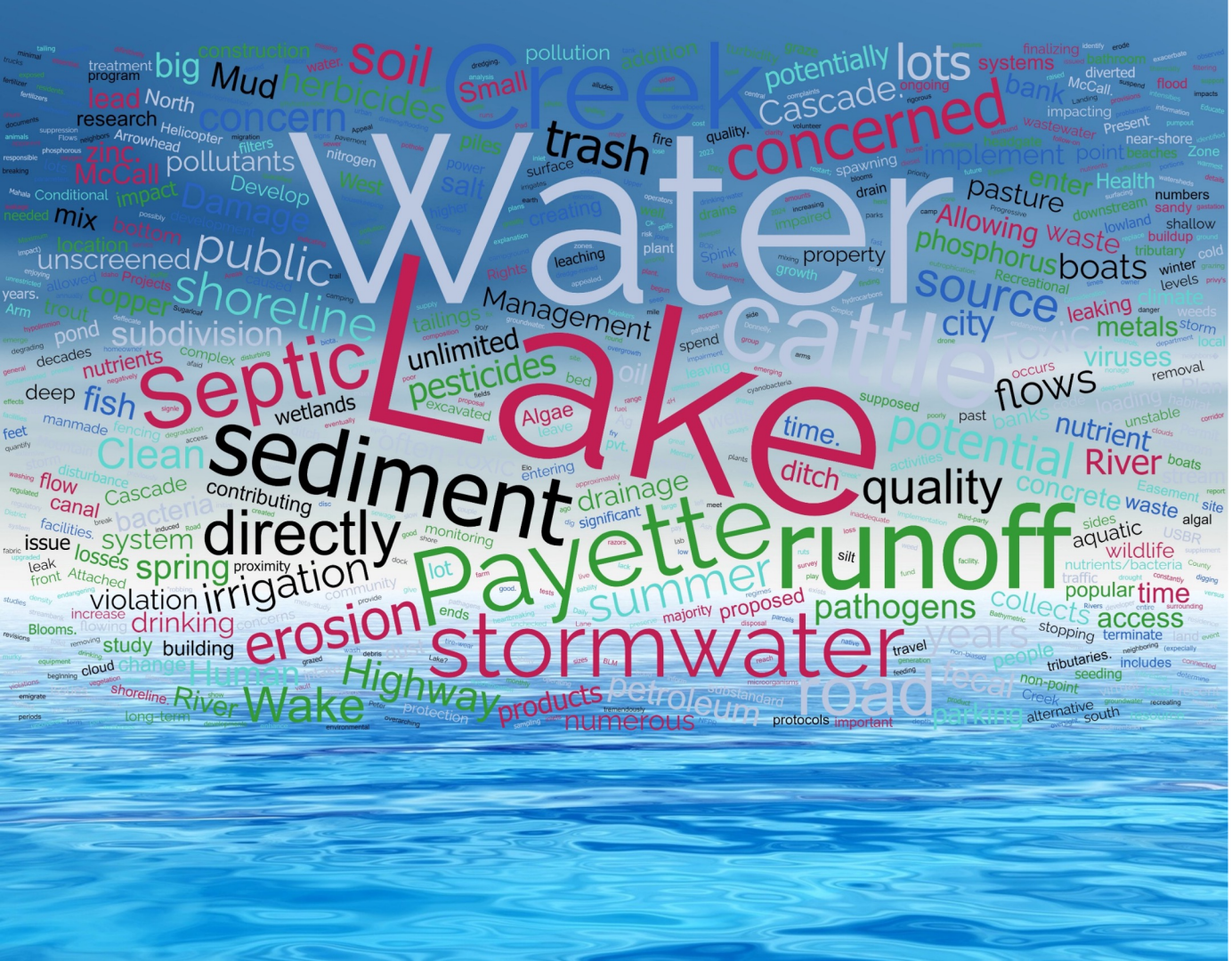
Impaired Streams

Good

Impaired

Counties





Current Recurring Feedback Themes:

- Lake Water Quality
- Toilet Facilities
- Septic Systems
- Erosion & Sedimentation
- Pollutant Chemicals
- Boating
- Grazing Management
- Urban Drainage
- Shoreline Protection
- Land use

