

Project Name:	Summit County and Communities Risk Mapping, Assessment, and Planning (Risk MAP) Phase I
Meeting:	Discovery Meeting with Summit County & Communities
Date & Time:	April 8, 2022; 1:00 – 3:00 PM
Location	1 Main St, Frisco, CO 80443 & Webinar via Zoom

MEETING ATTENDEES

- Terri Fead (CWCB Floodplain Mapping Coordinator)
- Marta Blanco Castaño (CWCB – Flood Mapping Program Assistant)
- Robert Jacobs (Summit County)
- Ben Pleimann (Summit County)
- Brian Bovaird (Summit County)
- Paul Geiger (Summit County)
- Suzanne Kenney (Summit County)
- Dan Borroughs (Town of Dillon)
- Kristin Brownson (Town of Breckenridge)
- Alice Gustafson (Town of Breckenridge)
- James Phelps (Town of Breckenridge)
- Don Reimer (Town of Frisco)
- Carlton Henny (Town of Frisco)
- Hilary Sueoka (Town of Frisco)
- Tom Daugherty (Town of Silverthorne)
- Troy Wineland (Colorado Dept. of Water Resources)
- Christine Gaynes (FEMA)
- Sam Bugg (FEMA Community Engagement and Risk Communication Team)
- Griffin Cullen (AECOM)
- Connor Johnson (AECOM)
- KC Robinson (AECOM)

MEETING PRESENTATION

- **Goals for the Project**
 - The goal is to get updated risk information across Summit County and Communities because flooding is a serious risk and can change over time. Growth and development require updated risk information, as this helps inform building practices to promote resiliency. The information also can be leveraged and provide a basis for potential emergency management actions and mitigation projects.
 - The project team wants to identify where it can help communities implement projects to reduce flood risk with the ultimate goal of keeping people, property, and infrastructure safe from flooding.
- **National Flood Insurance Program (NFIP) Overview**
 - Marta provided an overview of the National Flood Insurance Program (NFIP):
 - A voluntary program based on a mutual agreement between the Federal government and the local community
 - Engineers determine flood risk & develop maps
 - Participation makes Federally backed flood insurance available to all residents and enables flood mitigation/disaster assistance eligibility
 - The flood insurance program is overseen by FEMA, managed by the community, and enforced by lenders

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- NFIP based on four main pillars (see graphic):
 - Know the Risk: flood hazard identification through mapping; determine mitigation focus areas
 - Mitigate the Risk: state and federal hazard mitigation grants/loans eligibility
 - Manage the Risk: adoption and enforcement of local, state, federal rules and regulations
 - Insure the Risk: flood insurance (Federally-backed insurance policies for property owners)
- **Benefits of Participating in the NFIP**
 - Marta discussed the benefits of Participating in the NFIP.
 - Property owners will be able to purchase a federally backed flood insurance policy.
 - Federal and State grants or loans may be available for development in the Special Flood Hazard Areas (SFHA).
 - Federal and State disaster assistance grants may be available.
 - Federal mortgage insurance and loan guarantees may be available for homes and home construction.
 - 255 Colorado communities currently participate in the NFIP.
 - Marta mentioned that these regulations are needed to:
 - Manage current flood risk that is already present.
 - Protect life and property.
 - Make federal flood insurance and disaster assistance dollars available.
 - Save tax dollars.
 - Avoid liability & lawsuits.
 - Reduce future flood loss.
 - Make communities more resilient.
- **Insurance Implications**
 - Marta indicated that there are insurance implications that need to be considered when joining the NFIP.
 - Participation in the NFIP enables property owners to protect themselves and their property.
 - NFIP insurance is available to all property owners – not just ones with structures in the floodplain.
 - NFIP insurance is available when private flood insurance may not be.
 - NFIP insurance is typically more affordable than private flood insurance.
 - NFIP insurance is required in mapped high flood risk areas for those with federally backed mortgages or loans.
 - Mortgage lenders can require insurance anywhere, as flooding can happen anywhere.
- **Disaster Assistance**
 - Marta then described the implications of participating in the NFIP and not being in the NFIP when a disaster occurs.
 - The goal of the NFIP is to mitigate and reduce a community's flood risk.
 - This is done through the adoption and enforcement of minimum floodplain development rules and regulations.
 - **To build in an area of known flood risk without the necessary rules for the structure to be built reasonably safe from future flooding would be inadvisable.**
 - History has shown NFIP participating communities are more resilient than those which do not participate.
 - The NFIP rules help development in the floodplain be suited to resist the impact of floods resulting in less damage and quicker recovery for less money.
 - There is no difference in how the State and FEMA respond to a flood disaster – same resources to support emergency response efforts.



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- However, a non-participating community may see less state & federal funding available for rebuilding structures in the floodplain as well ineligibility for disaster mitigation grants/loans.
- Outside of a disaster declaration, homes without flood insurance are not eligible for disaster flood damage assistance.

• Roles and Responsibilities Under the NFIP

- Marta then discussed that different stakeholders have different responsibilities under the NFIP, and all are engaged in the process to join. Stakeholders all have a partnership and work together to make the program successful.



- Community officials: Implement the NFIP and are the first point of contact for questions on risk and development. They communicate flood risk and changes in the risk to their elected officials and constituents. Local communities have better knowledge of what is happening at the local level so it's important to work together from the beginning. They provide information on projects that may impact the flood hazard mapping, review and provide feedback to ensure results are representative of conditions within their communities. Inform CWCB and FEMA on support needed for outreach efforts, and assistance with ordinance updates (if required) to adopt new mapping.
- State (CWCB): is a cooperating technical partner (CTP) with FEMA and initiates development of flood hazard mapping and revisions. The state coordinates getting the update information on Flood Insurance Rate Maps (FIRMs). CWCB provides outreach assistance and support throughout the project life cycle, and ensure products meet NFIP and state requirements.
- FEMA – federal partner that provides funding for the studies, manages the NFIP, and provides outreach assistance as needed.
- AECOM and Other Stakeholders – work with all partners to produce science and engineering that meet NFIP and state requirements. Assist with distribution of products developed, communication and outreach, and are available to provide trainings as needed.

