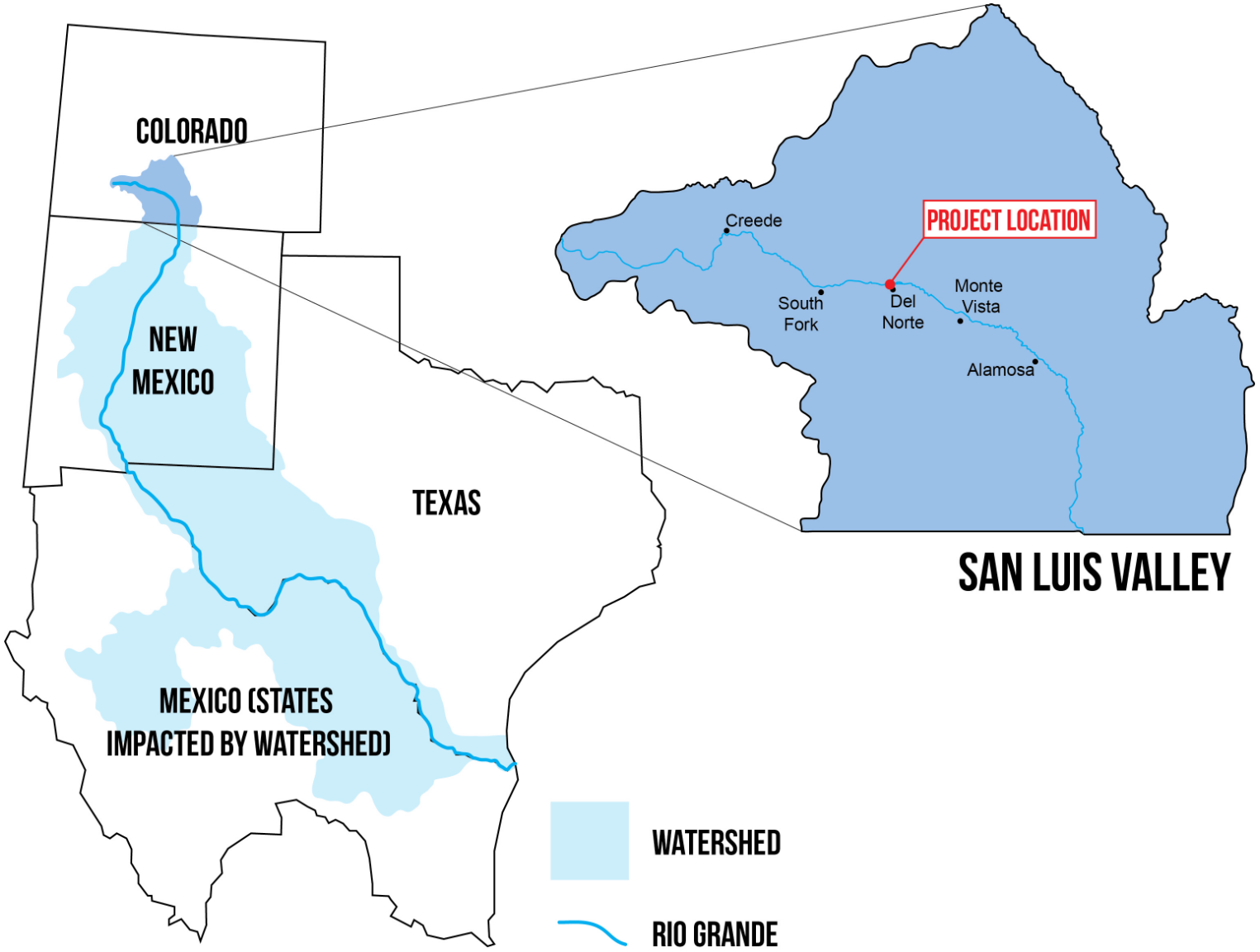
Stream and Watershed Planning in the Rio Grande Basin

Heather Dutton
San Luis Valley Water Conservancy District
Rio Grande Basin Director - CWCB



