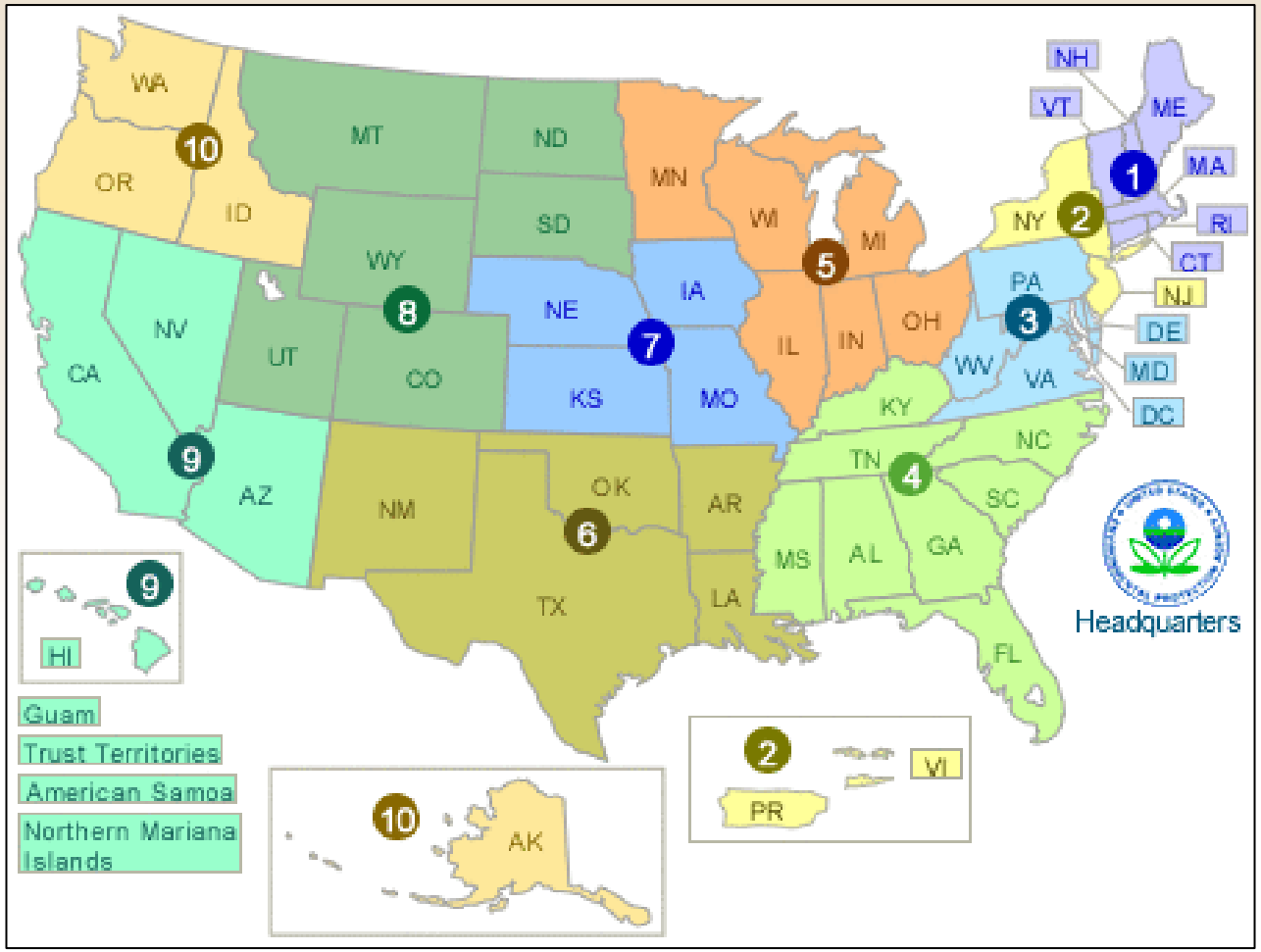
Addressing Agricultural NPS Pollution: Key Partners & Strategies

Webinar #6

June 22, 2023

2 – 4pm Eastern

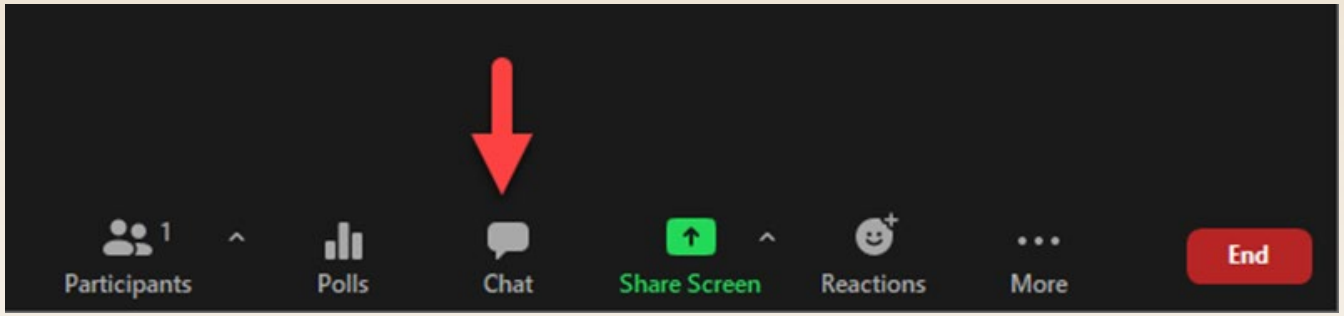
Poll #1: What EPA Region are you in?



Poll #2:
How long have you been working in Tribal water quality programs?

- Less than one year
- 1-4 years
- 5-10 years
- Over 10 years
- Since Hector was a pup/ since the last ice age/ a very long time

Training Webinar Logistics



- **To ask a question:** Please type your question in the Chat box. We will take questions after presentations.
- **Technical difficulties:** If you are having technical difficulties, please send a message through the Chat to Gabby Vinyard, ERG (host) or email gabby.vinyard@erg.com
- **Evaluation:** Please complete the survey evaluation at the end of the training.

Webinar Agenda

- Greetings and Introductions
- Appreciation
- Agricultural Pollution Overview
- Conservation Assistance Available to Tribes
- BMPs in action
- Panel Discussion and Break-outs
- Summary

Poll #3: Is agricultural pollution something you are dealing with? (If yes---in chat---Tribally-owned production, leased land, or other?)

- Yes
- No
- Don’t know/Not sure

Poll #4: Does your Tribe have an agricultural resource management plan (ARMP)?

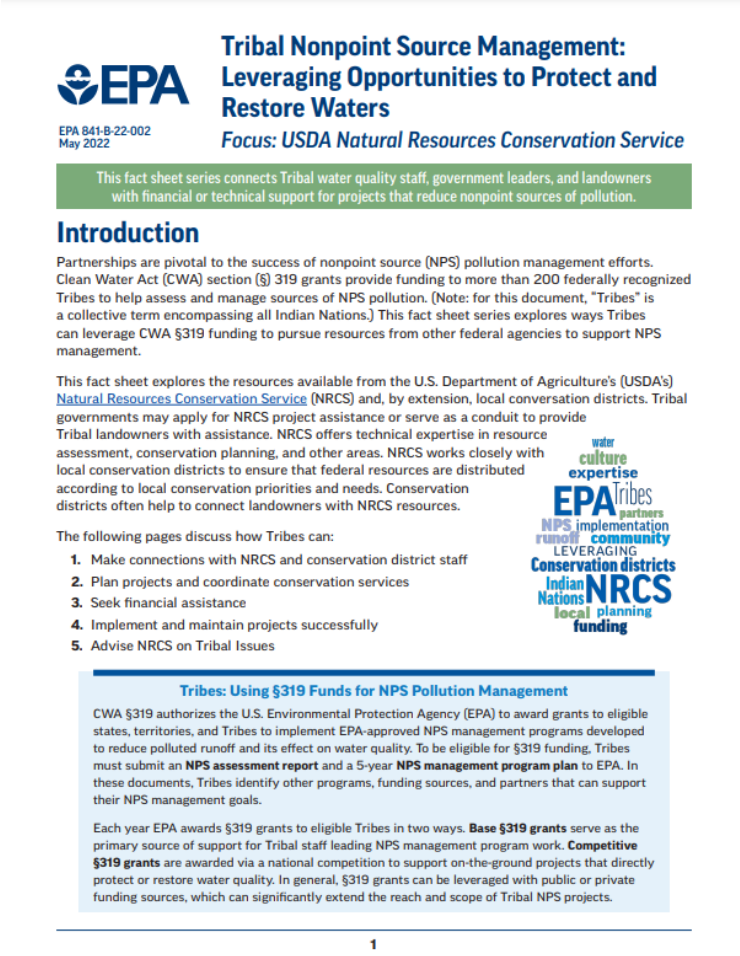
- Yes
- No
- Don’t know/not sure.

New resource guide for Tribal water quality staff

Goal: Educate Tribal water quality staff about opportunities to work with NRCS and conservation districts to manage NPS pollution. Includes:

- Introductory information on NRCS and conservation districts
- Highlights of NRCS programs that provide technical and financial assistance
- "Tips from Tribes" and Tribal project examples
- Links to existing Tribal NRCS resources and partnership groups (e.g., INCA)

Recording of June 8 webinar highlighting new resource guide available online. Features NRCS, NACD, and two Tribal programs



EPA

EPA 841-B-22-002
May 2022

Tribal Nonpoint Source Management: Leveraging Opportunities to Protect and Restore Waters

Focus: USDA Natural Resources Conservation Service

This fact sheet series connects Tribal water quality staff, government leaders, and landowners with financial or technical support for projects that reduce nonpoint sources of pollution.

Introduction

Partnerships are pivotal to the success of nonpoint source (NPS) pollution management efforts. Clean Water Act (CWA) section (§) 319 grants provide funding to more than 200 federally recognized Tribes to help assess and manage sources of NPS pollution. (Note: for this document, "Tribes" is a collective term encompassing all Indian Nations.) This fact sheet series explores ways Tribes can leverage CWA §319 funding to pursue resources from other federal agencies to support NPS management.

This fact sheet explores the resources available from the U.S. Department of Agriculture's (USDA's) Natural Resources Conservation Service (NRCS) and, by extension, local conversation districts. Tribal governments may apply for NRCS project assistance or serve as a conduit to provide Tribal landowners with assistance. NRCS offers technical expertise in resource assessment, conservation planning, and other areas. NRCS works closely with local conservation districts to ensure that federal resources are distributed according to local conservation priorities and needs. Conservation districts often help to connect landowners with NRCS resources.

water culture expertise EPA Tribes partners NPS implementation runoff community LEVERAGING Conservation districts Indian Nations NRCS local planning funding

The following pages discuss how Tribes can:

1. Make connections with NRCS and conservation district staff
2. Plan projects and coordinate conservation services
3. Seek financial assistance
4. Implement and maintain projects successfully
5. Advise NRCS on Tribal Issues

Tribes: Using §319 Funds for NPS Pollution Management

CWA §319 authorizes the U.S. Environmental Protection Agency (EPA) to award grants to eligible states, territories, and Tribes to implement EPA-approved NPS management programs developed to reduce polluted runoff and its effect on water quality. To be eligible for §319 funding, Tribes must submit an **NPS assessment report** and a 5-year **NPS management program plan** to EPA. In these documents, Tribes identify other programs, funding sources, and partners that can support their NPS management goals.