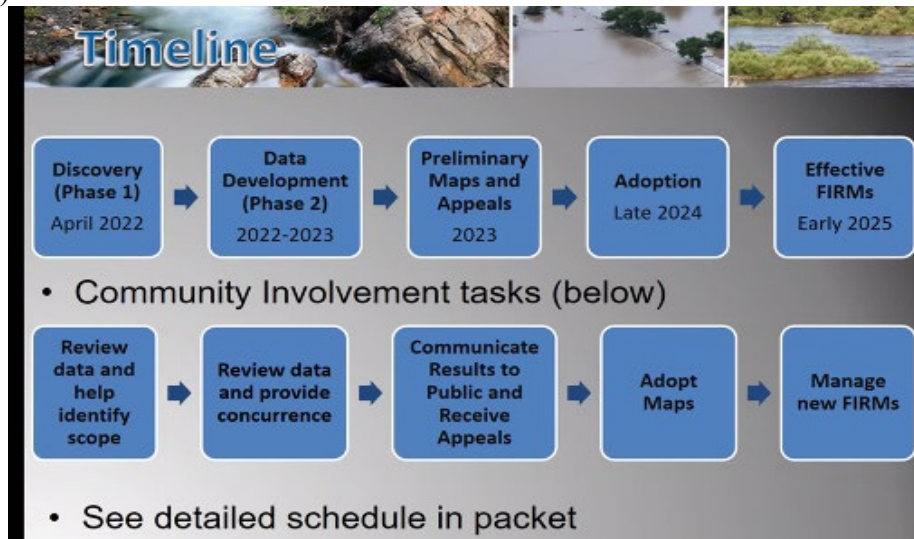
• Mapping Projects/Risk Mapping, Assessment, and Planning (Risk MAP)

- Marta gave an overview of the Risk MAP project lifecycle.
- She explained that these Risk MAP projects are tailored to meet the needs of the communities, and address a community's specific needs and interests. This framework is centered on the aspects of mapping, assessing risk/communicating risk, and planning for safer communities by integrating generated information into planning and other development mechanisms.



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- Summit County Risk MAP, Study Timeline, and Base Level Engineering (BLE)**
 - KC discussed the estimated timeline for the ongoing study and what would be expected from the communities. He passed around examples of mapping result would likely look like if the project proceeded to updating FIRMs.
 - KC discussed the process and data included in the initial Base Level Engineering (BLE) analysis.
 - Next steps were presented, as well as how communities may decide where new BLE data may be moved forward to become regulatory, and what BLE information would remain as Best Available Information (BAI).



- There was also discussion on how often an update like this is needed. Updates are needed regularly, but not to this scale. These major large scale studies can be anywhere from 5 years to 50 years apart.
- Updates to flood risk information is still necessary after a study is completed. There is a process called the Letter of Map Revision (LOMR) Process for these updates to occur as new development takes place (for more information, you can visit CWCB's LOMR Program Page [HERE](#)).
- The last Flood Insurance Study (FIS) went effective on 11/16/2018 but didn't include modeling updates for all the stream sources. The effective flood hazard studies include about 82 miles of Zone A (approximate) reaches and about 44 miles of Zone AE (detailed) reaches.
- KC mentioned that 4 out of the 7 communities participate in the NFIP. The remaining communities need to consider whether the program is right for them. Right now, CWCB, FEMA, and AECOM are conducting a study to look at the floodplain maps. This update would include recent topographic, or ground elevation information. The initial study has been done and the results are available. Even if communities don't join the NFIP, the maps are still useful.
- Related hazards include Fluvial Hazard Zone concerns, which arise from changing stream paths, landforms, and sedimentation/debris through the years along stream corridors (fluvial zones). See slide 12 for more information.
- It is typically asked that outreach and communication to the public and local decision makers happens through local representatives. Communication to local officials and home/business owners needs to occur to make them aware of potential flood risk changes, and requirements. The project team understands this is a complex program, so CWCB/FEMA can offer resources to help get messaging out. It is important that there is a unified message coming from all stakeholders. Even if the project does not proceed to a regulatory update, it is important that home/business owners are aware of their risk, and that changes they make could impact others.

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- **Data Provided for Community Review and Community Options**
 - KC discussed that deliverables for community review and feedback included a map package (GIS layers reflecting the flood hazard information to date); a Discovery Report that includes the information on the county and communities and potential natural hazard information pertinent to Summit County, and an overview of the contents that will be provided in the Discovery packet (handouts, additional information on the process and products provided, etc.).
 - The communities have the option to use the information/datasets provided as:
 - Best Available data (non-regulatory) as long as there is no current mapping designated
 - Carry BLE based information over to a regulatory product
 - Either as Base Level/Approximate or as Detailed studies
 - For a refresher on floodplain definitions and flood hazard delineations, revisit slides 15 and 16 in the slide deck.
 - **Comments, feedback, concerns, and requests on the information presented is due by 5/27/2022.**

- **Community Actions and Expectations**
 - Communities are requested to review the information, let us know if they agree with the study approach, if there are additional areas where more detail is needed, or if they have questions or concerns.
 - Let CWCB and FEMA know if they need assistance with presenting the information to local decision makers, or require other support at this time. Again, with any comments, questions, concerns, or to request additional study areas or ad-hoc projects, please reach out by 5/27/2022.
 - Marta indicated that the community expectations are as follows:
 - Communities to work together with CWCB and other partners
 - Looking for agreement and for questions and concerns to be raised in a timely manner to make products more helpful
 - Materials will be made available at each phase of the study, but be aware that as we work through this process, you will receive updated information and changes can occur
 - Communities will lead outreach efforts, but CWCB and FEMA support can be provided as needed
 - FEMA is funding the study, so no community funding is required
 - If additional detail or scope is requested, communities can discuss funding availability with CWCB
 - You make the project team aware of updated data, more restrictive codes (beyond state standards), or other community zoning and planning standards to consider.

