

# NOW IS THE TIME TO IMPLEMENT

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



Instream Flow  
Workshop  
Jacob Bornstein,  
CWCB

February 22, 2012



# 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***

- |   |   |
|---|---|
| <ol style="list-style-type: none"><li>1. Finish Basin Reports</li><li>2. Identify consumptive and non-consumptive projects and methods to get behind and begin strategic implementation</li><li>3. Develop statewide portfolios</li></ol> | <ol style="list-style-type: none"><li>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.</li><li>2. Continue implementation of consumptive and non-consumptive projects and methods.</li></ol> |
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### ***Colorado Water Conservation Board***

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|--|--|
| <ol style="list-style-type: none"><li>1. Support basin roundtable / IBCC technical work and portfolio development</li><li>2. Develop statewide portfolios</li><li>3. Begin to implement SWSI 2010 recommendations</li><li>4. Review WSRA criteria and guidelines</li></ol> | <ol style="list-style-type: none"><li>1. Support basin roundtables in technical work</li><li>2. Continue implementing SWSI 2010</li><li>3. Begin SWSI 2016</li></ol> |
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### ***Interbasin Compact Committee***

- |  |  |
|--|--|
| <ol style="list-style-type: none"><li>1. Identify and execute next steps for IBCC subcommittees</li><li>2. Support basin roundtable portfolio development and bring portfolios together</li><li>3. Review WSRA criteria and guidelines</li></ol> | <ol style="list-style-type: none"><li>1. The IBCC members will work with their basin roundtables or constituencies to determine the specifics of cross-basin and statewide consumptive and non-consumptive projects or methods</li></ol> |
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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. Compile basin plans and statewide work into a state water plan
3. Complete SWSI 2016



# Two Concurrent Paths Forward

- 1. Develop Nonconsumptive Implementation Plan:** Suggest and prioritize projects and methods that can fill nonconsumptive gaps in a strategic manner. Include:
  - Initial cost estimates,
  - Potential partners, and
  - Whether any entity has agreed to take the lead
  
- 2. Initiate 3-5 Nonconsumptive Projects:** Determine how to implement 3-5 projects or methods that meet identified nonconsumptive needs by the end of 2012.