Each year EPA awards §319 grants to eligible Tribes in two ways. **Base §319 grants** serve as the primary source of support for Tribal staff leading NPS management program work. **Competitive §319 grants** are awarded via a national competition to support on-the-ground projects that directly protect or restore water quality. In general, §319 grants can be leveraged with public or private funding sources, which can significantly extend the reach and scope of Tribal NPS projects.

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EPA/NRCS/Conservation District Connection Points

- Tribal water quality staff bring key perspectives that can help target practices to achieve natural resource conservation goals:
  - E.g., Program plans, monitoring/assessment info, community engagement
- Larger water quality projects typically require support from multiple sources, such as EPA grants + NRCS funds + CD tech assistance.
- A major challenge in Tribal NPS work is having the resources and partnership opportunities to pursue watershed-based management strategies. CDs can be key partners in addressing this challenge.

Key Take-aways from Tribal NPS staff currently collaborating with NRCS

- Building and sustaining relationships is key to successful partnerships
  - Between tribal government departments
  - With NRCS DC, Tribal Liaison, and Conservation District
- NRCS provides a range of support to tribal water programs
  - Funding (e.g., EQIP), technical assistance (e.g., project design), tribal staff training
- Engage NRCS during tribal program planning
  - E.g., during multi-year NPS planning, when planning conservation practice projects
- Understand the keys to NRCS funding, as it is different than EPA 319 funds
  - Know farm tract number for NRCS eligibility
  - Timeframes and funding specifics differ (e.g., EPA grant and NRCS contract)

slido

What type of agricultural production is going on in your lands?

ⓘ Start presenting to display the poll results on this slide.

Soil Health for Water Quality Improvement and IAC Assistance

Emily Luscombe, Natural Resources Director
Intertribal Agriculture Council
Emily@indianag.org

Intertribal Agriculture Council

About Us: Founded in 1987, the IAC is a national 501c3 that supports all 574 federally recognized Native American Tribes and Alaska Native Villages.

Natural Resources Topics Addressed by Department

- Working to assist with regenerative agricultural practices/ conservation planning
- Soil health and understanding soil science
- Climate understanding and extreme event preparedness
- Drought preparedness
- Youth Soils and Agriculture Curriculum
- Pollinator Protection

Natural Resources Topics Addressed by Department

- Integrated Pest Management/ Invasive Species Control
- Water quality assistance/ Riparian Protections
- Agricultural Resource Management Planning
- CRP/ CREP
- Habitat Assessment and Protection
- Seed Keeping
- Traditional Ecological Knowledge (TEK) connections
- New topics are added by request to serve our producers

Natural Resources Department Resources Delivery Method

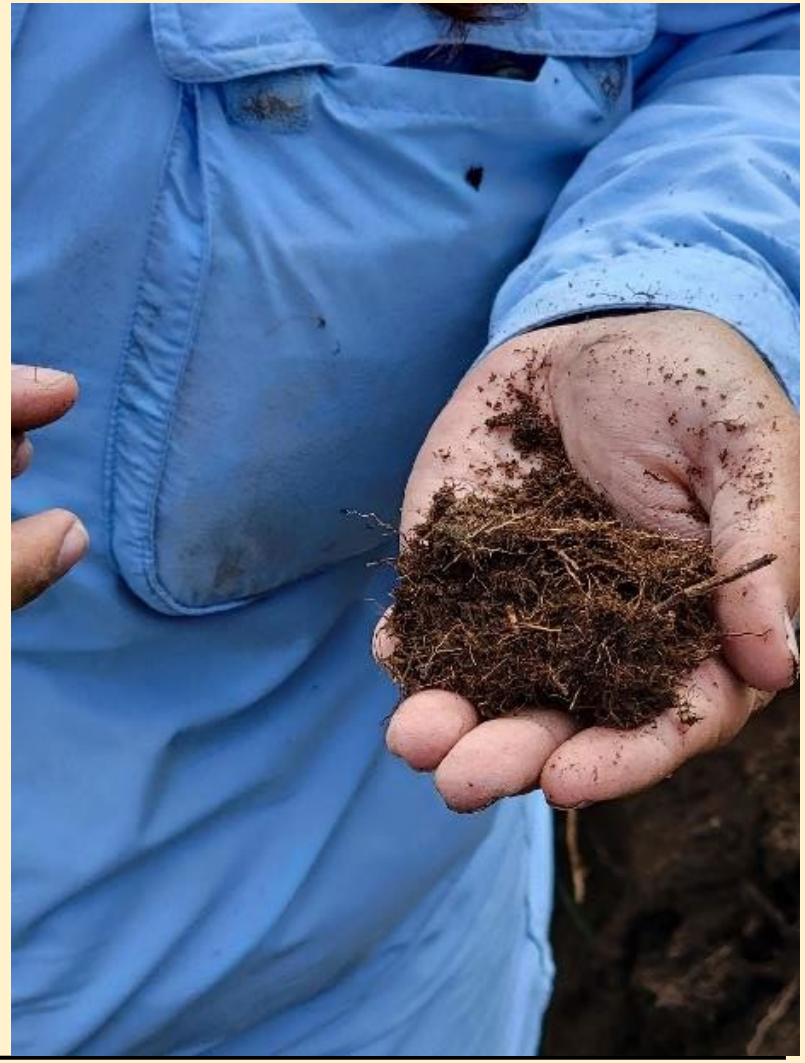
- Field Days and Workshops providing outreach to small groups
- Individual producer/Tribe outreach including:
  - -understanding soil samples/ water samples
  - -information on individual practice changes
  - -understanding how to get started with a new piece of land
  - -drought planning, grazing management, other planning
- Large group presentations
- Assistance to other IAC departments
- Working with partners to help provide services to our producers
- Outreach material creation
- Youth Outreach

Technical Assistance Programs

- USDA Technical Assistance, Tribal outreach, and resource identification for individual Tribal producers
- Tribal food sovereignty initiative support
- Tribal representation on state and national level agriculture related initiatives
- On-the-ground coordination with all IAC programs to support producer engagement

Soil Health/ Water Quality Connection

- Water quality cannot be considered without looking at soil health because soil is the filter over which and through which water runs
- Every pollutant that ends up on the soil can be expected to make it to ground water and/ or surface water
- Healthy soils will reduce pollutants and help to protect the water
- Pollutants that destroy soil health also destroy water quality so protecting one helps to protect both
- Soil health loss can be an early indicator that you will lose water quality and working to improve that soil health before it degrades further can help protect your water sources
- Whole ecosystem function is important to keep in mind



Agriculture and Protecting your Waterways

- Protect Riparian Corridors

-Having a buffer improves habitat, especially for pollinators, fish, and birds

-It prevents erosion and sedimentation

-It lowers water temperatures, increases dissolved oxygen content and the parameters required by most fish and aquatic life

- It helps to filter pollutants before they reach the stream
- Allow space for habitat protection and encourage species diversity

-Maintaining ecosystem function helps protect water quality

Connection between quantity and quality

- There is a direct connection between water quality and water quantity
- In general higher water quantity can be equated to higher water quality as pollutants, minerals, etc. are diluted
- However, it is important to remember that higher flows, floods, etc. can bring pollutants into the water that wouldn't normally be there so when faced with extreme events or nonpoint source pollution sources higher quantity can negatively impact water quality
- The negative impacts of higher flows can be reduced through prevention by building soil, and reducing sources of pollution. Practice changes make a difference

Agricultural Water Pollution Sources

- Pesticides
- Fertilizers
- Erosion
- Animal Wastes

Resulting NPS Pollution:

- Chemical toxicity
- Increased nutrient loading
- Siltation
- Pathogens (E.Coli, Fecal Coliform, etc. there are some pathogens present in surface water naturally in small numbers so it's important to know normal counts to see if you are above average)

Problems this causes:

- Chemical absorption into plants, animals, and silt reducing or damaging desirable species
- Nitrification (this can cause blue baby disease in drinking water)
- Eutrophication and fish kills
- Loss of pool/ riffle formations, loss of spawning grounds, higher water temps
- Danger to humans

Nitrification of Drinking Water

Resources:

http://www.usgs.gov/special-topic/water-science-school/science/nitrogen-and-water?qt-science_center_objects=0#qt-science_center_objects

http://www.water-research.net/index.php/nitrate

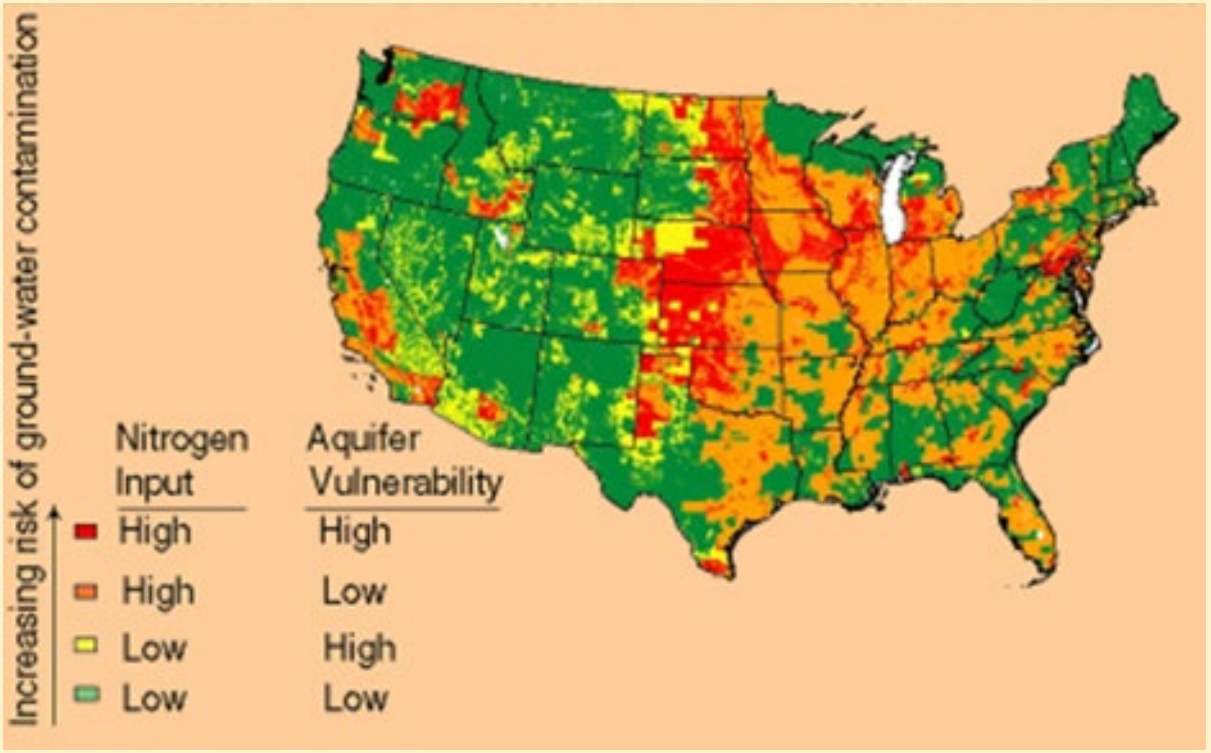


Image from:
http://water.usgs.gov/nawqa/nutrients/pubs/wcp_v39_no12/

Tend to Reduce Soil Health

Aggressive Tillage

Annual/seasonal fallow

Mono-cropping

Annual Crops

Excessive inorganic fertilizer use

Excessive crop residue removal

Broad spectrum fumigants/pesticides

Broad spectrum herbicides

Reduced organic matter and soil armor

Tend to Promote Soil Health

No-till or conservation tillage

Cover crops; Relay crops

Diverse crop rotations

Perennial crops

Organic fertilizer use (manures)

