



FEMA

R8-MT

December 10, 2021

Douglas County Commission
100 Third Street
Castle Rock, Colorado 80104

Dear Douglas County Board of County Commissioners:

We are pleased to announce the approval of the Douglas County, Colorado Hazard Mitigation Plan Update as meeting the requirements of the Stafford Act and Title 44 Code of Federal Regulations 201.6 for a local hazard mitigation plan. The plan approval extends to Douglas County, the Cities of Castle Pines and Lone Tree, the Towns of Castle Rock, Larkspur and Parker, and the Districts of Centennial Water and Sanitation, Denver Water and Parker Water and Sanitation.

The jurisdictions are hereby eligible for FEMA Hazard Mitigation Assistance grant programs. All requests for funding will be evaluated individually according to the specific eligibility and other requirements of the particular programs under which the application is submitted. Approved mitigation plans may be eligible for points under the National Flood Insurance Program Community Rating System.

The plan is approved through December 9, 2026. A local jurisdiction must revise its plan and resubmit it for approval within five years to continue to be eligible for mitigation project grant funding. We have provided recommendations for the next plan update on the enclosed Plan Review Tool.

We wish to thank the jurisdictions for participating in the process and commend your continued commitment to mitigation planning. Please contact Mark Thompson, State Hazard Mitigation Officer, Colorado Division of Homeland Security and Emergency Management at markw.thompson@state.co.us or (720) 630-0770 with any questions on the plan approval or mitigation grant programs.

Sincerely,

A handwritten signature in cursive script that reads "Jeanine D. Petterson".

Jeanine D. Petterson
Mitigation Division Director

Enclosure

cc: Mark Thompson, State Hazard Mitigation Officer, Colorado Division of Homeland Security and Emergency Management

LOCAL MITIGATION PLAN REVIEW TOOL

The *Local Mitigation Plan Review Tool* demonstrates how the Local Mitigation Plan meets the regulation in 44 CFR §201.6 and offers States and FEMA Mitigation Planners an opportunity to provide feedback to the community.

- The Regulation Checklist provides a summary of FEMA’s evaluation of whether the Plan has addressed all requirements.
- The Plan Assessment identifies the plan’s strengths as well as documents areas for future improvement.
- The Multi-jurisdiction Summary Sheet is an optional worksheet that can be used to document how each jurisdiction met the requirements of each Element of the Plan (Planning Process; Hazard Identification and Risk Assessment; Mitigation Strategy; Plan Review, Evaluation, and Implementation; and Plan Adoption).

The FEMA Mitigation Planner must reference this *Local Mitigation Plan Review Guide* when completing the *Local Mitigation Plan Review Tool*.

Jurisdiction: Douglas County	Title of Plan: Douglas County, Colorado Hazard Mitigation Plan Update	Date of Plan: February 2021
Local Point of Contact: Mr. Tim Johnson	Address: 4000 Justice Way Castle Rock, CO 80109	E-Mail: TMJohnson@dcsheriff.net
Title: Director		
Agency: Douglas County Office of Emergency Management		
Phone Number: 303-660-7589		

State Reviewer: Patricia L. Gavelda	Title: DHSEM Local Hazard Mitigation Planning Program Manager;	Date: 4/15/2021;
Mark W. Thompson	State Hazard Mitigation Officer	6/10/2021; 6/14/2021

FEMA Reviewer: Laura Weinstein, IR Logan Sand, QC	Title: CERC Mitigation Planner Community Planner	Date: 7/16/2021 7/21/2021
Date Received in FEMA Region VIII	6/14/2021	
Plan Not Approved		
Plan Approvable Pending Adoption	7/21/2021	
Plan Approved	12/10/21	

**SECTION 1:
MULTI-JURISDICTION SUMMARY SHEET**

MULTI-JURISDICTION SUMMARY SHEET									
#	Jurisdiction Name	Jurisdiction Type	Jurisdiction Contact	Email	Requirements Met (Y/N)				
					A. Planning Process	B. HIRA	C. Mitigation Strategy	D. Update Rqmts.	E. Adoption Resolution
1	Douglas County	County	Tim Johnson	TMJohnson@dcsheriff.net	Y	Y	Y	Y	Y
2	City of Castle Pines	Home Rule Municipality	Larry Nimmo	Larry.Nimmo@castlepinesco.gov	Y	Y	Y	Y	Y
3	Town of Castle Rock	Home Rule Municipality	Norris W. Croom, III	ncroom@crgov.com	Y	Y	Y	Y	Y
4	Town of Larkspur	Home Rule Municipality	Randy Johnson	rjohnson@larkspurfire.org	Y	Y	Y	Y	Y
5	City of Lone Tree	Home Rule Municipality	Bill Medina	Bill.Medina@cityoflonetree.com	Y	Y	Y	Y	Y
6	Town of Parker	Home Rule Municipality	Greg Epp	gepp@parkeronline.org	Y	Y	Y	Y	Y
7	Centennial Water and Sanitation District	Special District	Jeff Case	JCase@highlandsranch.org	Y	Y	Y	Y	Y
8	Denver Water	Special District	Becky Franco	Rebecca.Franco@denverwater.org	Y	Y	Y	Y	Y
9	Parker Water and Sanitation District	Special District	Angelo Carrieri	acarrieri@pwsd.org	Y	Y	Y	Y	Y

