

Attachment F
Reaches 3 and 4: Current Management, Status and Concerns
Dove Creek Pumps to Joe Davis Hill,
Joe Davis Hill to Big Gypsum Valley Bridge

1990 Dolores River Corridor Plan
Overall Goals and Objectives

1. Protect and enhance the natural and cultural resources of the Corridor while allowing compatible uses.
2. Maintain or improve the existing quality of riparian and wildlife habitat by identifying and implementing management opportunities and strategies. Determine the present condition and ecological structure of riparian and aquatic communities. Identify areas which provide unique habitat features for species considered relic or unusual to region.
3. Provide full protection to threatened and endangered species. Determine distribution of and identify all areas that provide habitat for federally listed, state listed, and BLM sensitive species to ensure the continued existence of such species and the conservation of their habitats.
4. Coordinate with CDOW for management of wildlife and fisheries resources within the corridor.
5. Protect and enhance cultural resource values by identifying significant cultural resources and paleontological sites and performing necessary documentation. Identify and implement appropriate management actions.
6. Conduct planning for the Dolores River within a “regionalized system of rivers” context.
7. Maximize availability of impounded water released for river management opportunity by coordinating with DWCD.
8. Provide for recreational opportunities in the fall and winter seasons in addition to standard spring/summer activities.
9. Maintain primitive and semi-primitive experience opportunities by limiting and/or distributing visitor use and commercial guide/outfitter use.
10. Protect those public lands which are utilized intensively as recreational sites by exploring the need for and feasibility of withdrawing from mineral entry.
11. Develop recreation sites as prescribed in the Dolores Project ES, the Dolores River Downstream Site Report (as modified) and in accordance with BLM's MOU with BOR and USFS.
12. Minimize potential conflicts with recreational use of public lands by working closely with private landowners and users. Maintain options to develop BOR funded sites if private enterprise chooses to close area to public.
13. Ensure consistent and/or complementary management of adjacent lands, especially in terms of commercial use and facility maintenance/management by coordinating with the US Forest Service and the Lone Dome Mgt. Plan

**Reaches 3 and 4:
Wild and Scenic Eligibility Classifications**

Reach 3 and Reach 4 to Disappointment Creek = “Scenic”
Lower Reach 4 (Disappointment Creek to Gypsum Valley Bridge) = “Recreational”
Summit Canyon (lower 12.15 miles) = “Scenic”
McIntyre Canyon (lower 5.82 miles) = “Scenic”

Recreational: This type is most impacted by human activity. It is readily accessible by roads or railroads and may have had some impoundment or diversion in the past.

Scenic: This type has had no impoundments. It is largely primitive and undeveloped. Nearby roads generally cross it and do not run parallel to it.

Wild. This is the most natural WSR. There are no dams or impoundments. The water is unpolluted and the shoreline is primitive. Generally there are only trails in the corridor, not roads.

Outstandingly Remarkable Values (ORVs)

- ORV = a unique, rare or exemplary feature that is significant at a regional or national scale.
- Eligible streams = free-flowing and possess one or more ORV.

Reaches 3 and 4 ORVs

Recreation ORV:

- Rafting

Archeology ORV

Fish ORV

- Roundtail Chub

Ecological ORV

- NM Privet
- Eastwood’s Monkey flower (and McIntyre Canyon)
- Canyon Tree Frog (and Summit Canyon)

Scenery ORV

- Old Growth Ponderosa groves, cliffs and linear canyons)

Geology ORV

- Linear canyons

Reach 3

DRD Science Summary

Overview

- 9 miles
- Steep gradient.
- Large boulders.
- Confined by steep canyon walls, broader downstream
- 2-track dirt road provides access throughout reach.
- Ponderosa pine and Boxelder dominate. upstream.
- Some old cottonwoods on river terraces.
- Valley widens and ponderosa declines downstream.
- Willow and sedge dominate stream banks downstream, with P-J on terraces.
- Cottonwoods not a major part of the main channel plant community.
- Snaggletooth Rapid is major recreational boating attraction.
- Desert bighorn sheep on canyon walls and rims

