Coeur d’Alene Lake Management

Goal:

Protect water quality by managing nutrient inputs that may influence lake metabolism and the related solubility of metals found in lakebed sediments.

Approach involves:

- *Science*
- *Nutrient reduction planning and projects*
- *Regional collaboration*
- *Education* and *outreach*

Coeur d'Alene Lake Management Plan

Watershed Advisory Groups

Critical partners in lake management efforts!

- Identify nutrient sources
- Identify improvement opportunities
- Prioritize potential projects
- Vital component of nutrient reduction, partnerships, and outreach!

Our Team

Scott Fields and Michael George

Glen Pettit

Craig Cooper

Jamie Brunner and Laura Laumatia

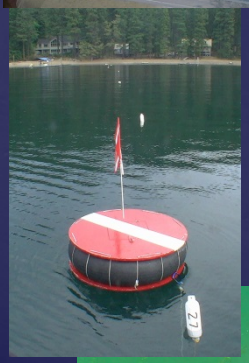
Dale Chess

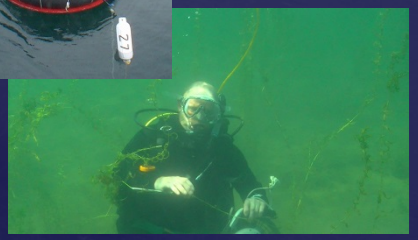
Ben Scofield

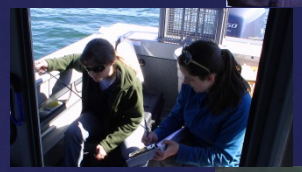
Bob Witherow

Science: Monitoring and Modeling

- Core Monitoring: 8 events each year
  - Physical
  - Chemical
  - Biological Parameters
- Special Studies
  - Aquatic Macrophytes
  - Benthic Macroinvertebrates
  - Zooplankton Studies
- ELCOM-CAEDYM Model







- Northern Bays:
  - Cougar 2
  - Blue Creek
  - Wolf Lodge
  - Beauty
- Gasser Point
- Stable Isotopes
- 5-Year Review

