Appendix A: FEMA Eight-Step Process

Eight-Step Planning Process for Floodplains and Wetlands

Step 1: Determine whether the Proposed Action is located in a wetland and/or the 100- year floodplain, or whether it has the potential to affect or be affected by a floodplain or wetland.	**Project Analysis:** According to FEMA Flood Insurance Rate Maps for the project area (FIRM Panels 08041C0513F, 08041C0494F, and 08041CO726F, effective date of March 17, 1997), a majority of the project would be constructed in a FEMA regulatory 100-year floodplain (Flood Hazard Zone AE). A formal wetland delineation was conducted by Robert Belford, Biologist with Wilson & Company, on November 14, 2013. No wetlands were identified in the project limits.
Step 2: Notify public at earliest possible time of the intent to carry out an action in a floodplain or wetland, and involve the affected and interested public in the decision-making process.	**Project Analysis:** The Camp Creek Garden of the Gods detention facility and downstream improvements are the initial stand-alone project of a larger long-term Camp Creek drainage improvement program. The community was engaged in the development of solutions through a series of news releases, five newsletters, and four community workshops/meeting. The community meetings were: • Community workshop, October 22, 2013, approximately 150 people in attendance. • Community workshop, December 12, 2013, approximately 60 people in attendance. • Community workshop, February 25, 2014, approximately 125 people in attendance. • Open house, April 29, 2014 approximately 100 people in attendance. FEMA Notice of Intent to prepare an Environmental Assessment was published in the Colorado Springs Gazette on October 1, 2015. No comments were received during the 15 day public comment period
Step 3: Identify and evaluate practicable alternatives to locating the Proposed Action in a floodplain or wetland.	**Project Analysis:** The Camp Creek Drainage Improvement Project reviewed alternatives for Camp Creek from the Glen Eyrie property line on the north to Fountain Creek on the south that would provide the required conveyance capacity. These alternatives included various forms of channel reconstruction and creek stabilization with and without detention options. The following alternatives were considered in selecting the proposed action: *No Action Alternative:* Under the No Action Alternative, no improvements would be made to mitigate the effects of flooding or sedimentation and erosion through Garden of the Gods Park or the Pleasant Valley neighborhood. The City would continue to maintain the small sedimentation facility that they have constructed in the northern part of Garden of the Gods Park but it would be overwhelmed with sediment in large storm event and sediment would likely migrate downstream. Erosion would continue to occur in the natural sections of the creek and the process would be accelerated as the channel enlarges and the

	natural function of the floodplain is diminished. *Upsize 31st St. Channel with No Stormwater Detention (not included in the EA because it does not meet the purpose and need):* A concrete lined and much larger conveyance facility through the space constrained 31st Street corridor to convey the un-detained 100-year flood flow. This larger concrete channel would not provide optimum reduction in downstream flood risk and would visually impact more properties in the project area. *Single Medium Sized Detention Pond adjacent to Gateway Road (not included in the EA because it does not meet the purpose and need):* This alternative would raise Gateway Road, the primary access to Garden of the Gods Park, by approximately 14 feet to serve as the dam for the detention facility. The location next to Gateway Road limited the size of the potential detention facility and would have required an additional sediment and debris basin at the north end of Garden of the Gods Park. Because of the limited storage available, this alternative would not reduce the flow rates to a level that they could be conveyed in the naturalistic channel section in the median of 31st Street as preferred by the community. The alternative would require a large concrete lined in the space constrained 31st Street corridor to convey the 100-year flood. With the exception of the No-Action Alternative, all other practicable alternatives would require location within the some portion of the existing floodplain to meet the purpose and need. While the Proposed Action will require construction in the existing floodplain its purpose is in support of improving floodplain values.
Step 4: Identify the full range of potential direct or indirect impacts associated with the occupancy or modification of floodplains and wetlands, and the potential direct and indirect support of floodplain and wetland development that could result from the Proposed Action.	**Project Analysis:** Construction of the proposed detention/sedimentation facility will not have an impact on wetlands as there are not any present in the project area. Construction of the proposed detention/sedimentation facility will have the following impacts on the floodplain. • The floodplain will be increased in width and depth in some areas limited to the confines of the detention facility. • The dam associated with the facility will constitute a fill within the existing floodplain. • Flow rates in large flood events will be reduced in Camp Creek downstream of the facility. This will reduce the risk of flooding in the Pleasant Valley Neighborhood located downstream of the facility. Construction of the naturalistic channel stabilization along the unlined portions of Camp Creek through Garden of the Gods Park and Rock Ledge Ranch will help restore the connection between the creek channel and the adjacent