**SECTION 2:
REGULATION CHECKLIST**

REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
ELEMENT A. PLANNING PROCESS				
A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))	Section 3.2 – <ul style="list-style-type: none"> Section 3.2.1 Section 3.2.2 Table 3-2 Section 9 – Jurisdictional Annexes <ul style="list-style-type: none"> Section 9.X.1 Appendix B Appendix C	X		
A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))	Section 3.3 Appendix D	X		
A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))	Section 3.3 Appendix D	X		
A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))	Section 3.4 Section 6 Section 9 - Jurisdiction Annexes <ul style="list-style-type: none"> Section 9.x.6 References	X		
A5. Is there discussion of how the community (ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))	Section 3.5 Section 7.3 Appendix D	X		
A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i))	Section 7 <ul style="list-style-type: none"> Section 7.1.1 Section 7.2 Section 7.3 Appendix G	X		
ELEMENT A: REQUIRED REVISIONS				
ELEMENT B. HAZARD IDENTIFICATION AND RISK ASSESSMENT				

REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
<p>B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))</p>	<p>Section 5.2 Section 5.4 – Hazard Profiles</p> <ul style="list-style-type: none"> • Section 5.4.X.1 <p>Section 9 – Jurisdictional Annexes</p> <ul style="list-style-type: none"> • Section 9.X.7 (Sections 9.1-9.6); Section 9.X.6 (Sections 9.7-9.10) • Table 1-10 (Sections 9.1-9.6); Table 1-8 (Sections 9.7-9.10) 	X		
<p>B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))</p>	<p>Section 5.4 – Hazard Profiles</p> <ul style="list-style-type: none"> • Section 5.4.X-1 • Section 5.4.X-1 <p>Section 9 – Jurisdictional Annexes</p> <ul style="list-style-type: none"> • Section 9.X.7 (Sections 9.1-9.6); Section 9.X.6 (Sections 9.7-9.10) • Table 1-10 (Sections 9.1-9.6); Table 1-8 (Sections 9.7-9.10) 	X		
<p>B3. Is there a description of each identified hazard’s impact on the community as well as an overall summary of the community’s vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))</p>	<p>Section 5.4 – Hazard Profiles</p> <ul style="list-style-type: none"> • Section 5.4.X-1 • Section 5.4.X-2 <p>Section 9 Section 9.X.8 (Sections 9.1-9.6); Section 9.X.7 (Sections 9.7-9.10)</p>	X		
<p>B4. Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))</p>	<p>Section 5.4.6 – Flood – Table 5.4.6-4 Section 9 – Annexes Section 9.X.4 Table 9.X-5 (Sections 9.1-9.6), Table 1-8</p>	X		

REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
<u>ELEMENT B: REQUIRED REVISIONS</u>				
ELEMENT C. MITIGATION STRATEGY				
C1. Does the plan document each jurisdiction’s existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement §201.6(c)(3))	Section 9 – Annexes • Section 9.X.5, Sections 9.1-9.6 and Section 9.X.4, Sections 9.7-9.10 Sections 9.1-9.6 (Sections 9.X.6.2 and 9.X.6.3)	X		
C2. Does the Plan address each jurisdiction’s participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6(c)(3)(ii))	Section 9 – Annexes Section 9.X.4; Table 9.X-5 (Sections 9.1-9.6), Table 1-8	X		
C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i))	Section 6 – Mitigation Strategy Section 6.4	X		
C4. Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3)(ii))	Section 6 – Mitigation Strategy - Subsection 6.5 Section 9.7 through 9.10 in Section 9.X.9 and Sections 9.1-9.6 in Section 9.X.10	X		
C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))	Section 6 – Mitigation Strategy Subsection 6.6.2 and 6.6.3 Section 9.7 through 9.10 in Section 9.X.9 and Sections 9.1-9.6 in Section 9.X.10	X		
C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement §201.6(c)(4)(ii))	Section 9.1 through 9.10 in subsection 9.X.4	X		
<u>ELEMENT C: REQUIRED REVISIONS</u>				
ELEMENT D. PLAN REVIEW, EVALUATION, AND IMPLEMENTATION (applicable to plan updates only)				

REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
D1. Was the plan revised to reflect changes in development? (Requirement §201.6(d)(3))	Section 4 – County Profile – subsections 4.3.5 and 4.4 <ul style="list-style-type: none"> Section 4.5.3 Section 9.1 through 9.6 Section 9.X.3	X		
D2. Was the plan revised to reflect progress in local mitigation efforts? (Requirement §201.6(d)(3))	Section 6 – Mitigation Strategy <ul style="list-style-type: none"> Section 6.4. – Section 9.1 through 9.6, Section 9.X.1.4 and Section 9.7.-9.10, Section 9.X.1.3 	X		
D3. Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))	Section 6 – Mitigation Strategy <ul style="list-style-type: none"> Section 3 Section 6.4 	X		
<u>ELEMENT D: REQUIRED REVISIONS</u>				
ELEMENT E. PLAN ADOPTION				
E1. Does the Plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? (Requirement §201.6(c)(5))	NA	NA		
E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? (Requirement §201.6(c)(5))	To Be Completed	X		
<u>ELEMENT E: REQUIRED REVISIONS</u>				
OPTIONAL: HIGH HAZARD POTENTIAL DAM RISKS				
HHPD1. Did Element A4 (planning process) describe the incorporation of existing plans, studies, reports, and technical information for high hazard potential dams?	Section 5.4.2	X		
HHPD2. Did Element B3 (risk assessment) address HHPDs?	Section 5.4.2	X		
HHPD3. Did Element C3 (mitigation goals) include mitigation goals to reduce long-term vulnerabilities from high hazard potential dams that pose an unacceptable risk to the public?	Section 6.4.2	X		
HHPD4. Did Element C4-C5 (mitigation actions) address HHPDs prioritize mitigation actions to reduce vulnerabilities from high hazard potential dams that pose an unacceptable risk to the public?				X

REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
<u>REQUIRED REVISIONS</u>				
HHPD4. This section of the review tool is optional and will not prevent the plan from being approved. You can only meet the 4 th one by having an action for a high hazard dam that's officially in Unsatisfactory condition.				
ELEMENT F. ADDITIONAL STATE REQUIREMENTS (OPTIONAL FOR STATE REVIEWERS ONLY; NOT TO BE COMPLETED BY FEMA)				
F1.				
F2.				
<u>ELEMENT F: REQUIRED REVISIONS</u>				

SECTION 3: PLAN ASSESSMENT

A. Plan Strengths and Opportunities for Improvement

This section provides a discussion of the strengths of the plan document and identifies areas where these could be improved beyond minimum requirements.

Element A: Planning Process

Strengths

State

- This plan has an excellent description of how neighboring jurisdictions contributed to this plan. It also has a very good community profile and discussion about Lifelines. These highlights show that Douglas County is well integrated with the other communities it shares hazards with and is “self-aware” of what’s important to and at risk within the County.

FEMA

- The Plan does a nice job of documenting the alignment of the planning process with the 10-step process required for credit under Activity 510 of FEMA’s CRS program. The integration of these two processes for one plan will benefit the many jurisdictions in Douglas County that actively participate as CRS communities during their next cycle verifications.
- In addition to including meeting invitations, agendas, minutes, sign-in sheets, and survey results, the Plan appendices also contain an impressive array of planning process questionnaires created by the Project Management Team (PMT) to help inform the Plan update. A remarkable amount of data was requested and collected from the Local Planning Committee (LPC) on topics such as population growth and development trends, hazard identification and risk ranking, capability assessment, goal setting, and action priorities. The questionnaires are comprehensive and user-friendly, making it easy and streamlined for participants to inform the Plan update.
- The Participation Matrix (Table B.1) is an excellent way to identify *how* each jurisdiction met participation requirements throughout plan development. This type of table is easy to read and highlights planning process responsibilities in a transparent manner. The Plan also clearly articulates the roles and responsibilities for participation as members of the LPC and the Plan Maintenance Matrix (Table 7-1) provides a comprehensive summary of responsibilities to address plan maintenance, including description of task, approach, timeline, and lead and support responsibility.
- The PMT did a good job of providing opportunities for the public to be informed and engaged in the planning process, including use of social media, informational bulletins and a public project webpage to report on update activities, invitation to public meetings and LPC workshops, distribution of surveys, and the public review period. The Public Outreach Strategy (Appendix D) developed by the Douglas County Department of Communication and Public Affairs is a wonderful asset to the Plan. This outreach strategy leverages all of Douglas County’s traditional and digital communication assets and recommends an appropriate mix

of engagement strategies and marketing tools to maximize outreach and ensure that content is engaging, accurate, timely and relevant.

- Concurring with the State’s assessment, the planning team did an excellent job of involving neighboring communities, local and regional agencies, and other agencies with the authority to regulate development. The surrounding counties were all invited to the planning process which is a small but often missed planning requirement which is commendable. In particular, it was great to see a request sent to surrounding counties to complete a 38-question survey. This type of plan integration highlights the fact that jurisdictions from the region share hazard risks, and opportunities for collaborative mitigation action.

Opportunities for Improvement

State

- Three jurisdictions didn’t initially meet the requirement to discuss how they incorporated existing plans (Element A4) into their annexes. Beyond just meeting a planning requirement, doing so early in the next update will efficiently make their annexes more inclusive of the jurisdictions as a whole.

FEMA

- The Plan Maintenance Matrix indicates that the Plan’s Annual progress reports will be evaluated by an oversight steering committee annually; however, the Plan does not specify who comprises this committee. To ensure involvement, in future updates, consider including a brief description of the persons and/or agencies desired to participate in this oversight steering committee.
- An appropriate range of stakeholders were engaged and given the opportunity to become involved in the planning process. However, there could have been greater active participation from several key stakeholders, such as, the Douglas County School District, Tri-County Board of Health, local historical societies and preservation boards, and the Douglas County Farm Bureau. In the next plan update, consider outreach and engagement tools, techniques, and opportunities that will generate more active participation from educational, medical, historical, and agricultural institutions. For example, think about hands-on opportunities for educators and students. Are there particular school events/projects, or periodic guest speaking opportunities for the LPC to engage with students about mitigation concepts and risk-reduction actions? Continue to find new opportunities to educate, engage, and involve the community (esp. the youth) in mitigation planning activities.
- It is difficult to tell exactly who was invited to the planning process. Pages 3-6 thru 3-8 note different types of groups who were invited to participate, however, it does not identify which of those groups were reached out to. For the next plan, please include exactly who was invited and participated. As presented, this information can be gleaned from the Appendices, but it is not completely clear in the main plan document.

Element B: Hazard Identification and Risk Assessment**Strengths****State**

- The HIRA in this plan does a very good job describing the risks and vulnerabilities each jurisdiction faces. This is an important step not only for the mitigation strategy but also because it can inform many other community plans related to land use, emergency management, and other departments that influence, or are influenced by, natural hazards.