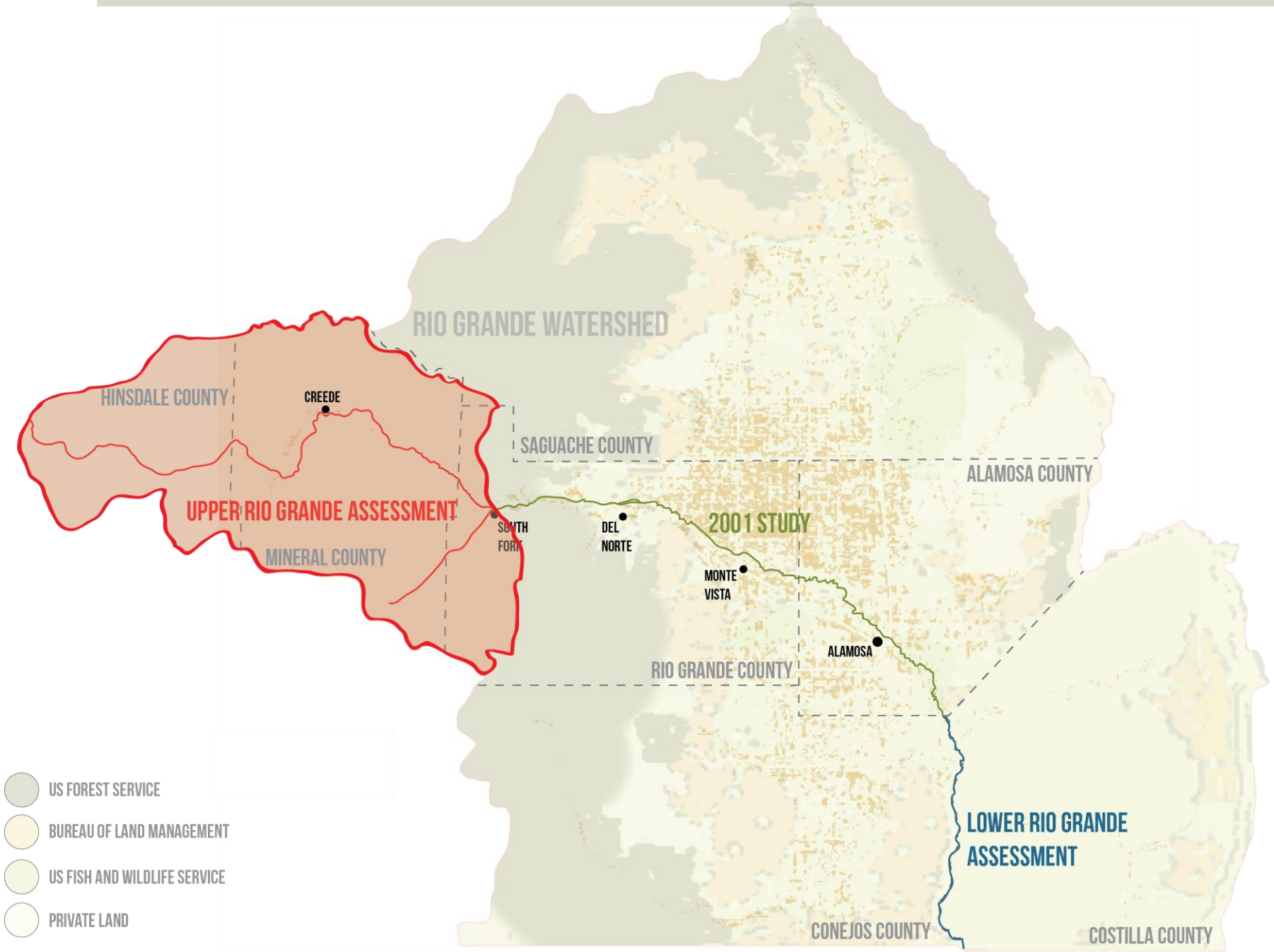
Project Location Map: Rio Grande Watershed

Studies and restoration plans are not new to the Rio Grande Basin.