- Community Engagement and Risk Communication (CERC) survey. As discussed at the meeting, FEMA's CERC team is piloting a survey to help them to better understand and improve the meeting experience. If you decide to participate in the survey, please complete it as soon as possible. You can access the survey at this link:

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<https://bit.ly/3x7dH7q> - If you have any questions about the survey, please do not hesitate to reach out to Sam Bugg, FEMA Contractor at: sam.bugg@ogilvy.com. We appreciate your participation in the mapping process and look forward to using your input to enhance the process.

• Results

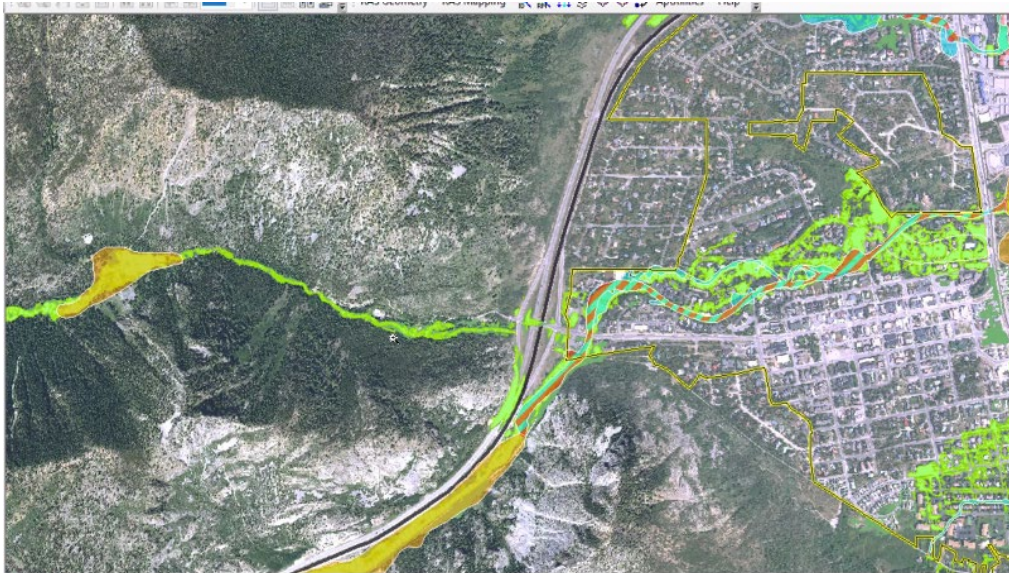
- KC indicated that some information would be made available for use to help communicate risk and manage NFIP requirements.
 - FIRM Updates would be available on FEMA's website when a regulatory update is completed. Large plot FIRMs would also be sent to community (like examples passed out earlier).
 - Non-Regulatory products to help with flood risk management (see www.coloradohazardmapping.com). These include grids to show depth of potential flooding, elevation to build to to be above the calculated 1% annual hance flood, and others showing risk information. These would be added once the draft results were approved by FEMA, and if communities wanted it posted.
 - Flood Insurance Study (FIS) with additional information to manage flood risk would be generated as part of a regulatory update.
- As mentioned before, regardless of whether the information is adopted and the NFIP is joined the models and results generated can help communities:
 - Plan for future development to be safe.
 - Inform emergency action plans to help evacuation and other decisions if a flood occurs.
 - Identify potential post fire flood risk. Fires tend to increase flood risk, so available models can be modified to identify this risk
 - Evacuation plans can be identified and modified based on flood risk information.
 - Critical facility placement can be informed so that they are not included in flood hazard areas. Schools, hospitals, etc. should be reasonably safe from flooding. In most cases wastewater treatment plants end up being built in at-risk areas.

POST-PRESENTATION: Map Review, Question, Answers, Discussion, and Additional Resources

- KC and Griffin went through the map packet, and focused on the study results near communities and other areas of interest. They showed a comparison of the draft data to effective flood hazard information.
- **Question:**
- Robert asked if we were using Light Detection and Ranging (LiDAR) data for terrain and NOAA Atlas 14 hydrology?
 - KC confirmed that we were using 2016 LiDAR (available on the CWCB website) and latest NOAA Atlas 14 information for hydrology.
- **Question:**
- Robert asked if Summit County could incorporate changes to LiDAR or updated survey to new models.
 - KC said that those areas could be looked in a detailed model and that information could be incorporated. Marta asked if he could coordinate with CWCB to provide that updated information.
- **Question:**
- Alice mentioned that they had a climate extreme study and asked if that might be useful.
 - KC said that might be helpful when producing non-regulatory products to help show future risk.
- **Question:**
- Robert asked if it was appropriate for Summit County to remove floodplains that have previously been mapped if flooding has not been seen there.
 - KC said that FEMA has a separate process to do that with requirements
 - Terri said that if it is a Zone A area that the County wants to remove, an analysis is needed to show that there is no longer a flood risk. This is typically conducted via a LOMR.
- **Question:**

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- Robert has been working to implement a 0.00-foot rise floodway. Would this analysis abide by the State standard of a 0.5-foot rise?
 - Terri - if the standard the county is establishing is more restrictive, we would use that.
 - KC gave the example of other communities where cities like Fort Collins where they have enforced higher standards using a regulatory floodway. **Please confirm with us what regulatory requirements you currently have in place, so we make sure to match our study details to that.**
- Terri noted that in the Packet there is a sheet that outlines example types of non-Regulatory products that we can offer for your communities.
 - KC noted that other communities had fires recently and were worried about what flooding would look like post fire.
 - KC said that there was late in the season snow buildup in the southwest CO area and they wanted to know how this could impact their floodplains, so that type of analysis is definitely something we can perform if there is interest.
 - KC noted that we have also looked at ice jamming for previous counties/projects.
- **Question:**
- Robert asked if he missed the report that went out.
 - Marta responded that all the reporting will be sent out in the next few weeks but a draft version was available to view in person.
- The next portion of the meeting was dedicated to viewing each community's floodplains and areas of concern.
- **Town of Frisco:**
 - Don Reimer (DR) asked to look at the area upstream of the water treatment plant (WTP). It is forest land so there is not a floodplain but flooding has occurring in the past. Damage to the WTP was mentioned.
 - Don asked if this area would now be mapped, and Marta responded that it will be up to the Town of Frisco to decide. They can choose for it to be regulatory or just left as best available data.
 - The area around Whole Foods and Meadow Creek has experienced flooding.
 - It was noted that the town is basically built in a wetland with high groundwater issues.