FEMA

- There is a newly added section on climate change in each hazard profile for this Plan update. The reality is that climate uncertainty has the potential to change local hazards risk profiles over time, and to amplify cascading hazard impacts across the region. Also, the overall discussion of natural assets and historic/cultural resources conveys how important certain community values and the ecosystem are to the County and participating jurisdictions. The attention to wildlife assets such as Endangered Species is a noteworthy inclusion.
- Table 5-5 Identification of Natural Hazards of Concern for Douglas County clearly demonstrates the PMT's rationale for inclusion or omission of a hazard from the Plan.
- Social vulnerability is incorporated into the Hazard Mitigation Plan, including an overall summary in Section 2.7 as well as into the risk assessments of individual hazards. Through identification of potential impacts to vulnerable populations, the Planning Team shows a strong commitment to accommodating all members of the community and achieving greater resiliency and social equity. Additionally, the incorporation of spatial analyses (Figures 2-6 thru 2-10) is extremely beneficial to understand where vulnerable populations live and where hazards will occur. The wildfire hazard profile, among others, is an excellent example of effectively tying the social vulnerability maps back to the risk analysis, stating "of the population exposed, the most vulnerable include the economically disadvantaged and the population over age 65. In Douglas County, there are 11,333 persons in poverty and 35,801 persons over 65 years old." The paragraph then goes on to explain why these groups are at higher risk. This information is extremely useful in guiding creation of targeted mitigation actions.
- FEMA's Community Lifeline categories, along with other facilities of value identified by the LPC, are used in the Plan to classify critical facilities and infrastructure. The Lifelines construct is a growing area of interest in hazard mitigation planning and it is commendable to see Douglas County and the Project Management Team thinking ahead at how lifelines are incorporated into the Plan. The Plan's Risk Assessment thoughtfully integrates the lifeline construct by documenting which lifelines, if any, would be disrupted during an event or are at higher risk. The integration of lifelines into mitigation will evolve before the next update is due. For the next plan update, consider capitalizing on this evolution to further integrate Lifelines into the Plan. Problem statements may be especially helpful here to highlight the issues and impacts to particular lifelines. Those lifelines could then be prioritized for mitigation actions and funding. An example of integration into the mitigation strategy may be to include a column in the Mitigation Action Table to identify which Lifeline the action is associated with.

- Risk analyses are clearly articulated and connected to the mitigation strategy. Each hazard profile's risk assessment includes helpful narrative to justify current and future hazard significance to all jurisdictions. For example, the HIRA discusses development trends over time and highlights patterns such as growth within or near the floodplain and WUI or climate change increasing the area's vulnerability to drought. Again, this is type of contextual information connects well with projects described in the mitigation strategy (e.g., land use regs., CWPP update, implementation of water conservation strategies, etc.).
- The Plan's Hazard Ranking methodology is a clear and consistent way to evaluate, describe, and quantify the degree of relative risk for each hazard assessed. The fact that it was applied to determine risk scores/classifications for each hazard specific to each jurisdiction (versus the planning area as a whole) is commendable. To better link the results of the HIRA with the Mitigation Strategy, consider including risk scores as a component of the methodology for prioritizing plan actions.

Opportunities for Improvement

State

- There are a lot of dams in Douglas County and the discussion of dam failure focused on failure inundation areas. As more information becomes available, this hazard profile should also include operational release inundation to better understand the hazards and potential losses from dams.

FEMA

- The Erosion and Deposition Hazard Profile cites three past mudslide/flood events that occurred in burn areas. The profile also indicates that impacts of climate change may increase the probability of wildfire, thus increasing the likelihood for erosion to occur. While the Plan acknowledges that post-wildfire flood events are an ever-increasing threat, no data is given to demonstrate vulnerability and potential impacts. Because flood after fire events are unique in their origin, frequency, geography, severity, impact, and prevention and response efforts, it is recommended that they are profiled and discussed as part of the risk assessment. Summarizing the characteristics and risk of flood after fire will help with the creation of targeted mitigation strategies.
- Although county-level and multi-jurisdictional map products work well for most hazards, consider using more detailed, jurisdiction-specific maps for hazards such as floods and wildfires, which have more localized spatial extents. While this would increase the page count for the plan, the benefit of more discernable hazard areas for each jurisdiction could help in terms of visual risk communication.

Element C: Mitigation Strategy**Strengths****State**

- The mitigation strategy in this plan is comprehensive for several of the participating jurisdictions and addresses many of the hazards that are ranked high or medium.

FEMA

- The inventory and assessment of relevant local capabilities is thorough and well organized. The brief descriptions and excerpts from applicable policies, regulations, plans, and programs for each jurisdiction are helpful, and the tables/matrices used to summarize the inventory and analysis of existing capabilities are very effective. The comprehensive inventory demonstrates that Douglas County and the participating jurisdictions are thinking holistically about what already exists within the planning area to accomplish hazard mitigation.
- The Plan demonstrates an understanding of the importance of integrating hazard mitigation into other planning mechanisms, and vice versa. The Existing Integration and Opportunities for Future Integration subsections in each jurisdictional annex are impressive for their thoughtful guidance on ways to utilize the data aggregated for this Hazard Mitigation Plan to inform other plans, procedures, and programs. For future updates, also consider including additional details of the processes or schedules followed by the entities that are responsible for those planning mechanisms, to conduct those updates.
- The Mitigation Action Plan tables provide a nicely catalogued summary of each proposed mitigation action/initiative with relevant attribute information. Mapping each action back to its applicable goal(s) and objective(s) is a good way to document how specific actions are designed to support a more coordinated strategy for risk reduction. Additionally, Tables 6-2 thru 6-9 include a comprehensive and nicely organized catalog of actions considered for each hazard.
- The mitigation strategy included a number of land use planning, administration, and regulatory actions to strengthen the existing built environment and direct new growth away from hazard-prone areas. Initiatives such as revising the Land Development Code in the City of Castle Pines to promote water conservation measures, updating the Parker 2035 Master Plan to add goals and strategies that further address natural hazards and mitigation, mitigating flooding by developing and implementing zoning regulations in the City of Lone Tree, and adopting a new community wildfire protection plan for the Town of Castle Rock are excellent examples of land use and regulatory actions/projects that will have a positive impact to further reduce community hazard risk. FEMA appreciates the continued commitment to advance these planning and regulatory mitigation actions.
- The Mitigation Action Priority Tables found in the Mitigation Strategy section of each jurisdictional annex are informative and provide insight into the methodology used to prioritize implementation and grant pursuit for all actions identified. It is clear local jurisdictions are considering the benefits that may result from mitigation actions versus the cost of those actions.

