

Integrating Source Water Protection and Wildfire Risk

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Water Quality Control Division**

September 25, 2009

WHAT IS SOURCE WATER ASSESSMENT AND PROTECTION?

- Multi-step, two-phased process
- Assessment Phase
 - Completed assessment reports for over 1600 public water systems
- Protection Phase
 - Encouraged to voluntarily develop a protection plan

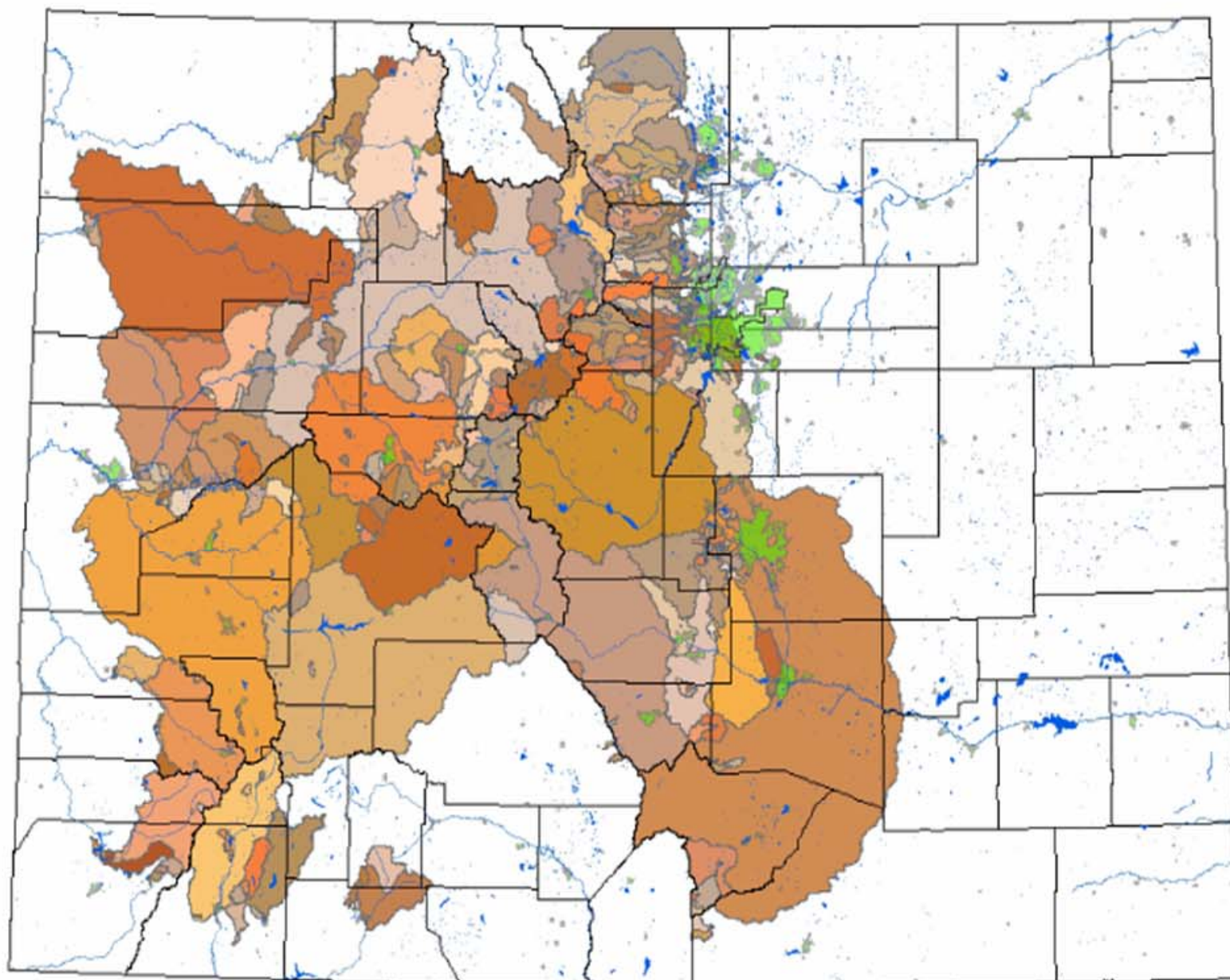
Benefits to Safe Drinking Water

- Establish a Multiple Barrier Approach
- Protect a Vital Community Resource
- Reduce the Risk of Contamination and Costly Water Source Replacement
- Potential to Reduce Future Water Treatment Costs
- Reduce the Threat of Emerging Contaminants
- Establish Smart Growth/Development and Water Quality Relationships
- Build a Community Networking Structure for Drinking Water Protection

