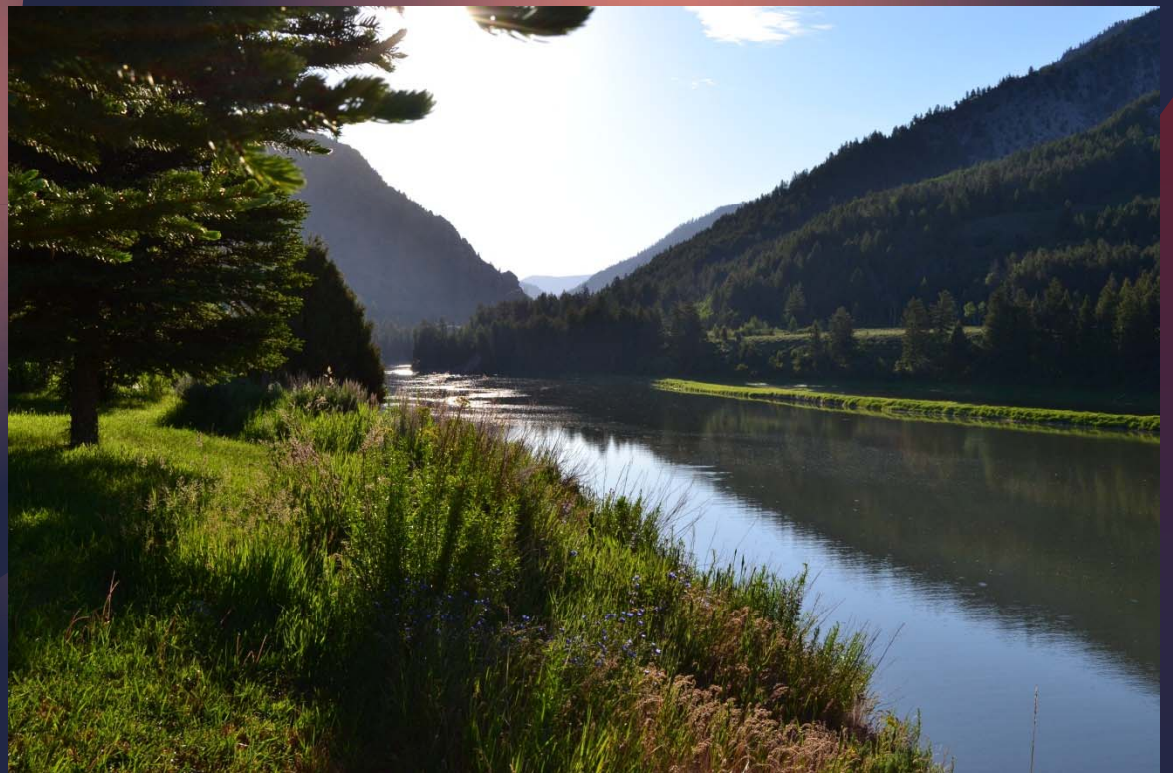


# Environmental and Recreational Analysis

Snake Salt Basin  
Plan Update  
By Jodie Pavlica



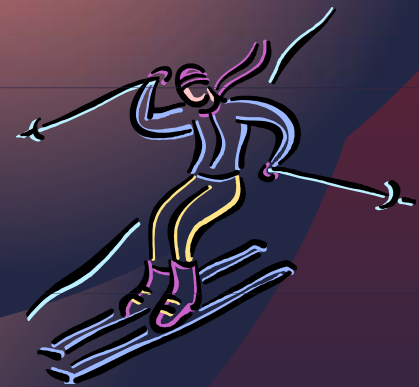
# Topics for Today's Presentation

1. Recreational and Environmental Uses in the Last Plan
2. Traditional vs. Environmental and Recreational Uses
3. Environmental and Recreational Water Use Study – New Approach
4. Environmental and Recreational Use within the Update
5. Draft Results
6. Current Status and Remaining Items

# Previous Basin Plan

## Recreational Topics in Previous Plan

- 🏂 Grand Teton National Park
- 🏂 Bridger Teton National Forest
- 🏂 Ski Areas and Winter Sports
- 🏂 Fishing
- 🏂 Waterfowl Hunting



# Previous Basin Plan

## Environmental Topics in Previous Plan

- 🐾 Maintenance Flows
- 🐾 Wetlands Mapping
- 🐾 Wetlands Projects
- 🐾 Snake River Restoration Project
- 🐾 Cutthroat management
- 🐾 Big Game Habitat
- 🐾 Salmon Recovery Effort





# Previous Basin Plan

## Problems with this approach?

- 🏠 The picture was incomplete.
- 🏠 There was no link between traditional, recreational, and environmental uses



# Environmental and Recreational Uses

## Traditional Uses

Have a water Right and a measurable diversion amount




## Environmental and Recreational Uses

Are considered nonconsumptive, because they have no measureable diversion amount.