- Where a mitigation action addresses a major issue identified for a hazard, the Project Management Team has included a cross-reference to the text noting the relevant Action(s) and/or Action Number(s). This is a thoughtful tactic to establish direct links between key vulnerabilities identified in the Plan's HIRA with specific actions proposed in the Mitigation Strategy. For example, on page 9.6-113 of the Plan Annex, bank stabilization is identified as a jurisdiction-specific issue for the Town of Parker. Cross reference is made to Action PAR5 which identifies four bank stabilization projects in drainage areas throughout the town limits.
- It is not often that Hazard Mitigation Plans include detailed vulnerability assessments for Special Improvement Districts. The Planning Team is praised for their efforts to capture hazard risk (specifically wildfire, flood, and drought) for the participating Water District and Water and Sanitation Districts.

Opportunities for Improvement

State

- Some of the actions included in the mitigation strategy are focused on response or preparedness actions that fall in the gray area between response and mitigation. During the next update it would be helpful to involve DHSEM earlier in the process to provide education and examples of actions that fall into the gray area vs. actions that are clearly mitigation.

FEMA

- The Plan identifies which communities participate in the NFIP and provides detailed narrative around what NFIP participation and compliance looks like in these communities. For the next update, please consider including supplemental narrative describing each jurisdiction's floodplain management program for continued compliance with NFIP requirements. Some of this information can be gleaned from proposed mitigation actions. However, it could be enhanced with a greater description of the floodplain management program, such as if there are any floodplain ordinances that have been adopted and are actively enforced, if mapping has been completed or requested, or if there have been any community assistance and monitoring activities. Also, it would be helpful to note if there have been any Risk MAP activities in the county.
- As previously highlighted, the Plan does an excellent job incorporating social vulnerability into the risk discussion; including use of spatial analysis to identify where vulnerable populations reside in proximity to known hazard areas and providing strong narrative to express the disproportionate impact of disasters on at risk communities. However, the Plan's Mitigation Strategy does not contain targeted actions to reduce impacts to those identified at-risk groups. For future updates, please include actions to reduce vulnerabilities and enhance outcomes for those groups that could be disproportionately affected by disasters. For example, low-income households living in flood hazard areas may have fewer financial resources to prepare or recover from a flood, may not have access to a vehicle for evacuation, and may be more likely to be uninsured or underinsured. Targeted actions to consider may include planning more efficient evacuations, upgrading early warning systems and improving access to information, upgrading infrastructure, offering financial support to

retrofit structures, determining resource needs and allocation, tailoring communication efforts, and educating homeowners about insurance options.

- Several jurisdictions identified Animal Disease and Infestation and Plant Disease as medium risk. However, no associated mitigation actions are included in the Plan’s Mitigation Strategy. If animal and plant disease continue to be a high-risk hazard at the time of the next update, the Project Management Team may want to consider adding additional actions to mitigate risk.

Element D: Plan Review, Evaluation, and Implementation (Plan Updates Only)

Strengths

FEMA

- The Project Management Team did a great job of being aware of and integrating the 2021 planning process with concurrent/anticipated local planning efforts, such as the Douglas County 2040 Comprehensive Master Plan and several regulatory updates for participating jurisdictions. These efforts help promote consistency between complementary plan and policy documents, which can support and reinforce actions across the region.
- Table 1-4, “Plan Change Crosswalk,” provides an excellent and clear snapshot of what specifically has changed since the previous plan.
- The Plan has a clear and actionable strategy for review, evaluation, and implementation.
- The Plan does a nice job discussing historical development patterns and projected future growth uncertainties for all jurisdictions. In addition to written descriptions, the Plan includes maps to depict projected population growth and to show locations of recent and anticipated development within or near hazard prone areas. The hazard exposure analyses are comprehensive and provide valuable information to aide in creation of targeted mitigation activities.

Opportunities for Improvement

FEMA

- Section 7.3 notes ways to continue community engagement. The County may also want to consider leveraging existing community events to attend and engage the community there. While social media campaigns and meetings can be effective and bolster engagement results, they are not a substitute for going out into the community to muster up engagement.

