



# Now is the time to Implement

How the roundtable & SWSI process can help meet Colorado's nonconsumptive needs



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# Why are we here?

37-75-104 (2)(c). Using data and information from the Statewide Water Supply Initiative and other appropriate sources and in cooperation with the on-going Statewide Water Supply Initiative, develop a basin-wide consumptive and nonconsumptive water supply needs assessment, conduct an analysis of available unappropriated waters within the basin, and propose projects or methods, both structural and nonstructural, for meeting those needs and utilizing those unappropriated waters where appropriate. Basin Roundtables shall actively seek the input and advice of affected local governments, water providers, and other interested stakeholders and persons in establishing its needs assessment, and shall propose projects or methods for meeting those needs. Recommendations from this assessment shall be forwarded to the Interbasin Compact Committee and other basin roundtables for analysis and consideration after the General Assembly has approved the Interbasin Compact Charter.

Year 1 and Year 2

Mid-Term

**Basin Roundtables**

- 1. Finish Basin Reports
- 2. Identify consumptive and non-consumptive projects and methods to get behind and begin strategic implementation
- 3. Develop statewide portfolios

- 1. The basin roundtables will continue to work with their local constituencies to identify ways that the region will meet future consumptive and non-consumptive needs using a portfolio approach. This can provide a vision for the basin, including how to fill the water supply gap. Basin roundtables may choose to add more specificity.
- 2. Continue implementation of consumptive and non-consumptive projects and methods.

**Colorado Water Conservation Board**

- 1. Support basin roundtable / IBCC technical work and portfolio development
- 2. Develop statewide portfolios
- 3. Begin to implement SWSI 2010 recommendations
- 4. Review WSRA criteria and guidelines

- 1. Support basin roundtables in technical work
- 2. Continue implementing SWSI 2010
- 3. Begin SWSI 2016

**Interbasin Compact Committee**

- 1. Identify and execute next steps for IBCC subcommittees
- 2. Support basin roundtable portfolio development and bring portfolios together
- 3. Review WSRA criteria and guidelines

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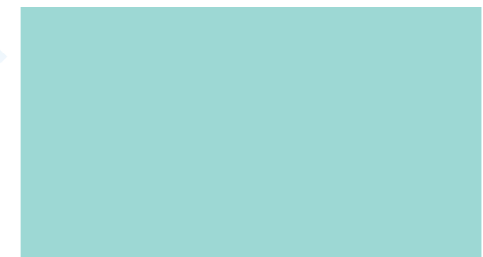
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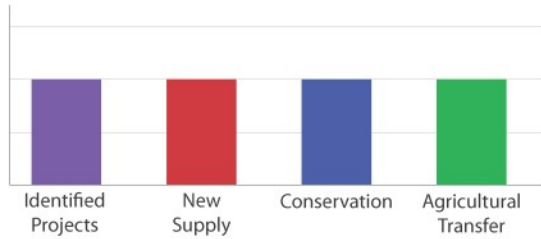
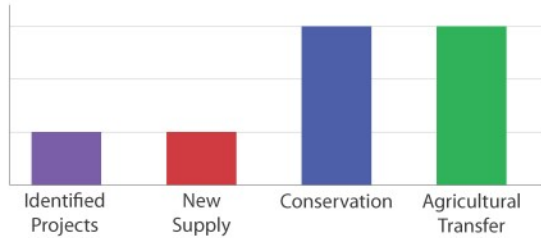
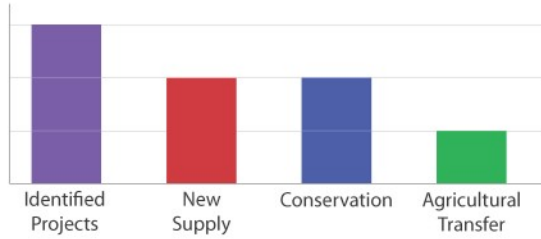
**Milestones**

- 1. Basin roundtables, water stakeholders, and the state have made a measurable dent in addressing future water challenges by implementing on-the-ground consumptive and non-consumptive projects and methods
- 2. Complete basin plans and statewide work into a state water plan
- 3. Complete SWSI 2016