Summary of Current Understanding

- River mechanics
 - Current flow management maintains pool scour and sediment transport.
 - Sediments will accumulate in pools over prolonged non- or low- spill periods.
- Riparian
 - Non-spill periods encourage development of dense sedge/grass/willow along banks.
 - Main threats: non-native weeds in understory, reduction in wet meadow habitats.
- Warm Water Fishery
 - Declining populations of native sucker species (flannelmouth and bluehead), highly variable pops. of roundtail chub.
 - Roundtails show poor size class structure.
 - Increasing populations of non-native green sunfish (esp. 2000-2004)
 - Periodic spills may: decrease threats from non-native sunfish and improve habitat for roundtail chubs by scouring pools.
- Cold Water Fishery
 - Reach is transition from coldwater to warm water .
 - Some reproducing brown and rainbow trout may persist in deep pools.
 - Brown trout decrease as you move downstream

Top Research Needs:

- When and where are native fish spawning?
- What are the temperature and/or flow cues that trigger spawning?
- What are the effects on non-native predators on natives?
- What is the downstream extent of viable cold water fishery?
- What is the extent of non-native weed invasion in riparian?

Recent Partner Efforts:

- 2007 CDOW fish sampling just below Dove Creek Pumps.
- 2009 Dolores River Restoration Partnership Inventory and Implementation

Reach 4

DRD Science Summary

Overview

- 38 miles
- Low gradient
- Upstream banks dominated by dense willows, sedges, and some silver buffalo berry; sagebrush, rabbitbrush, and greasewood on terraces.
- Phragmites and tamarisk increase downstream.
- Some old cottonwoods on river terraces.
- Native warm water fishery; Very few brown trout.
- 3 subreaches:
 - Joe Davis Hill to Disappointment Creek (confined and mainly colluvial with bedrock controls.
 - Disappointment creek to Big Gypsum Valley (mainly confined, but heavily affected by sediments from Disappointment
 - Big Gypsum Valley to Gypsum Valley Bridge: alluvial

Summary of Current Understanding

River Mechanics:

- Current flow management maintains pool scour above Disappointment.
- Below Disappointment, significant accumulation of fine sediment during non-spill periods impairs habitat.
- The combination of high fine sediment loads from tributary watersheds (esp. Disappointment and Big Gypsum Valleys) and vegetation that aggressively colonizes fresh sediment (i.e. willows, phragmites, and tamarisk) has narrowed and entrenched the active channel through alluvial portions of Reach 4.

Riparian:

- Relatively stable above Disappointment Creek (willow/sedge and buffalo berry)
- Below Disappointment Creek, channel narrowing and entrenchment reduces diversity, and increasing tamarisk and understory knapweed threatens native communities.
- Remnant cottonwoods not dominant and disconnected from river dynamics.
Question: were they native?

Cold Water Fishery:

- Not considered cold water fish habitat.

Warm Water Fishery

- Population viability of bluehead sucker in doubt.
- Flannelmouth and roundtail populations fluctuate with few reproducing adults.
 - Surveys indicate a prevalence of non-native aquatic species.
- Periodic spills improve habitat for natives and reduce threats from non-natives (channel catfish, black bullhead, etc.)

Top Research Needs:

- When and where do native fish spawn?
- What temperature and/or flow cues trigger spawning?
- What are the effects of non-native predators on natives?
- What is the extent of non-native plant invasion in riparian, esp. tamarisk.
- What can be done to improve habitat for native fish?
- What are the sources and effects of sediments contributed by Disappointment Creek?
- Is cottonwood a historic component of the riparian community?

Recent Partner Efforts:

- 2007 CDOW fish sampling
- 2009 Dolores River Restoration Partnership Inventory and Implementation Plan

Big Gypsum Study Site

Why Big Gypsum at Dolores?

- Alluvial therefore River Mechanics, Riparian and Native Fish habitat are more sensitive to flows
- Cottonwoods, NM privet, tamarisk, knapweed
- 5 sub-reaches are representative
- Long-term native fish monitoring
- Easily accessible

Key Questions:

- Given changes in flows, is the channel still dynamic? Is it down-cutting?
- What flows are necessary to inundate the floodplain OR what areas are still able to be flooded?
- Does reduction of Tamarisk result in changes in riparian vegetation, soils, and/or channel dynamics?
- Is soil salinity limiting recruitment of native species?
- What flows have facilitated the establishment of cottonwoods?
- Are cottonwoods still getting established and maturing since construction of McPhee?

