LOWER DOLORES WORKING GROUP
Meeting 3 Summary
Feb. 17, 2009

Note: Presentations, documents, meeting summaries, agendas and other information related to the Lower Dolores Working Group process are posted at http://ocs.fortlewis.edu/drd/. There is a button on the left on the home page for the Lower Dolores Working Group.

Fish, ecology and wildlife in the Lower Dolores River Corridor

Wildlife: Kathy Nickell, biologist and head of the wildlife program with the Dolores Public Lands Office ("DPLO") of the San Juan Public Lands Center ("SJPLC"), and Dave Harper, district wildlife manager with the Colorado Division of Wildlife ("DOW"), said the Lower Dolores is a wonderful resource that supports considerable wildlife. Over 90 percent of wildlife species in Colorado are dependent to some extent on riparian habitat, and such habitat is even more critical in dry areas such as ours.

Among the species present in the Dolores River corridor are:

- **Desert bighorn sheep.** Reintroduced in the mid-1980s, these have done fairly well, though not as well as biologists had hoped. At one time there were 350 or so, but there was a die-off, and now the sheep number 120 or fewer. A good goal is probably 275. The cause of the die-off is unknown, probably disease or predation.
- **River otters.** These were reintroduced in the early 1990s and have flourished. They have been found in McPhee Reservoir and as far up the river as Rico.
- **Deer and elk.** They use the river corridor a great deal. The upper part is critical winter range.
- **Bats.** Because of past mining, the Dolores River corridor has become a wonderful area for bats, which inhabit abandoned mines, moving among them over the course of the year as the temperature changes. The Townsend's big-eared bat and several other species can be found here.
- **Other wildlife.** Species include black bears, ring-tailed cats, mountain lions, bobcats, wild turkeys, raptors (including peregrine falcons, prairie falcons, bald eagles and golden eagles); reptiles and amphibians (there are unique reptile species in Southwest Colorado, many in the river canyon; amphibians include canyon tree frogs found in seeps).

Discussion: The DOW is working to ensure the viability of the bighorn sheep population. Some people have called for killing more mountain lions in the river corridor to help the sheep, but Dave said that has been tried in other places with no success. Also, the corridor is a difficult place to hunt mountain lions, and there is a question of whether it's appropriate to wipe out lions to benefit sheep.

Instead, the Dolores Public Land Office is considering reducing vegetation cover in lambing areas to reduce predation and improve survival. Some habitat-improvement projects are being considered as well. The DOW and DPLO have a strong partnership on the sheep reintroduction.

The bighorn sheep population is limited by habitat. Bradfield Bridge is about as far upstream as they've been seen; from Bradfield downstream to the confluence with the Colorado is all good bighorn habitat. Even places outside the corridor itself, such as Disappointment Valley, are good habitat.

Dave said the sheep are to be reintroduced in the lower part of the river, from Bedrock downstream. In the area around the pumps and Slick Rock, the population is stable.

The question was raised about the impact of recreation on wildlife. Kathy and Dave said it certainly does affect wildlife. Rafters floating down the river but not stopping probably have little impact on sheep or otters, but there are greater impacts from camping, hiking, four-wheeling, and so on, especially during lambing season. Sheep have been found shot near Slick Rock.

Humans also impact otters. Some people have said they shoot otters on sight because they think the otters eat all the trout. Otters have been trapped, despite the statewide trapping ban. More recreational use causes more disturbance. Most wild animals simply don't like people and don't want to be near them.

Vegetation and riparian ecology: Ann Oliver, co-coordinator of the Dolores River Dialogue ("DRD") science committee, gave a PowerPoint on the wildlife and ecology of the Lower Dolores, with a focus on vegetation and riparian ecology.

Ann noted that the DRD core science team produced a detailed report call the Core Science Report 2005, which is available online. It included information relating to:

- Native warmwater fish
- Coldwater fish
- Channel function
- Riparian ecology.

Ann gave an overview of the types of vegetarian in each of the eight reaches of the Dolores River from McPhee to the Colorado River. She said the Dolores River corridor supports a number of unusual plant communities, including strapleaf willow and coyote willow found together and two species of box elder together. There are also large stands of skunkbrush and of New Mexico wild privet that are unusual. The New Mexico privet communities occur only in Utah and Colorado, and in Colorado they are found only in the Dolores River basin.

