

Rio Grande & Conejos River Stream Management Plans – Boatable Days Results

Thursday, December 12, 2019 at 5:00 pm

San Luis Valley Water Conservancy District

623 E Fourth Street,

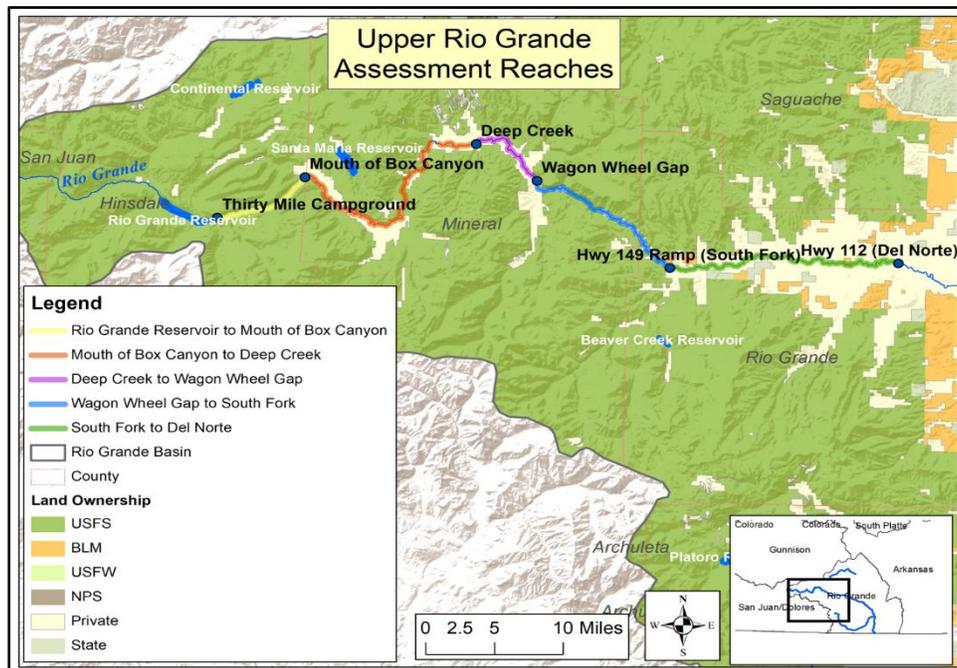
Alamosa, CO 81101

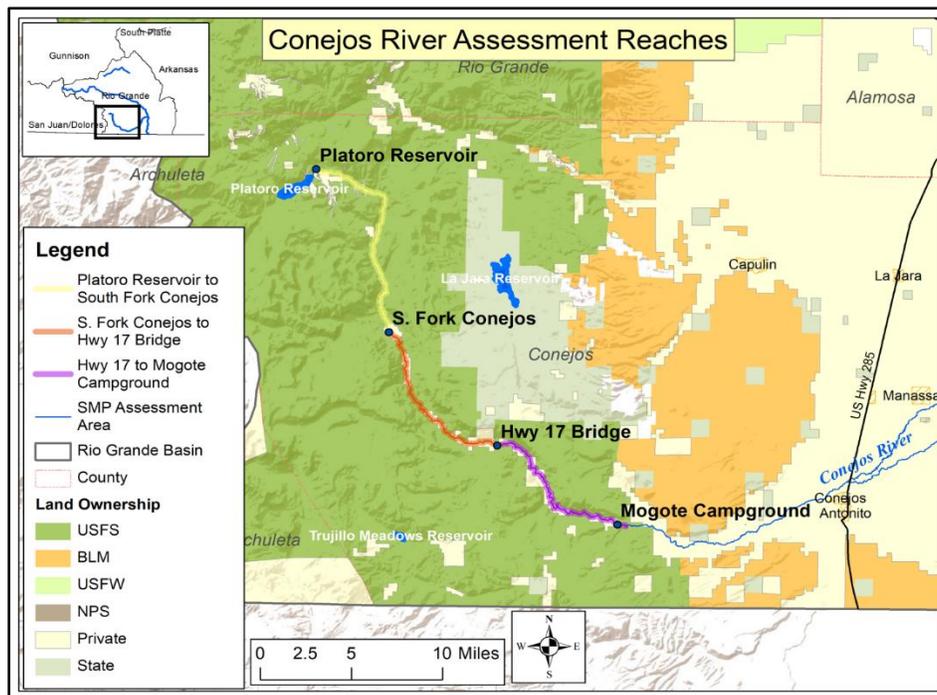
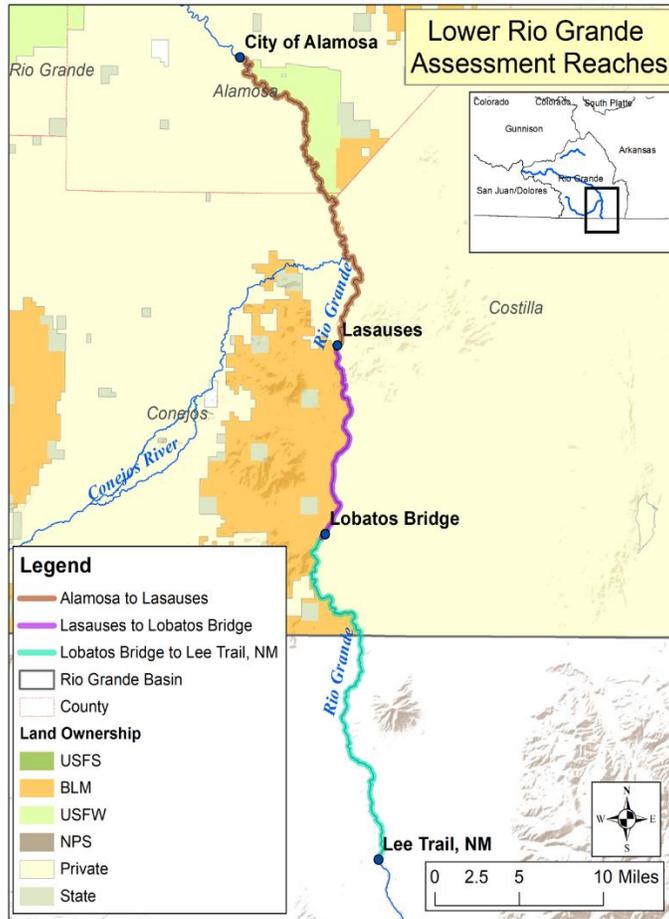
In attendance: Kestrel Kunz, Hattie Johnson, Curt Howell, Brian Puccerella, Cathy Morin, Ian Rich, Steve Vandiver, Jason Remshardt, Daniel Boyes, Emma Reesor, Heather Dutton, Jenny Nehring, Matt Nehring, Kevin Terry, Connor Born, and John Reesor.