DR: Frisco WTP has had flooding and damage – most area upstream is National Forest. (bright green is draft base level 100 year floodplain)

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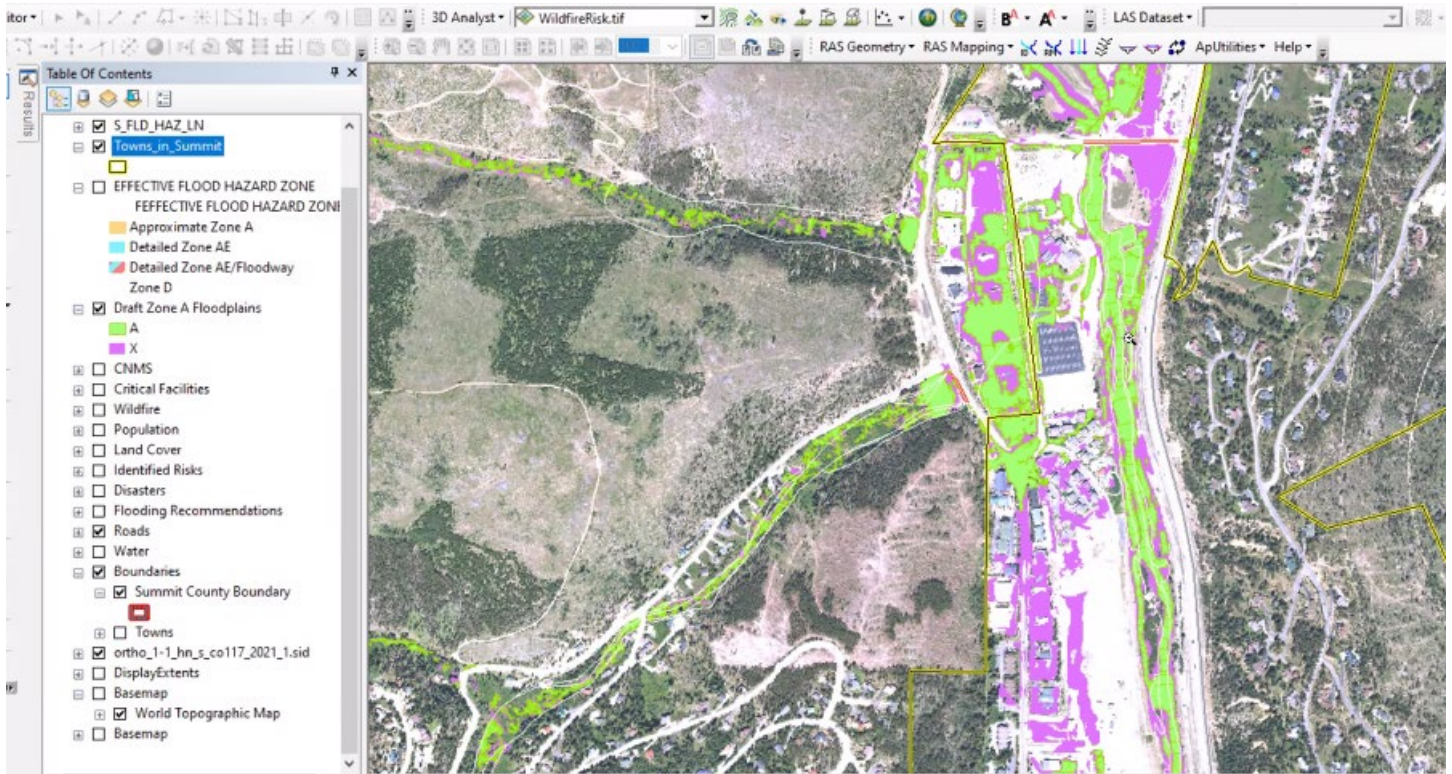


Near Whole Foods (bright green is draft base level 100 year floodplain)