Building Off Past Successes

- Stream Management Plan Sponsor: Rio Grande Headwaters Restoration Project

- SMPs – Where we are going is influenced by where we've been.
  - 2001 Study
    - Implemented by the SLVWCD: Initiated by concerned farmers, ranchers, and community members.
  - 2016 Lower Rio Grande Study
    - A partnership between RGHRP, CWCB, and BLM.
  - 2018 Upper Rio Grande Watershed Assessment
    - A partnership with RGHRP, USFS, CPW, TU, HA, and landowners.



RIO GRANDE BASIN

What's the Problem? - Geomorphology

- Degraded habitat
- Altered Hydrology
- Erosion
- Disconnected Floodplain
- Impaired water quality

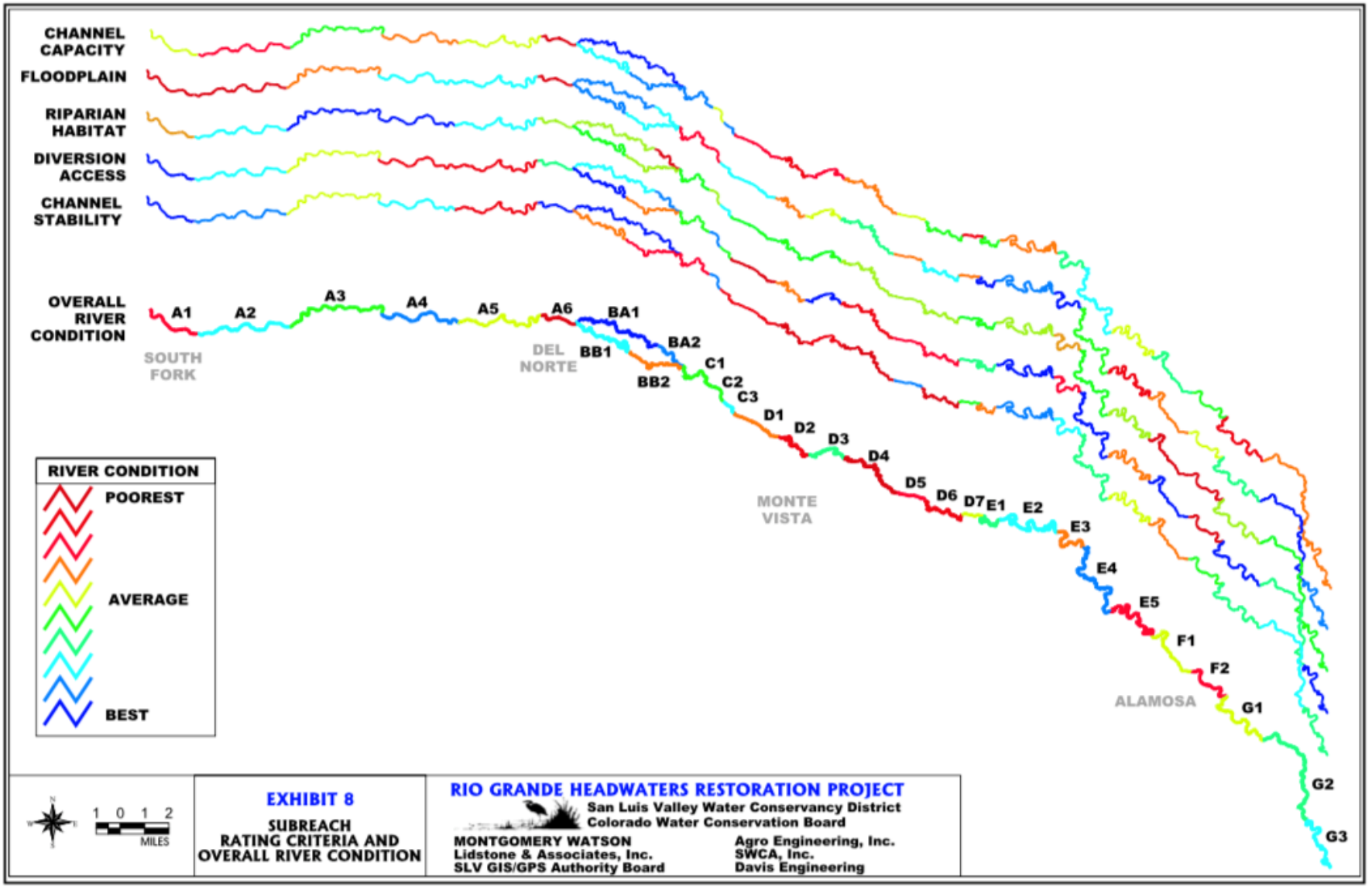
What's the Problem? - Infrastructure

- Poorly functioning and high maintenance diversion structures
- Fragmented aquatic habitat
- Sediment and debris buildup
- Lack of recreation access