B. Resources for Implementing Your Approved Plan

FEMA FUNDING SOURCES

Hazard Mitigation Grant Program (HMGP). The HMGP is a post-disaster mitigation program. It is made available to states by FEMA after each Federal disaster declaration. The HMGP can provide up to 75 percent funding for hazard mitigation measures. The HMGP can be used to fund cost-effective projects that will protect public or private property in an area covered by a federal disaster declaration or that will reduce the likely damage from future disasters. Examples of projects include

acquisition and demolition of structures in hazard prone areas, flood-proofing or elevation to reduce future damage, minor structural improvements and development of state or local standards. Applicants who are eligible for the HMGP are state and local governments, certain nonprofit organizations or institutions that perform essential government services, and Indian tribes and authorized tribal organizations. Individuals or homeowners cannot apply directly for the HMGP; a local government must apply on their behalf. Applications are submitted to your state and placed in rank order for available funding and submitted to FEMA for final approval. Eligible projects not selected for funding are placed in an inactive status and may be considered as additional HMGP funding becomes available. More information: <https://www.fema.gov/hazard-mitigation-grant-program>

Building Resilient Infrastructure and Communities (BRIC) Grant Program. The BRIC program supports states, local communities, tribes and territories as they undertake hazard mitigation projects, reducing the risks they face from disasters and natural hazards. BRIC is a new FEMA pre-disaster hazard mitigation program that replaces the existing Pre-Disaster Mitigation (PDM) program. The BRIC program guiding principles are supporting communities through capability- and capacity-building; encouraging and enabling innovation; promoting partnerships; enabling large projects; maintaining flexibility; and providing consistency: <https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities>

Rehabilitation of High Hazard Potential Dams (HHPD) Grant Program. This program provides technical, planning, design, and construction assistance in the form of grants for rehabilitation of eligible high hazard potential dams. For more information, please visit: <https://www.fema.gov/emergency-managers/risk-management/dam-safety/grants#hhpd>

Flood Mitigation Assistance (FMA) Grant Program. FMA provides funding to assist states and communities in implementing measures to reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insurable under the NFIP. The FMA is funded annually; no federal disaster declaration is required. Only NFIP insured homes and businesses are eligible for mitigation in this program. Funding for FMA is very limited and, as with the HMGP, individuals cannot apply directly for the program. Applications must come from local governments or other eligible organizations. The federal cost share for an FMA project is 75 percent. At least 25 percent of the total eligible costs must be provided by a non-federal source. Of this 25 percent, no more than half can be provided as in-kind contributions from third parties. FMA funds are distributed from FEMA to the state. More information: <https://www.fema.gov/flood-mitigation-assistance-grant-program>

Fire Management Assistance Grant (FMAG) Program. The FMAG program provides grants to states, tribal governments and local governments for the mitigation, management and control of any fire burning on publicly (non-federal) or privately owned forest or grassland that threatens such destruction as would constitute a major disaster. The grants are made in the form of cost sharing with the federal share being 75 percent of total eligible costs. Grant approvals are made within 1 to 72 hours from time of request. More information: <http://www.fema.gov/fire-management-assistance-grant-program>

Hazard Mitigation Grant Program (HMGP) Post Fire Grant Program. FEMA's Hazard Mitigation Grant Program (HMGP) has Post Fire assistance available to help communities implement hazard mitigation measures after wildfire disasters. States, federally-recognized tribes and territories affected by fires resulting in an [Fire Management Assistance Grant \(FMAG\)](#) declaration on or after October 5, 2018, are eligible to apply. More information:

<https://www.fema.gov/grants/mitigation/post-fire>

Fire Prevention and Safety (FP&S) Grants. FP&S Grants support projects that enhance the safety of the public and firefighters from fire and related hazards. The primary goal is to target high-risk populations and reduce injury and prevent death. Eligibility includes fire departments, national, regional, state, and local organizations, Native American tribal organizations, and/or community organizations recognized for their experience and expertise in fire prevention and safety programs and activities. Private non-profit and public organizations are also eligible. Interested applicants are advised to check the website periodically for announcements of grant availability:

<https://www.fema.gov/welcome-assistance-firefighters-grant-program>

OTHER MITIGATION FUNDING SOURCES

Grant funding is available from a variety of federal and state agencies for training, equipment, and hazard mitigation activities. Several of these programs are described below.

Program 15.228: Wildland Urban Interface Community and Rural Fire Assistance. [This program](#) is designed to implement the National Fire Plan and assist communities at risk from catastrophic wildland fires. The program provides grants, technical assistance, and training for community programs that develop local capability, including: Assessment and planning, mitigation activities, and community and homeowner education and action; hazardous fuels reduction activities, including the training, monitoring or maintenance associated with such hazardous fuels reduction activities, on federal land, or on adjacent nonfederal land for activities that mitigate the threat of catastrophic fire to communities and natural resources in high risk areas; and, enhancement of knowledge and fire protection capability of rural fire districts through assistance in education and training, protective clothing and equipment purchase, and mitigation methods on a cost share basis.

Secure Rural Schools and Community Self-Determination Act - Title III- County Funds. The Self-Determination Act has recently been reauthorized and now includes specific language regarding the Firewise Communities program. Counties seeking funding under Title III must use the funds to perform work under the Firewise Communities program. Counties applying for Title III funds to implement Firewise activities can assist in all aspects of a community's recognition process, including conducting or assisting with community assessments, helping the community create an action plan, assisting with an annual Firewise Day, assisting with local wildfire mitigation projects, and communicating with the state liaison and the national program to ensure a smooth application process. Counties that previously used Title III funds for other wildfire preparation activities such as the Fire Safe Councils or similar would be able to carry out many of the same activities as they had before. However, with the new language, counties would be required to show that funds used for

these activities were carried out under the Firewise Communities program. For more information, [click here](#).