Crop residue retention

Integrated pest management

Weed control by mulching, cultivation

Promotion of soil biome

Talking to Producers

- Remember that this is their livelihood and probably also a long standing tradition
- Respect that they have a lot of knowledge about the land that they are working on
- Include them in a decision making process and any decisions you are making
- Explain new concepts in terms that are digestible and avoid acronyms
- Talk to them about outcomes. Most producers want to be good land stewards and so if they understand the process and the outcomes it is much easier to work out solutions with them.
- Talk to them about what to expect for yields and profits

Increasing Yield and Profits through Practice Changes

- Improved soil health and building of soil organic matter and biology increases yields over time. In most soils it takes 2-5 years to see an increase in yields.
- There is a drop in yields temporarily as you change practices and your soil biology adjusts.
- Make changes incrementally and on a safe to fail basis to avoid yield drops beyond what you can afford in the short term.
- There are a number of programs that can help make up the difference with incentives. Please visit our website: www.indianag.org to find your local technical assistance representative for assistance with this.
- Improved water quality, soil health, and ecosystem health will not only increase yields, but will create healthier crops and animals

Ways soil health can help protect your water quantity and quality

- Slow the water cycle
- Use regenerative practices to increase the water holding capacity and filtration properties of your soil
- Increase irrigation and use efficiency
- Improve water storage to collect more during times of more precipitation
- Reduce run off and erosion
- Protect pool and riffle formations in the waterways
- Create habitat

ARMP: Agricultural Resource Management Planning

- This process helps to increase Tribal Sovereignty as it can supersede BIA policy (but not an Federal Rules, CFRs, etc.)
- This is a collaborative goal setting and decision making process that can be used to protect resources and the collaboration can help have buy in on resource decisions
- A lot of the basic information in this plan be taken from other planning documents so that you do not have to recreate the wheel. It can be a good compliment to other plans.
- The Native Land Information System has a lot of the information needed to create maps and fulfill data needs in an easy to use format. https://nativeland.info/
- This should be a living document that is used and changed as the need arises.
- We can assist you in embarking on this process.

Water has a memory

- Water is essential, it is life.
- Water in its pure form is not its naturally occurring form, which is why water wants to mineralize.
- If we strip all of the minerals from water it will be actively trying to re-mineralize. It holds electrical capacity which has an elemental pull.
- Water maintains a memory of the places it has been through the minerals it picks up, the oxygen that is added as it is tossed over rocks, the nutrients that fall from leaves and come from the fish, etc. It has a story to tell of where it has been.
- This is also true of pollutants, water will easily pick up pollution and tell that story too.
- It is important to protect the water quality from the pollution or it ends up in our drinking water and food.

Some Resources for Water Quality

- EPA Basic Nonpoint Source Pollution Information: https://www.epa.gov/nps/basic-information-about-nonpoint-source-nps-pollution
- EPA Nonpoint Source Success Stories: https://www.epa.gov/nps/success-stories-about-restoring-water-bodies-impaired-nonpoint-source-pollution#read
- Basic Benthic Macroinvertebrate Information: https://www.epa.gov/national-aquatic-resource-surveys/indicators-benthic-macroinvertebrates
- Water Quality and Practices from the USDA: https://www.farmers.gov/conservation/water-quality
- NRCS Conservation Practice Standards: https://www.nrcs.usda.gov/getting-assistance/conservation-practices
- National Tribal Water Council (updated with current priority topics and concerns): http://www7.nau.edu/itep/main/ntwc
- An overview of ecosystem function: https://www.sciencedirect.com/topics/earth-and-planetary-sciences/ecosystem-function

Some Resources for Soil Health

- For more information on soil science and agriculture some of the people I suggest looking up on YouTube and reading their books are:
- Nicole Masters
- Dr. Elaine Ingham
- Alejandro Carrillo
- Gabe Brown
- Ray Archuleta
- Dr. Christine Jones
- Allan Savory
- Didi Pershouse
- Fred Provenza

This is not an exhaustive list and is in no particular order, but is a good starting point for easy to digest further information. There are also a lot of resources on USDA NRCS websites, extension service websites, and a number of non profit organization. I am happy to direct you to more resources.

Ocean Dead Zones

Facts and Resources:

http://oceanservice.noaa.gov/facts/deadzone.html

http://www.vims.edu/research/topics/dead_zones/index.php

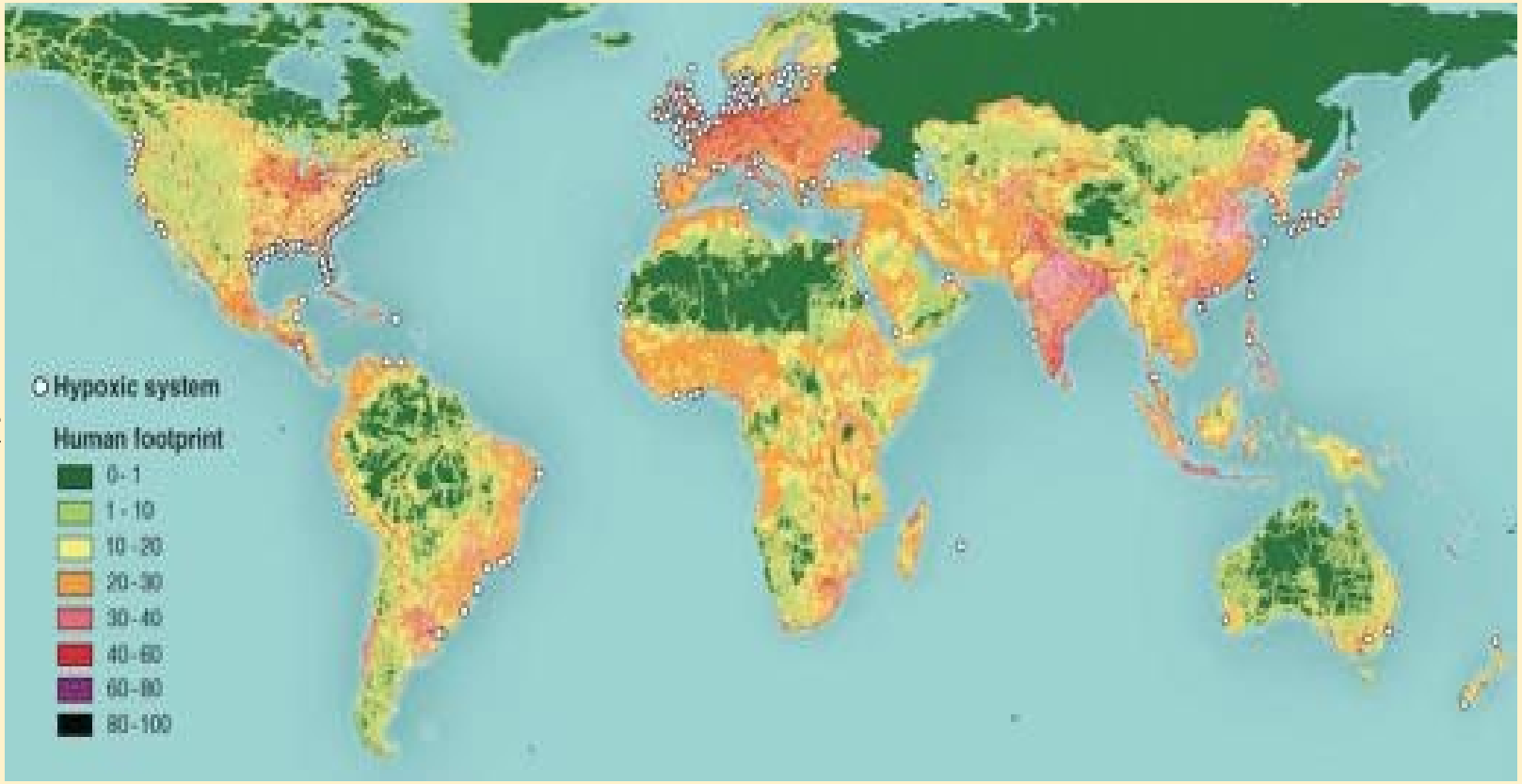


Image from https://www.biointeractive.org/classroom-resources/dead-zone-coastal-ecosystems

Using Conservation Agriculture to Improve Soil Health

Practice the basic soil health principles:

- Keep soil covered: continuous living cover is best
- Minimize soil disturbance
- Integrate animals where possible for the optimum minimal disturbance: apply adequate recovery periods and mimic natural grazing as much as possible
- Rotate crops or employ cover crops and intercropping

PROTECT SOIL BIOLOGY, this is something we can impact and it can alter physical and chemical aspects of soil

Soil Biology

Aiming for fungal dominated soils:

- **Mycorrhizal fungi/ fungal dominated aerobic soils are healthier and more productive than bacterial dominated anaerobic soils**
- **The fungi help act as soil glue supporting soil aggregation, both their bodies and what they exude act as cements and sealants for soil aggregates**
- **Fungi increase soil moisture, break down rocks and organic matter to make nutrients accessible to the plants and break down elements into water molecules**
- **Feed the soil microbes not the plant and the system will take care of the plant**
- **Watch the plant to see if the soil is in balance ie. stem to leaf ratio: more leaves = more microbes/ nutrients**
- **Extends roots by 1000% allowing plants more access to nutrients and water.**