# New Approach

## 2010 Legislative Funding

-  To develop an approach to analyze Environmental and Recreational Uses – Including their interaction with Traditional Uses
-  To develop a list of data needed
-  To develop a list of data sources available

## Harvey Economics

## 2012 Study Completed



# New Approach

## Steps

1. Identification of Uses
2. Map Uses
3. Locate Traditional Uses
4. Categorize Uses on a Subbasin Scale
5. Summarize on a Basin Scale





# New Approach

## 3 Types of Environmental and Recreational Uses

Protected – These uses are both recognized and protected in some way from incursions by traditional water uses.

Ex. Instream Flow Segments, Bypass flows, Wild River Segments



# New Approach

## 3 Types of Environmental and Recreational Uses

Complementary – These uses exist without explicit protection, but will continue to exist typically by virtue of their location or linkage with a traditional water use.



Ex. Spawning Habitat supported by return flow from Flood Irrigation.

Ex. Uses in the National Forest that exist because of Federal Management.

# New Approach

## 3 Types of Environmental and Recreational Uses

Competing – Competing uses are those environmental or recreational uses which are in a location where other traditional water use diverters may constrain or eliminate the environmental or recreational use at any point in time.

Ex. Fishing segment below flood irrigation. If the irrigation is switched to sprinkler then the return flows will be dramatically reduced and may result in portions of the year with little or no water in the stream





# Update Procedure

## Step 1 - Gather Data

- Game and Fish
- Bridger Teton National Forest
- [www.rivers.gov](http://www.rivers.gov) (Wild and Scenic River Site)
- Caribou-Targhee National Forest
- Fish and Wildlife Service
- National Park Service
- The Nature Conservancy
- Yellowstone and Grand Teton National Parks
- Trout Unlimited
- State Engineer's Office
- Wyoming Department of Tourism



## Step 2 - Map Uses

GIS Layer Name	Source
Aquatic Habitat Priority Areas	Wyoming Game and Fish
Bridger Teton Sites	Bridger Teton National Forest
Bridger Teton Trails	Bridger Teton National Forest
Caribou Targhee Dispersed Areas	Caribou Targhee National Forest
Caribou Targhee Dispersed Sites	Caribou Targhee National Forest
Caribou Targhee Sites	Caribou Targhee National Forest
Elk Feed Grounds	Wyoming Game and Fish
Fishing Spots	WyGISC
Game and Fish Stream Classifications	Wyoming Game and Fish
Golf Courses	WyGISC
Grand Teton National Park Resources	National Park Service
Instream Flows	WWDO, SEO, Game & Fish
Lakes	WSGS
Landownership	BLM
Model Demand Nodes	WWDO
National Wetlands Inventory	Fish and Wildlife Service
Nature Conservancy Easements	The Nature Conservancy
Non Nature Conservancy Easements	The Nature Conservancy
Palisades Wilderness Study Area	Bridger Teton and Caribou Targhee National Forests
Scenic Highways and Byways	WyGISC and ESRI
Shoal Creek Wilderness Study Area	Bridger Teton National Forest
Ski Areas	WyGISC
Streams	WSGS
Teton County Ponds	SEO
Trout Unlimmited Projects	Trout Unlimmited
Wild and Scenic Rivers	SEO
Wilderness Areas	WyGISC
Yellowstone National Park Resources	National Park Service



# Step 2 - Map Uses

## What do you do about overlapping layers?

### Use Layer

- ❑ Wyoming Game and Fish Stream Classifications
- ❑ Instream Flow Application Segments
- ❑ Wyoming Game and Fish Critical Streams
- ❑ National Wild and Scenic Rivers
- ❑ Land Ownership

### Protection Layer

- ❑ Permitted Instream Flow Segments
- ❑ National Wild and Scenic River Segments
- ❑ Land Ownership