Community Planning Assistance for Wildfire. Established in 2015 by Headwaters Economics and Wildfire Planning International, Community Planning Assistance for Wildfire (CPAW) works with communities to reduce wildfire risks through improved land use planning. CPAW is a grant-funded program providing communities with professional assistance from foresters, planners, economists and wildfire risk modelers to integrate wildfire mitigation into the development planning process. All services and recommendations are site-specific and come at no cost to the community. More information: <http://planningforwildfire.org/what-we-do/>

Urban and Community Forestry (UCF) Program. A cooperative program of the U.S. Forest Service that focuses on the stewardship of urban natural resources. With 80 percent of the nation's population in urban areas, there are strong environmental, social, and economic cases to be made for the conservation of green spaces to guide growth and revitalize city centers and older suburbs. UCF responds to the needs of urban areas by maintaining, restoring, and improving urban forest ecosystems on more than 70 million acres. Through these efforts the program encourages and promotes the creation of healthier, more livable urban environments across the nation. These grant programs are focused on issues and landscapes of national importance and prioritized through state and regional assessments. Information: <http://www.fs.fed.us/managing-land/urban-forests/ucf>

Western Wildland Urban Interface Grants. The National Fire Plan (NFP) is a long-term strategy for reducing the effects of catastrophic wildfires throughout the nation. The Division of Forestry's NFP Program is implemented within the Division's Fire and Aviation Program through the existing USDA Forest Service, State & Private Forestry, State Fire Assistance Program.

Congress has provided increased funding assistance to states through the U.S. Forest Service State and Private Forestry programs since 2001. The focus of much of this additional funding was mitigating risk in WUI areas. In the West, the State Fire Assistance funding is available and awarded through a competitive process with emphasis on hazard fuel reduction, information and education, and community and homeowner action. This portion of the National Fire Plan was developed to assist interface communities manage the unique hazards they find around them. Long-term solutions to interface challenges require informing and educating people who live in these areas about what they and their local organizations can do to mitigate these hazards.

The 10-Year Comprehensive Strategy focuses on assisting people and communities in the WUI to moderate the threat of catastrophic fire through the four broad goals of improving prevention and suppression, reducing hazardous fuels, restoring fire-adapted ecosystems, and promoting community assistance. The Western States Wildland Urban Interface Grant may be used to apply for financial assistance towards hazardous fuels and educational projects within the four goals of: improved prevention, reduction of hazardous fuels, and restoration of fire-adapted ecosystems and promotion of community assistance. More information: <https://www.westernforesters.org/wui-grants>

U.S. Fish & Wildlife Service, Rural Fire Assistance Grants. Each year, the U.S. Fish & Wildlife Service (FWS) provides Rural Fire Assistance (RFA) grants to neighboring community fire departments to

enhance local wildfire protection, purchase equipment, and train volunteer firefighters. Service fire staff also assist directly with community projects. These efforts reduce the risk to human life and better permit FWS firefighters to interact and work with community fire organizations when fighting wildfires. The Department of the Interior (DOI) receives an appropriated budget each year for an RFA grant program. The maximum award per grant is \$20,000. The DOI assistance program targets rural and volunteer fire departments that routinely help fight fire on or near DOI lands. More information: http://www.fws.gov/fire/living_with_fire/rural_fire_assistance.shtml

U.S. Bureau of Land Management, Community Assistance Program. BLM provides funds to communities through assistance agreements to complete mitigation projects, education and planning within the WUI. More information: <https://www.blm.gov/services/financial-assistance-and-grants>

NOAA Office of Education Grants. The Office of Education supports formal, informal and non-formal education projects and programs through competitively awarded grants and cooperative agreements to a variety of educational institutions and organizations in the United States. More information: <http://www.noaa.gov/office-education/grants>

NRCS Environmental Quality Incentives Program (EQIP). The Environmental Quality Incentives Program, administered through the NRCS, is a cost-share program that provides financial and technical assistance to agricultural producers to plan and implement conservation practices that improve soil, water, plant, animal, air and related natural resources on agricultural land and non-industrial private forestland. Owners of land in agricultural or forest production or persons who are engaged in livestock, agricultural or forest production on eligible land and that have a natural resource concern on that land may apply to participate in EQIP. Eligible land includes cropland, rangeland, pastureland, non-industrial private forestland and other farm or ranch lands. EQIP is another funding mechanism for landowner fuel reduction projects. More information: <https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/eqip/>

U.S. Department of Agriculture, Community Facilities Loans and Grants. Provides grants (and loans) to cities, counties, states and other public entities to improve community facilities for essential services to rural residents. Projects can include fire and rescue services; funds have been provided to purchase fire-fighting equipment for rural areas. No match is required. More information: http://www.usda.gov/wps/portal/usda/usdahome?navid=GRANTS_LOANS

General Services Administration, Sale of Federal Surplus Personal Property. This program sells property no longer needed by the federal government. The program provides individuals, businesses and organizations the opportunity to enter competitive bids for purchase of a wide variety of personal property and equipment. Normally, there are no restrictions on the property purchased. More information: <http://www.gsa.gov/portal/category/21045>

Hazardous Materials Emergency Preparedness Grants. Grant funds are passed through to local emergency management offices and HazMat teams having functional and active LEPC groups. More information: <http://www.phmsa.dot.gov/hazmat/grants>

U.S. Department of Homeland Security. Enhances the ability of states, local and tribal jurisdictions, and other regional authorities in the preparation, prevention, and response to terrorist attacks and other disasters, by distributing grant funds. Localities can use grants for planning, equipment, training and exercise needs. These grants include, but are not limited to areas of Critical Infrastructure Protection Equipment and Training for First Responders, and [Homeland Security Grants](#).