# Section 2: Short Term Implementation

**Initiate 3-5 Nonconsumptive Projects**



# Already Granted Nearly \$12M on Nonconsumptive Projects & Studies over Past 5 Years

Upper Colorado Endangered Fish Recovery Alternatives Analysis (10,825)	\$200,000	John Martin Wetlands & Neenoshe Reservoir Nonconsumptive Needs Quantification	\$148,975
<b>Vail Ditch Project</b>	\$1,500,000	UAWCD Hydrologic Water Balance Study	\$180,000
<b>Paonia-Feldman Diversion Reconstruction</b>	\$110,700	Bedload/Sediment Collection and Removal Technology	\$225,000
Sedimentation Management Study For Paonia Reservoir	\$309,000	Colorado Basin Nonconsumptive Needs Quantification	\$315,171
<b>Alamosa River In-stream Flow Project</b>	\$64,500	Hartland Diversion Dam Fish Passage Feasibility Study	\$22,100
Preliminary Design Multi-use Rio Grande Reservoir Rehabilitation and Enlargement	\$288,000	<b>Lower Willow Creek Restoration Project</b>	\$250,000
Rio Grande Basin Conservation Reserve Enhancement Program	\$36,750	<b>Rio Grande Conservation Reserve Enhancement Program Implementation</b>	\$31,500
<b>Lower South Platte Wetland Initiative Phase I</b>	\$278,476	Central South Platte Wetland Partnership	\$93,769
<b>Tamarisk Project</b>	\$50,000	<b>FMRI Co Recharge &amp; Wetlands Project</b>	\$670,000
Fountain Creek Vision Task Force	\$75,000	<b>Lower Blanco River Restoration Project</b>	\$100,000
<b>Arkansas Headwaters Diversion Structure Improvement Project</b>	\$57,955	<b>Lower Blanco River Restoration Project</b>	\$150,000
Grand County Stream flow Management Plan	\$100,000	Animas River Needs Assessment	\$57,000
Fraser Sedimentation Basin	\$187,900	<b>Mancos River Diversion Project, Phase I</b>	\$24,753
Roaring Fork Watershed Assessment -Phase 2	\$40,000	Flathead chub migration through diversion structure monitoring	\$35,000
<b>Battlement Reservoir #3 Dam reconstruction to enhance recreational &amp; environmental opportunities</b>	\$80,000	North Park Irrigated Meadow Conservation Program – Phase I	\$20,000
South Platte River Recreation and Habitat Feasibility Study	\$150,000	<b>2009 Rio Grande Riparian Stabilization Project - Phase 4</b>	\$148,000
Effects of Mtn pine beetle and forest management on water quantity, quality, and forest recovery	\$376,923	Development of a decision support model for Identifying and Ranking Waterfowl and Wildlife Related Recharge Projects along the SP	\$99,821
Identification and assessment of important wetlands	\$182,000	A Way Forward: The Dolores River Below McPhee Reservoir	\$25,000
<b>Rio Grande Initiative</b>	\$1,500,000	<b>Diversion Improvement Project</b>	\$25,000
<b>2008 Rio Grande Riparian Stabilization Project</b>	\$285,000	Recreational Plan for Lake Nighthorse	\$25,000
<b>Platoro Reservoir Restoration</b>	\$250,000	Yampa White Nonconsumptive Needs Assessment Watershed Flow Evaluation Tool	\$169,002
<b>Conejos River and North Branch Diversion and Stabilization</b>	\$383,700	Triniad/Purgatorie River Reach 4 Demonstration Project	\$75,000
Rio Grande Reservoir Multi-Use Rehabilitation: Refinement and Enhancement of Reservoir Reoperation and Optimization Model	\$100,000	<b>Helena Diversion Structure/BV Boat Chute Improvement Project</b>	\$325,000
Weld County School Dist RE1 Wetland Partnership	\$42,110	Canal #1 Check Structure Pilot Project @ Dalton, Kiefer & Springer Properties	\$25,212
<b>S.P. Water protection and restoration</b>	\$825,552	<b>Hartland Dam Improvements</b>	\$53,100
Halligan Seaman Water Mgmt project share vision planning model	\$101,740	SP River Recreation and Habitat Improvement Preliminary Design	\$125,000
South Platte River Phreatophyte Control Pilot	\$65,000	The McDonald Ditch and Plaza project, Phase I Planning	\$40,000
		<b>Rio Grande Initiative: North Rio Grande Ranch Conservation Easement</b>	\$70,000
		<b>Plaza Project Phase 2 - McDonald Ditch</b>	\$295,000
		South Platte River Recreation and Habitat Improvement Preliminary Design	\$125,000
		<b>Yampa River/Walker Ditch River Restoration Project</b>	\$40,000