2008

100 permanent sample sites established across Study Site

- 100 random points within 5 sub-reaches (20 points per sub-reach)
- coordinates located with GPS unit and mapped in ArcView.
- Photos taken to document soil, vegetation, and location relative to river.
- Will allow tracking of changes in vegetation, soil salinity, etc. in relation to flows, inundation and river movements

Tamarisk sites identified and mapped into ArcView

- Treatment sites identified

2009

- Vegetation identified and measured at each of the 100 sample sites.
- 2 permanent cross sections established to track channel shape and movement over time.
- Aerial photos are now being used to identify vegetation changes along the riparian corridor over time.
- Cottonwoods cored to identify age and correlate establishment with known flows.

Reaches 3 and 4:

Management Questions for Consideration

(forthcoming from the DPLO)

Reach 3 and 4

Current Management Objectives (1990 Plan)

Reach 3 and Reach 4 to Disappointment Creek

- Provide a predominantly natural or naturally appearing environment. Human evidence present but generally subtle.
- Motorized vehicle use is permitted on designated routes.
- Concentration of users low to moderate.
- Group encounters should not normally exceed 10 per day.
- Road, trails, and interpretive facilities stress the natural environment in their design and be the minimum necessary .
- Minimize/reduce the impacts on the natural environment of any proposed surface disturbing projects.
- Recreational activities: car camping, river running , fishing, picnicking, hunting, hiking, mountain bike riding, photography, horseback riding, nature study, and viewing scenery.
- Manage consistent with criteria used to recommend “Scenic” eligibility classification status.
- Frequency of managerial contact with visitors is presently low.
- Specific wildlife objectives:
 - Identify all riparian and key wildlife areas which are in less than good condition. Initiate management actions to improve all areas in less than good condition whenever feasibly.
 - Monitor all key areas to maintain an overall condition class rating of good.
 - Determine the present distribution of aquatic and macroinvertebrate species. Develop and implement actions to enhance conditions whenever possible.
 - Monitor selected aquatic species to determine which factors may be influencing habitat conditions or restricting species from maintaining viable populations.

- Survey and map all areas which provide unique habitat features for species of plants and animals considered as relic or unusual to this area of Colorado.
- Reestablish river otters and bighorn sheep along the Dolores River. (1985 RMP)
- Any mineral leasing will include no-surface occupancy stipulations. (1985 RMP)

Reach 3 and 4:

Current Management Objectives (1990 Plan)

Reach 4 from Disappointment Creek to Gypsum Valley Bridge

- Provide a naturally appearing environment with human evidence subordinate to the natural scene.
- Concentration of users is moderate; encounters with other users commonplace.
- Modification and utilization of natural resources evident, but generally harmonize with the natural environment.
- Coordinate with landowners near Slick Rock to ensure that the public will always have opportunity for river access in the Slick Rock locality.
- Location surface disturbing activities would be favored in these units over placement in Reaches 2, 3 and 5.
- Motorized vehicle use is permitted.
- Recreational activities: river running, car camping, ORV activities, mountain biking, picnicking, hunting, hiking, photography, viewing scenery, nature study, and horseback riding.
- Manage consistent with criteria used to recommend “Recreational” eligibility status per findings in the 1976 Dolores River Wild and Scenic Rivers Study Report.
- Frequency of managerial contact with visitors is presently low.
- Reestablish river otters and bighorn sheep along the Dolores River. (1985 RMP)
- Big Gypsum Valley to Gypsum Valley Bridge: no-surface-occupancy stipulations (1985 RMP)

Rafting

Significance

- One of most popular and beautiful rafting areas in SW CO. Contains Class IV rapid.
- Regionally significant for boating based on actual use and interviews with commercial providers.

Goals and Objectives Specific to Reach

Reach 3 and Reach 4 to Disappointment Creek.

- Provide predominantly natural environment.
- Group encounters should not normally exceed 10 per day.

- Frequency of managerial contact with visitors is presently low.

Reach 4 from Disappointment Creek to Gypsum Valley Bridge

- Provide a naturally appearing environment with human evidence subordinate to the natural scene.
- Coordinate with landowner near Slick Rock to ensure that the public will always have an opportunity for river access in the Slick Rock locality.
- Frequency of managerial contact with visitors is presently low.