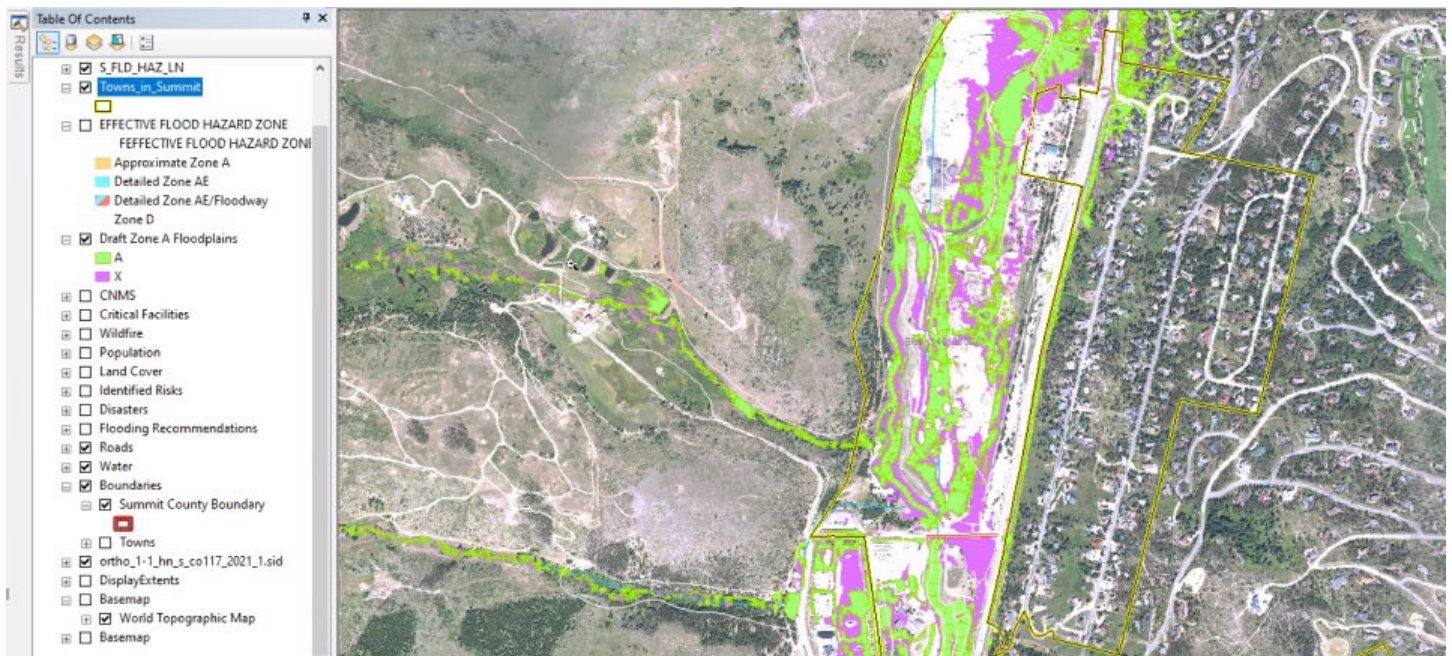
- **Town of Breckenridge:**

- Kristin brought up concerns about North, Middle, and South Barton Creek. Potential detailed study streams.
- South Barton has a detailed study but hits the pond and doesn't ever overtop the road. In 2011 we saw it flood down south into a hole in the intersection
- Where North Barton crosses into the town would be another concern
- Alta Vista Development has a pending LOMR. Knowing Base Flood Elevations could be very helpful when development to know what elevation to lift to.
- Blue River is not part of the NFIP which is why there isn't flooding shown there. This is why there isn't mapping through the Goose Pasture Tarn.
- If anyone is interested in getting additional data or modeling not already provided, just complete our draft data Memorandum of Agreement (MORA) and we will share grid data that has elevation details. This could be compared against the development area.

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Middle and South Barton Creeks

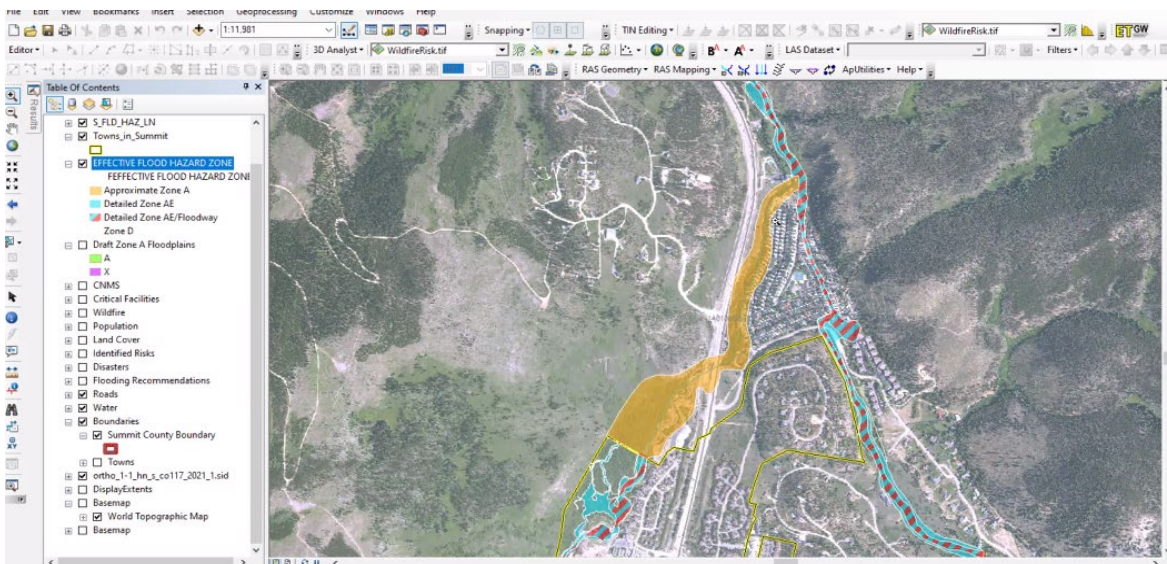


North Barton Creek

- **Summit County:**
 - At the confluence between Swan River and Blue River there are a lot of issues at the RV park. KC noted that in this area we are showing some additional flooding throughout the RV park.