Two rare plants are found in the river corridor: the Eastwood monkeyflower and Kachina daisy. The Eastwood monkeyflower lives in hanging gardens and canyon walls where water flows through cracks. It is found in Slickrock Canyon, McIntyre Canyon and Coyote Wash. It is found only in the Four Corners region, in the Gunnison, Dolores and San Juan river corridors. There are eight sites in Colorado, five in Arizona, 10 in Utah, and one in New Mexico on the Navajo Reservation.

The Kachina daisy was first identified near Kachina Natural Bridge in Utah. It is very rare; there are only about 7500 individual plants in the world, all in 15 sites in Utah and Colorado, one of which is in the Dolores River corridor.

There are also interesting plants and plant communities in the uplands above the river.

Tamarisk, an exotic invader, begins to show up in Reach 4, from Joe Davis Hill to the San Miguel-Montrose County line, and is found more extensively further downstream. Tamarisk loves perennial water and salt. Its upper limit is 9,000 to 10,000 feet elevation. In the Lower Dolores, where there is now a perennial stream and high sulfates, the environment is heaven for tamarisk. But the Dolores' rare plants also require a saline environment.

Riparian vegetation is very important to water quality. It shades, prevents erosion, provides channel stability and keeps the water temperature down. It is very valuable to recreation, livestock and wildlife. The ecological needs of riparian vegetation such as cottonwoods include the right flows and water table (the size and timing of flows, days of inundation, and rate of recession of water table all affect seedlings); and suitable sites for establishment and survival (the right type of soils, salinity, and light).

The Northern Arizona University graduate student who is working with the DRD for two years will be studying river conditions both pre- and post-dam to see, among other things, when cottonwoods became established. The student will also compare the Dolores to the San Miguel River to study the differences between regulated and non-regulated systems.

Fishery status: Jim White, DOW aquatic biologist for the San Juan and Upper Dolores river basins, discussed the fishery status on the Lower Dolores. The reach from McPhee dam to Bradfield Bridge is a cold reach. There are three trout species present: the brown, rainbow and cutthroat. The cutthroat trout in the Dolores are hatchery-raised and are not the genetically pure, native cutthroats. Browns are the most tolerant of warm water and are also resistant to whirling disease. Browns are self-sustaining; rainbows and cutthroat are stocked.

The reach from the dam to Bradfield is managed as a quality trout fishery. The stream is catch-and-release only. The DOW inventories three historic sites over the years.

There is also a Dolores River native species called the Paiute sculpin, an abundant coldwater fish.

The trout fisheries have shown a general downward trend since 1993, though the 2005 survey did show an increase over the previous year. The management goal for all three species is 32 pounds per acre, which is an estimate of the pounds of trout per one acre of stream surface. A typical coldwater stream has 40 pounds per acre; 60 or more is gold-medal water. Lower numbers don't provide satisfactory fishing. Droughts are very hard on trout, but other factors besides water levels may be limiting the populations. It was asked whether there were any studies comparing fish biomass to otters. Jim said otters could possibly be a factor, as they eat trout, though they eat many other things as well.

The prevalence of whirling disease rises with proximity to the dam. This year the DOW began stocking rainbows that are whirling-disease-resistant.

Native warmwater fish species in the Lower Dolores are the roundtail chub, bluehead sucker and flannelmouth sucker. These fish are in decline and are listed as sensitive species by the Forest Service. There is a rangewide conservation agreement among six states to work to recover these species and avoid a federal threatened or endangered listing. The primary threats to these fish range-wide are habitat loss, non-native fish interaction and hybridization with other fish. These natives are long-lived (20 or more years) and large in size.

Non-native fish species found downstream are smallmouth bass, green sunfish, channel catfish, black bullheads, fathead minnows, carp, brown trout and rainbow trout. Some were introduced as sport fish; others were used as bait fish. The good news is that, so far, there are no white suckers in the Dolores River. White suckers hybridize prolifically with other species and are prevalent almost everywhere else. They are present in McPhee Reservoir, but not in the river itself; releasing flows from the cold bottom depths of the reservoir should prevent them from spreading into the river.