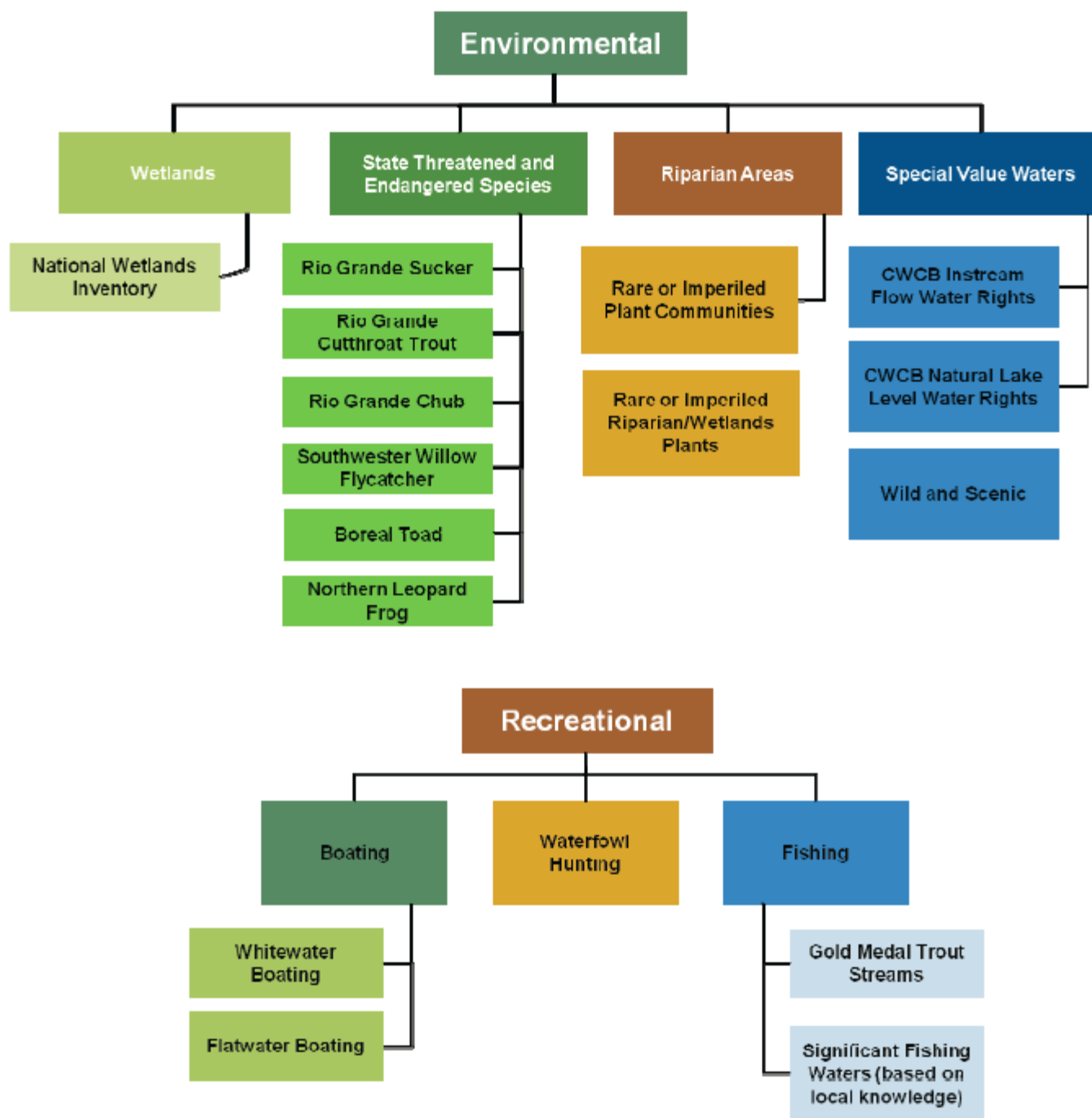
## Example Statewide Portfolios



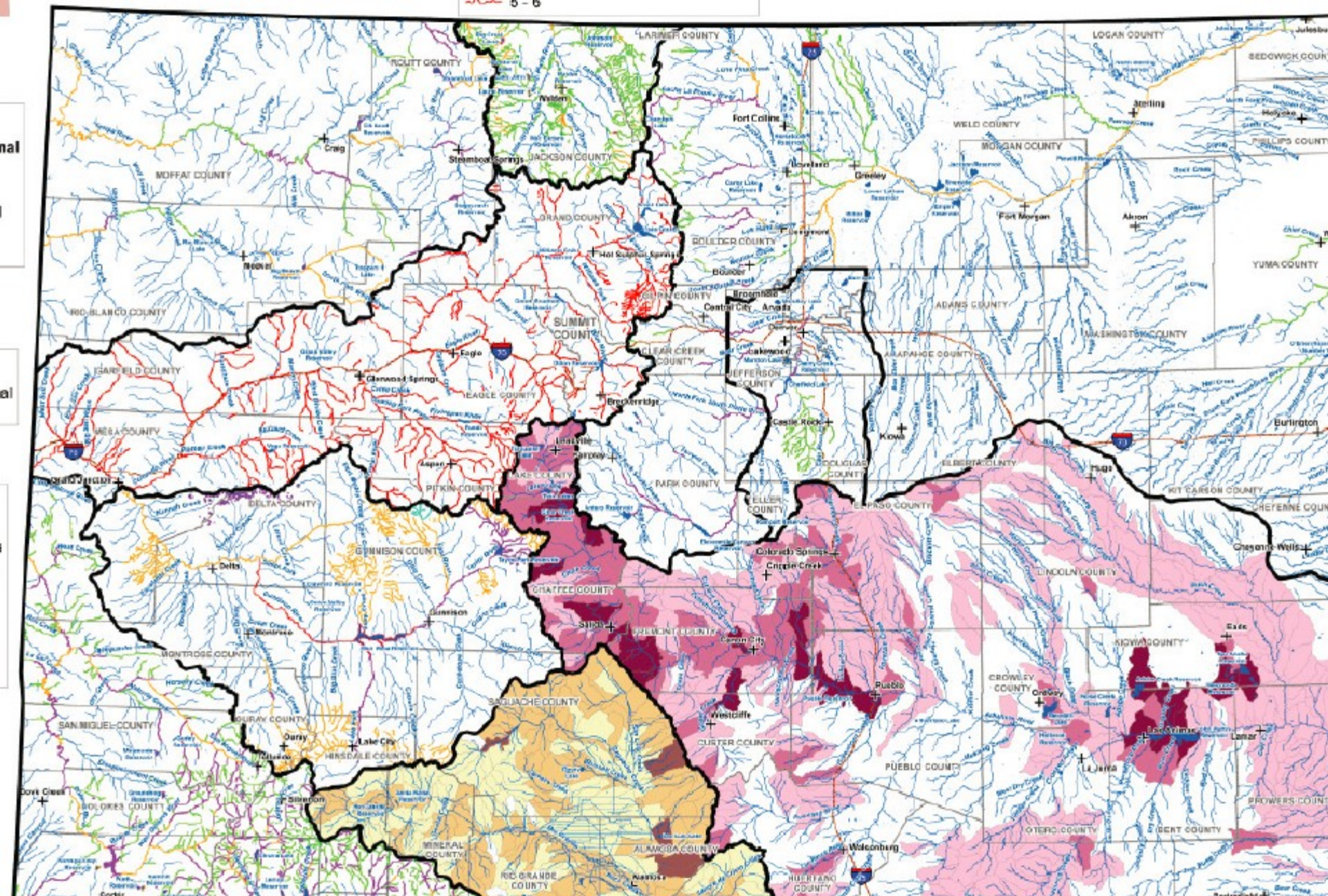
- ### IBCC and Subcommittees
- Reconcile common elements
  - Arrange by thematic portfolios
  - Explore trade-offs of thematic portfolios
  - Determine implementation elements of portfolios