# **Well retirements on the Arikaree**





# **Land protection along the Rio Grande**





# South Platte River Ranch



# **Tamarisk removal and riparian restoration on the Dolores**





# Identified projects and processes summary

Project Name	Project Location	Project Type	Project Status	Basin Roundtable Attributes Identified	Project Protections	Reach ID
Planned Fraser River settling basin upgrades	Fraser River - just upstream of Denver diversion	Project	Planned	Aquatic_Ec, Boreal Toad, Colorado River Cutthroat Trout , CWCB instream flow water rights, Geomorph_F, Rafting/kayaking/flatwater reaches, Riparian/Wetlands, Significant Riparian/Wetland Communities, Water_Qual	Bluehead Sucker-I, Bonytail Chub-I, Boreal Toad -I, Colorado Pikeminnow -I, Colorado River Cutthroat Trout -I, CWCB Instream Flow Water Rights-I, CWCB Natural Lake Level Water Rights-I, Federally Listed Critical Habitat-I, Flannemouth Sucker -I, Flatwater Boating -I, Humpback Chub-I, Razorback Sucker-I, Roundtail Chub-I	15
Aquatic habitat study and restoration project (Town of Breckenridge)	Blue River above Dillon	Project	Planned	Aquatic_Ec, Bluehead Sucker, Boreal Toad, CWCB instream flow water rights, CWCB natural lake level water rights, Flannemouth Sucker, Rafting/kayaking/flatwater reaches, Riparian/Wetlands, Significant Riparian/Wetland Communities		65
Design and construction of kayak park for RICD	Blue River below Dillon Reservoir	Project	Planned	Aquatic_Ec, Audubon important bird areas, Bluehead Sucker, Boreal Toad, CWCB instream flow water rights, CWCB natural lake level water rights, Gold Metal Trout Streams, Rafting/kayaking/flatwater reaches, Rec_Boatin, recreational in-channel diversion structures, Significant Riparian/Wetland Communities	Recreational In-Channel Diversion Structures- D	3, 4, 65
Battlement Reservoir #3 Dam reconstruction to enhance recreational & environmental opportunities	Battlement Creek	Project	Planned	Aquatic_Ec, Colorado River Cutthroat Trout , CWCB instream flow water rights	Bluehead Sucker-D, Bonytail Chub-D, Colorado River Cutthroat Trout -D, Flannemouth Sucker-D, Flatwater Boating-D, Gold Metal Trout Lakes-D, Gold Metal Trout Streams-D, Humpback Chub-D, Lake Fishing-D, Razorback Sucker-D, Razorback Sucker, Humpback Chub, Colorado Pikeminnow-D, Roundtail Chub-D, Significant Fishing Waters-D, Signification Fishing Waters-D, Stream Fishing-D, Trout Streams-D	65

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



# **Opportunities to Move Forward w/ BRTs**

## **Workshop → Roundtable:**

- WSRA Grant process review
- Get nonconsumptive community together
- Use CWCB consultant funds to help get projects to next stage
- Select projects
- Work to fund projects (and leverage those funds)

## **Multi-Purpose Projects:**

- Work with water providers up front
- Identify opportunities to benefit many purposes:
  - Environmental
  - Recreation
  - Agriculture
  - Compacts
  - Municipal / Industrial