Management objectives for the Dolores River are:

- Ensure adequate base flows, which are critical to bluehead suckers and flannelmouth suckers and also beneficial to trout.
- Stock whirling-disease-resistant rainbows to increase biomass.
- Remove non-native fish that threaten natives.
- Release flows from the bottom outlet of the dam to prevent white suckers from making it into the river.

The Lower Dolores River is probably not good habitat for the native Colorado River cutthroat trout and probably was not even before water diversions were in place. The cutthroat needs cold, clean water.

Discussion of issues, concerns, and opportunities: The Working Group suggested a variety of concerns and possible opportunities and tools. It was stated that this is an effort to have a community process like the DRD but involving broader topics than just flows – topics such as landscape and ecology.

Concerns:

- All users impact wildlife. We need a better understanding of how disturbance affects wildlife.
- The river has been diverted for a hundred years. Humans have been impacting the native species so long that it's difficult now to determine what's native and what's non-native.
- 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.
- How are non-native plants affecting water quality? Tamarisk, when abundant, tends to channelize the stream. Tamarisk sucks salt out of the water and stores it in its leaves, then drops the leaves, creating a saline environment.
- This is a complex system. Is it possible to accomplish all these conflicting goals (restoring native fish, improving the sport fishery, restoring cottonwoods, providing irritation water, etc.)? Which goal has priority? What does the public want?
- A foundation of DRD has been to work with available flows/spills. This is very important. There is a debate about what the constraints are.
- There is a finite amount of habit available for the native fish species. To have those three species (bluehead suckers, flannelmouth suckers, and roundtail chubs) in evidence in the Lower Dolores is an important part of the effort to keep them from becoming threatened/endangered, because there aren't many streams that can support them.
- How can we maintain historic use and keep the resources healthy and intact?

Opportunities/tools:

- It would be good to have an understanding of how the river used to flow and the flow dynamics for the historic, pre-McPhee and post-McPhee conditions.
- Continue tamarisk removal.
- Provide more detailed mapping of other wildlife species and their range and habitat, including along tributaries and into uplands.
- Preserve and protect habitat for the three native fish to avoid federal endangered-species listing.

- Redevelop pools. Put more energy into the stream to flush out the pools that have been silted in.
- Treat some of the watersheds that are dumping sediment into the river. For example, Disappointment Valley dumps a lot of mud. It may or may not be natural to stop it.
- Keep current policies in place. Management so far has apparently been fairly successful; the sheep and fish are still there and many activities are enjoyed throughout the corridor. Conditions change even without humans being involved.
- Solve some problems together. Preventing overuse of some rafting campsites could help the environment.
- Work to perhaps change the DRD constraints on water use.
- Use DRD to coordinate science efforts and to keep things transparent.
- Examine the historic hydrology.
- Create off-channel or in-channel sediment traps to improve pools and habitat.

Management questions: Shauna Jensen, hydrologist with the SJPLC, presented management questions to discuss at future meetings as follows:

Ecology

- How do we protect and enhance the ecology (specifically, aquatic and riparian) of the Dolores River while allowing for compatible uses?
- What are possible management objectives for old-growth ponderosa pine? (There is significant ponderosa pine in the corridor.)
- What management opportunities and strategies exist to maintain or improve the existing quality of the riparian and wildlife habitat?

Wildlife

- How do we ensure the continued existence of federally listed, state-listed, and BLM and Forest Service sensitive species?
- How do we minimize potential conflicts with recreational use of public lands and the preservation of federally, state-listed and BLM and Forest Service sensitive species and their habitat?

Recreation

- Should the Dolores River be on a permit system for rafting use?
- Should campsites be on a reserved or first-come, first-served basis?

Next and future meetings: The next meeting will be Monday, March 16, at the Lewis-Arriola Community Center, with dinner at 5:30 and the meeting at 6. Topics TBA. The Working Group will meet in March and April, then take a couple of months off because water managers, farmers and ranchers, and rafters will be busy. Meetings will resume in July. Marsha will be mailing out part of the draft San Juan Public Lands Resource Management Plan relating to Wild and Scenic Rivers.