# Section 1: We Got Data





*Figure 2-5 Rio Grande Basin Environmental and Recreational Subcategories*



**We mapped where important nonconsumptive attributes are and called them focus areas**

# Identified projects and processes summary

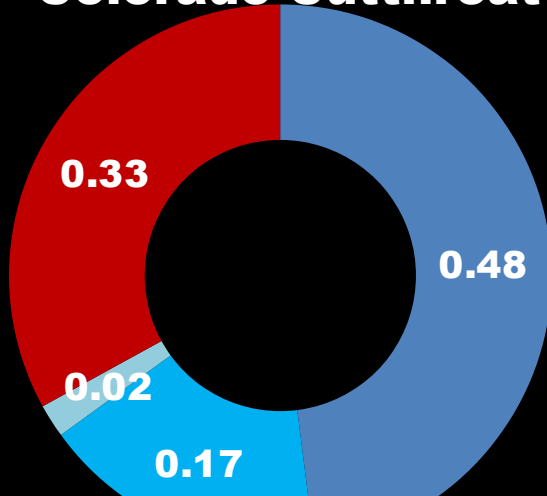
Project Name	Project Location	Project Type	Project Status	Basin Roundtable Attributes Identified	Project Protections
Roaring Fork River	5-85CW639	Appropriated	Completed	Aquatic_Ec, Bluehead Sucker, CWCB instream flow water rights, CWCB natural lake level water rights, Geomorph_F, Gold Metal Trout Streams, Rafting/kayaking/flatwater reaches, Rec_Boatin, recreational in-channel diversion structures, Riparian/Wetlands, RipWet_Eco, Significant Riparian/Wetland Communities, Water_Qual	Bluehead Sucker-D, Bonytail Chub-D, Colorado Pikeminnow-D, Colorado River Cutthroat Trout -D, Flannelmouth Sucker-D, Gold Metal Trout Lakes-D, Gold Metal Trout Streams-D, Humpback Chub-D, Rare Aquatic-dependent plants-I, Razorback Sucker-D, Razorback Sucker, Humpback Chub, Colorado Pikeminnow-D, Riparian/Wetlands-I, Roundtail Chub-D, Significant Fishing Waters-I, Significant Riparian/Wetland Communities-I, Significant Riparian/Wetland Plants-I, Trout Streams-D, Wetlands-I
Blue River	5-86CW217	Appropriated	Completed	Aquatic_Ec, Bluehead Sucker, CWCB instream flow water rights, Rafting/kayaking/flatwater reaches, Riparian/Wetlands, Significant Riparian/Wetland Communities	Bluehead Sucker-D, Bonytail Chub-D, Colorado Pikeminnow-D, Colorado River Cutthroat Trout -D, Flannelmouth Sucker-D, Gold Metal Trout Lakes-D, Gold Metal Trout Streams-D, Humpback Chub-D, Rare Aquatic-dependent plants-I, Razorback Sucker-D, Razorback Sucker, Humpback Chub, Colorado Pikeminnow-D, Riparian/Wetlands-I, Roundtail Chub-D, Significant Fishing Waters-I, Significant Riparian/Wetland Communities-I, Significant Riparian/Wetland Plants-I, Trout Streams-D, Wetlands-I
Blue River	5-86CW204	Appropriated	Completed	Aquatic_Ec, CWCB instream flow water rights, Flannelmouth Sucker, Rafting/kayaking/flatwater reaches, Riparian/Wetlands, Significant Riparian/Wetland Communities	Bluehead Sucker-D, Bonytail Chub-D, Colorado Pikeminnow-D, Colorado River Cutthroat Trout -D, Flannelmouth Sucker-D, Gold Metal Trout Lakes-D, Gold Metal Trout Streams-D, Humpback Chub-D, Rare Aquatic-dependent plants-I, Razorback Sucker-D, Razorback Sucker, Humpback Chub, Colorado Pikeminnow-D, Riparian/Wetlands-I, Roundtail Chub-D, Significant Fishing Waters-I, Significant