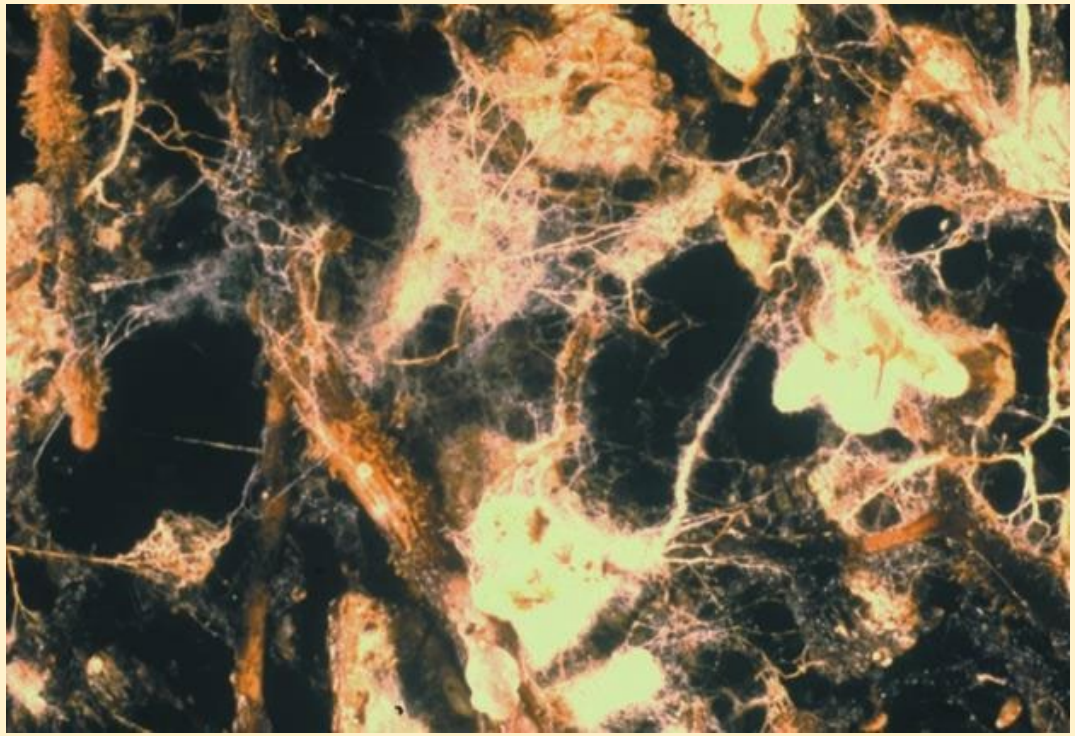
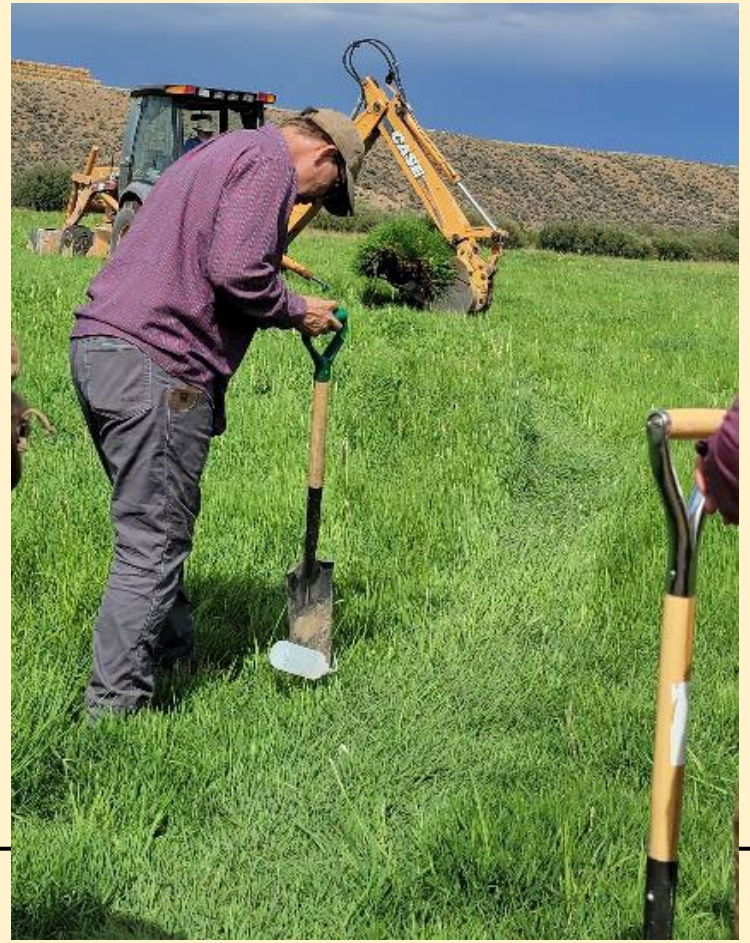


Photo USDA NRCS

Ways to use Agriculture to slow the water cycle and prevent Nonpoint Source Pollution

- Keep soil cover. Raindrops are a powerful force when they hit the ground causing dispersal of soil and causing erosion. Any kind of soil cover will help to break up the force of the drop and reduce erosion.
- Not all soil cover is created equal. Continuous living cover with good soil structure and microbe life is the best long term solution in most instances. This soil is like a sponge and will absorb more water keeping it where you need it and refilling aquifers.
- Healthy soil will not only act like a sponge, but also like a filter.
- Vegetation will break up water drops and help slow flows of runoff.
- Avoid soil compaction and impervious surfaces.
- Healthy soils hold more water and help to replenish aquifers so that more springs and fresh water are available to streams in the dry season.



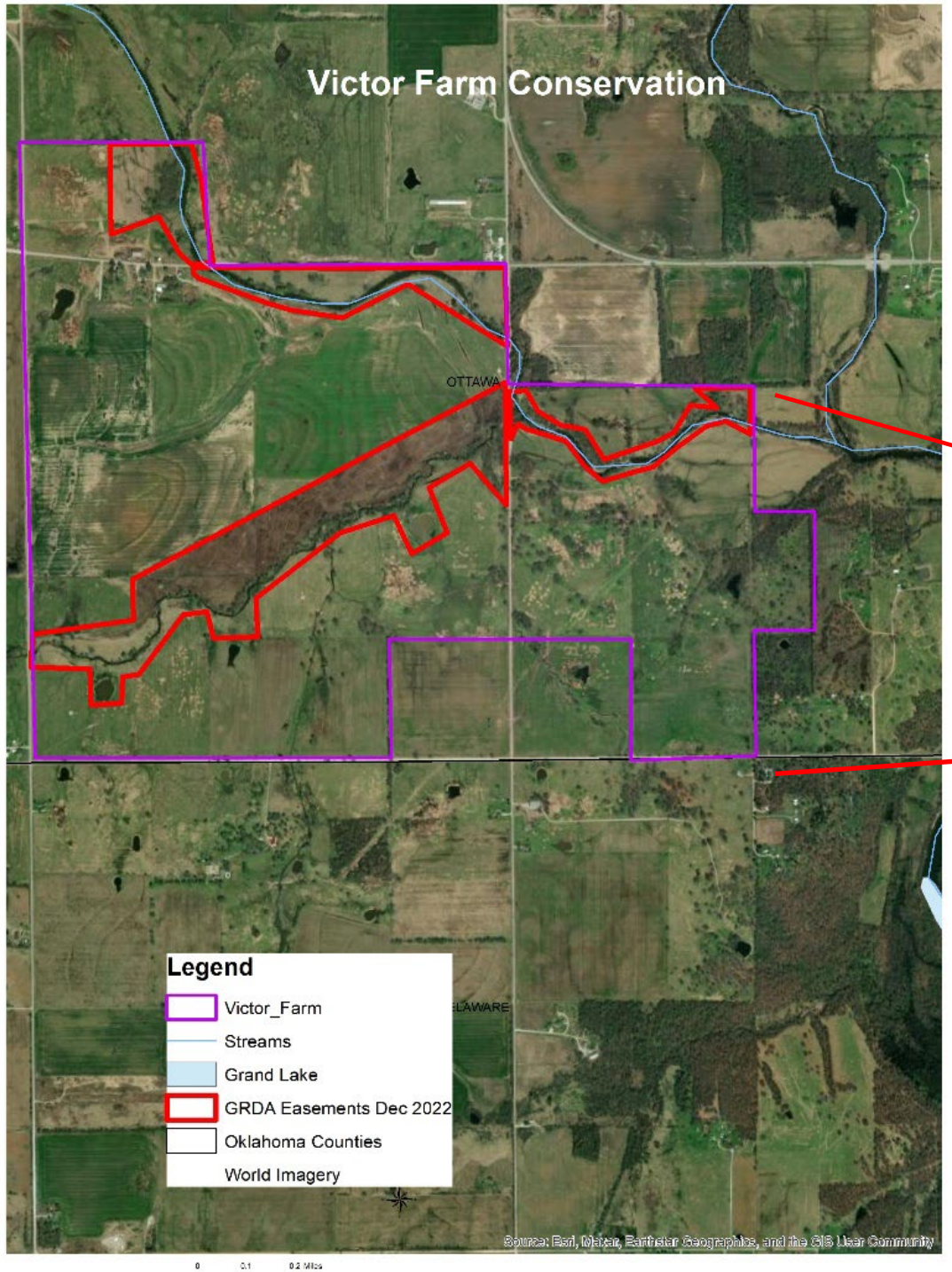
Thank you!

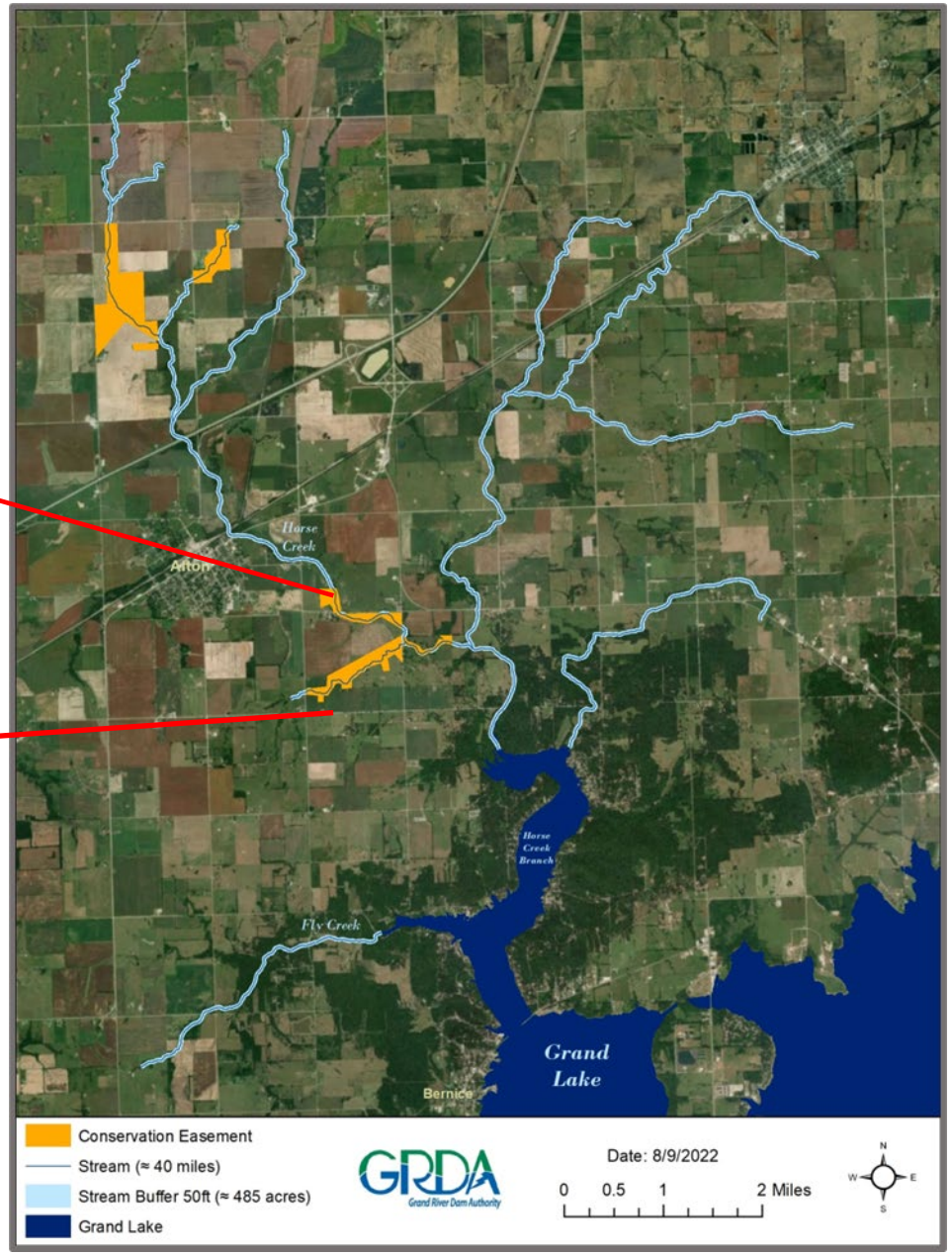
Questions?