What's the Problem? – Upstream Watersheds

- Wildfire Impacts
- Widespread Beetle Kill
- Water Quality Impairments

What's in the Plans? (2001 Study)

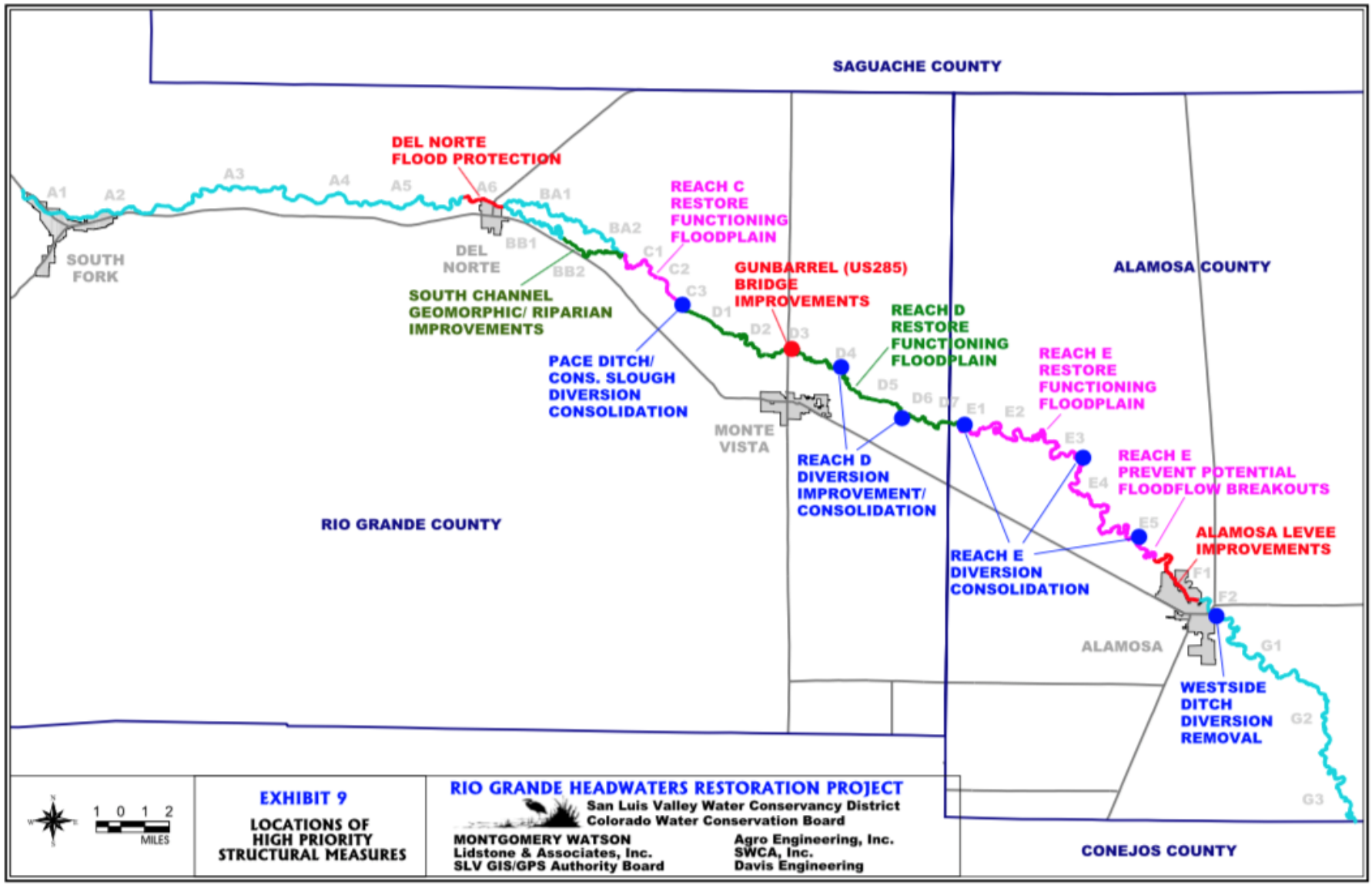


What's in the Plans? (2001 Study)