Current Program Status

- Encouraging Source Water Protection Planning
- State and Federal Inter-agency Coordination
- Coordination with Wildfire Risk Methodology Development

Individual Surface Water SWAA's

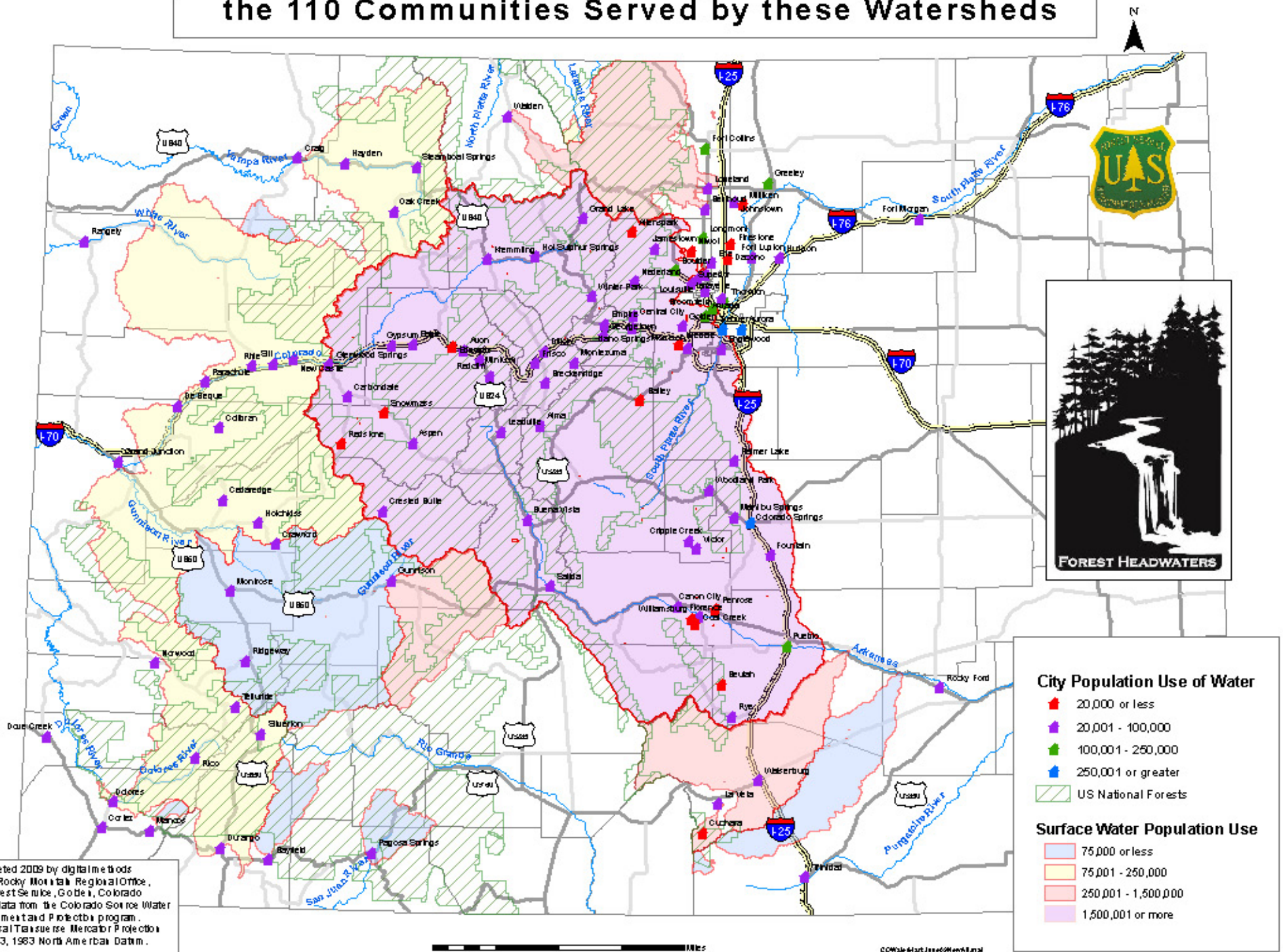


Legend

- Rivers
- Lakes
- Cities

0 20 40 80 120 160 Miles

Colorado Source Watersheds on National Forests and the 110 Communities Served by these Watersheds