Monitoring

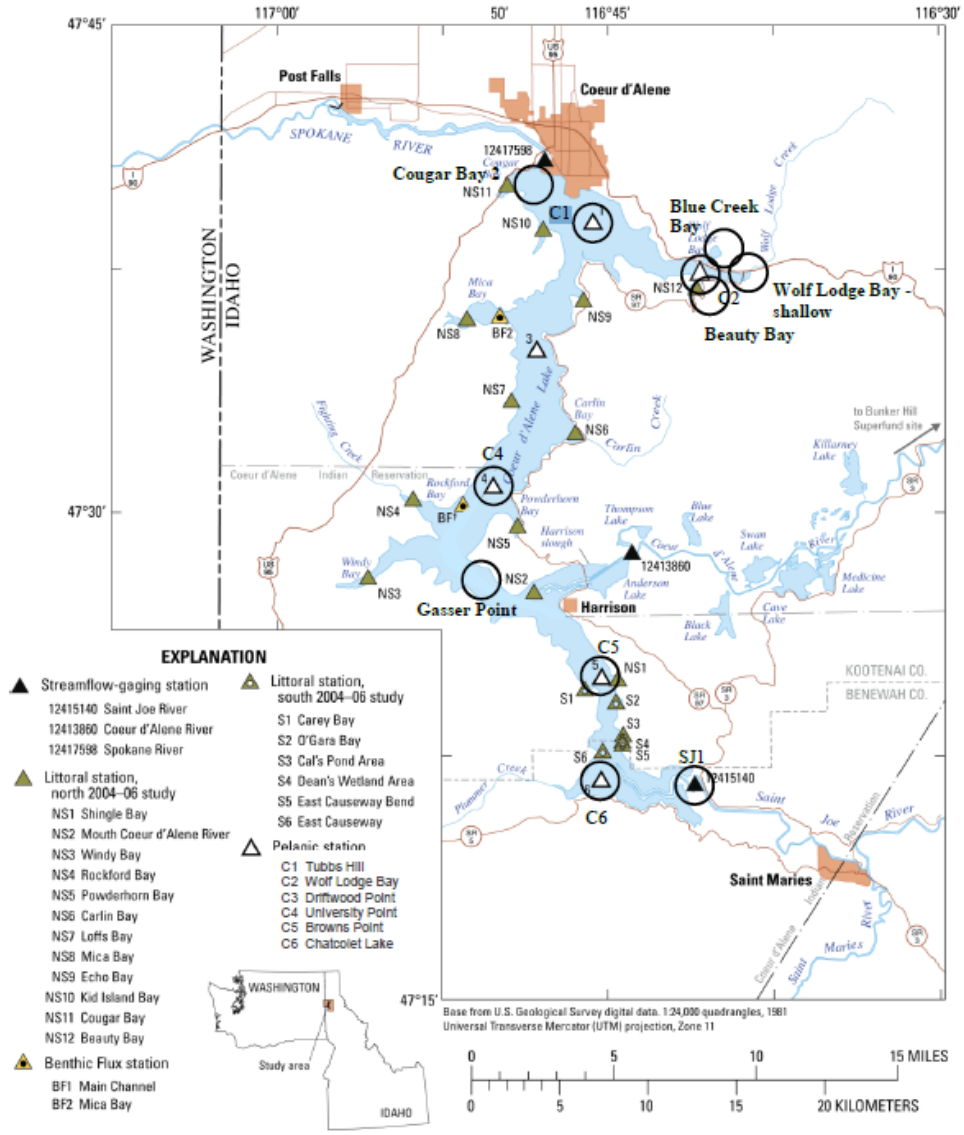


Figure B-1. Map of sampling sites for the 2014 Coeur d'Alene Lake Monitoring Program (circles); map provided by USGS for WY04-06 sampling program (Wood and Beckwith, 2008)