Excerpt from 2001 Study:

Centennial Ditch: (Exhibit 9-6) The channel is unstable upstream and downstream of the diversion. Upstream, the channel is migrating eastward, causing tightening of the meander on which the entrance is located. The USGS quadrangle map shows a small channel in this location. During future high flow events, it is possible that this small channel could be captured and the entrance to the diversion cutoff. Some accumulation of debris was noted during the field investigation.

What's in the Plans? (2001 Study)



Streambank Stabilization and Riparian Restoration Program - Before

Streambank Stabilization and Riparian Restoration Program - After

Instream Infrastructure Improvement

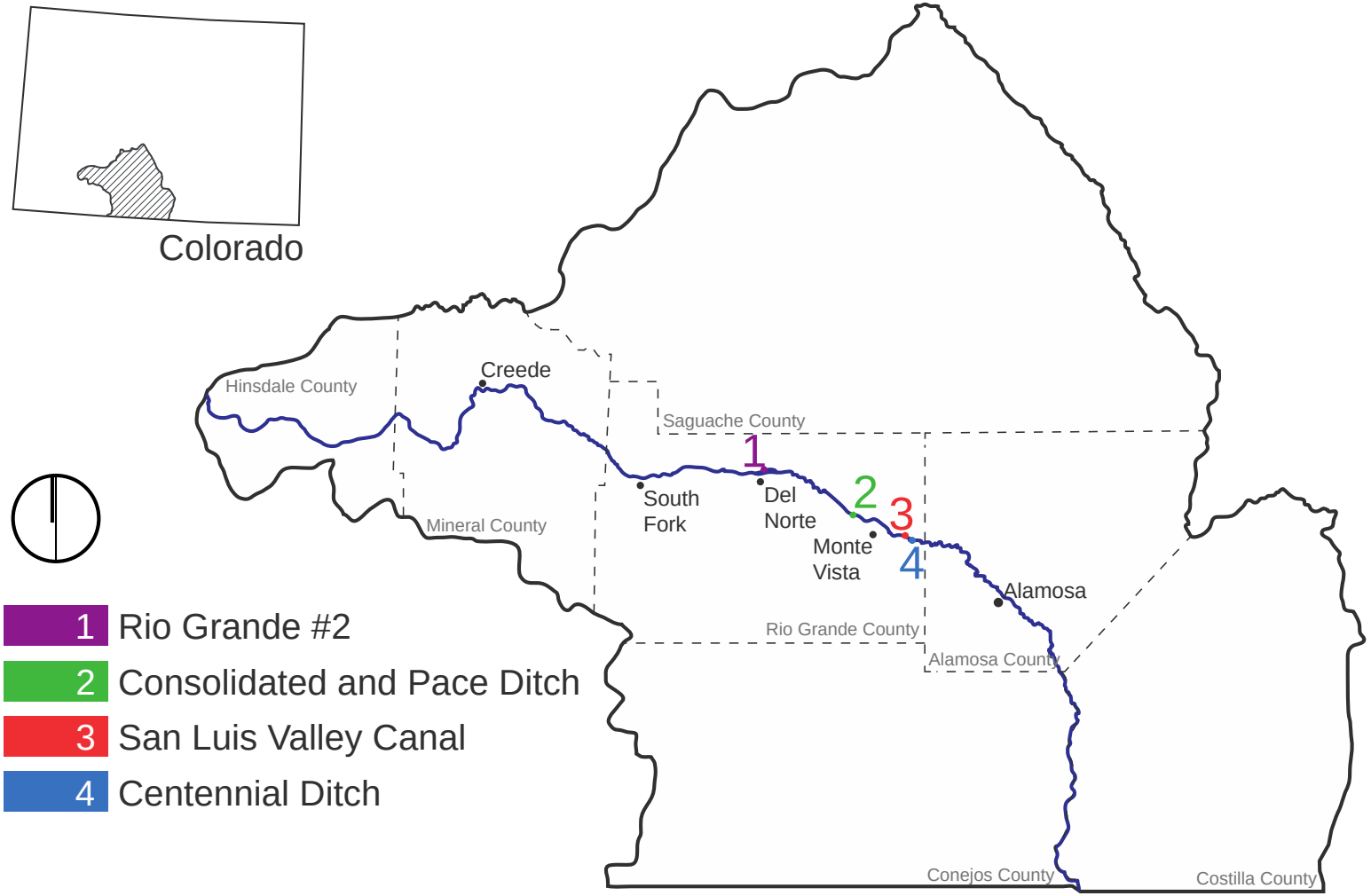
- Work with irrigators to improve diversion infrastructure, resulting in:
  - Reduced maintenance
  - Improved efficiency (automation)
  - Improved water quality
  - Enhanced aquatic habitat
  - Riparian restoration
  - Community engagement