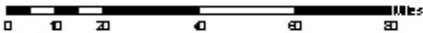
City Population Use of Water

- 20,000 or less
- 20,001 - 100,000
- 100,001 - 250,000
- 250,001 or greater
- ▨ US National Forests

Surface Water Population Use

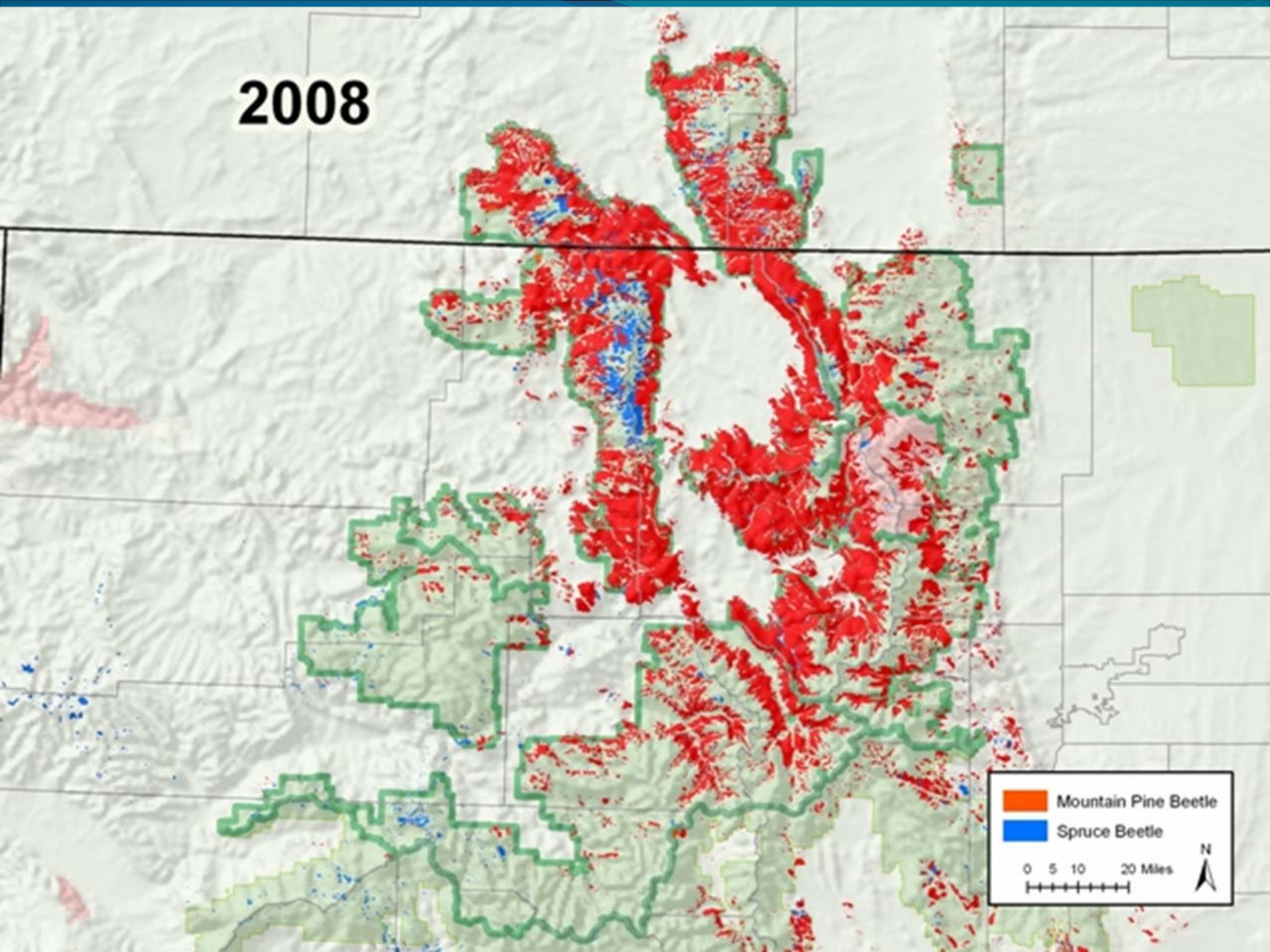
- 75,000 or less
- 75,001 - 250,000
- 250,001 - 1,500,000
- 1,500,001 or more