Daniel Boyes: Intro to meeting

Kestrel Kunz & Hattie Johnson – American Whitewater

- Overview of Boatable Days reaches and user preference survey and analysis.
- Boatable Days Reach Overview
 - Slides 3 to 5 show Boatable Days reaches. Maps from slides 3-5 are shown below, indicating Rio Grande and Conejos River reaches.





- Flow Preference Survey
 - Slide 6 - 132 people participated in the flow preference survey
 - Majority of respondents were advanced boaters; more than half said they were comfortable reporting flows

*Results from the boatable days study are intended to provide baseline recreational boating information for the Rio Grande & Conejos River, and may be used to inform water management decision. The data are *not* intended to be prescriptive.

- Example of flow preference survey analysis. Reach 4 – Wagon Wheel Gap to South Fork – was used as an example. Graph showing PCI2 scores & central tendency of respondents was shown. Lower PCI2 scores (smaller “bubbles” on graph) indicate more agreement among respondents. In the example on slide 7, the optimal flow range was between 800 and 1500 cfs.
 - Slide 8 – shows percentage of respondents for reach 4 by craft type as well as their objective for boating that reach.
- User-defined flow preferences
 - Slide 9 shows a table summarizing user-defined flow preferences for each reach. Kestrel explained that some reaches do not include maximum acceptable flows, either because difficulty/risk do not appreciably increase with flow rate, or because there were insufficient survey responses for that reach.
 - Steve noted the maximum acceptable flow preference for Reach 1 – Rio Grande Res. to Mouth of Box Canyon – was 2700 cfs, which is higher than the reservoir can physically release. Additionally, flows higher than 1200 cfs become dangerous for the reservoir outlet works. Hattie explained the max. acceptable flow of 2700 cfs is a result of data from the user-defined flow preference survey, and does not necessarily reflect actual flows experienced. After discussion, the group agreed that a thorough narrative explaining the source of the max. acceptable flow preference should be included in the report to avoid confusion.
- Boatable Days results by Reach
 - Hattie noted with the exception of Reaches 3, 4, and 5, typical flows do not exceed the upper flow acceptability threshold. On Reaches 3-5, the upper limit is exceeded in wet year types, resulting in a decrease in the total annual boatable days. This exceedance may be due to hazards, such as low bridges & low head dams.
- Reach 1 - Rio Grande Reservoir to Mouth of Box Canyon, slides 11 & 12. Boatable days occur from May through July and increase with increasingly wet year types.
- Reach 2 - Box Canyon to Creede, slides 13 & 14. Boatable days occur from May through July and increase with increasingly wet year types.
- Reach 3 – Creede to Wagon Wheel Gap, slides 15 & 16. Boatable days occur from April through October, increasing from dry to average year types, with a slight decrease from average to wet year types.