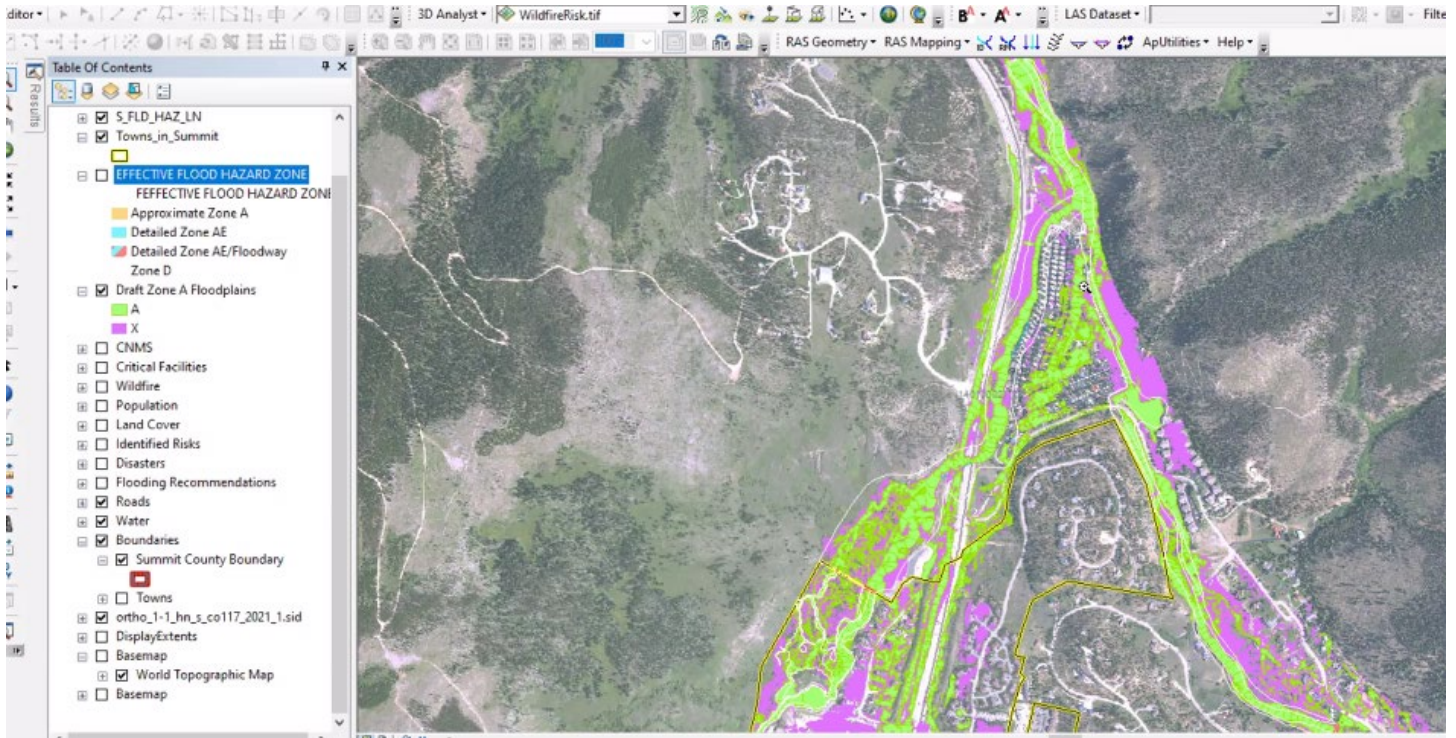
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- KC noted that the water surface elevation grid can be made be available so that you can click anywhere and get elevation.
- Terri and Marta noted that these additional datasets could be used as best available information.
- For the final mapping exercise, are the boundaries shown in the map package what we see?
 - KC said that it depends. For an enhanced study we would go out and collect survey and update hydrology. We can do these with 1-Dimensional (1D) or 2-Dimensional (2D) modeling.
 - Since this area is sandwiched by an enhanced study, this could be a great candidate to upgrade the whole area to an enhanced study.
 - Another benefit is that these models could be passed along to any developers as a starting point.
- If the County has a LOMR that is somewhat ready but not yet submitted, could it be incorporated.
 - Terri – If it’s a manmade project and the community wants the change reflected in the near future, it might be best to go through the standard process. LOMRs that become effective at least 60-days before a study’s Letter of Final Determination (LFD) is issued may be reflected on the final study products. For this to occur, they need to provide information that ties into both the effective and the preliminary study information.
 - If there’s no rush for project impacts to become effective, or there are no adverse impacts to adjacent properties, as-built information and a corresponding analysis (where appropriate) might be incorporated into the ongoing Risk Map mapping before the preliminary products are issued.
 - Marta noted the Summary of Map Actions (SOMA) process where we pull in any Letters of Map Amendment (LOMAs) or LOMRs that can be validated and incorporated into the final draft. This will all happen before the LFD.
 - Information would be needed before the preliminary products are finalized, so the changes could go through due process.
 - It sounds like the county will proceed with a LOMR but either way the information will be provided to CWCB.



Effective Floodplains: Confluence of Swan River and Blue River

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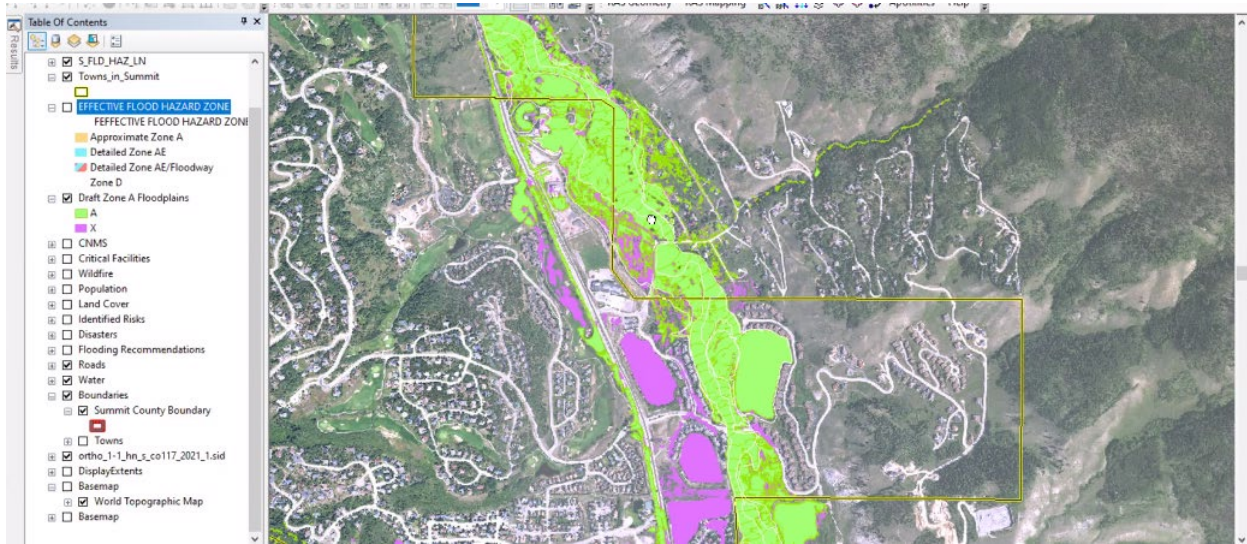