Completed 2009 by digital methods at the Rocky Mountain Regional Office, US Forest Service, Golden, Colorado using data from the Colorado Source Water Assessment and Protection program. Universal Transverse Mercator Projection Zone 13, 1983 North American Datum.



COMSIS 6/2012 Issue 6/2012

2008



Mountain Pine Beetle
Spruce Beetle

0 5 10 20 Miles
+ + + + + + + +



Wildfire Risk Assessments

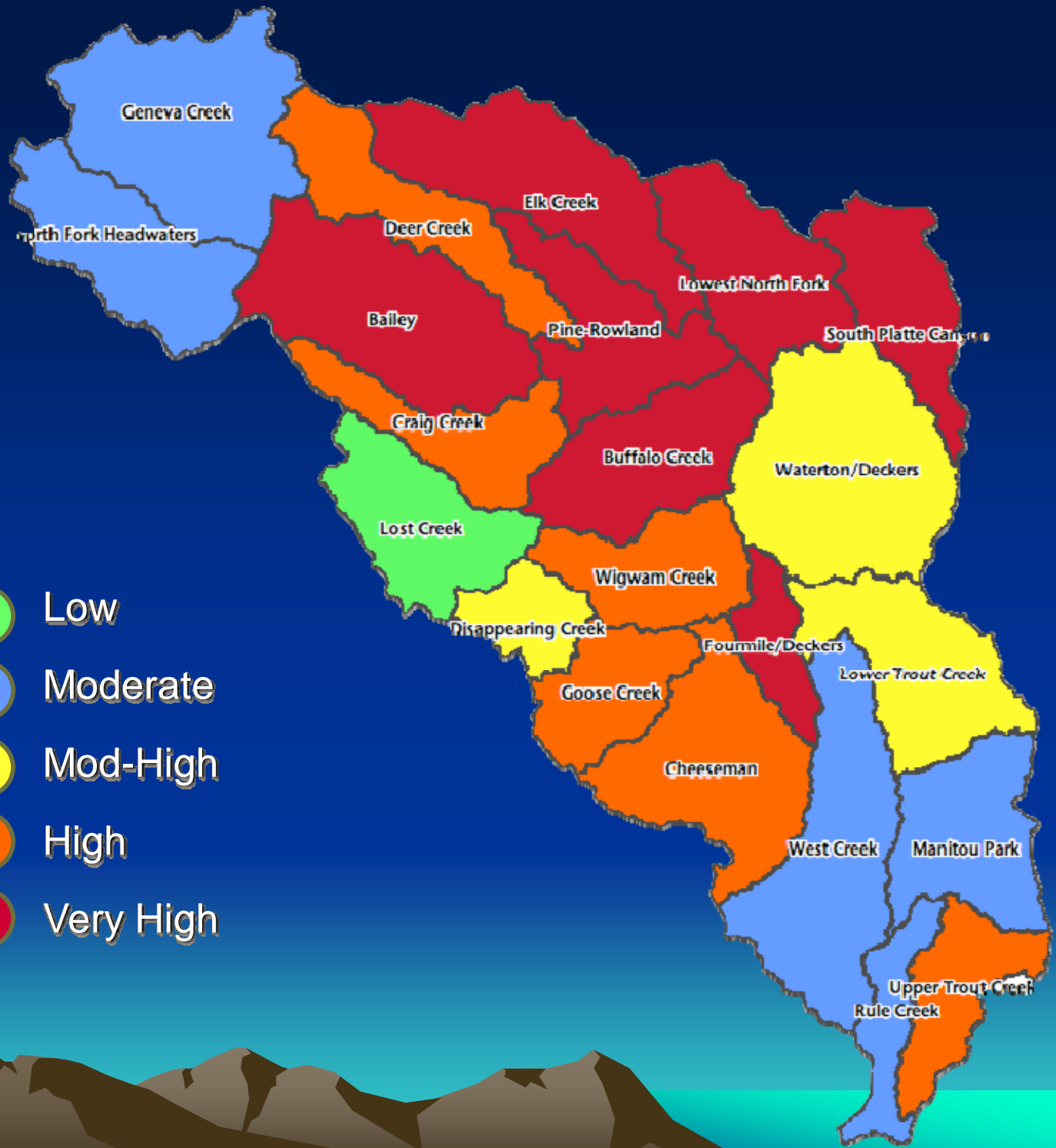
- Develop methodology
- Identify water supply watersheds
- Evaluate at 6th level
- Use common methodology in future