- Kevin noted that the decrease may be due to hazardous bridges. The group agreed that an explanation of the impact of hazards on boatable days in wet years needs to be included in the report.
- The group inquired as to why September and October, after significantly reducing from July to August.
- Matt recalled Rio Grande Reservoir may have been drained in summer/fall 1998 or 1999.
- Reach 4 - Wagon Wheel Gap to South Fork, slides 17 & 18. Boatable days occur from April through October, increasing from dry to average year types, with a pronounced decrease from average to wet year types. Again, the group noted this may be due to hazardous bridges.
- Reach 5 - South Fork to Del Norte, slides 19 & 20. Boatable days occur from March through October, increasing from dry to average year types, with a pronounced decrease from average to wet year types. Again, the group noted this may be due to hazardous bridges.
- Reach 6 – Alamosa to Lasasues, slides 21 & 22. Boatable days occur year-round and increase with increasingly wet year types. Although there are very few boatable days with optimal flows, results indicate a significant number of boatable days. The survey response rate was relatively low for this reach.
 - Cathy noted the study is showing boatable days during the winter months, when the Rio Grande is often frozen and not boatable. This may be skewing the results toward many more boatable days than actually occur.
 - Jenny suggested inserting cross-hatching on winter month bar graphs to indicate those months when the river is likely frozen over in this reach.
 - The group agreed this is critically important, as it will more accurately reflect the actual number of boatable days in this reach and will avoid confusion and potential misinformation for this reach. Hattie also noted the relatively low number of respondents for this reach may have skewed the results slightly. The group agreed that a detailed explanation of the low response rate and winter ice limitations should be included in the report for this reach.
- Reach 7 – Lasasues to Lobatos Bridge, slides 23 & 24. Boatable days occur from March through July and increase with increasingly wet year types. Notably, zero boatable days occur in dry year types.
 - Ian noted that boatable days for this reach are fewer than reach 6, despite the significant contribution of flows from Conejos River. Hattie noted that the relatively low number of respondents for reach 6 may have skewed the results slightly for that reach.
- Reach 8 - Lobatos Bridge to Lee Trail, NM, slides 25 & 26. Boatable days occur from February through November and increase with increasingly wet year types. Notably, zero boatable days occur in dry year types. It was noted that a seasonal closure to boating is in effect from April 1 through May 31 each year to protect nesting raptors. This closure was not incorporated into the boatable days calculation for this reach.
 - Again, the group agreed that a detailed explanation of the low survey response rate and winter ice limitations should be included in this reach's narrative.
- Reach 9 – Conejos R. – Platoro Reservoir to South Fork Conejos, slides 27 & 28. Boatable days occur from May through August and increase with increasingly wet year types. It was noted that the upper max acceptable flow of 800 cfs is close to the maximum release from Platoro Reservoir, measured at CONPLACO gauge.

- Slide 29 includes a table summarizing boatable days in dry, average, and wet year types for each reach.
- Slide 31 discusses the relevance & application of this data. This dataset is novel in that it quantifies user flow preferences and boatable days by reach. It can be used to inform water management and enhance recreational opportunities where possible. Additionally, the boatable days tool can be used in the future to simulate potential hydrologic change.
 - *Slides 33-36 show Reaches 10 and 11. There was a brief discussion regarding the low number of respondents for two of the Conejos River reaches (reaches 9 and 10). The low number of respondents for those reaches introduces some uncertainty regarding flow preference delineation. This is noted in the Boatable Days report. Also included is the recommendation to determine whether there are users who were not identified during this study and/or why these reaches experience relatively low use.

Discussion of results –

- Kevin asked whether navigational hazards can be included in the report, both in the form of a narrative and a graphical indication. The group discussed this and agreed that navigational hazards should be included. The draft report will be updated.
- Jason asked about the proximity of the takeout location for Reach 8, *Lobatos Bridge to Lee Trail, NM*, to the first stream gauge on the Rio Grande in New Mexico. Daniel noted that the Lee Trail takeout is upstream of the first stream gauge. Further research showed the Lee Trail takeout is ~5 miles upstream of the first stream gauge, “Rio Grande Near Cerro, NM, # 08263500.”
- Brian noted that Adams State Adventure Program and GOCO worked to construct a takeout for reach 8 just upstream of the New Mexico State Line. He asked that the takeout be noted in the report. The report will be updated to include the takeout.

6:35 pm - meeting adjourned