Poll #5:Who are the technical assistance providers you rely on to do agricultural BMPs?

- NRCS and conservation districts
- The Cooperative Extension
- The Farm Service Agency
- Other (please put in chat)

Grant Victor Farm


Victor Farm Conservation
OTTAWA
Legend
Victor_Farm
Streams
Grand Lake
GRDA Easements Dec 2022
Oklahoma Counties
World Imagery
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community


Horse Creek
Afton
Horse Creek Branch
Fly Creek
Grand Lake
Bernice
Conservation Easement
Stream (≈ 40 miles)
Stream Buffer 50ft (≈ 485 acres)
Grand Lake
GRDA
Grand River Dam Authority
Date: 8/9/2022
0 0.5 1 2 Miles
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Conservation Practices Implemented at Victor Ranch

Partner	Source of Funds	Conservation Practice
NRCS and Ottawa County CD	EQIP - 2013	Brush Management (425 acres), Watering facilities, Cross Fencing (7,208 feet), Herbaceous Weed Treatment (651 acres), Livestock Pipeline (4,790 feet), Prescribed Grazing (879.9 acres), 2 wells and pumping plants, 4 watering facilities
NRCS and Ottawa County CD	Regional Conservation Partnership Project Grant - 2018	Access Control (90.6 acres- $17/acre), Cover crop (40 acres), Fencing (27,958 ft), groundwater testing (2 wells), Livestock Pipeline (14,989 ft, $2.30/ft), 2 Water Wells
OK Conservation Commission*		Access Control (90.6 acres- $3.40/acre cost-share) (Riparian Protection (158.4 acres- $90/ac- 5 years), pumping plant (1), watering facility (6 tanks), heavy use area (9 areas), pipeline (14,989 ft- costshare $0.46/ft), 2 wells,
Grand River Dam Authority	OK Conservation Commission* - 2020	30 Year Riparian Easement- 237 acres

* Funding from EPA CWA Section 319 and State Funds

Easement Photos

Aerial Photo of non-easement (left)
and Conservation Easement (right)

Ground Level photo of non-easement (left)
and Conservation Easement (right)

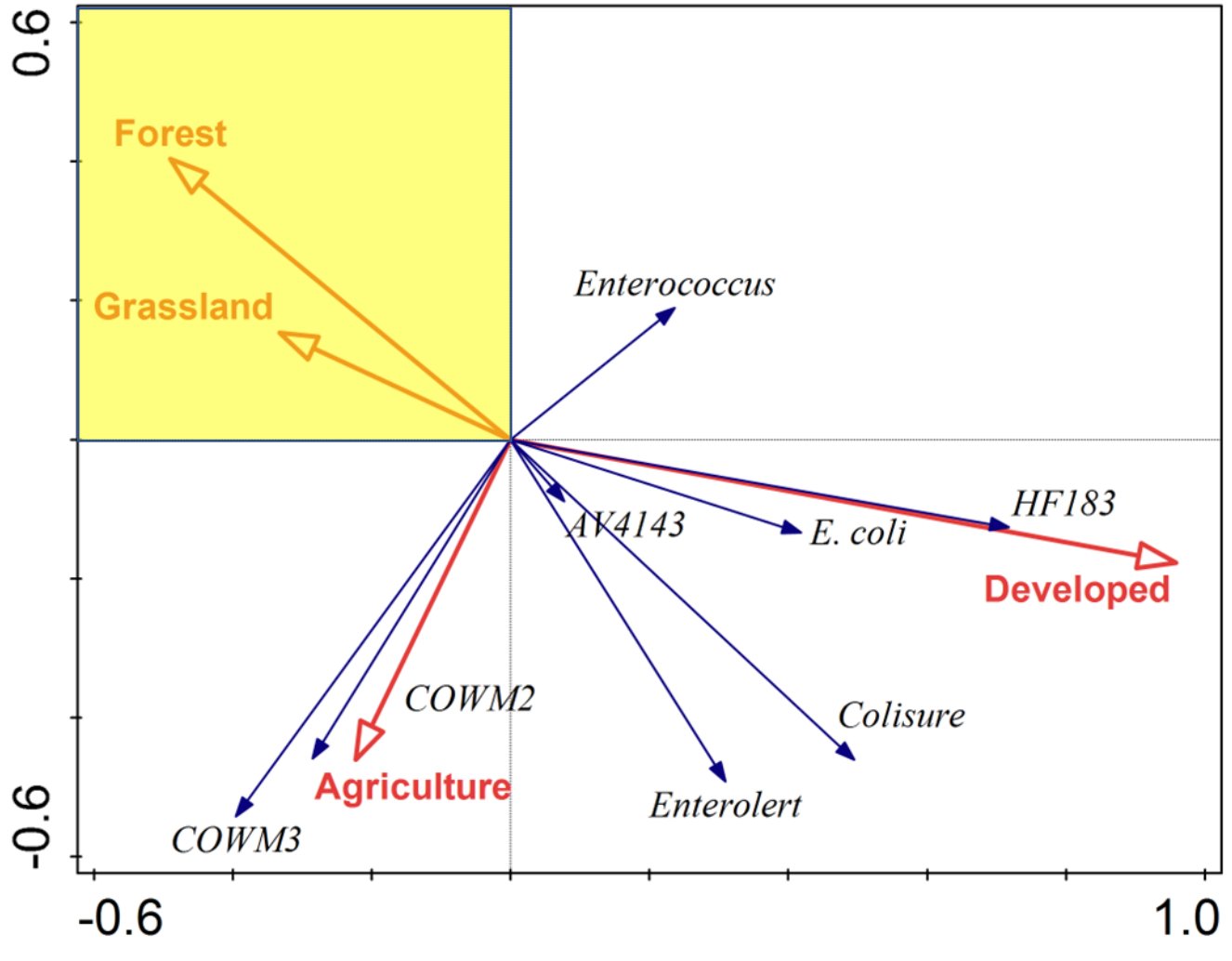
Source Tracking Results to Support Conservation Easements

Human markers were mostly associated with Developed Land Uses

Cow markers were mostly associated with Agricultural Land Uses

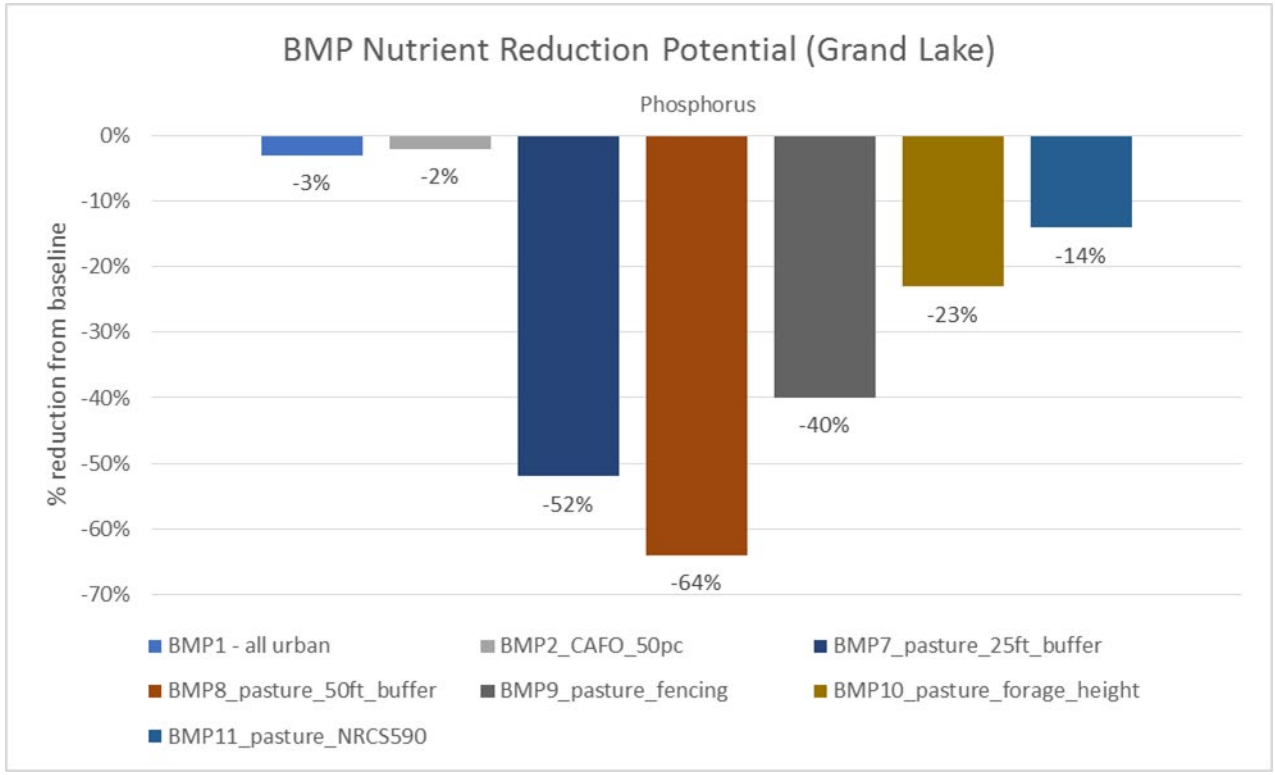
Forested and Grassland areas were not associated with any Nutrient sources.