Model Components

- Wildfire Risk
- Flooding or Debris Flow Risk
- Soil Conditions
- Water Uses

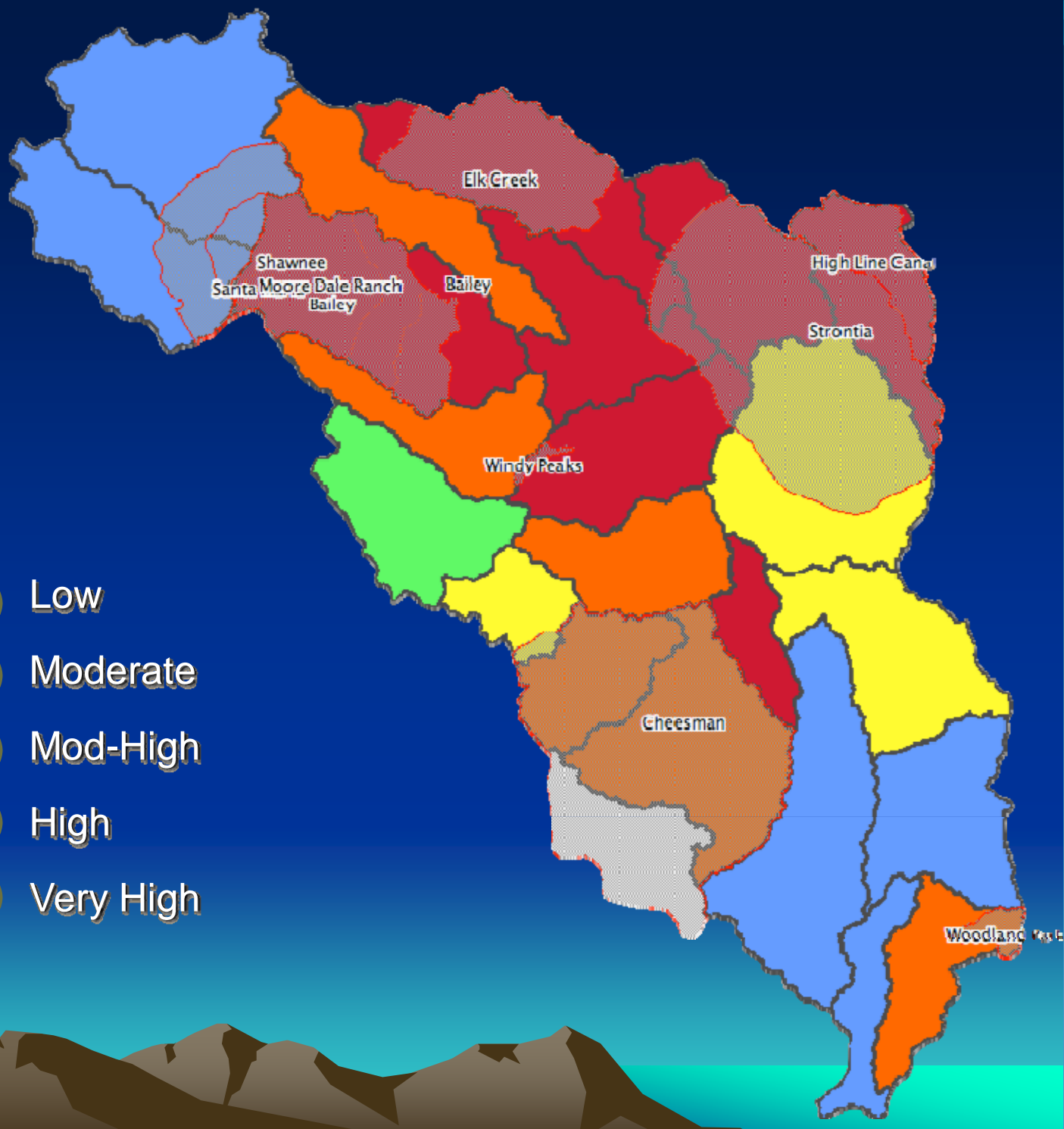
Upper South Platte Watershed Final Priority

