

August 15, 2017

Appendix A Discovery Meeting Community Feedback

Appendix A Discovery Community Feedback from 8-15-2017

1. Gather community feedback [See Attachment 1]
 - i. BLM would have a permitting role for projects that need use of BLM-managed lands; BLM's role is not to provide funding or to build/operate flood risk projects, e.g., Stephanie Way, Johnson Lane. – Bryant Smith
 - ii. USA Parkway needs to be studied for potential impacts to Silver Springs – Lyon County
 - iii. Explore funding sources Extremely important to Carson River Coalition (CRC) to find major funding to purchase conservation easements for portions of ranches in floodplain and close to river channel, e.g., Park property, Long field, others – John Cobourn
 - iv. Crossroads in Carson Valley, i.e., Mottsville, Centerville, Mueller Ln. are impacted by flooding. Road maintenance. Also, roads such as Jacks Valley Road and others are heavily impacted by detour traffic and need additional attention. Smelter Creek project not listed. – Steve Lewis
 - v. Maintenance costs timeline for building Smelter Creek detention basin for BLM may be long. – Courtney Walker
 - vi. Future routing of water to the Carson Lake in Churchill County be channeled past the Navy Range B-16 to prevent reduction to the Navy mission. Need more upstream storage. – Navy/Churchill County
 - vii. New projects to be considered are revised FIRM study and Carson River clearing and snagging program. – Churchill County
 - viii. Dam safety is always a concern. Also, the mitigation done along the Carson River at Lahontan Reservoir and below. – Mary Kay Wagner

2. Discovery areas of growth
 - i. Douglas County foothills; Carson City infill areas; Lahontan Reservoir to Fallon; Markleeville Creek – Bryant Smith
 - ii. The Ranch in Gardnerville? – Craig Burnside
 - iii. Silver Springs – Lyon County(?)
 - iv. Fish Springs area; Pine Nut Creek; Johnson Lane – John Cobourn
 - v. Identify lands within the newly delineated floodway that have no protection from development. Seek to secure conservation easements on these critical floodplain lands. – Steve Lewis
 - vi. Lompa Ranch development requires the realignment of existing flood channels within the proposed site. The channel design is currently going through the CLOMR process.
 - vii. Need to ask Planning or County Engineer – Courtney Walker
 - viii. The approved build out in Carson City west of Mountain Street (Anderson Ranch) and the old Lompa Ranch sited for development. The area west of Curry Street on hillside behind Greenhouse Garden Center. – Mary Kay Wagner

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- ix. Currently there are no new developments that would warrant additional flood hazard analyses. – Lyndsey Boyer

3. Discuss areas where flood risk data may be outdated

- i. BLM doesn't maintain flood risk data. – Bryant Smith
- ii. Flash flood potential, alluvial fan flooding – Lyon County(?)
- iii. ...or not well understood, such as alluvial fans. It seems advisable to conduct some type of comprehensive flood risk assessment in all communities, such as those done for wildfire risk assessments. – Steve Lewis
- iv. State Hazard mitigation plans will be updated in 2018. – Katie/Andy
- v. Pinenut Creek from Johnson Lane to Orchard is A zone and needs a detailed study; same with Sierra Country Estates. Smelter Creek in Ruhenstroth is A zone. – Courtney Walker
- vi. The old FIRM maps are from the 1970's. We need a revised FIRM to show modern growth, new plans, and new water spillways. – Churchill County
- vii. As a result of 2017 floods, the river channel has eroded considerably. Extensive damage was incurred to a few Carson City Parks properties. These areas may require an update as the sites have changed significantly. – Lyndsey Boyer; Explore funding sources for restoring open floodplain after large flood events at parks, publicly owned lands and golf courses.

4. Discuss potential new projects

- i. None. Douglas County might have some projects that will require BLM-issued authorizations for use of BLM-managed lands. – Bryant Smith
- ii. Ramsey Canyon Study Special Improvement District for storm drainage that flows into Carson River along Carson River (design, construct, operate and maintain) – Lyon County(?)
- iii. Identify areas that currently safely function as a floodplain and seek funding to compensate land owners for maintaining the river's access to its floodplain; create an incentives program. – Steve Lewis
- iv. 1) Floodplain ordinances update; 2) area drainage master plans for other areas of Douglas County; 3) new projects to be considered will come out of Johnson Lane Area Drainage Master Plan – Courtney Walker
- v. Complete the regional floodplain model through Lyon County. – Ed James
- vi. There are some areas on the river that have suffered significant erosion to the river banks. In these areas, we have discussed the potential for bank stabilization. Nothing is currently planned. – Lyndsey Boyer