Current Management (1990 Plan)

- Resource Protection
 - Require all recreationists pack out their trash and use porta-potties.
 - Require fire pans and pack out ashes. No collecting of firewood, or driftwood for fires.
 - Continually monitor the river corridor during boating season; periodic patrols the rest of the year.
 - Implement temporary closure, rehabilitation, or rotation of use for campsites suffering abuse/resource damage.
 - Control non-native invasive plants along the river.
- Visitor Services
 - Intensive education/information to get voluntary compliance with carrying capacity guidelines.
 - Provide the Dolores River hot-line service and periodic news releases during boating season.
 - Cooperative agreements with local search/rescue groups to provide prompt, efficient attention to emergencies.
 - Require all boaters to register at put-ins.
 - Limit groups floating from Slick Rock or Gypsum Valley to 16 persons.
 - 1 WSA float thru trip (launching above Slick Rock) of 16-25 persons allowed per week.
 - Campsites “first come/first serve”; with voluntary sign-up for campsites at river registers.
 - Post June 19, groups limited to 12 persons to enhance fishing and solitude.
- Permits/Allocation of Use
 - Commercial outfitters permitted. Private boaters permits not required.

Reach 3 and Reach 4 to Slick Rock

Whitewater Season (April 1-June 18)

- Guaranteed daily total commercial allotment = 3 launches. Commercial launches assigned BLM ; allocated among 18 multi-year outfitters and 18 annual outfitters. No outfitter assigned >1 launch on any day.
- 2 daily common pool launches available.
- If resource damage occurs or carrying capacity limits are exceeded >20% of the days of the use season, private permits to be initiated.

Low Water Season (June 19-March 31)

- Guaranteed daily commercial allotment = 1 launch. Commercial launches assigned by BLM.

Reach 4 from Slick Rock to Gypsum Valley Bridge:

Whitewater Season (April 1-June 18)

- Total weekly commercial allotment = 4 launches, with no >1 launch per day. Commercial launches assigned BLM ; allocated among 18 multi-year outfitters and 18 annual outfitters. No outfitter assigned >1 launch on any day.
- 3 daily common pool launches available.
- If resource damage occurs or carrying capacity limits are exceeded >20% of the days of the use season, private permits to be initiated.

Low Water Season (June 19-March 31)

- Guaranteed weekly commercial allotment = 4 launches, with no >1 launch per day. Commercial launches assigned by BLM.

Rafting

Current Management (1990 Plan) continued.

- Permits/Allocation of Use
 - Commercial outfitters permitted. Private boaters permits not required.

Reach 3 and Reach 4 to Slick Rock

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Low Water Season (June 19-March 31)

- Guaranteed weekly commercial allotment = 4 launches, with no >1 launch per day. Commercial launches assigned by BLM.
- Land Tenure Adjustments

Reach 4

- If possible acquire private property immediately upstream from the Slick Rock bridge (only if current access point becomes inaccessible)
- Acquire an easement for foot traffic up McIntyre Canyon.
- Bureau of Reclamation /Dolores Water Conservancy District current flow management:
 - Fill reservoir when possible.
 - Manage excess supply for rafting
 - Provide a minimum raftable release of 800cfs as long as possible
 - Time peak cfs over Memorial Day
 - Managed spill ends when inflow = demand.
 - Use ramping to avoid stranding rafters

Rafting

Status/Trends

- In 2008 (good rafting year):
 - Reach 3: Dove Creek Pumps had 74 launches.
 - Reach 4: Slick Rock had 139 launches, Gypsum Valley had 114.
 - Several reports/complaints of drunkenness, noise and late nights.
 - Several reports by large commercial groups of small groups using bigger sites and not being able to find commercial campsites.
- Changes in views of what constitutes a rafting day: BLM counts a rafting day as flow at or above 800cfs, some private rafters define a rafting day as 1000cfs with 2 weeks notice, etc.
- 16 commercial multi-year permits. Down from 31 in 1990 and 18 after implementation of 1990 plan. Surpasses demand.
- Level of river use very related to predictability (i.e. 2005, 2008 good years for predictability = high spill years).
- Campsites tend to have time to recuperate (within a season and between seasons). Some even disappear due to changes in channel and changes in vegetation.
- Summer 2009, BLM cleared pull-in above Snaggletooth Rapid – space for 6 boats.