Aquatic plant sampling:
Blue Creek, Beauty, Wolf Lodge, Bennett, and Moscow Bays

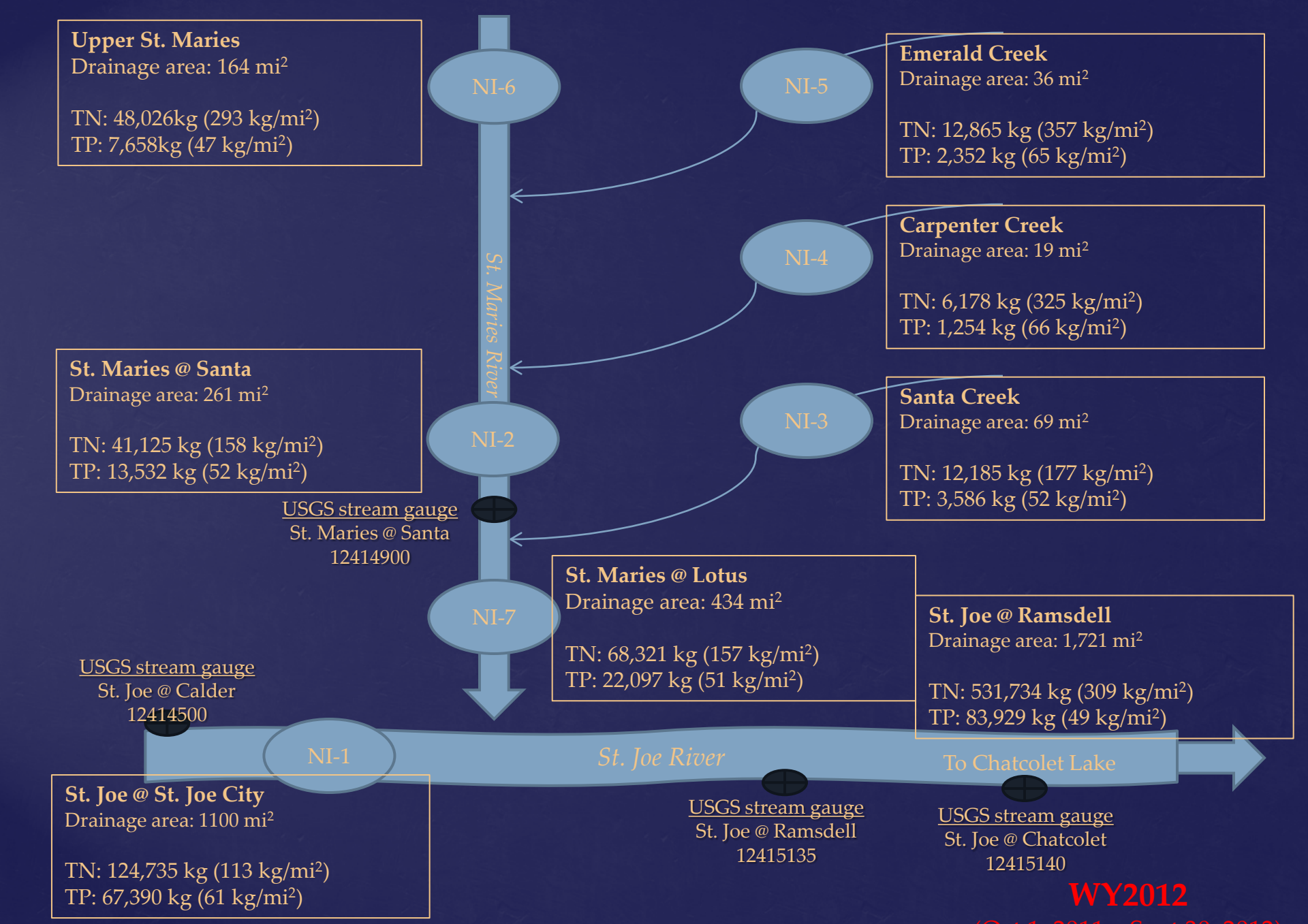
- Inventory Nutrient Sources
- Monitor nutrient loading
- Identify and prioritize nutrient reduction projects