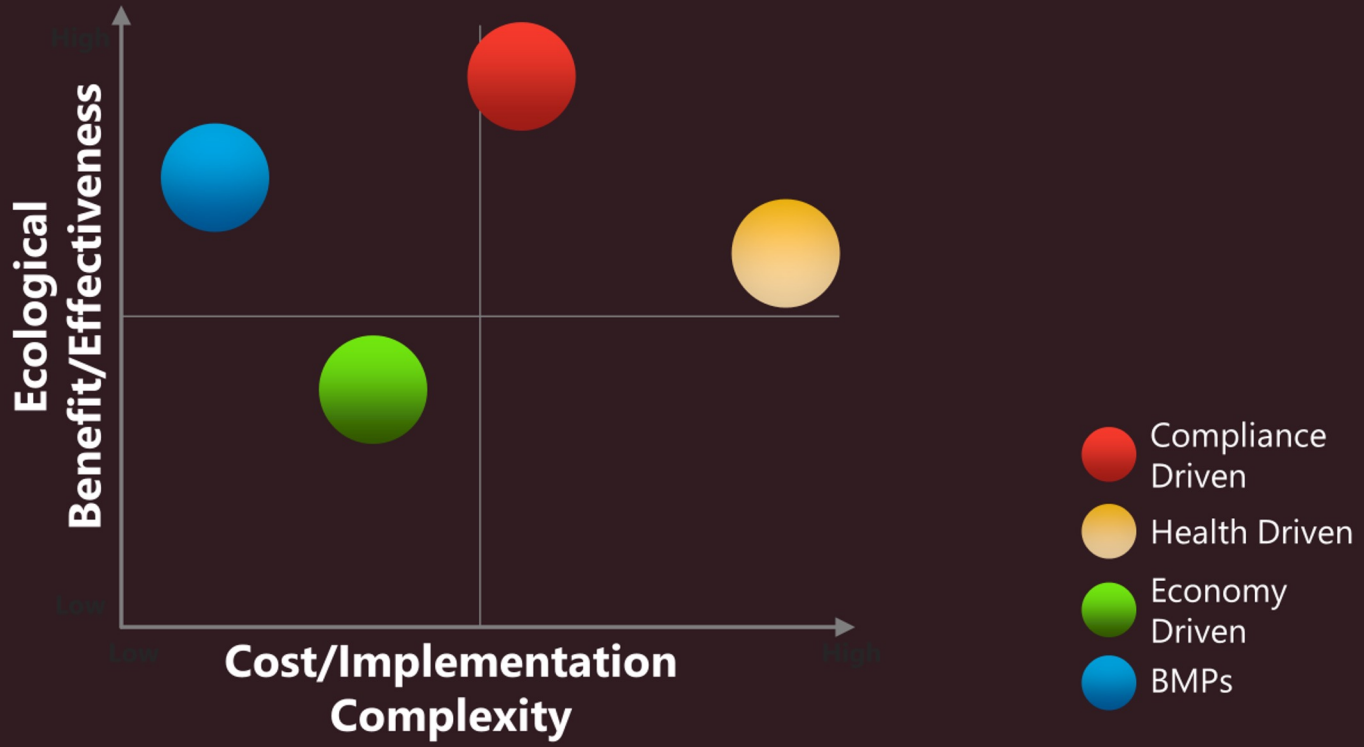
Non-relevant words (i.e. “and”, “but”, “its” etc.) filter out.

Interactive Map

Let’s go to the website

Google: Valley Soil and Water Conservation District {NFPR Watershed Coalition tab}

How we will use the Information Strategy for Prioritizing Projects



Coalition Resources

We want your feedback!

Scan the QR code below:

Visit our website, Facebook, and Instagram

https://valleyswcd.org/

@ValleySoilWater

Valley Soil & Water Conservation District

VALLEY SOIL & WATER
CONSERVATION DISTRICT

UPCOMING EVENTS

May 15 WQPA Applications due

June 12 NFPRWC Watershed Workshop

June 17&18 Alzar Student Planting Day

June 27 Southern Idaho Forestry Tour

June 22 District Outreach at McCall Airport Open House

September Watershed Tour Day

Fall 2024 Idaho DEQ Project Tour