## **Combine restoration projects with ISF:**

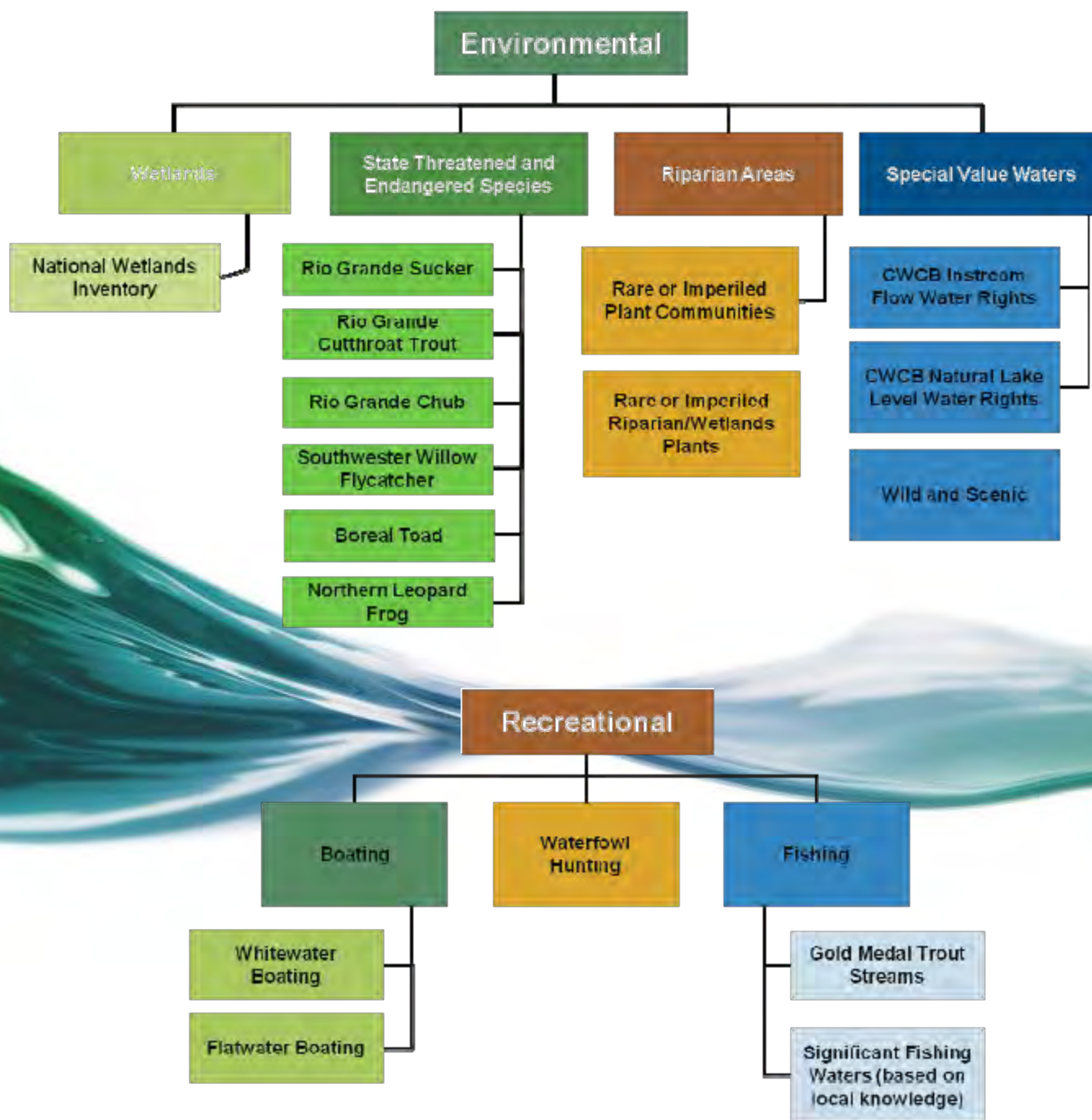
- Identify areas with an existing ISF
- Identify areas that could use an ISF to protect existing or restored attribute