B. Flood Risk Reduction

1. Local mitigation capabilities

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- i. Limited. BLM does limited road repairs (post-flooding) on system roads. Most roads and trails on BLM-managed lands are not system roads, i.e., not maintained. BLM does authorize individuals/governments to take flood control/repair actions on BLM-managed lands. – Bryant Smith
 - ii. Bioengineering – Craig Burnside
 - iii. Compliance with Title 12 (flood control) and work done by Dayton Conservancy District – Lyon County(?)
 - iv. University of Nevada Cooperative Extension completed an inventory of protected riverine floodplain in 2015. One objective is to teach the public why the goal of protecting more undeveloped floodplain is worthwhile. – John Cobourn
 - v. Education efforts – Steve Lewis
 - vi. Detention and retention basins
 - vii. Assistance with planning; outreach and awareness, if it counts; training: Silver Jackets; non-structural solutions – Katie/Andy
 - viii. Building code 1' higher than FEMA regs. Updated maps coming soon for Carson River Floodplain Limitations for land division in SFHA. No parcels less than 19 acres unless... (Douglas County code) – Courtney Walker
 - ix. Overflow drains/channels the addition of the drain ditch through the Base southside property to channel water to the Carson Sink – Navy/Churchill County
 - x. Precautionary releases in accordance with the BOR Lahontan Dam Emergency Action Plan. – Churchill County
 - xi. Mitigation in the way of education and knowledge to the public regarding blocked storm drains, landscaping and reducing flooding around properties. – Mary Kay Wagner
 - xii. We routinely receive grant funding to support mitigation strategies or to restore existing flood damages. – Lyndsey Boyer
2. Hazard risk assessment
- i. 2012 Ramsey Canyon Study by Manhard Consulting of Highlands/Silver Springs – Lyon County(?)
 - ii. UNCE publication on floodplain inventory – Steve Lewis
 - iii. Goni Canyon Wash Floodplain Study, Eagle Valley Golf Course A & B Drainage/Floodplain Restudy/Remapping
 - iv. Floodway is being remapped in Carson River floodplain. East Valley washes FIRMS updated, LOMRs, Douglas County Flood Management Guide (12/28/2015) – Courtney Walker
 - v. None have been completed that I am aware of. Ann Bollinger may have more information. – Lyndsey Boyer

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3. Current or future mitigation activities
 - i. Vegetation/sediment removal upstream from Lutheran Bridge and downstream from Cradlebaugh Bridge. Bank restoration upstream of Lutheran Bridge. – Craig Burnside
 - ii. 2017 Ramsey Canyon Study, Title 15–Low Impact Development standards adoption, Carson River Storm Water SID proposal – Lyon County
 - iii. Higher prioritization of floodplain parcels closer to channel which provide greater ecosystem and flood mitigation services. – John Cobourn
 - iv. Seek funding to hire an educator to design a curriculum to help landowners design flood resilient and drainage accommodating landscapes. – Steve Lewis
 - v. Updating State Hazard Mitigation Plan in 2018. – Katie/Andy
 - vi. Carson River floodplain remapping in review; Johnson Lane ADMP; Smelter Creek detention basin; Alpine View Estates LOMR in review; SR88 culvert expansion at Cottonwood Slough and East Fork – Courtney Walker
 - vii. Macari Lane project when the road is replaced at the end of the season add culverts large enough to allow future flows to not require cutting of the road. – Navy/Churchill County
- C. Prepare for Next Meeting
 1. Data request (Discovery Update):
 1. Photos and high-water marks from recent floods
 - a. Data can be submitted via DVD or other removable storage, or by file transfer protocol (ftp). Data can be mailed or hand delivered to the 777 E. William Street, #110A, Carson City, NV 89701, or sent electronically using the following link: <https://eftp.mbakertntl.com/>
 2. January 2017 flood photos shared with Brenda, timing of impact to 395 at Cradlebaugh for January and February events – Tim Bardsley
 3. Carson City – Silver Saddle Ranch to Deer Run Road – Bryant Smith
 4. See Douglas County GIS Dept. for photos. EFFPD has aerial photos taken by DAP during Jan. -17 & Feb. '17 events. – Craig Burnside
 5. Yes – Lyon County
 6. Carson City likely does – contact Robb Fellows
 7. Yes, and HDR/Weather Services does too. – Courtney Walker
 8. BLM was the data collection center during 2017 events – Navy/Churchill County
 9. Yes, City of Fallon and TCID – Churchill County
 10. We likely have photos; Ann Bollinger would know. – Lyndsey Boyer
 - ii. Any storm water or floodplain activities since last Discovery – Please explain those events