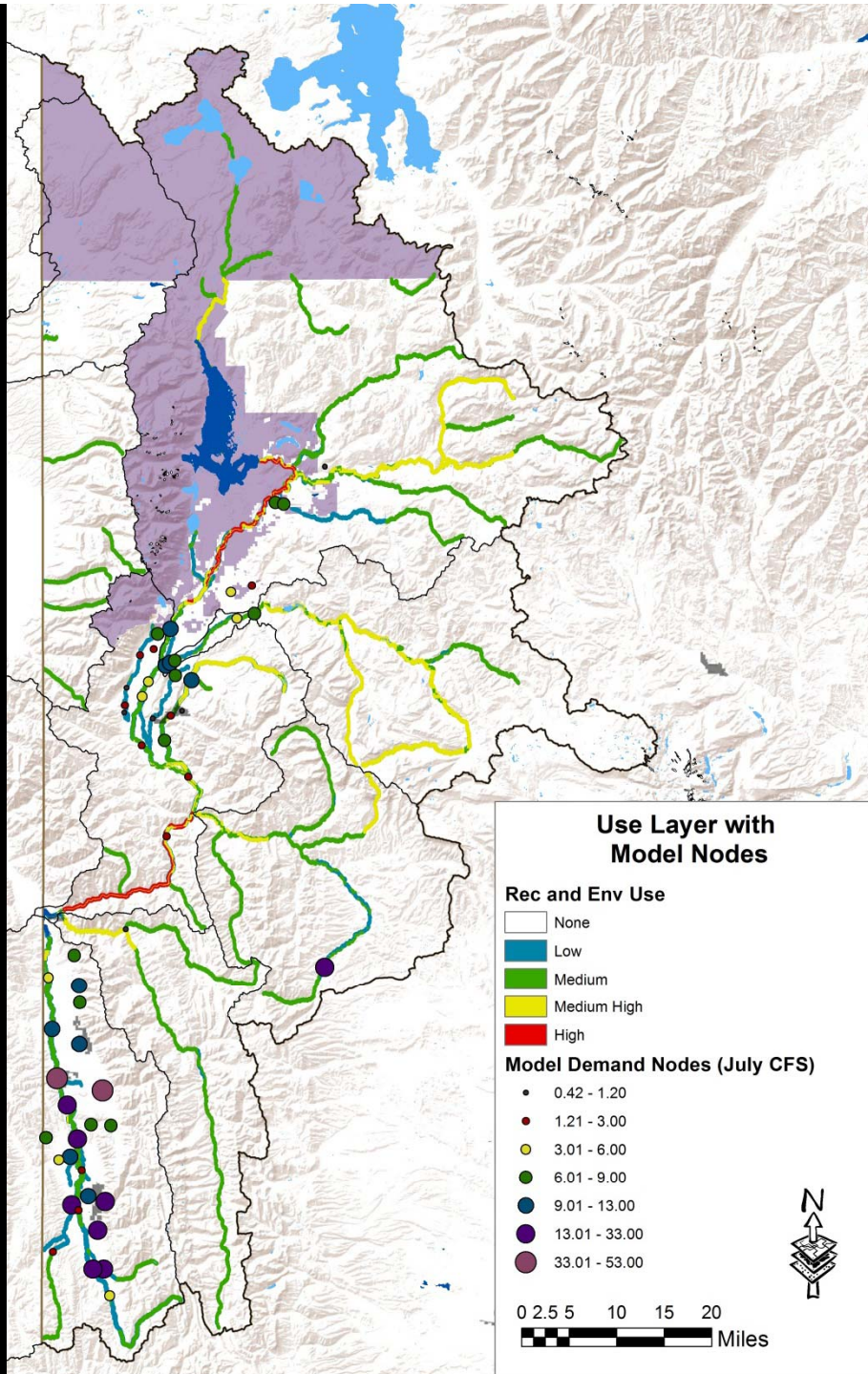
\* **Important:** These are only 5 of the 28 GIS layers that were used in this analysis. The GIS Layers that were developed by this procedure can not stand alone in describing the Environmental and Recreational Uses of the Basin.