Nutrient Reduction Action Plan

Inventory Nutrient Sources

3-Year Nutrient Source Inventory – St. Maries/St. Joe Watershed:

- St. Joe larger overall than St. Maries
- Comparable in load/area
- More detailed study in St. Maries
  - Santa Creek
  - Carpenter Creeks
- Increased load in St. Maries River below Santa Creek



2009-2011 Nutrient Inventory – Flow Schematic

**Note: Not to scale or geographically representative*

Inventory Nutrient Sources

3-Year Nutrient Source Inventory – St. Maries/St. Joe Watershed (cont.):

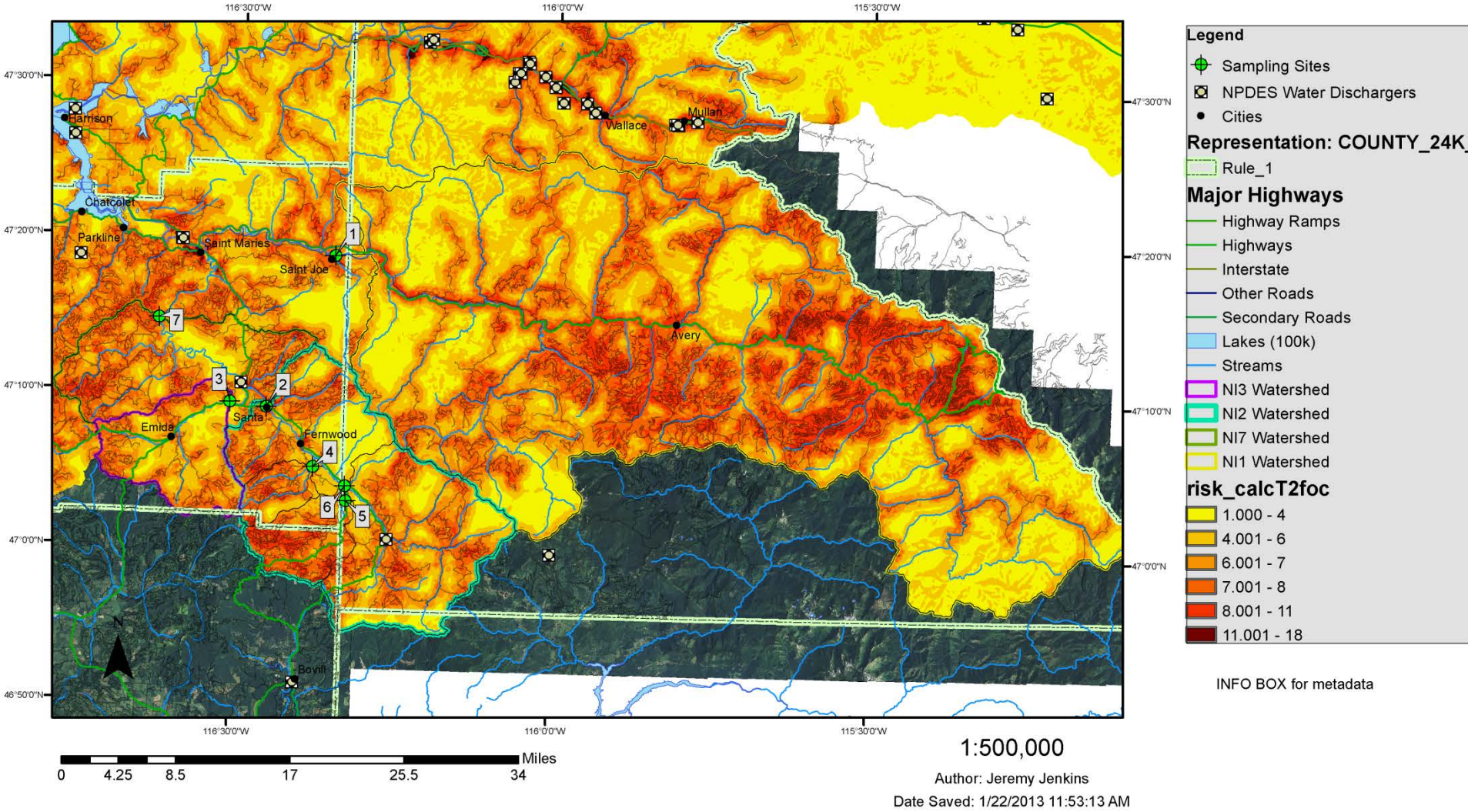
Follow up after monitoring

- GIS risk analysis
- GIS stream road crossing (forest road prioritization)
- Benewah SWCD
- ID SWCC
- IDL

Next Steps

- St. Joe/St. Maries WAG
- Hone in on Projects
- Pursue Project Funding

Saint Joe River, Idaho, Nutrient Inventory - Risk of Loading



Inventory Nutrient Sources

Bank Erosion Monitoring

Continue Bank Erosion Inventory

Continue Monitoring in Another Tributary:

- Wolf Lodge
- Mica Creek
- Elsewhere?

Approach:

- Automated Sampling Station - mouth
- 3 Turbidity Probes - subwatersheds

Nutrient Reduction

Shadowy St. Joe Bank Project with Avista Utilities

Stormwater Projects

Erosion and Sediment Control

Collaboration

Working together to **Maximize Resources**.

Working together to help us **Communicate**.

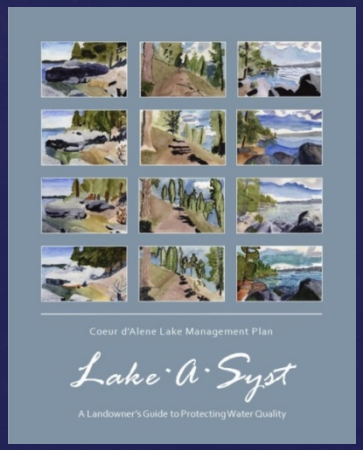
Working together to identify **Opportunities** and **Projects**.

- Water Quality Jurisdiction:
  - IDEQ
  - CdA Tribe
- Land Management:
  - Other agencies
  - Municipalities
  - Individuals
- Watershed Advisory Groups
- Educational Institutions
- Avista Corporation
- Business Community

Community Awareness

Panhandle SEEP

Stormwater & Erosion Education Program



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