- Work with local water rights holders to donate water rights to an ISF



# Section 3: Long Term Implementation?

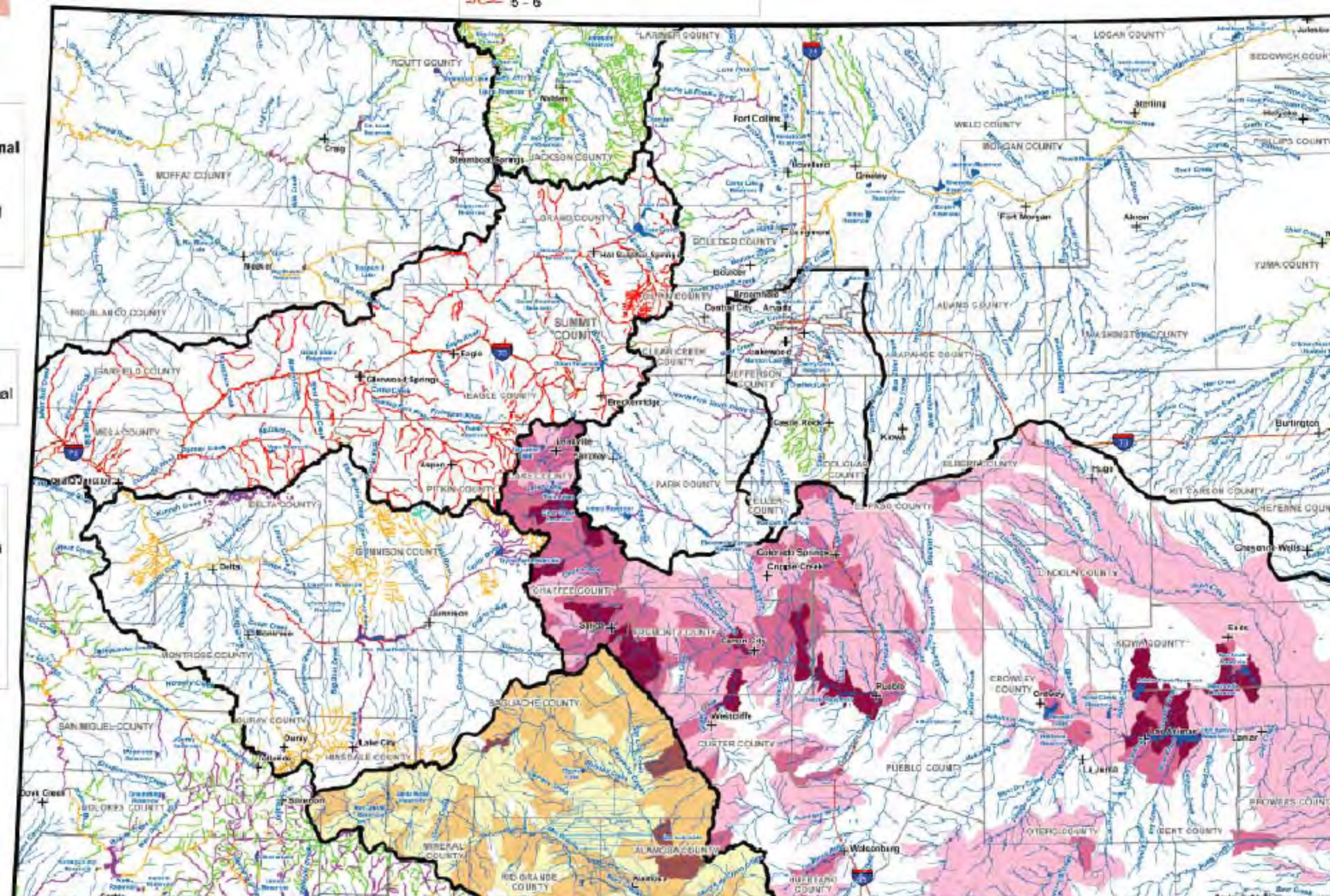
**Develop Nonconsumptive  
Implementation Plan**