# Step 3 - Locate Traditional Uses

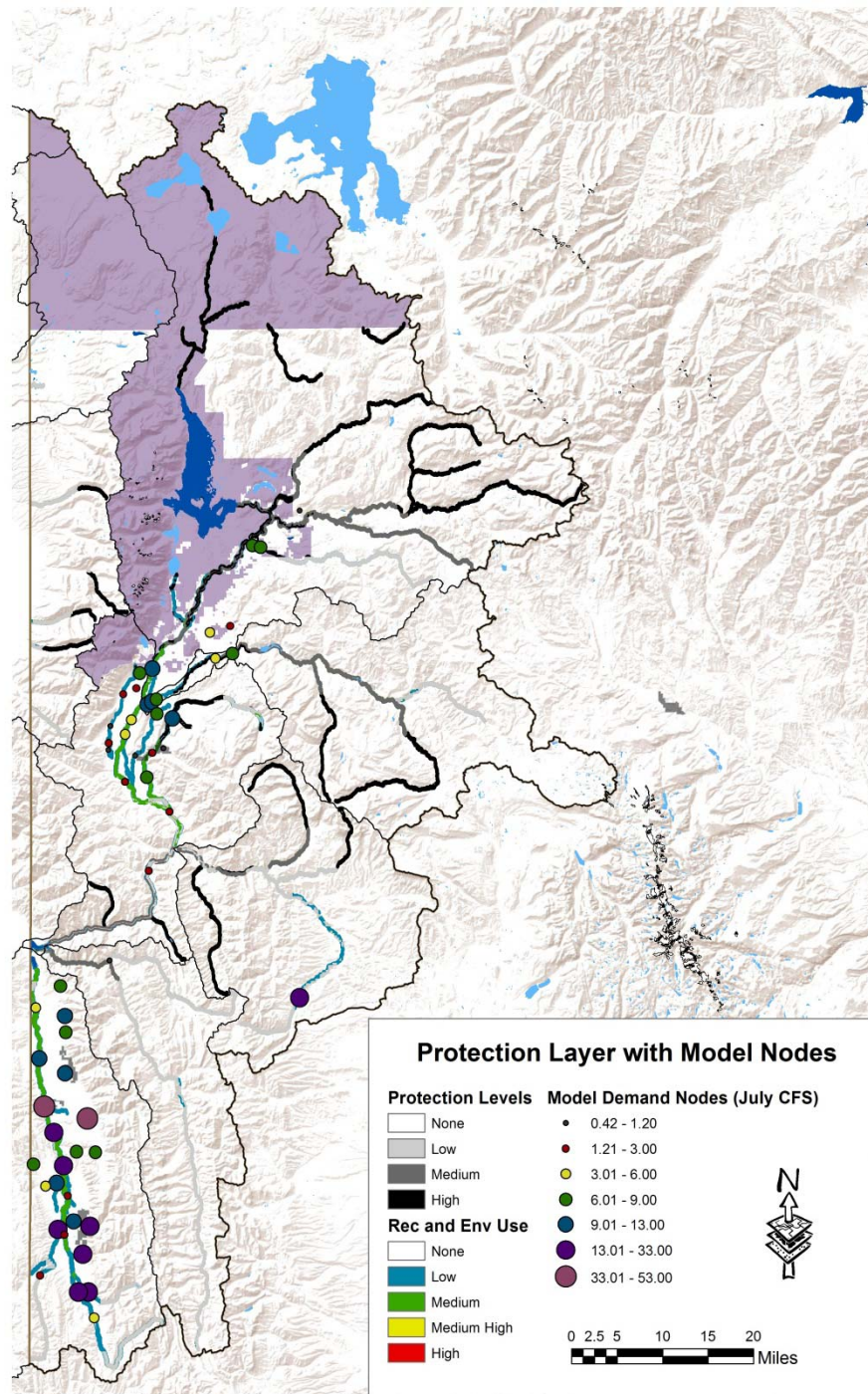
## Traditional Uses

- ❏ GIS points were not available for traditional diversions locations
- ❏ Model Nodes were used instead
- ❏ Priority Date is not included
- ❏ Traditional Uses are grouped Together
- ❏ If there is a particular area you are worried about, this is only a starting point to compare potential conflicts.