Problems/Concerns

- Social Carrying Capacity of the river: people being nice and ability to find campsites. Can reach “saturation” on weekends and holidays in a predictable flow year and in certain places.
 - Complaints about loud parties and drinking, fireworks, and dogs running loose.
- Small groups using limited number of large campsites best suited to large (16 people) commercial trips.
- Historically, the attempt is made to provide the greatest flows on Memorial Day weekend. Scheduling peak releases prior to Memorial Day may help to alleviate overcrowding and the associated social and environmental impacts on Memorial Day (Ryan 2008).

Reach 3:

- Urge people not to camp or lunch right below Snaggletooth – congested “recovery” area (R. Ryan)
- Desire to keep open the CR that goes through corridor across public lands in Dolores Cty into San Miguel Cty. Maintenance ends about 1 mile below Snaggletooth. (January 2009 LDPWG)
- The concern is for vehicle access and emergency rescues.
- The opportunity is to provide vehicle access for rescues and recreation.
- Need for a safe place to take out before Snaggletooth January 2009 LDPWG Meeting

Reach 4:

- Groups putting in at Slick Rock make it just to WSA and there are very few campsites.
- Very few campsites between Slick Rock and the WSA.
- People camp on private land along the river. Who is liable for firefighting costs if they start a fire? Maybe there could be an agreement to limit liability for the private landowner. (January 2009 LDPWG).
- Slickrock Launch Site (9/12/09 LDPWG Field Trip to Slickrock):
 - Landowners have problems here with trash, human waste, vandalism.
 - Owners have put in their own money to rectify some problems
 - Many problems are not necessarily from rafters but motorists using it as a park or roadside stop

Archeological Resources

Significance

- Rare and exemplary prehistoric archeological sites.
- At least 11,000 years of connection between the Dolores River and humans.

Goals/Objectives Specific to Reaches 3 and /or 4

- None.

Current Management

General

- Identify and evaluate all significant cultural resources along river and where access brings increased recreation.
- Protect from damage (e.g. visitation, trampling, camping, removal, or vandalism).
- Protect from effects of erosion or fluctuations in river flow.
- Develop and interpret for public education, enjoyment, and resource protection.
- Periodically monitor to assess cumulative impacts and track site condition.
- 1990 Corridor Plan outlined the following **Interim** management measures, pending completion of field work for an intensive inventory and development of a Cultural Resource Project Plan to present “specific site management prescriptions” and a Cultural Resource Synthesis report.

Reach Specific

Reach 3:

- A potential stratified prehistoric rock-shelter needs to be tested to determine cultural use and affiliation. Use levels here are low; however, a high-use campsite lies nearby within easy walking access.

Reach 4

- A historic mining habitation (5SM1979) has been pillaged in the past for wood and household furnishings. The site currently retains most of its integrity, however, and should be interpreted to give a perspective on historic European use of the river corridor. The theme would be vanadium mining and its effects on the river corridor and regional settlement.

Archeological Resources

Status/Trends

- Reach 3 (as of Toll 1977)
 - Sites are sparse.
- Reach 4 (as of Toll 1977)
 - Joe Davis Hill to Slick Rock: 16 sites.
 - Slick Rock to Big Gypsum Valley: 12 sites in open portions of canyon.
 - Big and Little Gypsum Valleys: 15 open and rock shelter sites.
- Cultural Resource Inventory, Cultural Resource Project Plan and Cultural Resource Synthesis report have not been completed due to lack of sufficient funding.
- Funding now secured to complete the field surveys, field work began this season.

Problems/Concerns

- Impacts from recreationists and impacts from cattle.
- Disappearance of artifacts from both major and minor sites: at some sites, all the surface artifacts listed in site documents from 10 years ago have now vanished (McMillan 2009).
- Limited funding.
- Lack of thorough systematic survey (only ~3.6% of the 91 miles of Reaches 1-5 (McMillan 2009)).
- Lack of consistent monitoring (for many sites the most recent documentation was Toll 1977)

Roundtail Chub

Significance

- Absent from ~45% of historical range in upper Co River Basin (Bezzarides and Bestgen 2002)
- BLM Sensitive Species, State Species of Special Concern.
- Range-wide Conservation Agreement and Strategy by 5 States completed in 2006
- June 2009: USFWS found ESA listing of distinct Lower Basin population Warranted but Precluded for listing under the ESA.