**We researched what projects exist / are planned in those areas & what attributes they protect**

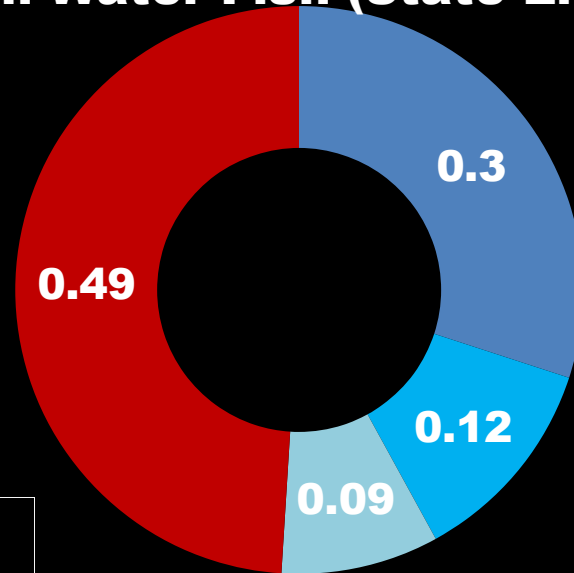


# Example of Protections in

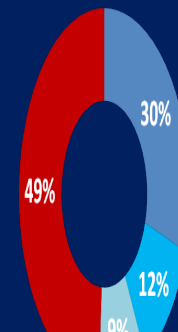
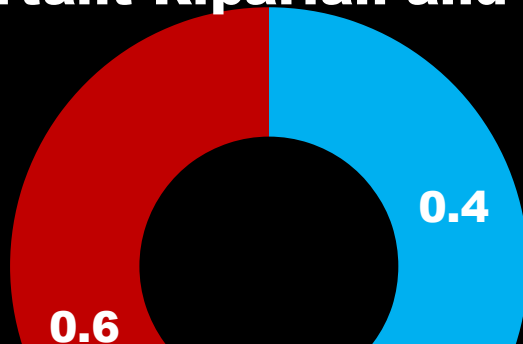
## Colorado Cutthroat