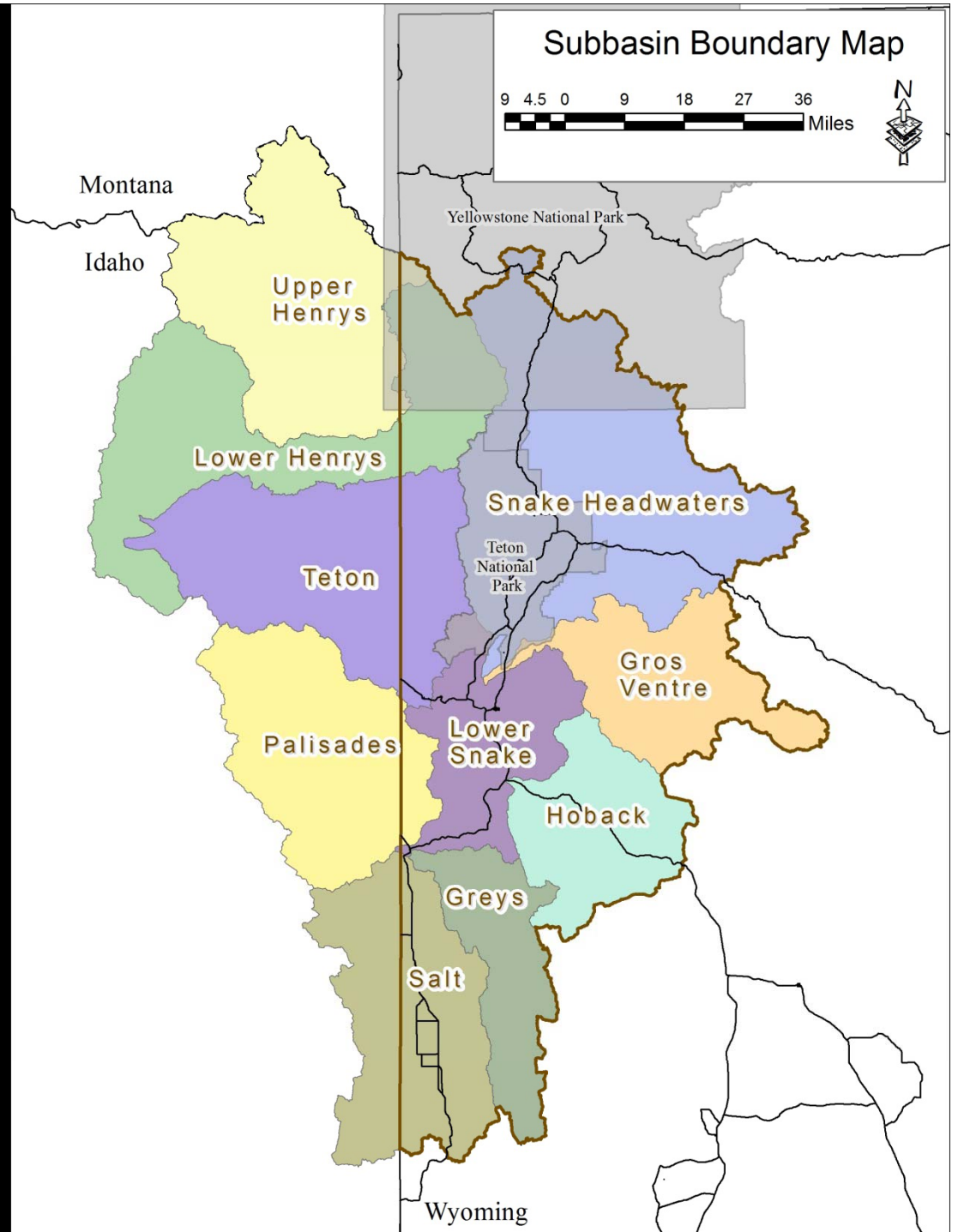








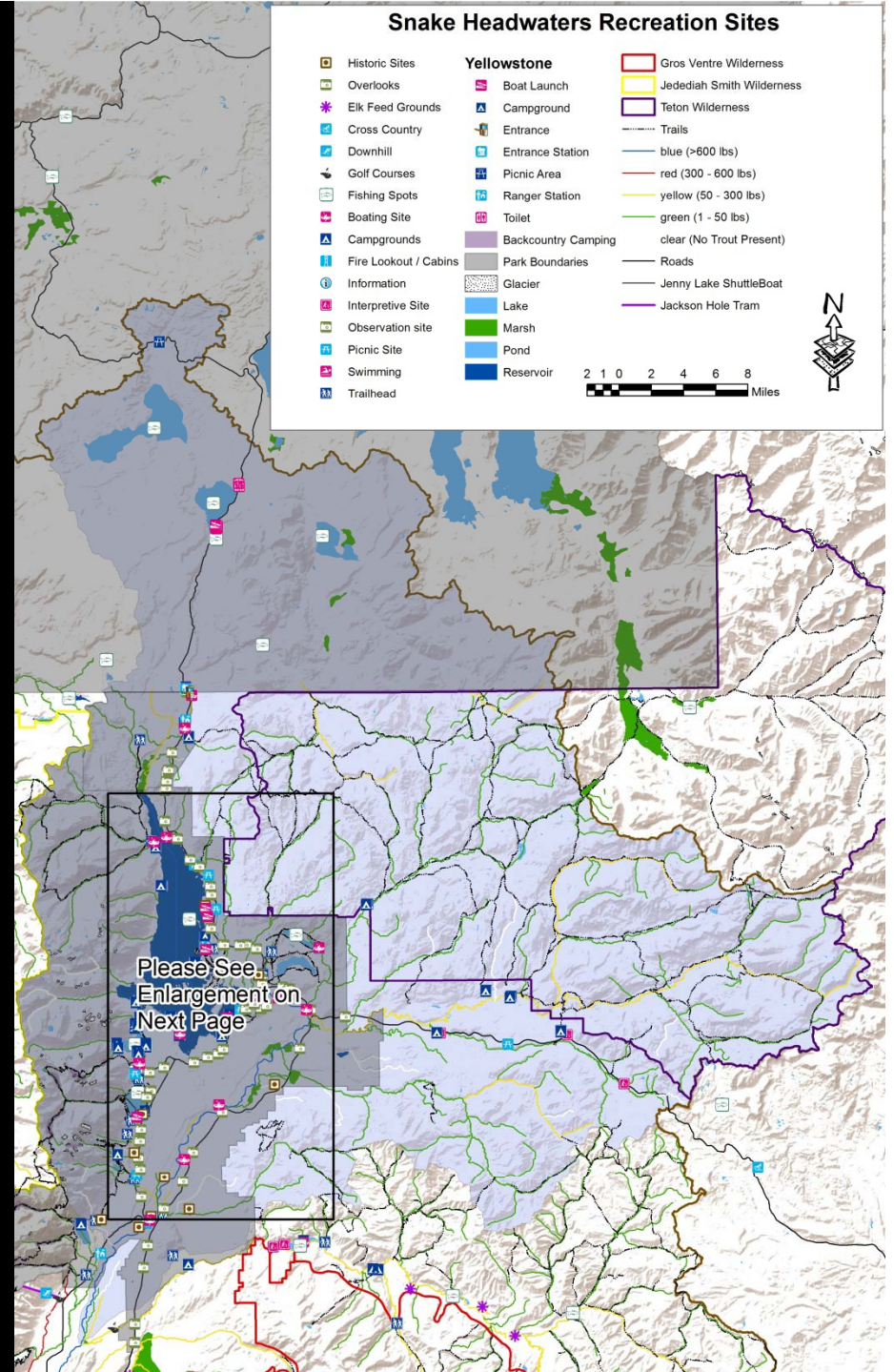
**Step 4 –  
Categorize  
Uses and  
Analyze on  
a Subbasin  
Scale**