- Low
- Moderate
- Mod-High
- High
- Very High



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Protection Planning Status

- Encourage Source Water Protection Plan Development
- Coordinate with CO Rural Water Association
- State and Federal Inter-agency Coordination to Protect Drinking Water Sources (COGCC, Drafting MOU with USFS)
- SWAP Coordination with Wildfire Risk Methodology Development

Recent Accomplishments

- CO Oil and Gas Conservation Rules
- Statewide Surface Water Supply Buffer Zones
- Established for Intakes on Classified Water Supply Segments
- 5 miles upstream of intake
 - Internal Zone: 0-300 feet
 - Intermediate Zone: 300-500 feet
 - External Zone: 500 feet - 1/2 mile

Available Planning Resources

- SWAP DVD/CD Toolkit Developed for Protection Planning
- Grant Funding is Available Through the Water Quality Control Division
- Technical Assistance by Contractors or Division Staff

Financial Grant Program

- Pilot Planning Project Grants
 - Maximum grant award: \$50,000
 - Requires a one to one match (cash or in-kind)
 - Develop an exemplary protection plan
- Development and Implementation (D&I) Grants
 - Maximum grant award: \$5,000
 - Requires a one to one match (cash or in-kind)
 - Develop effective protection plans

Protection Planning Status

- 74 Protection Plans in Development or Completed
- 14 Substantially Implemented Source Water Protection Plans
- 1 Pilot Planning Project Started (Standley Lake Cities)
- 1 More Pilot Project Planned (Blue River Watershed)

Regional and Statewide Benefits

- Address Common Threats to Water Supplies (Forest Fire, Transportation, Mining, Septics, Other)
- Establish Leadership Examples in Regional and Statewide Stewardship
- Potential for Inter-Agency Agreements (i.e.: Forest Service, CDOT, Local Health Dept)
- Potential Project Funding

MOST PREVALENT DISCRETE CONTAMINANT SOURCES

| SURFACE WATER | GROUND WATER |
|-------------------------|-------------------------|
| Contaminant Types | Contaminant Types |
| Mining Facs. (64,007) | Storage Tanks (21,166) |
| Storage Tanks (28,319) | SIC Facilities (16,362) |
| SIC Facilities (16,173) | Mining Facs. (9,915) |
| Haz. Waste SQG (2,343) | Haz. Waste SQG (2,933) |
| Petroleum Facs. (2,330) | SARA Facs. (1,876) |

MOST PREVALENT DISPERSED CONTAMINANT SOURCES

| SURFACE WATER | GROUND WATER |
|------------------------|--------------------------|
| Contaminant Types | Contaminant Types |
| Evergreen Forest (465) | Primary Roads (2,591) |
| Deciduous Forest (461) | Evergreen Forest (1,870) |
| Primary Roads (417) | Deciduous Forest (1,816) |
| Mixed Forest (294) | Septic Systems (1,750) |
| Septic Systems (287) | Pasture (1,719) |

Contact Information

- SWAP Website and Grant Information:
www.cdphe.state.co.us/wq/sw/swaphom.html
- SWAP Information Line: (303) 692-359