	undeveloped floodplain that was present prior to the Waldo Canyon Fire. The proposed treatment will be designed in a manner to encourage a portion of large flood flows to spread out over the historic floodplain within the Park and Ranch. Construction of the proposed roadway improvements at Gateway Road will result in a small fill in the existing floodplain but will increase the size of the bridge to pass the 100 –year flood without overtopping the roadway. This will reduce the potential for damage to the roadway infrastructure and life safety risks to motorists during flood events. While construction of the naturalistic channel stabilization and proposed roadway improvements at Gateway Road are not part of the FEMA funded project, they are mentioned in Step 4 as a connected action occurring in the floodplain. Changes to the FEMA regulatory floodplain will be analyzed and documented through CLOMR/LOMR processes in accordance with FEMAs requirements. The floodplain within the Pleasant Valley Neighborhood is already developed thus, reducing flood risks in the neighborhood will not result in further reduction of the natural floodplain in the neighborhood. The remainder of the floodplain that will be impacted by the Proposed Action is located within Garden of the Gods Park and Rock Ledge Ranch. The City of Colorado Springs operates both of these facilities and with the exception of the proposed improvements does not have plans for future development in the floodplain in these areas.
Step 5: Minimize the potential adverse impacts from work within floodplains and wetlands (identified under Step 4), restore and preserve the natural and beneficial values served by wetlands.	**Project Analysis:** The proposed detention/sedimentation facility will reduce peaks flood rates along Camp Creek downstream of the facility. This will reduce the risk of flooding for properties located adjacent to Camp Creek in the Pleasant Valley Neighborhood. The facility will also serve as a collection and storage facility for sediment conveyed by the Creek from the Waldo Canyon Fire burn scar which will mitigate the potential for downstream vegetated floodplain areas through the Garden of the Gods to be buried by coarse gravel. Construction of the proposed naturalistic channel stabilization along Camp Creek will help to restore connection between the unlined portion of Camp Creek and its undeveloped floodplain through Garden of the Gods Park. While it is not a primary goal of the project, the stabilization of the channel may ultimately foster an environment that would support some wetlands at some point in the future.

Step 6: Re-evaluate the Proposed Action to determine: 1) if it is still practicable in light of its exposure to flood hazards; 2) the extent to which it will aggravate the hazards to others; 3) its potential to disrupt floodplain and wetland values.	**Project Analysis:** 1. The Proposed Action is a flood control and drainage course stabilization project and must be located in the floodplain in order to function. The proposed action will have positive impacts to the floodplain and will be designed to mitigate damage during flood events. 2. The analysis completed indicates that the Proposed Action will reduce not aggravate hazards to others. 3. The mitigation of high peak flow rates, control of sediment and erosion and improving connectivity between the unlined channel and its historic floodplain through the Park and Ranch that will result from construction of the project will have positive impacts on floodplain values with minimal disruption. There are no existing wetlands but stabilization of the channel may allow wetlands to form in the future.
Step 7: If the agency decides to take an action in a floodplain or wetland, prepare and provide the public with a finding and explanation of any final decision that the floodplain or wetland is the only practicable alternative. The explanation should include any relevant factors considered in the decision-making process.	**Project Analysis:** As explained in text for Step 2, the plan for the Proposed Action was developed through a planning process with significant public involvement. A public notice will be published informing the public of FEMAs intent to proceed with the project. The notice will include significant facts considered in making the determination and a statement indicating that the proposed will conform to State and Local floodplain protection standards.
Step 8: Review the implementation and post-implementation phases of the Proposed Action to ensure that the requirements of the EOs are fully implemented. Oversight responsibility shall be integrated into existing processes.	**Project Analysis:** This step is integrated into the NEPA process and FEMA project management and oversight functions.