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



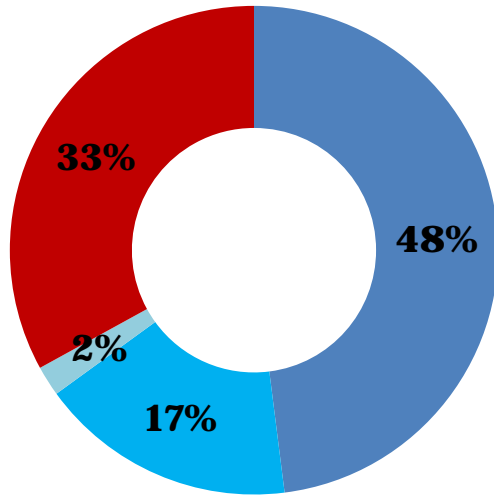


We mapped where important nonconsumptive attributes are and called them focus areas

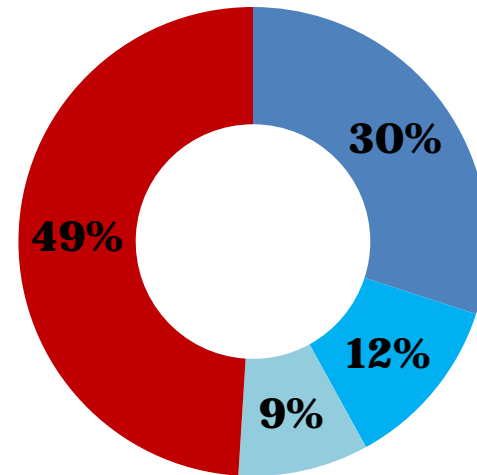


# Example of Protections in Southwest Basin

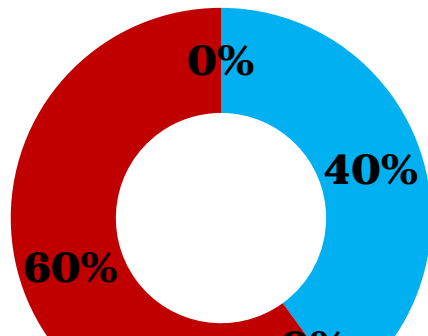
## Colorado Cutthroat Trout



## Warm Water Fish (State Endangered, Threatened and Species of Special Concern)



## 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





# Map Detail – North Fork of the Gunnison



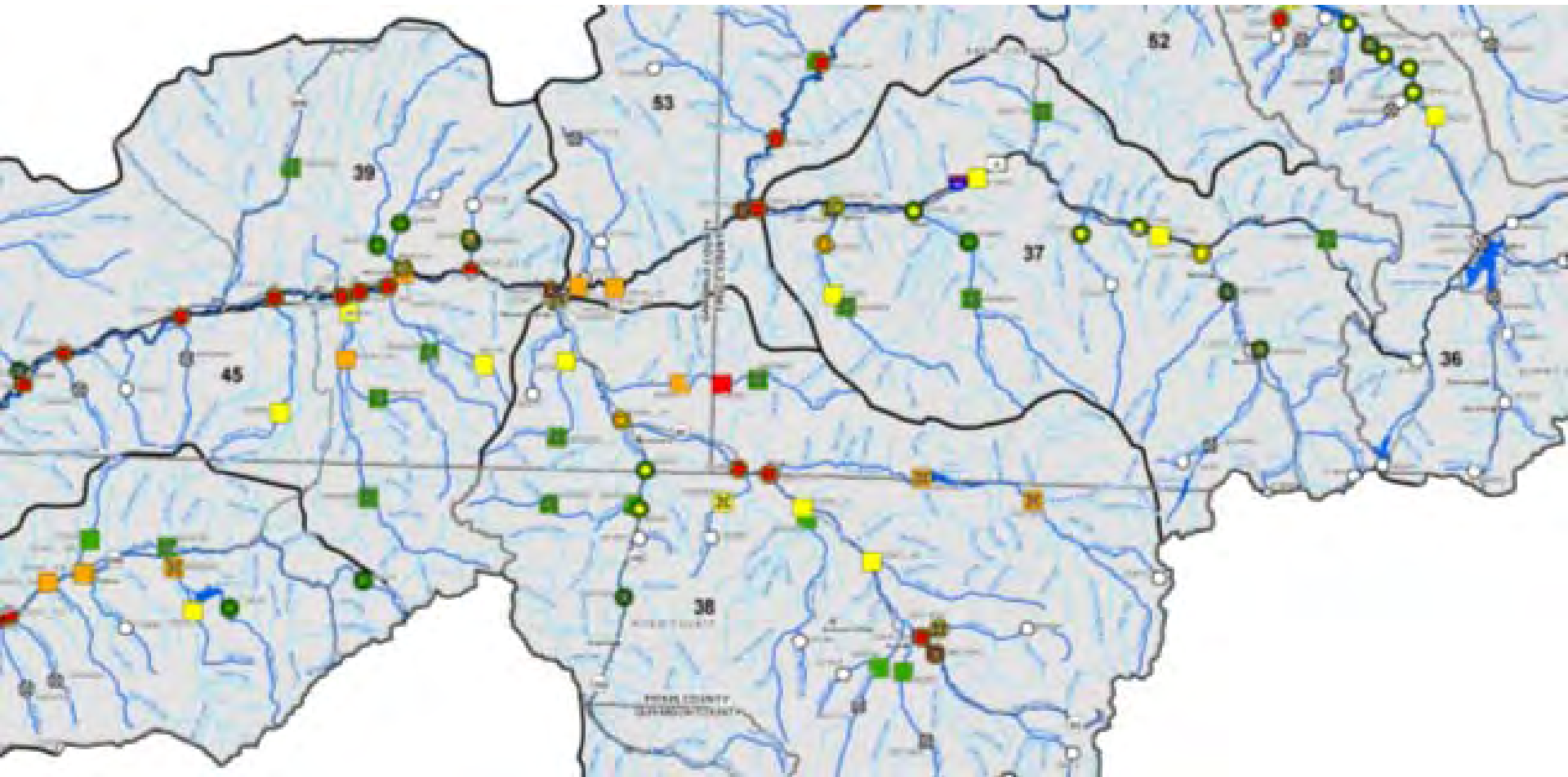