Goals/Objectives Specific to Reach

Reach 3

- BLM – none specific to reach

Reach 4 to Disappointment Creek

- Identify all riparian and key wildlife areas which are in less than good condition. Initiate management to improve those sites. Monitor to maintain good condition.
- Determine the present distribution of aquatic species. Develop /implement actions to enhance condition.
- Monitor selected aquatic species to determine factors influencing habitat condition or restricting maintenance of viable populations.
- Survey and map all areas which provide unique habitat for species of plants and animals considered as relic or unusual to this area of Colorado.

Current Management

General

- Inventory aquatic and riparian habitats to the Montrose District Boundary
- Identify essential wildlife habitat areas throughout corridor; monitor to ensure that downward trends do not develop.

Specific to Aquatic Wildlife

- Inventory fishery habitat.
- Establish permanent aquatic habitat monitoring sites. At least 2 sites in warm water sections. Monitor at least once every 5 years.
- Develop agreement with CDOW to sample fish pops. in the Dolores every 5 yrs

Allow no vehicle use from approx. 1 mile downstream of Snaggletooth Rapid to ~1 mile upstream from Disappointment Creek between Feb. 1 and June 30.

Status/Trends

- Valdez et al. (1992) reported no significant changes in species composition between 1990 and 1991 sampling and similar surveys done in 1981. Concluded that the fish community remained relatively stable over that 10 yr. period (DRD Core Science Report).
- 1990 and 1991 Electrofishing and gillnetting:
 - Reach 4 below Disappointment and Reach 5.
 - Flannelmouth sucker ~40 -45% of the catch
 - Bluehead sucker ~5-8% of the catch
 - Roundtail chub ~ 30% of the catch.
 - Reach 2, 3 and 4 to Disappointment.
 - Flannelmouth ~ 20% of the catch.
 - Bluehead sucker ~ 5-8% of the catch
 - Roundtail chub ~ 30% of the catch
- Spring 2007 and 2008 electrofishing:
 - Reach 3 just below Dove Creek Pumps (walking surveys) (see chart)
 - 1 YOY smallmouth bass captured; 1st recorded at this site
 - Reach 4 to Disappointment

- Very few natives captured.
- Most abundant fish were smallmouth bass and brown trout.

Problems/Concerns

- Difficult to monitor: Boat electrofishing is a poor estimator of RTC because relatively small and difficult to catch.
- Where are they spawning and what flows support success?
- Shortened spills and reduced baseflows are a concern. Water is the key to suitable habitat (deeper pools) and appropriate spawn timing (early summer).
- Fine sediments contributed by Disappointment may not moved out in non or low spill years, causing degradation of warm water fish habitat downstream.
- Increase of and predation by non-native fishes (e.g. small mouth bass) especially in Reach 4.
- Declining native fish species in Reach 4.
- Potential for future federal Endangered Species Act listing.
- Desire to keep open the CR that goes through corridor across public lands in Dolores Cty into San Miguel Cty. Maintenance ends about 1mile below Snaggletooth. (January 2009 LDPWG)

New Mexico Wild Privet

Significance

- G2 S2 rank (www.natureserve.org): Only known to occur in CO and UT. CO: only in Dolores River Basin.

Goals/Objectives Specific to Reach (1990 Plan)

Reach 3 and Reach 4 to Disappointment Creek:

- Identify all riparian and key wildlife areas which are in less than good condition. Initiate management to improve those sites. Monitor to maintain good condition.
- Survey and map all areas which provide unique habitat for species of plants and animals considered as relic or unusual to this area of Colorado.

Reach 4 below Disappointment Creek:

- none.

Current Management (1990 Plan)

General

- Inventory all riparian habitat.
- Initiate restoration activity on all degraded sites with good restoration potential.
- Apply stipulations and mitigating measures to all BLM actions to prevent /mitigate habitat degradation.
- Identify essential wildlife habitat in the corridor and monitor to ensure downward trends in condition do not develop.
- Cooperate with the recreation program to develop interpretive material and signs.