Instream Infrastructure Improvement

Prairie Ditch Dam Replacement

Prairie Ditch Dam Replacement

Five Ditches



What's Next?
Stream Management Plans

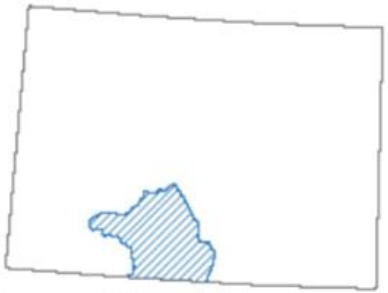
Locally Prioritized Streams:

- Rio Grande
- Conejos River
- Saguache Creek

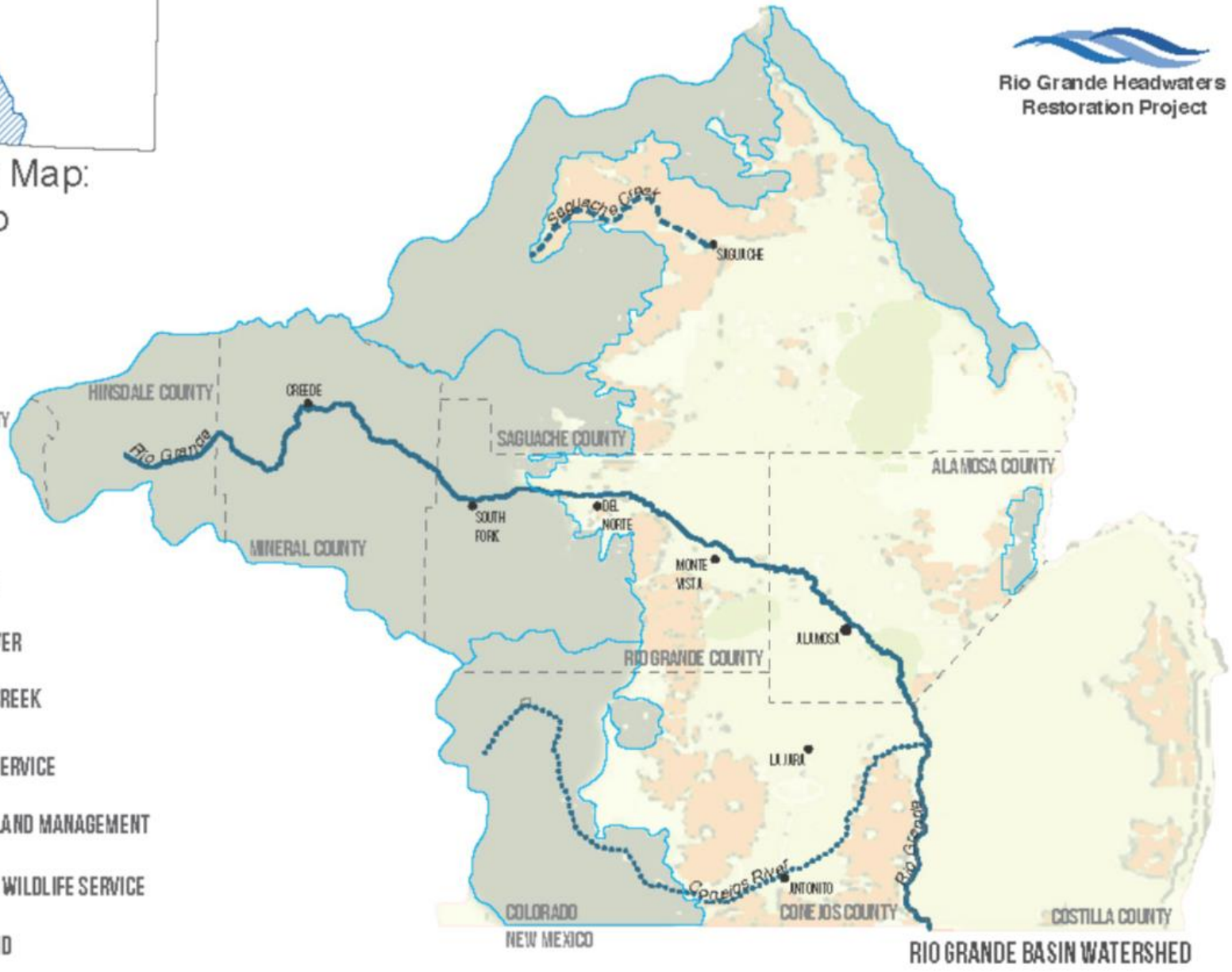
Rio Grande, Conejos, and Saguache Creek SMP