Supporting our Conservation Easements Program



Browning et al. 2023
https://link.springer.com/article/10.1007/s11270-023-06355-z

GRDA's Watershed Model Results for BMPs

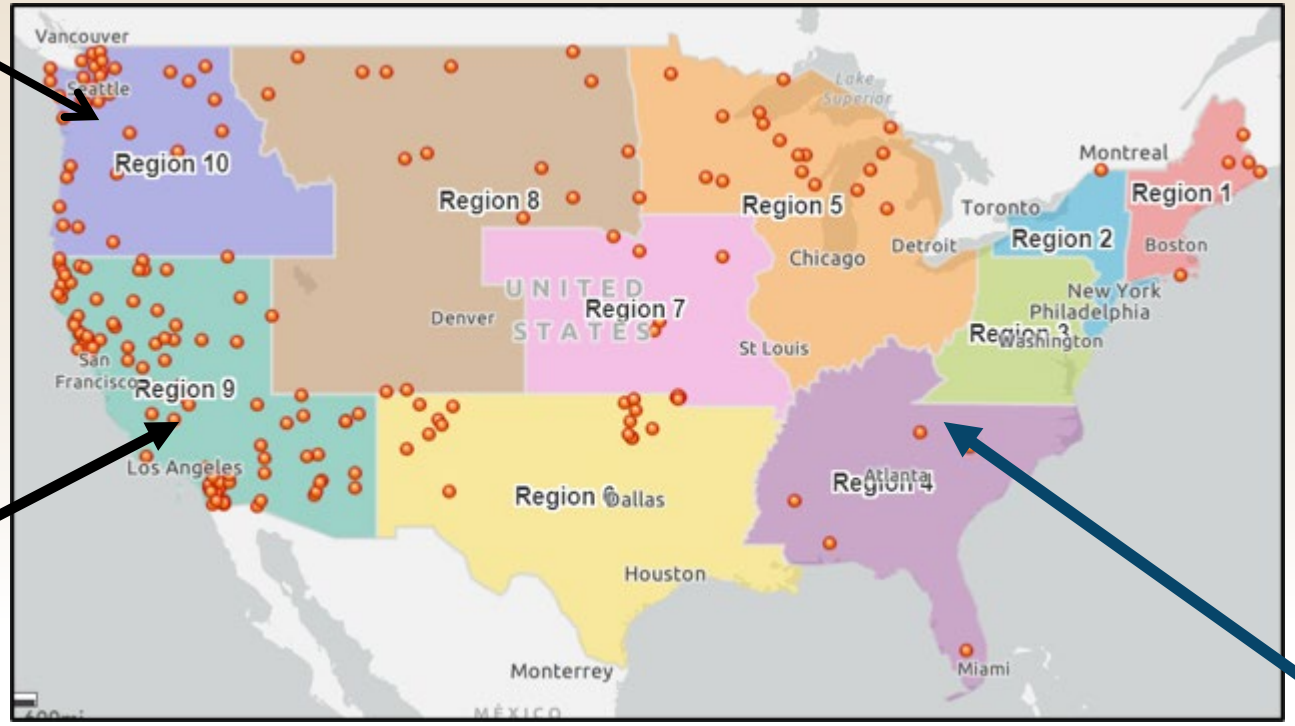


These results come from GRDA's watershed model.

Results show that 50-foot buffers (conservation easements) can reduce phosphorus by 64%.

Tribal Presentations

Mark Buettner, Klamath Tribes

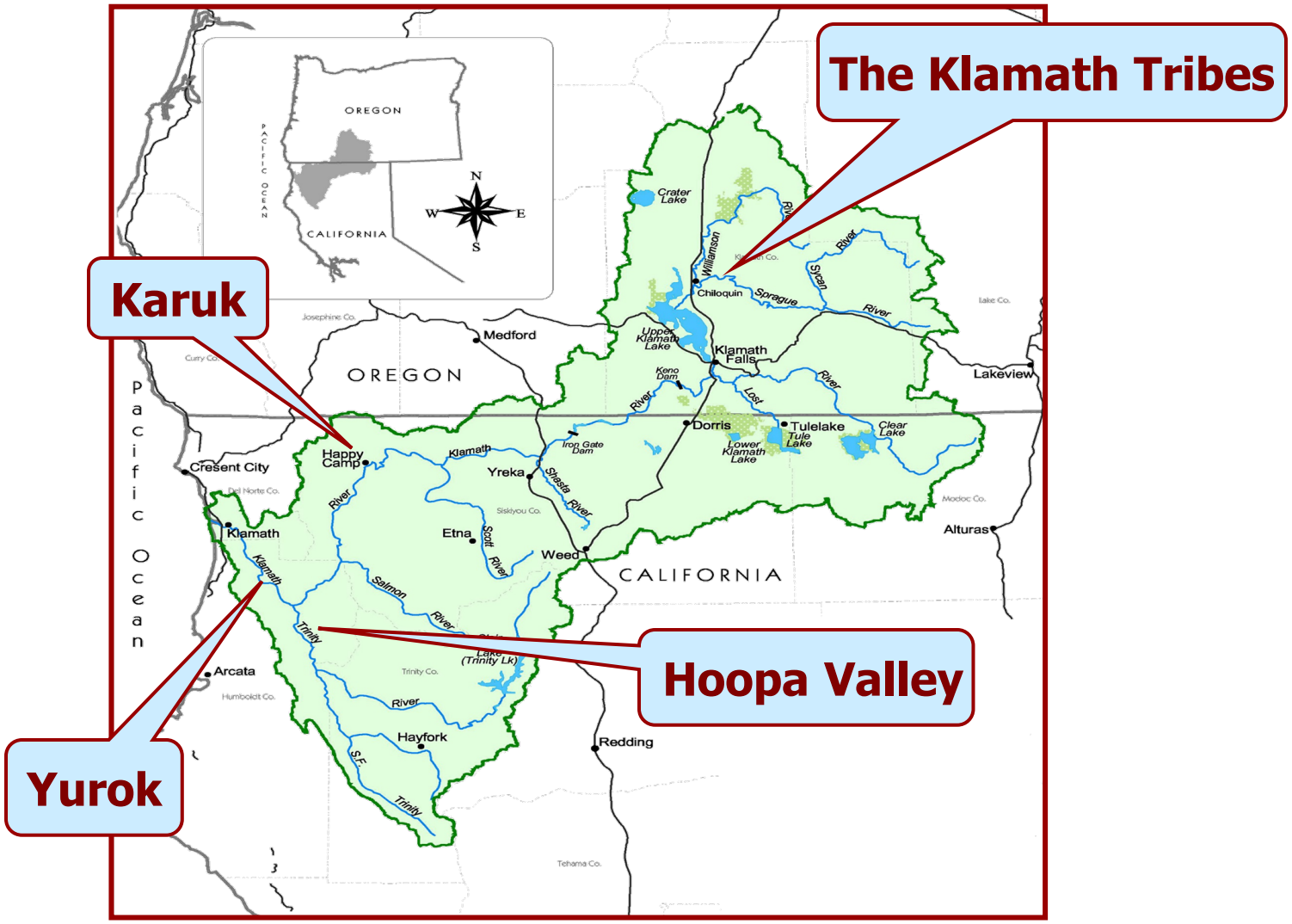


Julie Randall Colbert, Santa Ynez Band of Chumash Indians

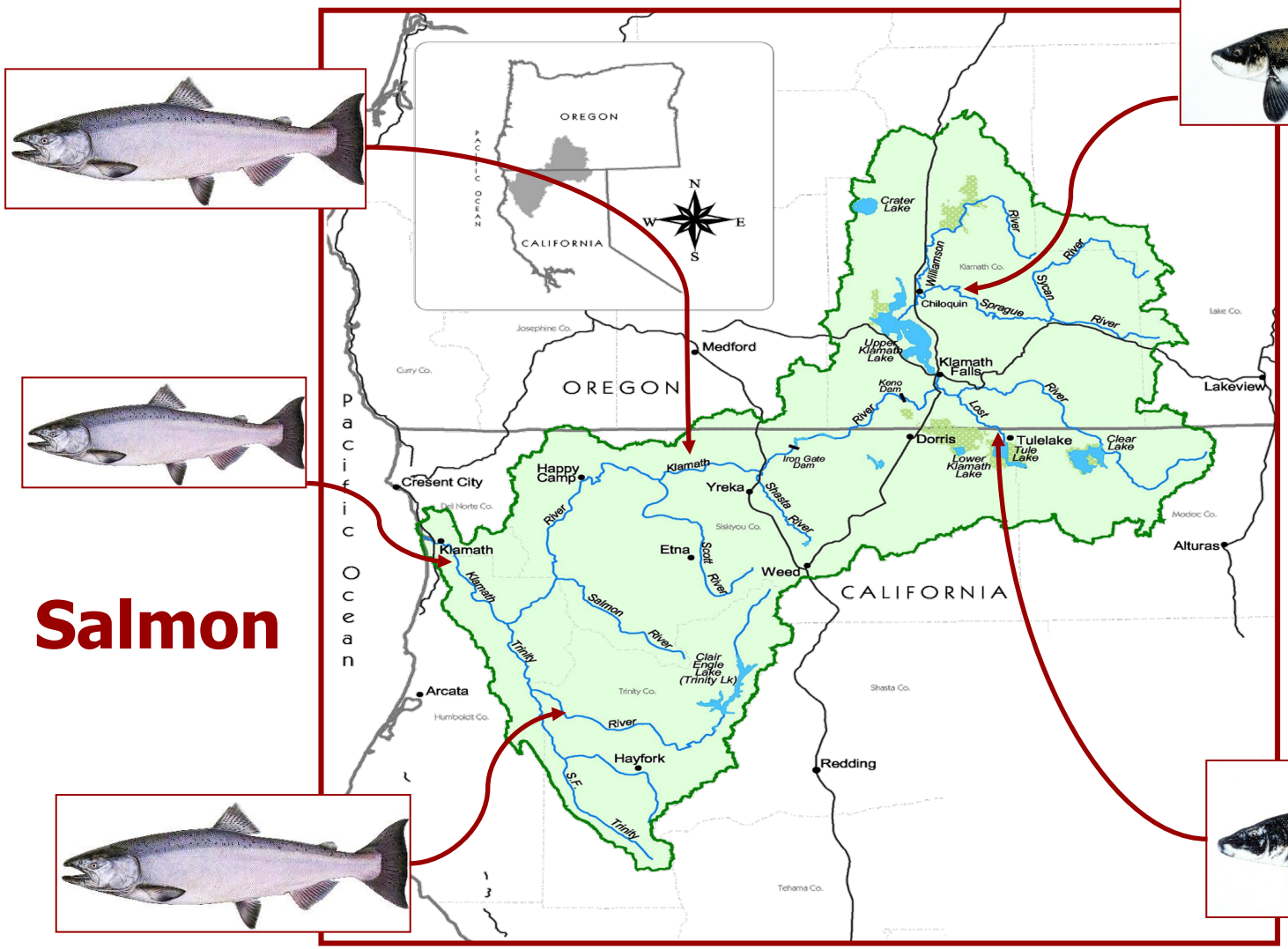
Desirae Kissell-Abella Eastern Band of Cherokee Indians