## Legend

- 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 Neenoshe**



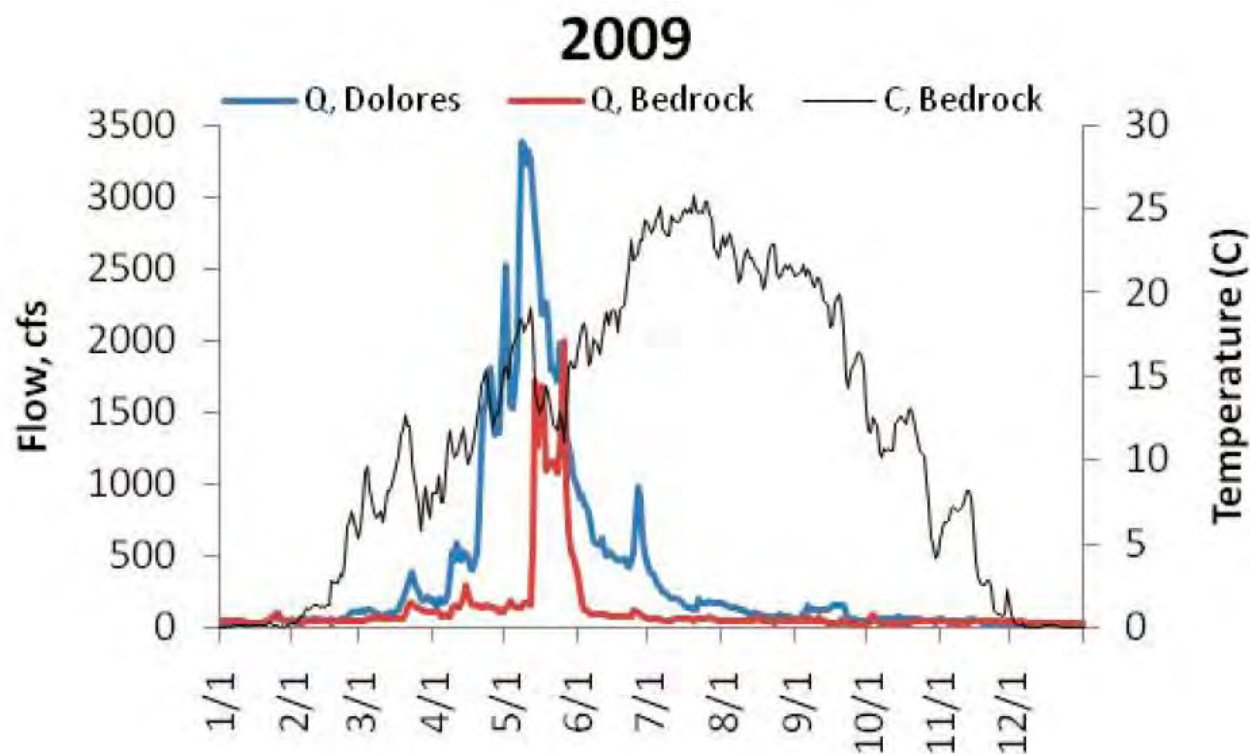
# Colorado & Yampa/White Watershed Flow Evaluation Tool Example Riparian Results



***Watershed Flow Evaluation Tool Application  
Overview***



# Flow management on the Dolores



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

# Yampa/White Projects and Methods Study





# How do we pull this information together to...

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- Potential partners, and
- Whether any entity has agreed to take the lead