## Warm Water Fish (State Endangered, ...)

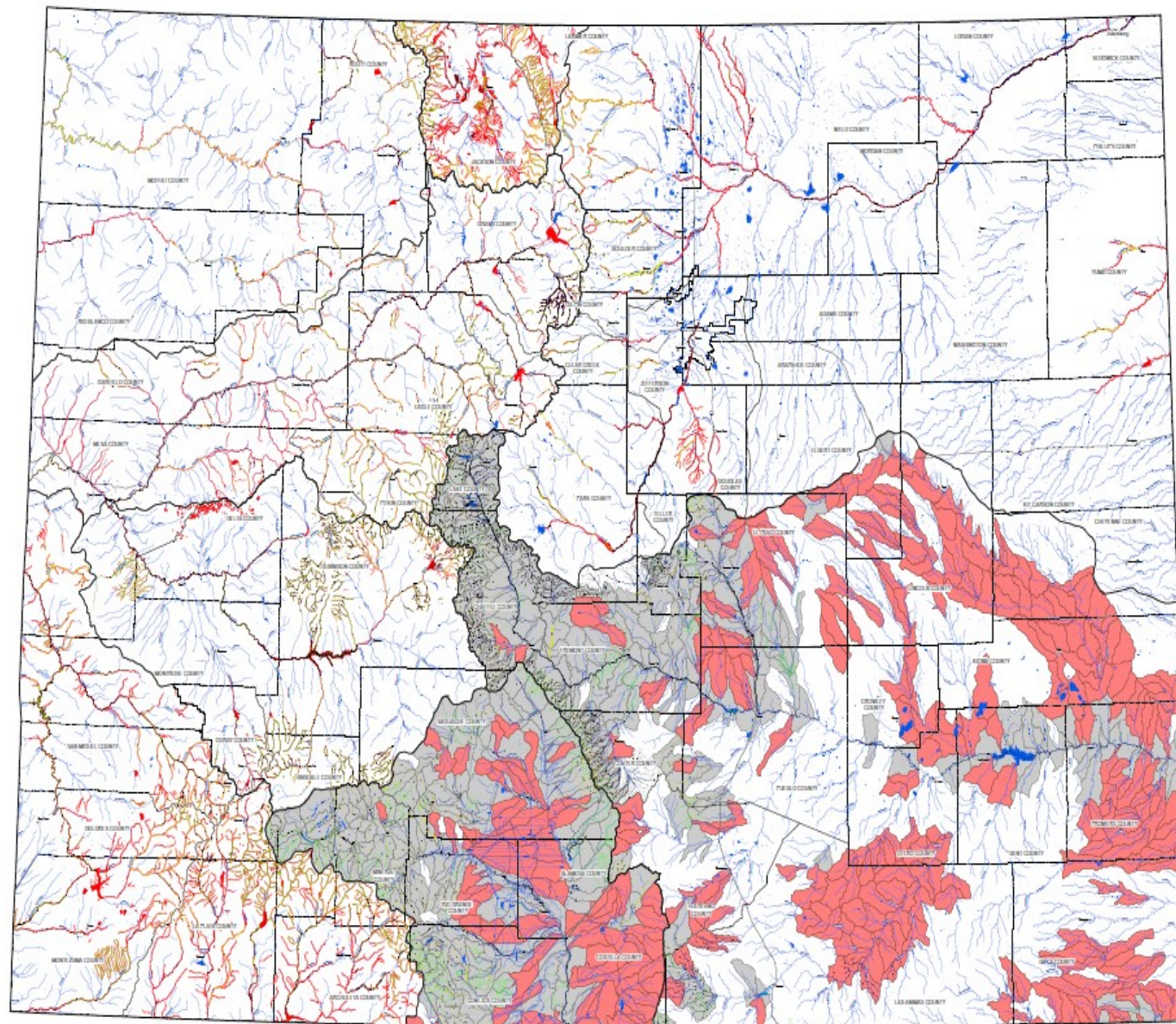


## Important Riparian and Wetland Areas



- Direct Protections
- Indirect Protections
- Both Direct & Indirect Protections
- No Known Protections

**We put all that into a database that can generate statistics by attribute & area**



Legend

- Identified Stream Project, CWA 303(d) Stream, Watershed Project, and BSA Catchment
- Gap Analysis Program Streamability Class 1 - 2.0 (pg)
- 2006 National Flow Law
- 2006 National Flow Law
- Focus Stream
- Focus I&C
- Focus I&C with Projects and Methods
- Highway
- Flow and Stream
- Lake and Reservoir
- City and Town
- County Boundary
- Date

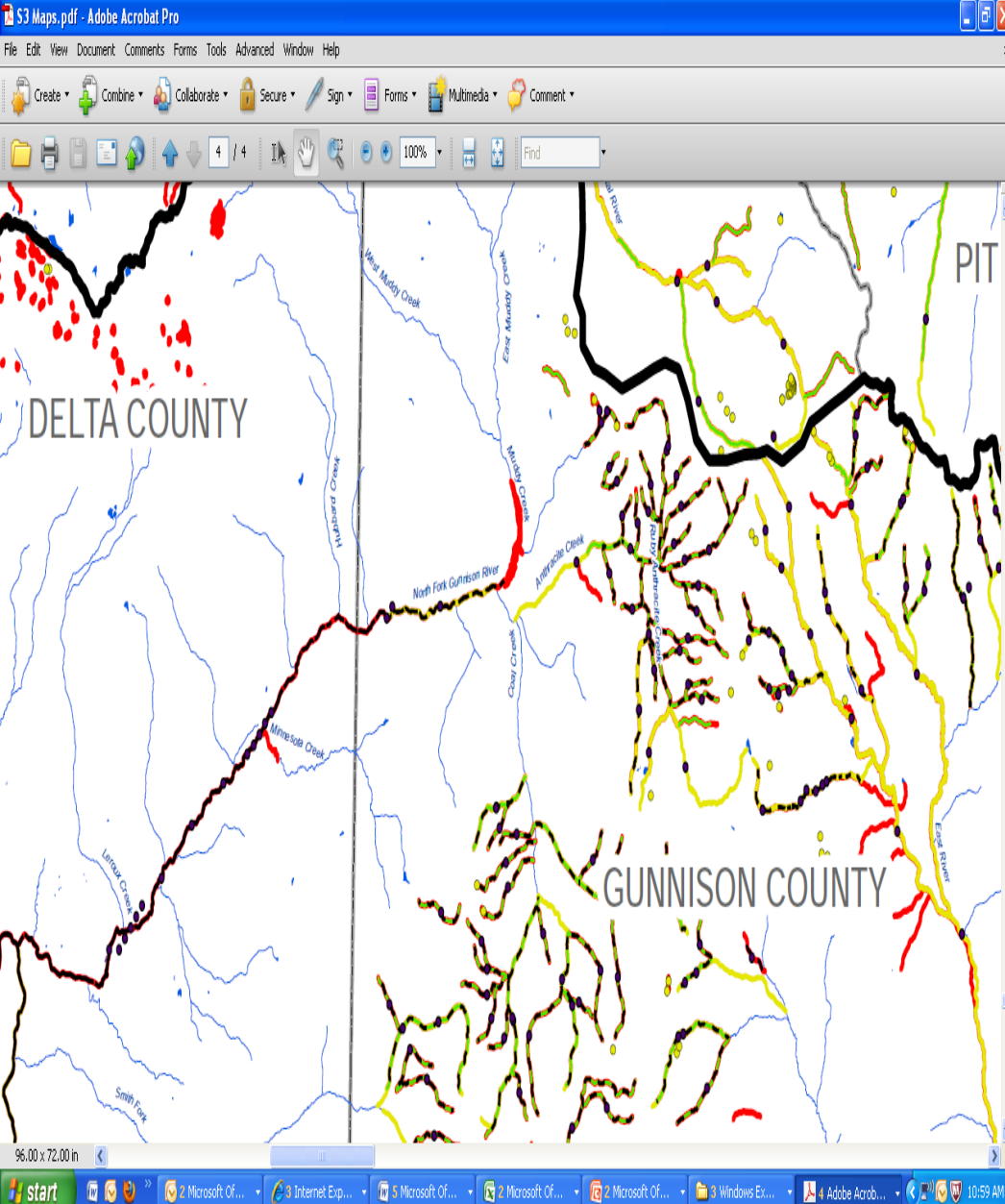
This Map is a Computer GIS which can be used to identify specific areas for stream projects and methods and to focus areas. To identify specific areas for stream projects and methods, the map is divided into 100-foot grid cells. Stream reach segments are identified as BSA segments. To identify stream projects and methods, the map is divided into 100-foot segments. To identify stream projects and methods, the map is divided into 100-foot segments. To identify stream projects and methods, the map is divided into 100-foot segments.



