Using GIS to Protect Wilderness Quality Lands in Colorado and Beyond

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Rocky Mountain Wild
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1995 Upper Arkansas and South Platte Project (now Wild Connections) roadless inventory volunteer
2002 started studying GIS
2005 - 2008 contractor for Colorado Environmental Coalition (now Conservation Colorado) and Wild Connections
2007 – present Rocky Mountain Wild (was Center for Native Ecosystems, absorbed Southern Rockies Ecosystem Project)
Biodiversity Protection in the Greater Southern Rockies
GIS Services

Photo: Munger Creek (BLM Land with Wilderness Characteristics), Colorado, by Soren Jespersen, The Wilderness Society
Introduction
Conservation Groups

- **Statewide/Regional**: Conservation Colorado, Rocky Mountain Wild, etc.
- **National Groups**: The Wilderness Society, etc.
- **Local Groups**: High Country Conservation Advocates, San Juan Citizens Alliance, San Luis Valley Ecosystem Council, Wilderness Workshop, Wild Connections, etc.
What lands does the USFS manage?
• USFS manages 154 national forests and 20 grasslands in 43 states and Puerto Rico.
• 193 million acres managed by the Forest Service
• 14.5 million acres in Colorado (22% of Colorado’s 66.7 million acres; 20.8 million acres in California – of 101 million acres)

What lands does the BLM manage?
• Over 245 million surface acres of public land
• mostly located in the 12 Western states, including Alaska
• 8.3 million surface acres in Colorado (about 12%); 15.3 million CA (15%)
Wilderness Act:

In order to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States and its possessions, leaving no lands designated for preservation and protection in their natural condition, it is hereby declared to be the policy of the Congress to secure for the American people of present and future generations the benefits of an enduring resource of wilderness… A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain.

Photos by John Fielder
44 wilderness areas 3.8 million acres (6% of Colorado’s 66.7 million acres)
Map as of 2015 by Alison Gallensky, Rocky Mountain Wild
http://rockymountainwild.org/wilderness50th.
Hermosa Creek has been designated as wilderness since this map was created.
Why is protecting wilderness quality land important?

- Unfragmented lands support at-risk (and abundant) animals and plants.
- Current wilderness does not represent well all ecosystem types
  - Tundra, Rock & Ice: Yes
  - High elevation conifers: Yes
  - Riparian areas: so-so
  - Sagebrush steppe: Not so much
  - Prairies: Very under represented
Forest Service Roadless Area Inventories
1990s through 2012
Photo:
Mount Gunnison in the West Elk Wilderness towers over a beaver pond in the Sunset Roadless Area.
PHOTOS BY TED ZUKOSKI / EARTHJUSTICE
HTTPS://EARTHJUSTICE.ORG/FEATURES/PHOTOS-SUNSET-ROADLESS-AREA

Roadless areas must meet the size criteria:
• At least 5,000 acres
• Or adjacent to Wilderness or area recommended for Wilderness protection
Roadless Area Inventories (Citizens)

- 100s of volunteers followed strict protocols
- Slowly adopted GPS
- Marked up USGS quads and Mylar overlays
- GIS mapped roads and boundaries and locations of 1000s of photos

Roadless Area Inventories Successes

- Both the 2001 and 2012 roadless rules protect over 4 million acres of Roadless areas on national forests in Colorado.
- Over 1.2 million acres are considered upper tier receiving more protection than in the 2001 Rule.
- Pike-San Isabel National Forest
  - Mountain areas in central Colorado including the iconic Pikes Peak
  - Inventory increased from 687,694 to 774,738 acres
Bureau of Land Management Lands with Wilderness Characteristics Inventories
2010s through Present

BLM

- Instruction Memorandum (IM) 2011-154
- Conducting Wilderness Characteristics Inventory on BLM Lands – Manual 6310
- Considering Lands with Wilderness Characteristics in the BLM Land Use Planning Process – Manual 6320

When is a route a road?

- Improved and maintained (when needed)
- By mechanical means (not solely by the passage of vehicles)
- To insure ritual and continuous use (including access road…)
Photo: Wilderness Society staffer Soren Jespersen, left, works with Will Roush of partner group The Wilderness Workshop to inventory lands for wilderness characteristics. https://wilderness.org/lands-wilderness-characteristics
Map by Alison Gallensky, Rocky Mountain Wild
http://rockymountainwild.org/wild-connections-mapping-potential-wilderness-areas
LWC Inventories Successes

- Royal Gorge Field Office
  - South Park, Arkansas River Headwaters and Canyons, All of Eastern Colorado
  - BLM LWC inventory increased from 77,765 to 190,772 acres

- Little Snake Field Office
  - Far northwestern corner of Colorado
  - BLM LWC inventory increased from zero to over 500,000 acres

- White River Field Office
  - South of Little Snake Field Office
  - BLM LWC inventory increased from 80,000 to over 300,000 acres
What lands does the USFS manage?
• 11 national forests in Colorado with 7 planning units (GMUG, ARNF, PSI, Routt, RGNF, SJFN, WRNF) plus a small portion of the Manti-La Sal
• 14.5 million acres in Colorado (22% of Colorado’s 66.7 million acres)
• 4 million roadless
Plan Revision/Wilderness (USFS)

- 2012 Planning Rule
  - “15-year” Plans that go back to 1980s
- Planning Process
  - Assessment
  - Environmental Impact Statement
  - Updated Plan and Record of Decision
- Current Plan Revisions in Colorado
  - Rio Grande National Forest
  - Grand Mesa, Uncompaghre, and Gunnison (GMUG)

Wilderness Process
1. Inventory
2. Evaluation
3. Analysis
4. Recommendation

Infographic on Wilderness Process from USFS:
https://www.fs.usda.gov/detail/gmug/landmanagement/planning/?cid=fseprd570149
Plan Revision/Wilderness (Citizens)

- Local conservation organization leads process
  - San Luis Valley Ecosystem Project for Rio Grande National Forest
  - High Country Citizens Alliance (with many other groups) for GMUG
  - Gunnison Public Lands Initiative great collaborative approach for Gunnison County
- GIS used to inventory available areas (matching USFS process)
- Paid Staff and Volunteers do site visits and help evaluate and prioritize areas
- Organize in the communities to advocate for areas

Successes TBD
Map of Grand Mesa, Uncompahgre, and Gunnison (GMUG) National Forest by Alison Gallensky
http://rockymountainwild.org/gmugscoping
And see interactive map here: https://www.gmugrevision.com/maps/
Summary and Next Steps

• Citizens help agencies determine lands to protect and advocate for Wilderness status
• BLM plan updates mostly complete in Colorado
• Most National Forests in Colorado have management plans that need to be revised
• Need better ways to prioritize the identified wilderness quality areas
Photo Alison Gallensky at Browns Canyon National Monument designated 2015 combination of a BLM Wilderness Study Area and Forest Service Roadless Area. Photo by Neil Gallensky