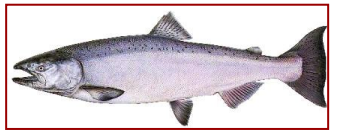
ADDRESSING AGRICULTURE NPS POLLUTION
KLAMATH BASIN OREGON

Klamath Basin Tribes



Tribal Fishery Resources





Lost River Sucker

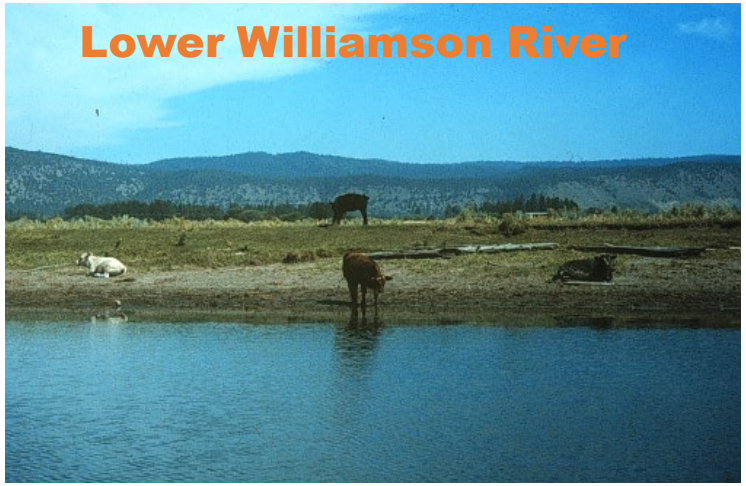
Shortnose Sucker

Redband trout

Salmon

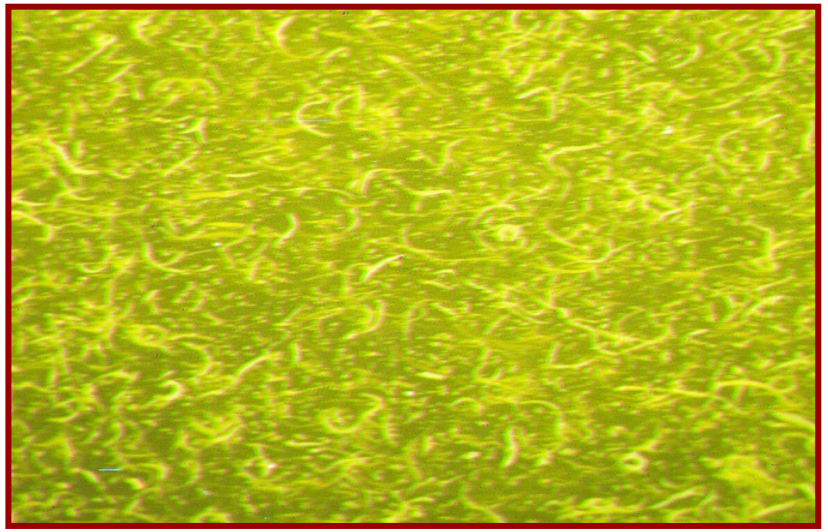
Extensive Watershed Degradation and Alteration

Riparian and Channel Degradation



Wetlands Peripheral to UKL Drained for Agriculture

Massive Cyanobacteria Blooms



Negative Impacts of Cyanobacteria blooms

Poor water quality (DO, pH, ammonia)

Lack of survival and recruitment of endangered fish

Major fish die-offs

Human health hazards from algal toxins

Lack of recreational opportunities

Reduced economic benefits related to tourism

Controlling Cyanobacteria Blooms

Current conditions support dominance of N-fixing Cyanobacteria

Evidence for control of Cyanobacteria blooms by decreasing Phosphorus loading

Main source of Phosphorus loading Agriculture runoff and erosion and nutrient loading from poor grazing practices

Tribal Efforts to Reduce NPS Pollution

Government to Government consultations with NPS regulatory agency Oregon Department of Agriculture and Governors Office

Formal complaints of agricultural discharges and grazing violations

Collaboration with NGOs and US Fish and Wildlife Service working with Ag producers on voluntary conservation measures and habitat restoration

Tribal program to work with Ag producers on voluntary conservation measures

Ag Lands Adjacent to Upper Klamath Lake

n the usability of the

Non-point Source Reductions from Agricultural Lands around Upper Klamath Lake

All 9 primary agricultural landowners around UKL voluntarily working with Oregon Department of Agriculture

Since 2019 there has been an 82% reduction in water pumped to UKL

Since 2019 there has been a 72% reduction in total phosphorus load to UKL

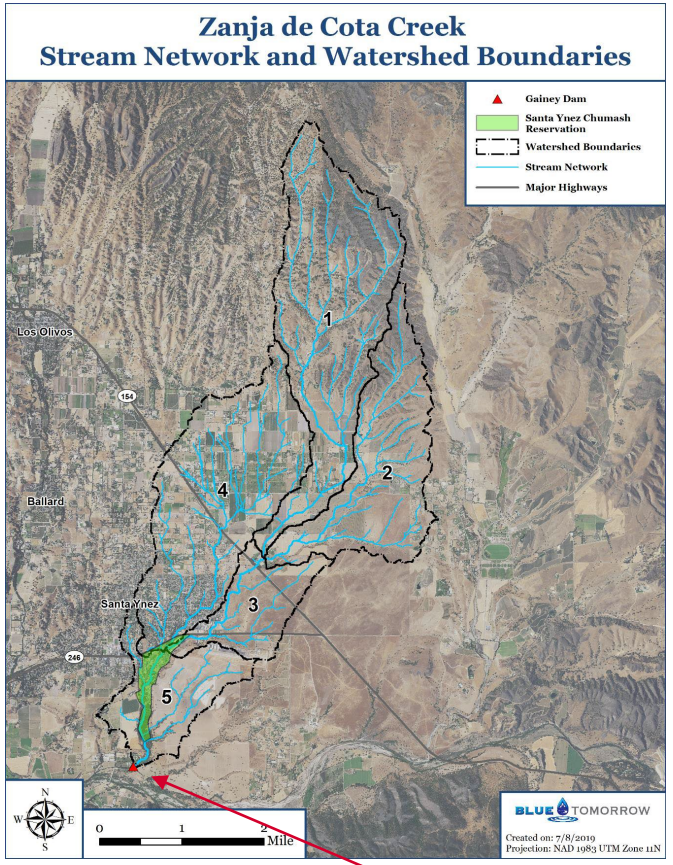
Project types implemented to reduce pumping to UKL include: reduced winter flooding, recycling irrigation water, land leveling, cover crops, water quality treatment wetland, and cattle exclusion fencing

Reducing Pesticides and Nutrients in Zanja de Cota Creek

Santa Ynez Band of Chumash Indians
Julie Colbert
Water Quality Specialist

Santa Ynez Band of Chumash Indians

- Reservation located in Santa Barbara County, California
- Originally 99 acres, over the years has grown to over 1,500 acres in trust
- Southern boundary of Zanja de Cota Creek Watershed
- Mixed use landscape
  - Urban
  - Rural residential
  - Agricultural



Chumash Reservation

Tribal Water Resources Program

Clean Water Act 106 – Water Pollution Control

- Water Quality Monitoring
  - Monthly
  - Quarterly
  - First Flush Storm

- Core Sampling Parameters
  - Instream measurements
  - Nutrients
  - Fecal Indicator Bacteria
  - Metals

Tribal Water Resources Program

Clean Water Act 319 – Nonpoint Source Pollution

- Nonpoint Source Pollution – Best Management Practices (BMPs)
- Non-Structural
  - Trash and debris removal
  - Storm drain markers
  - Pet waste stations
  - Street sweeping
  - Community education

Tribal Water Resources Program

Nonpoint Source Pollution Issues - Agricultural

Tribal Water Resources Program

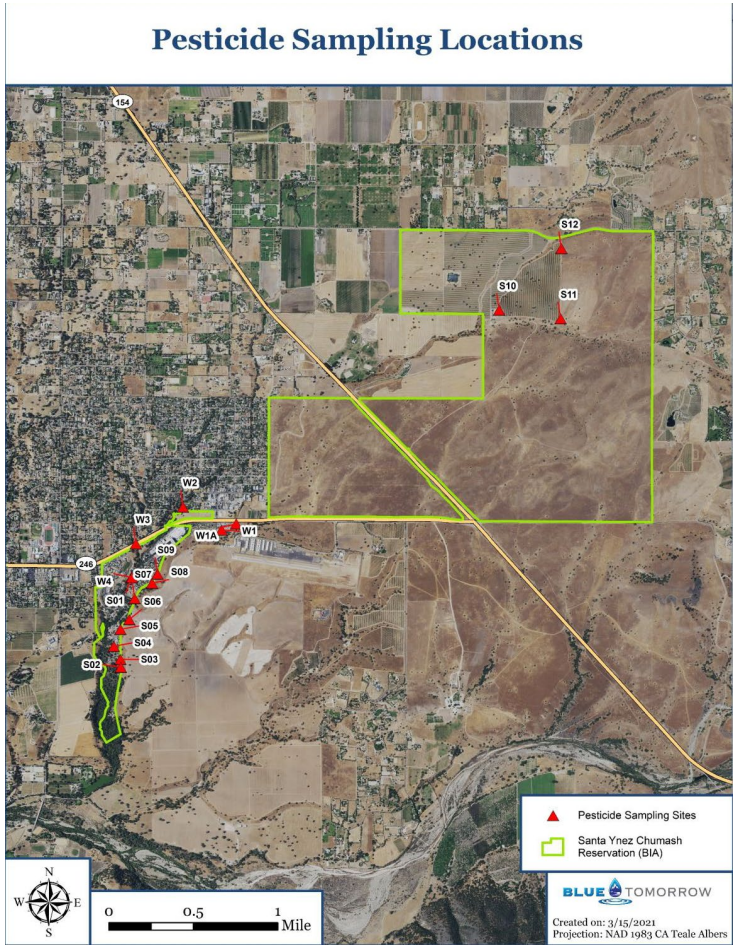
Zanja de Cota Creek Watershed Pollutant Exposure Assessment

- 2019: Tribe applied for and received funding through CalEPA Environmental Justice Small Grants Program
  - Environmental Department was asked by elders to investigate the new vineyard operation adjacent to the reservation and how the tribe's waterways and health of community were going to be impacted by fertilizer and pesticide use

Tribal Water Resources Program

Zanja de Cota Creek Watershed Pollutant Exposure Assessment

- 2020: Storm water and soil samples were collected to measure ground soil and stormwater runoff contamination
  - Five storm water sampling sites, tested for 26 different pesticides
  - Twelve soil sampling sites, tested for 237 different pesticides
  - Results showed pesticides detected in water and soil samples, posing risks to human health and aquatic environment



Tribal Water Resources Program

Characterizing Pesticide Impairments in Zanja de Cota Creek

- 2021: Tribe applied for funding through Clean Water Act 319 Competitive Grant Program
  - Unsuccessful application
  - Did not propose on-the-ground implementation of NPS best management practices (BMPs)