Specific: Riparian

- Evaluate and prioritize for future mgt. actions and monitoring.

- Monitor key riparian sites.
- Change management on all sites showing downward trend.
- Work with recreation program to inventory and document disturbance at heavily used sites.
- Determine acceptable levels and kinds of use at each site.
- Use appropriate management actions to improve riparian condition (e.g. designating campsites, trail closures).
- Manage grazing to maintain or improve the condition of the riparian community.

Status/Trends

- Common,
- Trends in condition/extent unknown.

Problems/Concerns

- Requires high water table (Lyon 2006)
- Changes in water table (Lyon 2006)
- Invasives (tamarisk and Russian knapweed)
- Concern from February 2009 LDPWG Meeting:
 - Does the New Mexico privet need to be considered for restoration, as cottonwoods have been? The privet provides good bird habitat. Its fruits are eaten by bears, ringtails and coyotes

Eastwood’s Monkey Flower

Significance

- G3S1 (www.natureserve.org)
- Only found in canyon lands of the 4 Corners on Gunnison, Dolores, Colorado, and San Juan Rivers
- Known occurrences: CO ~ 8 with ~5000 plants; AZ ~ 5; UT ~10; Navajo ~1 discovered in 2002.
- BLM Sensitive Species

Goals/Objectives Specific to Reach (1990 Plan)

Reach 3 and Reach 4 to Disappointment Creek

- Survey and map all areas which provide unique habitat features for species of plants and animals considered as relic or unusual to this area of Colorado

Reach 4 Below Disappointment: None.
 McIntyre Canyon: None.

Current Management

- No specific management program.

Status:

Reach 3: no known occurrences

Reach 4: no known occurrences

McIntyre Canyon: 1 known occurrence, in good condition as of last monitoring (pre-2006) (CNHP 2006)

Trends:

- Unknown
- “Many hanging gardens in the Navajo Nation have been documented to be drying out; while this species is among the longest lasting plants in drought-stressed hanging gardens, continued drying will eventually cause extirpations (D. Roth, pers. comm. 2008). www.natureserve.org/

Problems/Concerns

- Difficult to access for monitoring.
- Drying of seeps supporting hanging gardens. Activities such as mining, energy development, water projects etc. could affect water supplies to habitat (www.natureserve.org).
- Invasive species, introduction on hiker’s boots, etc.
- Disturbance of gardens by hikers climbing up washes and by subsequent erosion.
- There is active uranium leasing in the vicinity of this stream. (SJPL DEIS 2008).
- The oil and gas potential is high (SJPL DEIS 2008).
- Gravel and 4WD roads along the canyon. (SJPL DEIS 2008)

Canyon Tree Frog

Significance

- Breed in canyon bottom pools often bounded by solid rock.
- Colorado Species of Special Concern
- BLM Sensitive Species
- 2 out of the 6 occurrences known from McPhee to Bedrock (as of 2006 CNHP) occur in tributary canyons to Reach 4.

Goals/Objectives Specific to Reach

Reach 3 and Reach 4 to Disappointment Creek

- Identify all riparian and key wildlife areas which are in less than good condition. Initiate management to improve those sites. Monitor to maintain good condition.
- Determine the present distribution of aquatic species. Develop/implement actions to enhance conditions.
- Monitor selected aquatic species to determine factors influencing habitat conditions or restricting maintenance of viable populations.
- Survey and map all areas which provide unique habitat for species of plants and animals considered as relic or unusual to this area of Colorado.

Reach 4	Below Disappointment:	none
	Summit Canyon:	none

Current Management (1990 Plan)

General

- Inventory aquatic and riparian habitats .

- Identify essential wildlife habitat areas throughout the corridor and monitor them to ensure that downward trends in condition do not develop.

Specific to Aquatic Wildlife

- Establish permanent aquatic habitat monitoring sites. At least 2 sites in warm water sections. Monitor at least once every 5 years.

Status: Reach 3: No known occurrences.
 Reach 4: Above Disappointment: 1 occurrence in unnamed side canyon.
 Summit Canyon: 1 occurrence.