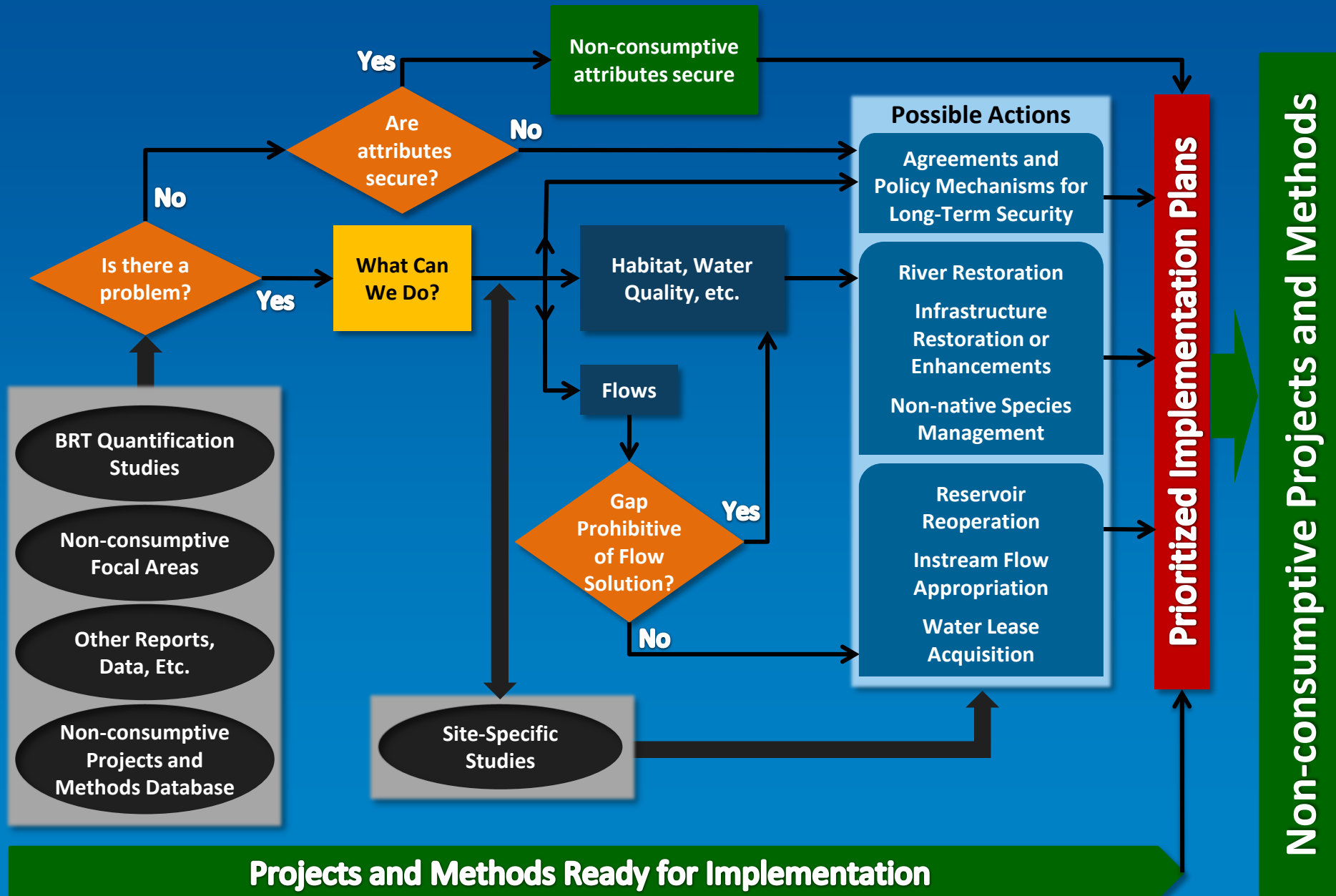




# Questions we hope to answer

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

# Nonconsumptive Projects and Methods Implementation







# **Opportunities to Move Forward w/ BRTs**

## **Roundtable:**

- Utilize data already available
- Use staff and consultant support to walk through decision tree
- Use toolbox to help determine costs, best type of project for the problem, etc.
- Think strategically rather than opportunistically (e.g. let's make a measurable dent in the problems we're facing)

## **NC Community:**

- Involve the community to get ideas
- Get entities to commit to shepherding projects through
- Work with water providers to make these multi-purpose and to find match funds
- Don't just rely on CWCB for funds....

## **Combine restoration projects with ISF:**

- Work with CWCB and CPW to conduct necessary flow studies
- Leverage multiple efforts
- Work with local water rights holders



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# Questions?



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