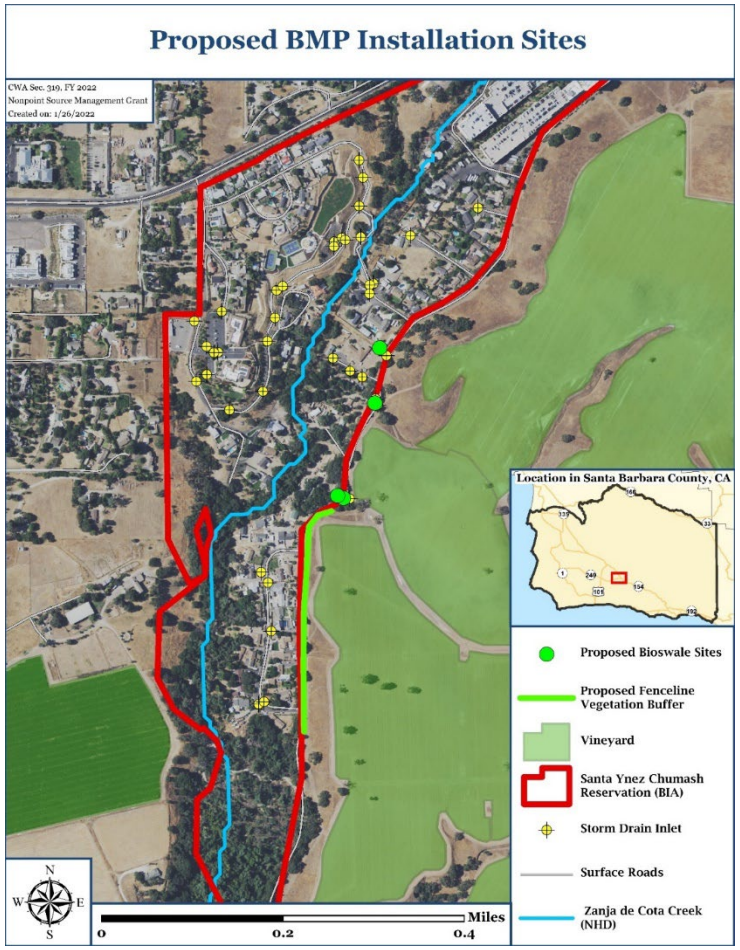
Tribal Water Resources Program

Reducing Pesticides and Nutrients in Zanja de Cota Creek

- 2022: Tribe applied for and received funding through Clean Water Act 319 Competitive Grant Program
  - Project focusing on structural BMPs, including constructing bioswales and creating vegetation buffer by planting trees along the riparian corridor to reduce pollution loading onto the reservation and into tribal waterways
  - Water quality monitoring before and after BMP implementation
  - Education and outreach

Tribal Water Resources Program

Reducing Pesticides and Nutrients in Zanja de Cota Creek



BMP Site #1

BMP Site #2

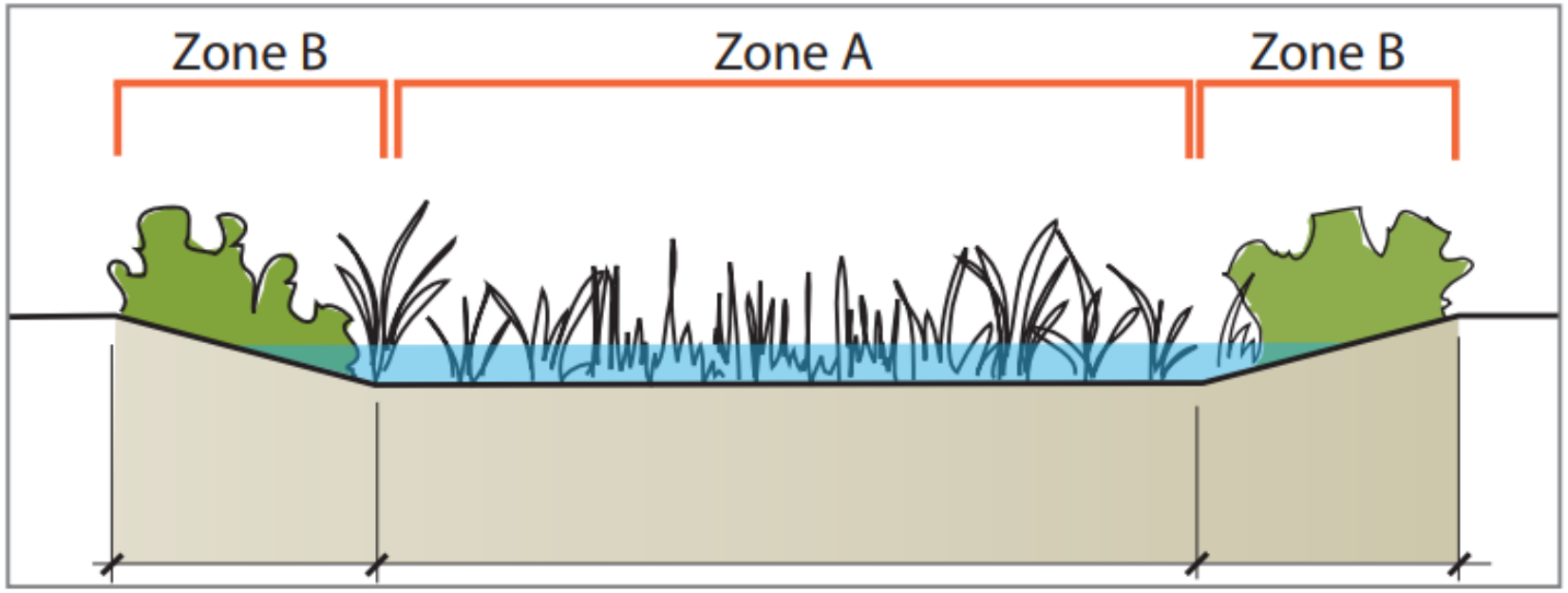
BMP Site #3

BMP Site #4

Tribal Water Resources Program

Bioswale Design & Construction

- Bioswales will be constructed with enough water retention capacity to capture low-flow and first flush storm water runoff to allow infiltration onsite instead of being conveyed and discharged into Zanja de Cota Creek



Tribal Water Resources Program

Bioswale Design & Construction

- Bioswales will be composed of diverse, native vegetation that considers species compatibility, minimum irrigation requirements, and potential habitat for wildlife
- Bioswales will be planted with local grasses, shrubs, and perennials grown at the Santa Ynez Chumash Tribal Nursery

Juncus

Hummingbird Sage

California Wild Rose

Tribal Plant Nursery

Native Plant Propagation

THANK YOU!

Julie Randall Colbert

jrandall@chumash.gov

Conservation in Practice:
Eastern Band of Cherokee Indians & NRCS Partnership

Desirae Kissell
Conservation Outreach Coordinator
Eastern Band of Cherokee Indians

What is my position?

- Conservation Outreach Coordinator:
  - Tribal Employee
    - ~ 50/50 duties:
      - 1st - EBCI Natural Resources outreach
      - 2nd - USDA-NRCS

- Job Expectations:
  - Address departmental outreach needs
  - Assisting landowners & producers with assistance from NRCS

Contribution Agreements

- NRCS may enter CAs, when the objectives will serve a mutual interest of the parties in carrying out NRCS programs, and all parties will contribute resources to the accomplishment of these objectives.

- Tailored to Tribal needs as it relates to NRCS goals or functions
  - Typically, a 50/50 split

- EBCI entered into Contribution agreement in 2018
  - 5-year agreement, currently renegotiating agreement

- **Purpose:** Increase the efficiency of service delivery in specific program areas

Cooperative Agreements

- Means a financial assistance instrument between a Federal agency and a non-federal entity
  - Used to enter into a relationship with the principal purpose of transferring anything of value to carry out a public purpose

- May or may not require recipient cost-share

- **Equity in Conservation Outreach Cooperative Agreements** funds 2 year projects to expand delivery of conservation assistance

Alternative Funding Arrangements

- 2018 Farm Bill requires the Secretary to enter into AFAs with Tribes
  - Additional guidance released Feb 2022

- Allows for more collaboration & flexibilities
  - Funding, planning, administration
    - Implement EQIP & CSP where existing processes create barriers to participation

- Federally recognized tribes must make the request to State Conservationist

Alternative Funding Arrangements

- Why would an AFA make more sense for tribes?
  - Best way to achieve 90% cost share rate
    - Tribal nations often unable to get competitive quotes
    - Practice rates are ~ 18 months behind market

- Incorporate Indigenous Tribal Ecological Knowledge (ITEK)
  - Indigenous foods & foods ways are not incorporated well into USDA programs
  - Develop culturally relevant practice standards & scenarios

Current NRCS Projects

- 1 RCPP- **Regional Conservation Partnership Program**
  - ***$3.5 million*** for Stream Habitat Improvement
    - Restore and/or enhance 3,000 linear feet of stream

-Practices used:

- Stream Habitat Improvement (395)
- Streambank and Shoreline Protection (580)
- Channel Bed Stabilization (584)
- Riparian Forest Buffer (391)
- Critical Area Planting (342)
- Tree/Shrub Establishment (612)
- Aquatic Organism Passage (396)

NRCS
Natural Resources Conservation Service

1st stream improvement in 1990- NRCS funded

Current State of Stream

Words of Advice

- Tribal side
  - Not everyone will be eager to participate in federal programs

- Federal Government side
  - Staffing
  - Persistence
  - Lack of knowledge on agreements tribes can utilize

Current NRCS Projects

- 2 EQIP (Environmental Quality Incentive Program) contracts
  - -Practices used:
    - Brush Management (314)
    - Herbaceous Weed Treatment (315)
    - Forest Stand Improvement (666)
    - Prescribed Burning (338)
    - Fire Break (394)

EBCI & NRCS Relationship

- Contracts going back to 1996
- Enrolled ~1500 acres in EQIP
- Previously had a Tribal Liaison- NRCS Employee
- Entered into Contribution agreement in 2018
  - 5-year agreement
  - Currently renegotiating agreement

Thank you!

desikiss@ebci-nsn.gov

Desirae.Kissell@usda.gov

Cherokeenaturalresources.com

Break-out Instructions and Discussion Questions

- You will automatically be moved to your randomized breakout room. The breakout session will last approximately 30 minutes and will *not* be recorded.

  - What type of challenges are you facing with agricultural pollution?

For more information about EPA's Tribal NPS Program

Tribal NPS Program Web Page:

https://www.epa.gov/nps/tribal-nonpoint-source-program

EPA Region	Coordinator
HQ	Steve Epting Margot Buckelew
1	Bessie Wright
2	Aimee Boucher
3	Jason Challandes
4	Sharon Brown
5	Janette Marsh
6	Sam Reynolds
7	Ann D'Alfonso
8	Erika Larsen
9	Howard Kahan Larry Maurin
10	Krista Mendelman

Thank You!