Trend: Unknown. Global Short Term Trend: No quantitative data but likely stable. (www.natureserve.org)

Problems/Concerns

- Specialist with narrow environmental requirements: needs temporary or permanent pools www.natureserve.org.
- Amphibians can be sensitive to contaminants in water.
- There is active uranium-leasing in the vicinity of this stream (SJPL DEIS 2008).
- The oil and gas potential is high (SJPL DEIS 2008).
- Livestock grazing occurs within the canyon (SJPL DEIS 2008).
- There are primitive roads and ATV trails within the river corridor. (SJPL DEIS 2008)

Geology

Significance

- Dramatic Cretaceous (dinosaur age) sandstone cliffs.
- Northerly flow is rare within the region and documents the uplift of Colorado Plateau and subsidence of the Paradox Basin.
- Action of the Dolores River to penetrate the caprock of the present-day cliffs and the linear flow pattern of its canyon demonstrate unusual rapidity of the area’s tectonic processes and the speed of the corresponding downward cutting of the river.

Goals/Objectives

- Conduct paleontological overview of geological formations to determine scientifically important and interpretable fossil remains. Remains that are significant scientifically would be protected from unauthorized collection.

Current Management

Reach 3 and 4 to Disappointment Creek:

- Any mineral leases will include no-surface-occupancy stipulations.
 - Control incompatible mineral exploration/extraction at Mountain Sheep Point (~Dove Creek Pumps).
- No commercial gravel removal operations .

Reach 4 below Disappointment:

- Any mineral leases between Big Gypsum Valley and the Gypsum Valley Bridge will include no-surface –occupancy stipulations.
 - Control incompatible mineral exploration/extraction at Slick Rock and Gypsum Valley recreation sites .
 - No commercial gravel removal operations .

Status/Trends

- Sheer-walled Wingate Sandstone, Kayenta Formation, and Navajo Sandstone with some Entrada Sandstone; and Morrison Formation above (Toll 1971)
- Geologic time...

Problems/Concerns

- Any?

Scenery

Significance

- Scenic values enhance and drive recreation.
- Reaches 3 and 4: Cliffs, canyons
- Upper Reach 3: Groves with old growth Ponderosa

Goals/Objectives Specific to Reaches

Reach 3 and Reach 4 to Disappointment Creek: Manage to provide a predominantly natural or naturally appearing environment (VRM Class II)

Reach 4 from Disappointment Creek to Gypsum Valley Bridge: Manage to provide a naturally appearing environment with human evidence subordinate to the natural scene (VRM Class III)

Current Management (1990 Plan)

- No commercial gravel removal operations .
- No motorized watercraft .

Reach 3 and 4 to Disappointment Creek:

- Any mineral leases will include no-surface-occupancy stipulations.
 - Control incompatible mineral exploration/extraction at Mountain Sheep Point (~Dove Creek Pumps).
- OHV use on designated routes only.
- Coordinate with the town of Dove Creek to repaint the existing pump station structures so as to minimize visual contrast with the natural surroundings.
- If possible acquire the John Black [now James Ranch] property near the Disappointment Crk. Confluence.
- Close road to vehicles from approx. 1 mile downstream of Snaggletooth Rapid to ~1 mile upstream from Disappointment Creek between Feb. 1 and June 30.

Reach 4 below Disappointment:

- Any mineral leases between Big Gypsum Valley and the Gypsum Valley Bridge will include no-surface-occupancy stipulations.

- Control incompatible mineral exploration/extraction at Slick Rock and Gypsum Valley recreation sites.
- Disappointment to Big Gypsum Valley: OHV use on designated routes only.
- Pursue acquisition of scenic and/or conservation easements from willing landowners between Slick Rock and the Gypsum Valley Bridge

Status/Trends

Reach 3: No significant changes.

Reach 4: No significant changes on public lands

Problems/Concerns

Reach 3:

- Desire to keep open the CR that goes through corridor across public lands in Dolores Cty into San Miguel Cty. Maintenance ends about 1 mile below Snaggletooth. (January 2009 LDPWG)

Reach 4

- Mineral leases between Disappointment Creek and Big Gypsum Valley do not include no-surface occupancy stipulations (as of 1990 Plan).
- Active uranium leasing in the vicinity below Disappointment. (2008 SJPL DEIS)
- Concerns about private lands access and potential BLM road access restrictions around Slick Rock.