Figure 3.4  
Statewide Stream  
Noncontingent Reach Assessment  
Focus Areas with Projects and Methods

**We mapped all the projects and methods over the identified focus areas**

# Map Detail – North Fork of the Gunnison



## Legend

- Interviewed/Surveyed Projects, CWCB Watershed Restoration Projects and WSRA Grants
- Gap Analysis Program Stewardship Status 1 - 2.5 (avg)
- 2006 Instream Flow Lake
- 2010 Instream Flow Stream
- Focus Segments
- Focus HUC
- Focus HUC with Projects and Methods
- Highway
- River and Stream
- Lake and Reservoir
- City and Town
- County Boundary
- Basin

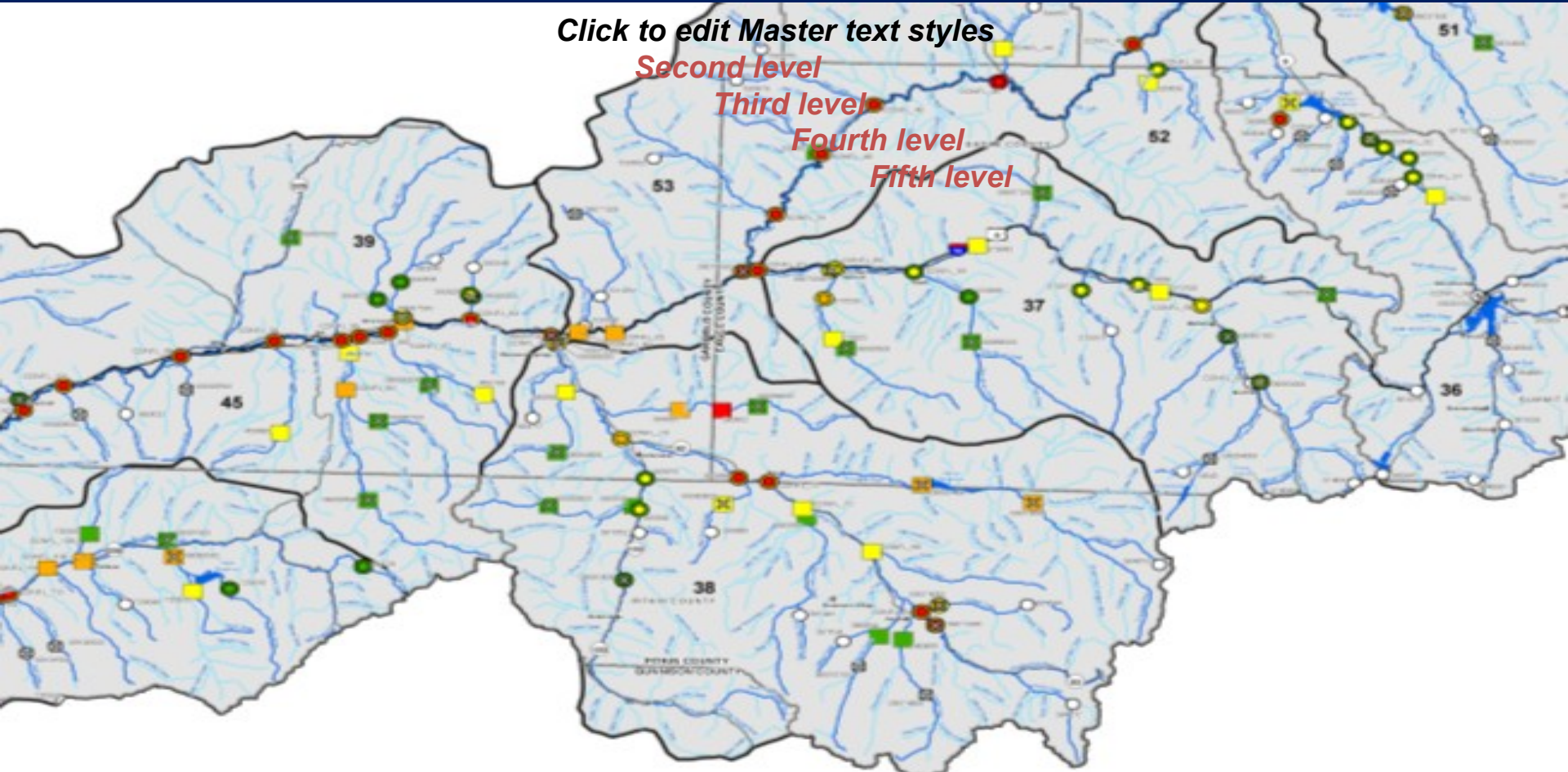
# Arkansas Roundtable Site Specific Studies on John Martin Reservoir Wetlands and