Draft Floodplains: Confluence of Swan River and Blue River

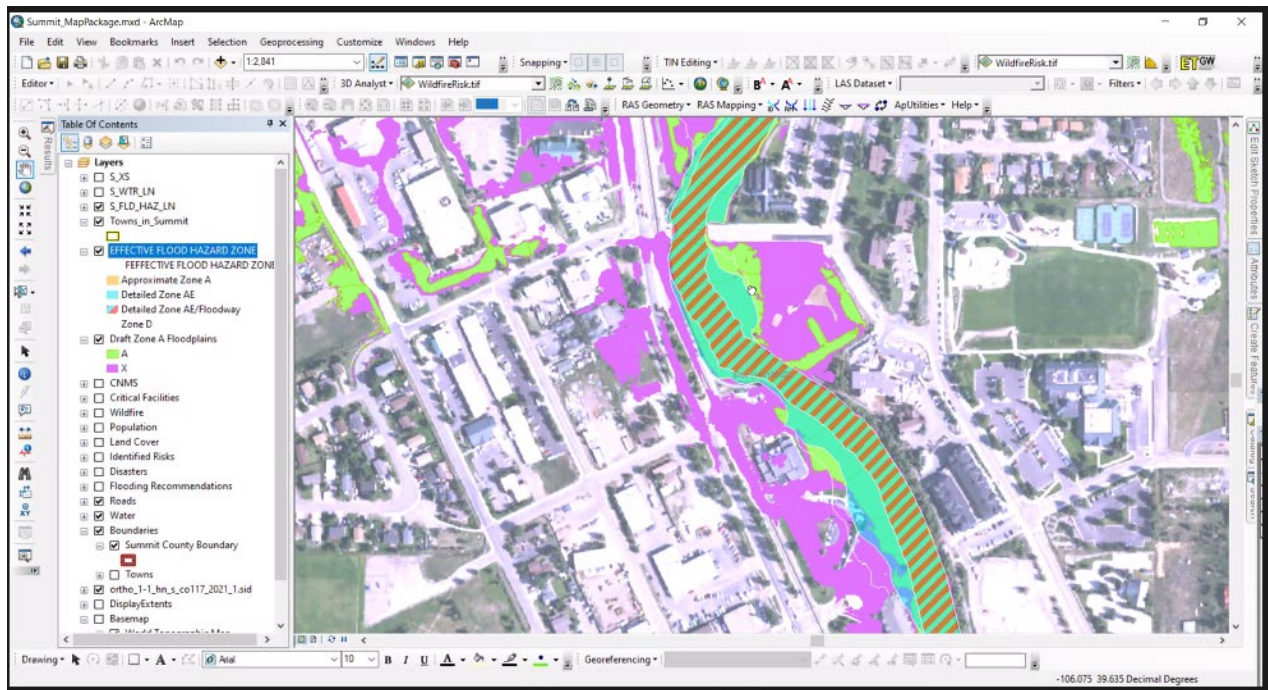
- Silverthorne

- Noted that there is much more development in the area downstream of the dam. There are 2 or 3 Conditional Letters of Map Revision (CLOMRs) awaiting completion in this area, and this is not reflected in the updated mapping.
- KC noted that this is likely because of what Griffin discussed about the coordination with Denver water and how they had underreported risk occurring in the area.
- Said that it's a deep ditch and it's very rare for there to be flow outside of their banks.
- There's also a CLOMR based on filling (CLOMR-F) in an area that was placed after 2017 that is not reflected in the LiDAR.
- There is a drainage master plan where they reapplied rain intensities and they saw that rainfall has decreased from the previous study.
- So, there was concern about why if there's less rainfall, we would be displaying a higher discharge.
 - Due to discharges from the Dillon Dam.

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Draft Floodplains: Silverthorne



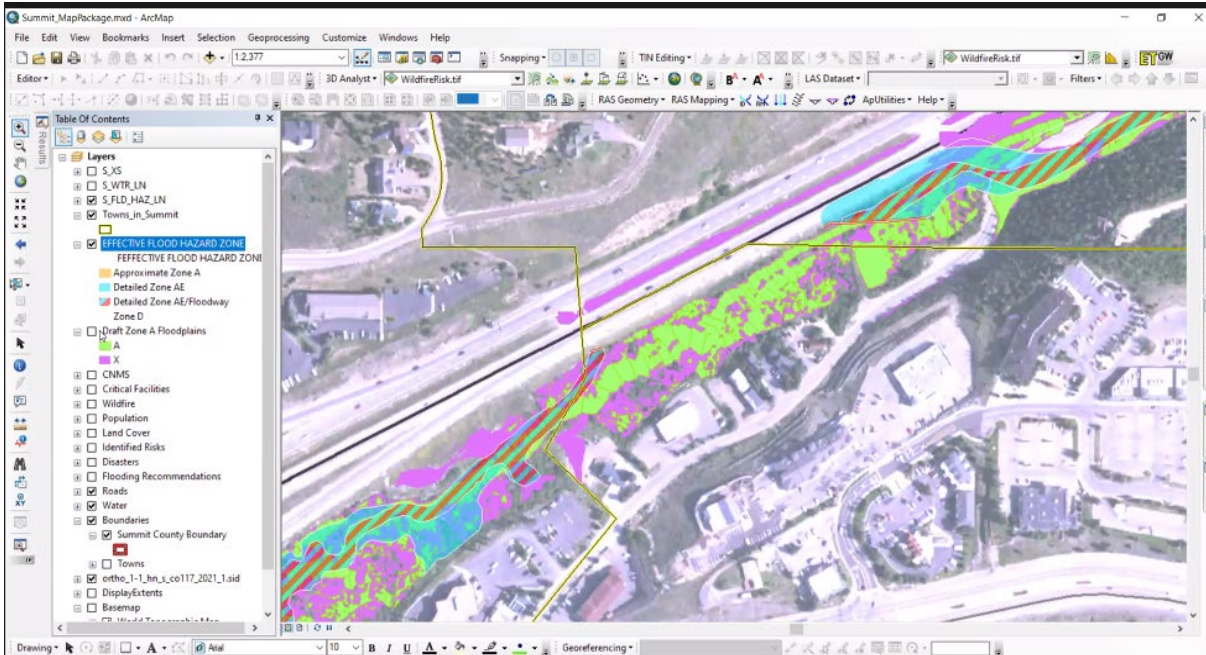
Blue River in Silverthorne: Concerns about widening floodplains and hydrology