Phase 1

Rio Grande Headwaters Restoration Project



Location Map: Colorado



KEY

PROJECT REACHES

- RIO GRANDE
- CONEJOS RIVER
- SAGUACHE CREEK

- US FOREST SERVICE
- BUREAU OF LAND MANAGEMENT
- US FISH AND WILDLIFE SERVICE
- PRIVATE LAND

Engage partners, collect and summarize data, develop and implement projects that improve water management and river conditions.

Objectives

- **Maintain and build on the coalition of community partners** engaged in stream management planning through frequent and robust stakeholder engagement throughout the project.
- **Summarize and obtain information** regarding the biological, hydrological, and geomorphological condition of identified stream reaches in the Rio Grande watershed.
- **Define and prioritize environmental, recreational, and community values**.
- **Develop goals** to improve flows and physical conditions needed to support values.
- **Outline actions to achieve measureable progress** toward maintaining or improving goals.
- **Identify opportunities and constraints for implementation of projects**, and additional data needed to inform project development.

Tasks and Deliverables

- **Task 1: Stakeholder Engagement**

Maintain existing interest and continually build engagement in stream management planning by facilitating frequent and open conversations with diverse interests in the Rio Grande Basin.

- **Task 2: Summarize Existing Information**

Review and summarize existing relevant information regarding the physical condition of the reaches, existing watershed plans and assessments, and land management directives.

Tasks and Deliverables

- **Task 3: Biology, Hydrology, Geomorphology, and Physical Conditions Assessment**

Use targeted sampling to assess current biological, hydrological, geomorphological, and physical conditions of the study reaches.

- **Task 4: Identify and Prioritize Ecological, Recreational, and Community Values**

Utilize feedback, stakeholder engagement, data, and user surveys to identify recreation opportunities within the study reaches, summarize distribution of aquatic habitat and species, define priority ecological and floodplain functions, and determine community values.

Tasks and Deliverables

- **Task 5: Develop Goals and Identify Methods for Implementation**

Utilize data regarding the physical condition of stream reaches to **develop goals and potential methods** to improve and protect the ecological, recreation, and community values.

- **Task 6: Project Administration**

Administer the project effectively. Ensure Tasks are completed within approved costs and timelines.

Timeline

- Summer/Fall 2018 – Field data collection, summarize existing information, stakeholder engagement (throughout SMP process).
- Winter 2018/2019 – Report writing, technical team input and review, and recreational values analysis.
- Summer 2019 – Follow-up data collection.

*Final report submitted Fall 2019

Contact
Heather@slvwcd.org
(719) 589-2230