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1. Yes – Lyon County
 2. 2015 Cooperative Extension special publication: “Inventory of Protected Riverine Floodplain” – John Cobourn
 3. Flood Awareness Week 2014-2017
 4. Constructing map book of Hazus analysis, eventually including Douglas and Carson – Katie/Andy
 5. Yes – new FIRMS, JLADMP should be completed in mid-2018 – Courtney Walker
 6. See TCID & BOR concerning Churchill County – Churchill County
 7. Carson City Public Works (Robb Fellows) may have additional info/data. – Lyndsey Boyer
- iii. LiDAR and aerial topography acquired since last Discovery
1. Yes – Lyon County(?)
 2. Johnson Lane LiDAR, J.E. Fuller – John Cobourn
 3. Douglas County LiDAR – We have circa 2012 data, not sure if it precedes last meeting. – Katie/Andy
 4. LiDAR of Johnson Lane area for ADMP, ask GIS when it was last done – Courtney Walker
 5. USGS will have new LiDAR for Carson City/Douglas County/Lyon County. Should be completed this fall. – Ed James
 6. BOR should have most updated data. – Navy/Churchill County
 7. Yes; see Preston Denney (GIS Coordinator Churchill) – Churchill County
 8. Yes – Mary Kay Wagner
 9. Carson City Public Works was flying drones during the floods and may have data (topographic). – Lyndsey Boyer
- iv. Community demographics
1. BLM doesn’t collect demographic data – Bryant Smith
 2. Planning Dept. – Lyon County(?)
 3. State demographer – Steve Lewis
 4. Robb Fellows
 5. GIS? Assessors? – Courtney Walker
 6. Rex Massey is a consultant for Churchill County on demographics. – Churchill County
 7. CWSD/Ed James, NDEP/Jean Stone, Carson City Public Works/Robb Fellows – Mary Kay Wagner
 8. Perhaps Carson City Hall would have this info. – Lyndsey Boyer
- v. Most recent hazard mitigation plans
1. BLM doesn’t prepare flood mitigation plans. – Bryant Smith
 2. EEFPD – Craig Burnside
 3. Emergency Manager – Lyon County(?)

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4. Robb Fellows
 5. 2013. Updating 2018 – Katie/Andy
 6. Last one completed 2013. Contact Emergency Manager, Tod Carlini – Courtney Walker
 7. Carlini – Courtney Walker
 8. Mike Heidemann, Emergency Manager; 2017 or 2016 if was updated. – Churchill County
 9. Robb Fellows – Lyndsey Boyer
- vi. Any other flood hazard mitigation data
1. Douglas County conducted a meeting on the ADMP for the Johnson Lane area. Much public input was collected. - Steve Lewis
 2. Contact BOR and TCID. They should have more data based upon 2017 events. – Churchill County
3. There is very likely additional info that I am unaware of. Ann Bollinger would know. – Lyndsey Boyer

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Appendix B Discovery Meeting Comments regarding Floodplain Management Plan Update

Appendix B – Comments regarding Floodplain Management Update

2. Data request (Floodplain Management Plan Update)

i. TBD –

1. Flashy watersheds with minimal storage capabilities lead to need for in-place protection measures on alluvial fans. Little upstream capabilities to engineer out the risks within communities on alluvial fans. Need to harden stream/road crossings and build in adequate storage (detention basins). BLM will not be able to stop water from flooding landfill – Bryant Smith
2. Counties should keep track of the details of any new conservation easements or public purchase of floodplain parcels for permanent open space. This data should be forwarded to you, to CWSD, and to UNCE. Inventory should be updated in 2020 to show progress. – John Cobourn
3. BR and TCID did not maintain drainages and ditches around Fallon. They need to maintain water flow yearly maintenance. “Big Dig” from Carson Lake to Stillwater violated environmental laws and restrictions and destroyed Tribal heritage sites. NAS Fallon caught issues on Navy property but BOR ignored other areas. – Navy/Churchill County
4. Note: I am attending this meeting on behalf of Ann Bollinger, Carson City Open Space Administrator. I’m not 100% certain of the details. For further info, contact Ann Bollinger, abollinger@carson.org, 775-283-7337. – Lyndsey Boyer