# Watershed Flow Evaluation Tool (WFET): Steps to develop the tool

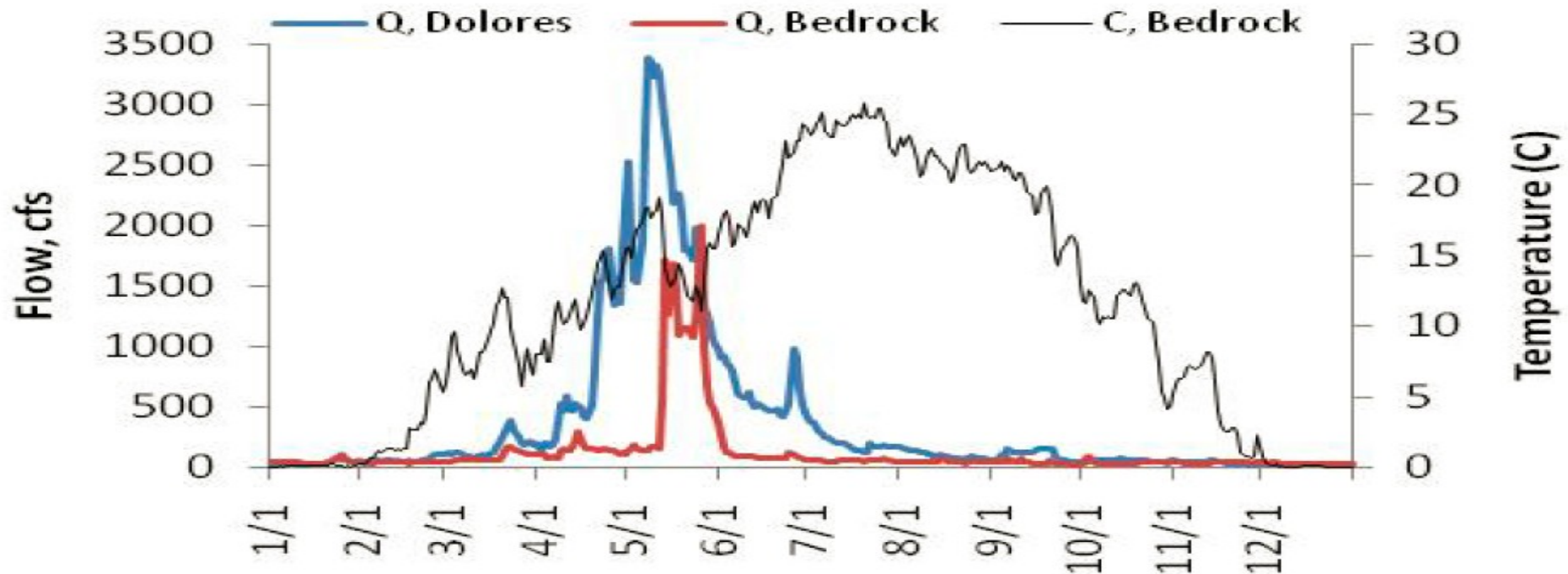
1. ***Hydrologic foundation – used Colorado’s StateMod to model daily natural and current flows.***
2. ***Classify stream segments by hydrogeomorphic setting.***
3. ***Using existing studies and data, developed quantitative models of flow alteration and ecological response.***
4. ***Utilized Indicators of Hydrologic Alteration (IHA) software to analyze hydrologic data.***
5. ***Developed mapping showing areas that may be at risk due to changes in flow regime.***

# Colorado & Yampa/White Watershed Flow Evaluation Tool Example Riparian Results



# Flow management on the

2009



STATUS AND TRENDS OF FLANNELMOUTH SUCKER *CATOSTOMUS LATIPINNIS*, BLUEHEAD SUCKER *CATOSTOMUS DISCOBOLUS*, AND ROUNDTAIL CHUB *GILA ROBUSTA*, IN THE DOLORES RIVER, COLORADO, AND OPPORTUNITIES FOR POPULATION IMPROVEMENT: PHASE II REPORT