Community Development Block Grants (CDBG). The U.S. Department of Commerce administers the CDBG program which are intended to provide low and moderate-income households with viable communities, including decent housing, as suitable living environment, and expanded economic opportunities. Eligible activities include community facilities and improvements, roads and infrastructure, housing rehabilitation and preservation, development activities, public services, economic development, planning, and administration. Public improvements may include flood and drainage improvements. In limited instances, and during the times of “urgent need” (e.g. post disaster) as defined by the CDBG National Objectives, CDBG funding may be used to acquire a property located in a floodplain that was severely damaged by a recent flood, demolish a structure severely damaged by an earthquake, or repair a public facility severely damaged by a hazard event. CDBG funds can be used to match FEMA grants. More Information: https://www.hud.gov/program_offices/comm_planning/cdbg

Building Blocks for Sustainable Communities. The EPA Office of Sustainable Communities sometimes offers grants to support activities that improve the quality of development and protect human health and the environment. When these grants are offered, they will always be announced on www.grants.gov. More information: <https://www.epa.gov/smartgrowth/building-blocks-sustainable-communities#2016>

PUBLICLY AVAILABLE TOOLS

FEMA Community Engagement Prioritization Tool (CEPT).

<https://www.fema.gov/floodplain-management/manage-risk/community-engagement-prioritization-tool>

FEMA National Risk Index for Natural Hazards (NRI).

<https://hazards.geoplatform.gov/portal/apps/MapSeries/index.html?appid=ddf915a24fb24dc8863eed96bc3345f8>

FEMA Resilience Analysis and Planning Tool (RAPT).

<https://www.fema.gov/emergency-managers/practitioners/resilience-analysis-and-planning-tool>

FEMA Flood Assessment Structure Tool (FAST).

https://www.fema.gov/sites/default/files/2020-09/hazus_fast-factsheet.pdf

FEMA Hazus.

<https://www.fema.gov/flood-maps/products-tools/hazus>

Decision Support System for Water Infrastructure Security (DSS-WISE):

<https://dsswiseweb.ncche.olemiss.edu/>

CDC/ASTDR Social Vulnerability Index (SVI).

<https://www.atsdr.cdc.gov/placeandhealth/svi/index.html>

OTHER RESOURCES

FEMA: Grant Application Training. Each year, FEMA partners with the State on training courses designed to help communities be more successful in their applications for grants. Contact your State Hazard Mitigation Officer for course offering schedules. Example Courses:

- Unified Hazard Mitigation Grant Assistance Application Development Course
- [Benefit Cost Analysis \(BCA\)](#) Course

FEMA: Community Assistance Visit. It may be appropriate to set up a Community Assistance Visit with FEMA to provide technical assistance to communities in the review and/or updating of their floodplain ordinances to meet the new model ordinance. Consider contacting your State NFIP Coordinator for more information.

FEMA: Building Science. The Building Science branch develops and produces multi-hazard mitigation publications, guidance materials, tools, technical bulletins, and recovery advisories that incorporate the most up-to-date building codes, floodproofing requirements, seismic design standards, and wind design requirements for new construction and the repair of existing buildings. To learn more, visit: <https://www.fema.gov/building-science>

NOAA/NIDIS: U.S. Drought Portal. NOAA's National Integrated Drought Information System's [Drought Portal](#) provides resources for communities to understand their drought conditions, vulnerability, and impacts. The Portal includes data and maps down by city, county, state, zip code, and at watershed global scales. Communities can use this information to inform their hazard mitigation plans with update-to-date data regarding drought conditions, vulnerability, and impacts for sectors such as agriculture, water utilities, energy, and recreation.

EPA: Smart Growth in Small Towns and Rural Communities. EPA has consolidated resources just for small towns and rural communities to help them achieve their goals for growth and development while maintaining their distinctive rural character. To learn more, visit: <https://www.epa.gov/smartgrowth/smart-growth-small-towns-and-rural-communities>

EPA: Hazard Mitigation for Natural Disasters: A Starter Guide for Water and Wastewater Utilities. The EPA released guidance on how to mitigate natural disasters specifically for water and wastewater utilities. For more information, visit: <https://www.epa.gov/waterutilityresponse/hazard-mitigation-natural-disasters>

National Integrated Drought Information System. The National Drought Resilience Partnership may provide some additional resources and ideas to mitigate drought hazards and increase awareness of

droughts. Visit: <https://www.drought.gov/drought/what-nidis/national-drought-resilience-partnership>.

Beyond the Basics: Best Practices in Local Mitigation Planning. The product of a 5-year research study where the Coastal Hazards Center and the Center for Sustainable Community Design analyzed local mitigation plans to assess their content and quality. The website features numerous examples and best practices that were drawn from the analyzed plans. Visit: <http://mitigationguide.org/>

STAR Community Rating System. Consider measuring your mitigation success by participating in the STAR Community Rating System. Local leaders can use the STAR Community Rating System to assess how sustainable they are, set goals for moving ahead and measure progress along the way. To get started, go to <http://www.starcommunities.org/get-started>

Flood Economics. The Economist Intelligence Unit analyzed case studies and state-level mitigation data in order to gain a better understanding of the economic imperatives for investment in flood mitigation. To learn more, visit: <http://floodeconomics.com/>

Headwaters Economics. Headwaters Economics is an independent, nonprofit research group that works to improve community development and land management decisions in the West. To learn more, visit: <https://headwaterseconomics.org/>