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Appendix C – CRC Floodplain & River Management Working Group Comments

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1. 3:30 – 4:30 p.m. Last meeting's unfinished business
 - A. Floodplain Management Plan Suggested Actions update:
 1. SA-30
 - i. Flood Awareness Week Update - Katie Clancey explained that Flood Awareness Week (FAW) for 2017 is Nov. 12-17. Events include:
 1. November 12 Meadowood Mall Flood Awareness Week Kickoff (Public);
 2. November 14 Douglas County Community Center (Public)
 3. November 16 – Yerington Event (TBD)
 4. November 17 – Elko Event
 5. October – November 2017 Posters/ Handouts at (Cal – Ranch / Sportsman Warehouse) in Carson City - arranged by Robb Fellows
 6. November 13 Educational Event for River Wranglers Work Day at Carson River (Private)
 7. Next, Katie described other outreach activities outside of that week –
 - a. February 2017 - NDWR and NDEP went to Elementary Schools
 - b. Spring 2017 Safety Day, Douglas County
 - c. Spring 2017 Earth Day in Fallon
 - d. August 2 National Night Out – Carson City
 - e. October 7-8 Minden Air Show
 - f. October 7-8 Alpine Aspen Festival.
 - ii. Debbie Neddenriep announced the Floodplains as Community Assets videos series were finalized. The next steps are to make them available on public access television, and to present them to counties and community groups. The videos were funded by a FEMA grant. Open floodplains have been an important CRC message. They are supporting conservation easements and ag producers who provide the service of keeping floodplains open. The videos try to underscore it saves money to keep floodplains open rather than to re-engineer developed floodplains. John Cobourn mentioned that they are very professional and a great promotion for FAW. Steve Lewis asked that the videos be sent to our local news stations. Brenda Hunt explained that NEON is being hired to create a watershed campaign and these videos will be included in the campaign.
 - B. Flood Damage Field Trip (John Cobourn) –
Several sites were selected as possible sites.

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Site Selection and Timing – The field trip to learn about flooding from observing flood damage. The following locations were suggested:

- i. In Douglas County on the East Fork, two summers ago work was done for clearing and snagging and the project did some good but straightened the channel which could cause some problems down the road. This would be a possible tour stop. How can we maintain the channel to keep it available for ag but also protect it from headcuts, etc.?
- ii. Steve Lewis suggested touring the V-canal in Churchill County and discussing what's to become of that. What is the weed control considered for that area?
- iii. Shane suggested just upstream of the Hwy. 88 bridge where there's a big berm.
- iv. Brenda suggested the Hussman property headcut which was created from flooding and high flows.
- v. Damage at Minor Ranch in Dayton.
- vi. Shane suggested Buzzy's Ranch in CC area.
- vii. Wolf Creek head-high debris covering the road.
- viii. Hope Valley restoration projects.

This is too much area to cover in a one-day trip; we may want to have a subcommittee to work on setting them up.

Brenda suggested having moveable Floodplain & River Management WG meetings with tours in various areas. Perhaps the field trips could be in line with a theme like weeds; LID projects for drainage culverts, ditches, right-of-ways; developments; commercial parks; strip malls with ditches which are not being maintained and causing water to back up; NDOT right-of-way and drainage off Hwy. 50 and Clear Cr areas which may be compromised. Work with counties and Chambers of Commerce in the future to encourage LID development. Zack Wood for Alpine County, Michael Johnson for Churchill County, conservation districts. Instead of going to all the different counties, you can see most of what you need to in Carson City and Douglas County arranged in an elevational approach with field trip sites from top to bottom. John suggested that this approach would be even better for a tour for the general public.

Clean Water Plan 319(h) grant proposals are due to NDEP in September. Brenda and Shane are putting in for a two-year Watershed Coordination grant. Perhaps we can apply for a LID project in urban centers in three reaches in the next five years. We need to come up with way to locate sites for the Management Plan. LIDs can help keep flooding minimized by providing infiltration.

- ix. Have Field Trips based on Types of damages? Erosion/Channel Migration; Structures; and Infrastructure/grade controls