# **Section 2: We are Already Making and Impact**



# Well retirements on the Arikaree



# Land protection along the Rio



# South Platte River Ranch



# Tamarisk removal and riparian restoration on



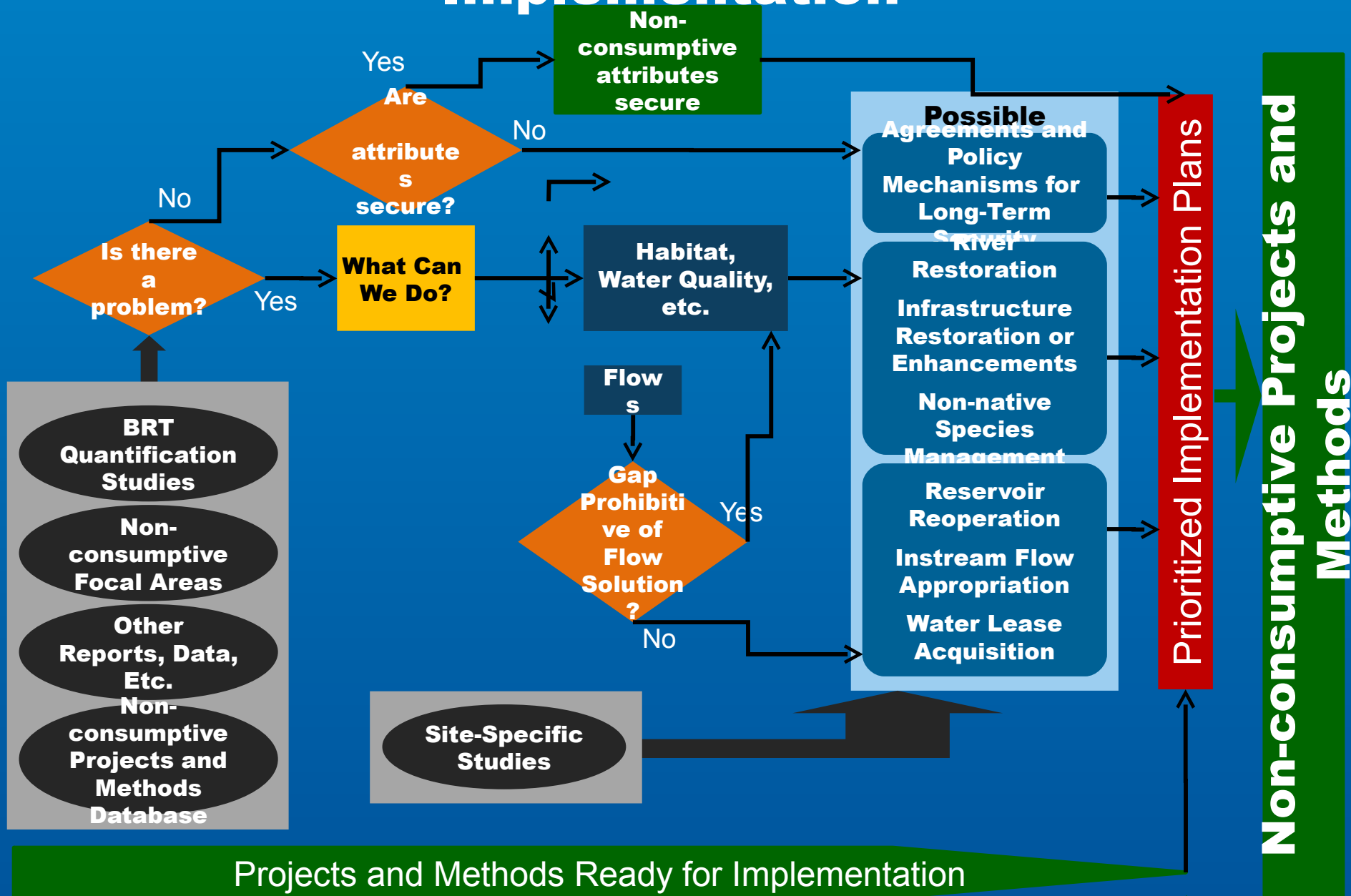
# Section 3: Where to Now?



## Questions we hope to answer:

1. What are we concerned about and where?
2. Which areas need further study?
3. What can be done?
4. Where is flow or water level quantification helpful?
5. Where can a project (restoration, flow, etc.) move forward?
6. Where is no action is needed?

# Nonconsumptive Projects and Methods Implementation



# **Funding Resources for Implementation: CWCB Resources:**

- Water Supply Reserve Account (\$10M)
- Instream Flow Acquisition Program (\$1M)
- Healthy Rivers funding (≈\$90K)
- Colorado Watershed Restoration Program (≈ \$250K)
- Multi Objective Watershed Protection Program (≈ \$100K)
- Fish & Wildlife Resources Fund (≈ \$500K)
- Species Conservation Trust Fund (≈ \$6.6M)

# **CPaW Resources:**

- Wetlands for Wildlife (\$1.2M)

# **Examples of Other Resources:**

- Great Outdoors Colorado (GOCO)
- Natural Resources Conservation Service Programs (esp. for private lands)
- National Fish and Wildlife Foundation
- North American Wetlands Conservation Council
- Fundraising / partnering (e.g., with water providers and conservancy districts)



# Contact Information

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