- **Dillon**

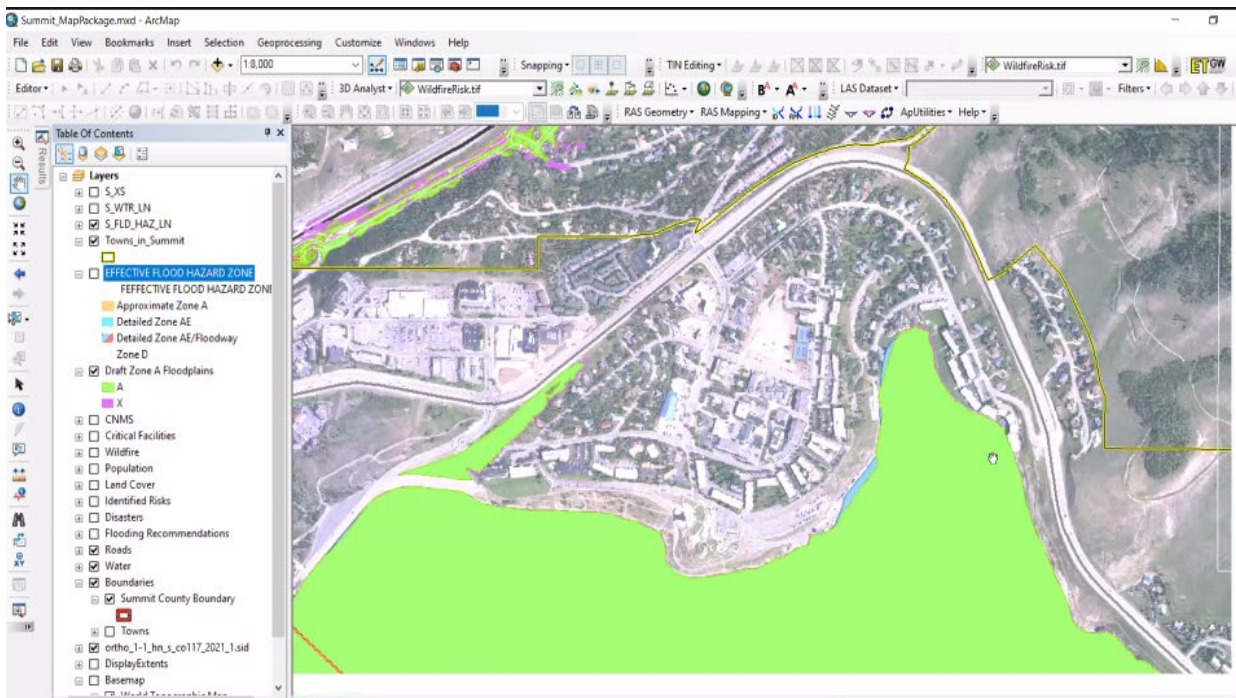
- Their intent is to join the NFIP soon.
- Hydrology is already finished and it's just a matter of connecting the dots from the county and Silverthorne.
- Planning to take this to council. Some people may lose mortgages if they don't join the program (e.g. using Veterans Affairs, or VA loans).
- There are also some homes (on Beaver Trail) that experience flooding if the water levels get too high. It should be nice for them to have flood insurance to help with this expense.

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- Denver water has a different datum that shows 8 ft (9025ft) higher than the North American Vertical Datum of 1988 (NAVD 88).
- Terri noted that there is some disconnect between Dam regulation and the flood insurance base flood regulation.



There was a request to connect this Zone AE



Homes around Dillon Reservoir

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- **Montezuma**
 - Experienced flooding that overtopped the road back in 2014 (see news article [here](#)). The county had to come in and build them a temporary access.
- **Question:**
 - Robert asked if all of the draft floodplains that are presented today are Zone A?
 - Terri explained that the base level engineering would not supersede the effective floodplains. The next step detailed models would supersede if the community wants to proceed in that direction. But yes, the draft data we presented at the Discovery meeting shows the Zone A floodplains, with Zone AE floodplains and data being generated in the next year or so during the Phase 2 (Data Development) stage of the Risk Map cycle.
- **Additional information**
 - KC mentioned the NFIP was a complex program, so there are a lot of additional resources available. Some helpful ones are:
 - Flood Smart: www.floodsmart.gov
 - FEMA's outreach materials – <https://www.fema.gov/flood-insurance/outreach-resources>
 - FEMA's mapping portal - <https://msc.fema.gov/portal/home>
 - Colorado Hazard Mapping Page - <https://www.coloradohazardmapping.com/>
 - CWCB Flood Page - <https://cwcb.colorado.gov/focus-areas/hazards/flood-information-resources>
 - The team here and with FEMA are also committed to helping as needed. Contacts are as follows.
 - **Terri Fead**
CWCB Floodplain Mapping Program Manager
terri.fead@state.co.us
303.495.0153
 - **Doug Mahan**
CWCB Community Assistance Program Coordinator
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 - **Marta Blanco Castaño**
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 - **Matt Buddie**
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 - **Diana Herrera**
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 - **Chris Gaynes**
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202.480.1265

Meeting adjourned at approximately 3:05 PM - These notes are an interpretation of discussions held. They intend to capture primary takeaways from the meeting, but not to thoroughly document everything discussed.