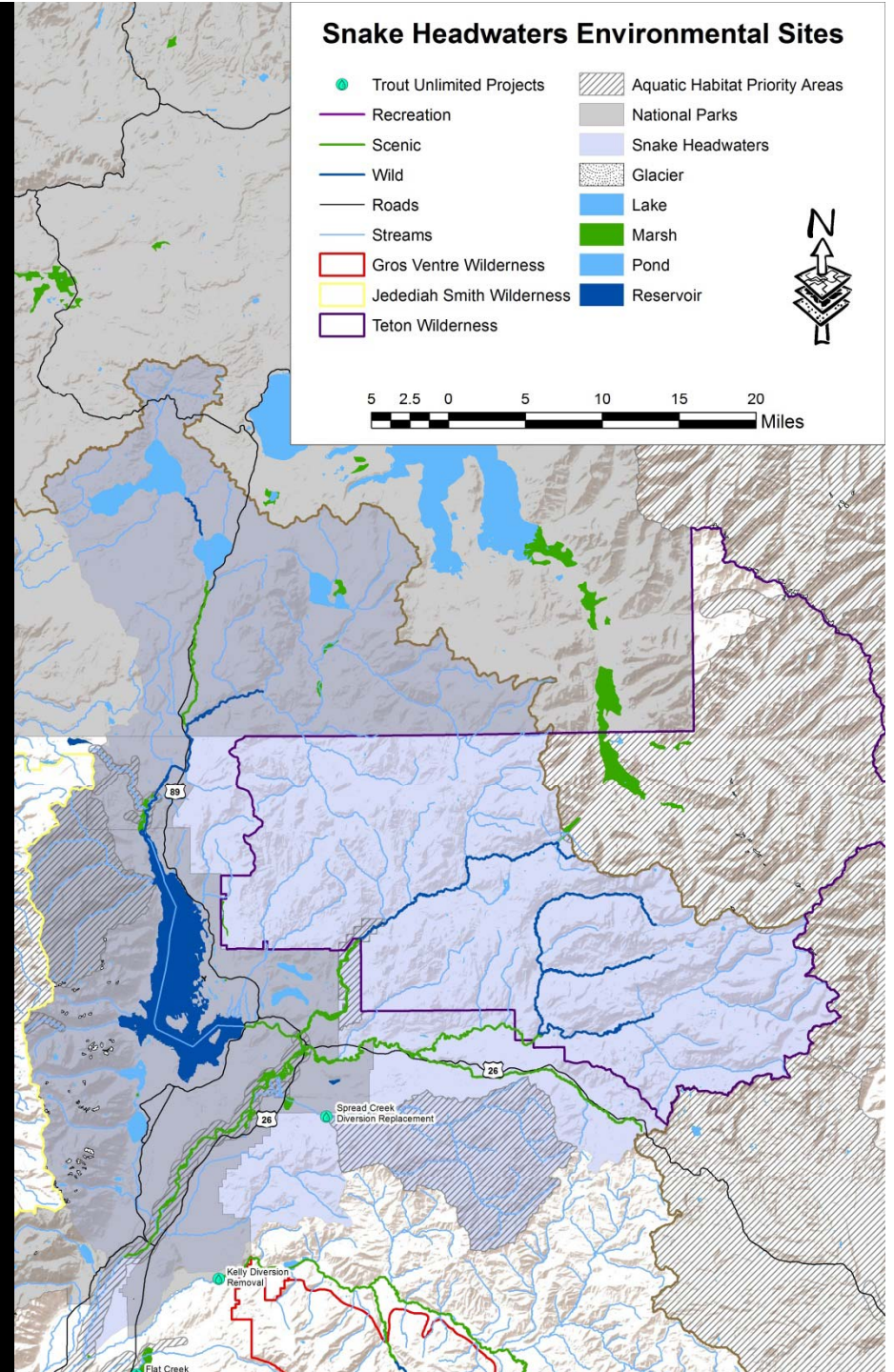
# Step 4 - Subbasin Analysis

- Map the rest of the Recreational Uses for each subbasin



# Step 4 - Subbasin Analysis

- Map the rest of the Environmental Uses for each subbasin

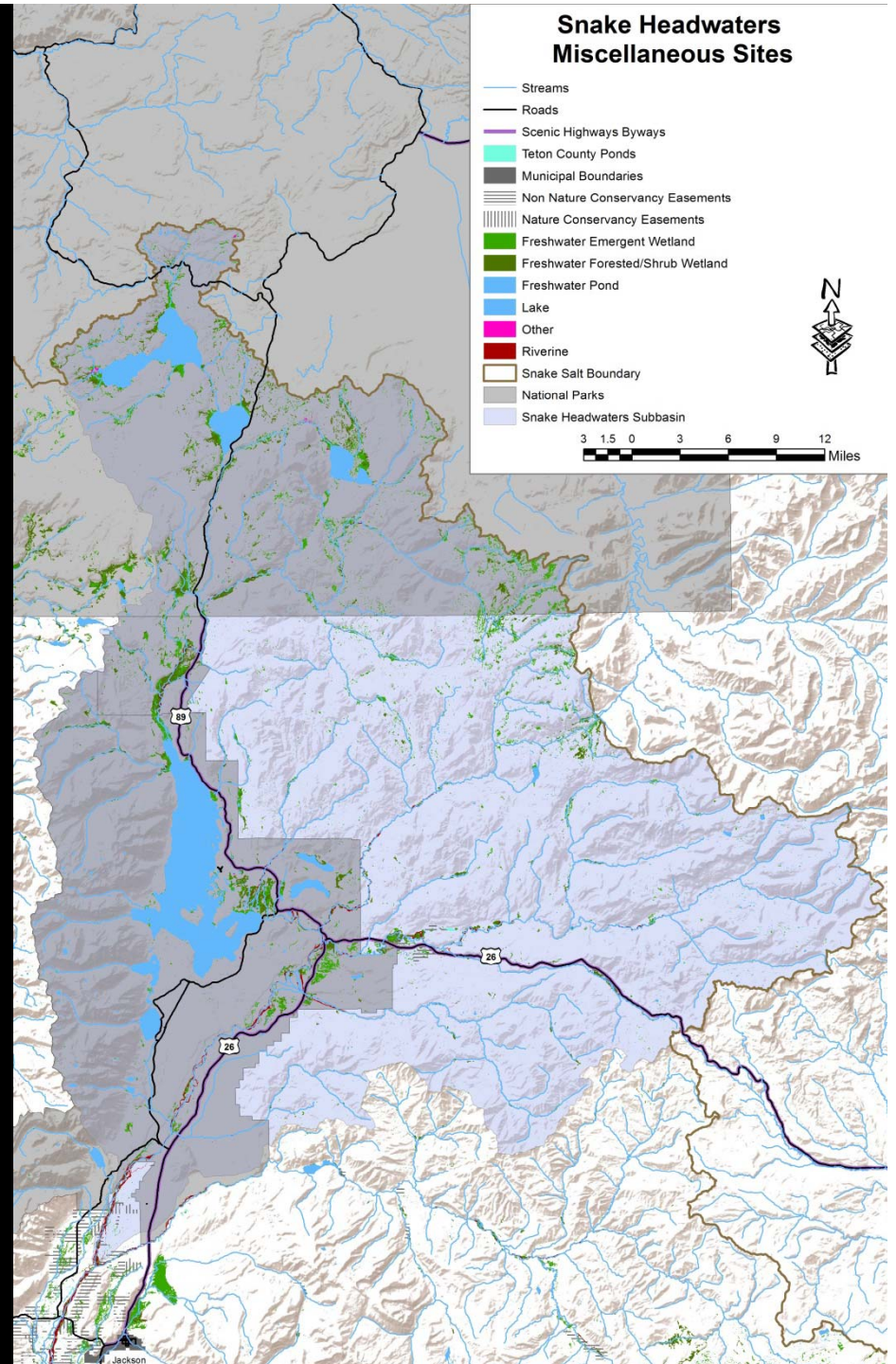




# Step 4 - Subbasin Analysis

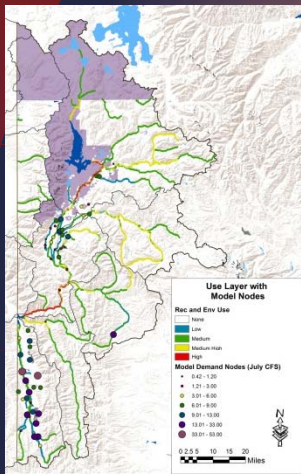


Map any uses that don't fit on the Recreational or Environmental Maps

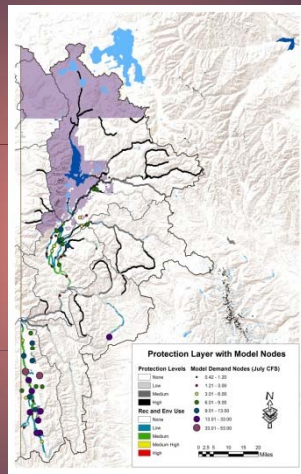


# Step 4 – Categorize Uses

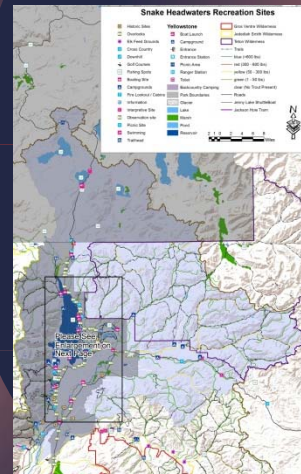
To Determine: Protected, Competing, Complimentary



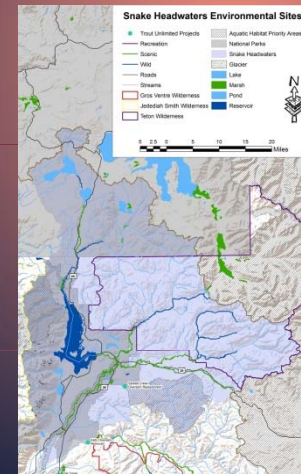
Use Map



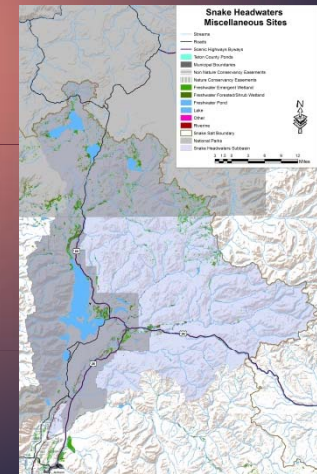
Protection Map



Recreational Sites Map



Environmental Sites Map



Miscellaneous Sites Map

To classify the use as Protected, Competing, or Complimentary utilize all five maps listed above for each subbasin, analyze each Recreational and Environmental Use in relation to land ownership, level of use, level of protection, and traditional uses that surround it.



# Draft Results

## Salt

- 🚚 5 Protected
  - 💰 Golf Courses
- 🚚 2 Potentially Competing
  - 🐟 One Stream Segment, One TU Site

## Greys

- 🚚 2 Protected
  - 🐎 One Stream Segment, One TU Site
- 🚚 0 Potentially Competing





# Draft Results

## Hoback



5 Protected



1 Swimming, 1 Picnic, 1 Camping, 1 Trailhead, 1 Fishing



0 Potentially Competing

## Lower Snake and Palisades



7 Protected



2 Ski Areas, 1 Golf Course, 1 Elk Feed Ground (on National Elk Refuge), 3 Back Country Camping in Teton National Park



0 Potentially Competing



# Draft Results

## Gros Ventre

- ▲ 2 Protected
  - 🏌️ 1 Golf Course, 1 Trail System
- ▲ 0 Potentially Competing

## Snake Headwaters

- 🏠 All Uses within the National Parks are Protected
- 🏠 6 Protected outside of the Parks
  - 🚲 3 Camping, 3 Trailheads
- 🏠 0 Potentially Competing






# Draft Results

## Teton

-  2 Protected
  -  1 Golf Course, 1 Ski Area
-  0 Potentially Competing

## Upper and Lower Henrys

-  3 Protected
  -  2 fishing, 1 Camping
-  0 Potentially Competing



# Current Status and Remaining Items

- The first rough draft of the Technical Memorandum is currently being edited.
- One additional internal review will be undertaken
- The results will be summarized for the report.
- Public Comments will be solicited

