

APPENDIX G

8-Step Process for EO 11988: Floodplain Management

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Augusta Rocky Creek Georgia Flood Risk Management Section 205 Feasibility Study

--Section 205, 1948 FCA (P.L. 80-858), as amended

--Decision Process for E.O. 11988 as Provided by 24 CFR §55.20

Step 1: Determine whether the action is located in a 100-year flood plain (or a 500-year flood plain for critical actions).

This action is located in a 100-year flood plain. Figure 5 of the feasibility report displays the 100 year flood plain in the study area. The Tentatively Selected Plan (TSP) is the combination of the Rosedale Detention Area and the Kissingbower Buyouts with Park. Therefore, E.O. 11988 applies. An evaluation of direct and indirect impacts associated with construction, occupancy, and modification of the flood plain is required.

Rosedale Dam Detention Area: This structural alternative proposes to modify the former Rosedale Dam into a detention area to reduce flood risks downstream without increasing flood risks upstream. Specifically, the Rosedale Detention area will reduce the peak flow downstream for rain events. The structure's design is targeted to have the largest flood reduction impact up to the 25-year flood event (4 percent chance of exceedance in any given year). At flows larger than the 25-year flood event, the overflow weir will be used to pass water in addition to culvert flow. The detention structure will still provide a reduction in peak flows and water surface elevations downstream at flows greater than the 25-year event; however, the incremental water surface elevation reduction will decrease as flow increases.

Kissingbower Buyouts with Recreational Park: This non-structural alternative proposes to acquire five properties, demolish and remove the existing structures occupying the properties, and develop a passive recreation park on the vacant lands that remain. Therefore, this analysis considers impacts to the floodway along with concerns for loss of life and property.

Step 2: Notify the public for early review of the proposal and involve the affected and interested public in the decision making process.

Coordination with the sponsor has been ongoing since approximately 2002. They have acted as the link between the USACE and the public. Some public concerns that were brought to USACE attention are:

- Damage to existing homes and commercial developments from storm events within flood plain
- Erosion, sedimentation, and subsequent impacts to wetlands and aquatic habitat from implementation of the proposed action
- Access thru private property in performance of maintenance on culvert/weir

A draft EA was sent out for public review in 2005 for a larger project that included the Rocky Creek Basin.

Discussions between homeowners and the sponsor has suggested the willingness of the homeowners to sell properties located in the Kissingbower area.

Step 3: *Identify and evaluate practicable alternatives.*

The objective of this study is to reduce flood risks within the 500-year flood plain of the Rocky Creek Basin in an economically justified, environmentally sound, and technically feasible manner.

The planning constraints identified in this study are as follows:

- Avoid or minimize environmental impacts from flood risk management measures.
- Minimize induced damages resulting from the implementation of flood risk reduction measures.

Augusta Rocky Creek FRM Section 205 study considered several alternative sites and actions:

A. Locate the Project Within the Flood plain

1. Rosedale Dam Detention Area Alone

The structural alternative, Rosedale Dam Detention Area Improvement, would convert the formerly breached earthen dam to a detention structure. The renovations proposed at this location include placing a reinforced concrete box culvert through the existing breached embankment in the creek bed for normal creek flow. This would consist of a low-level 5 feet wide x 6 feet high culvert outlet, approximately 150 linear feet in length, set to elevation 215.7 feet NAVD 88 with a controlling invert at elevation 216.7 feet NAVD 88. Because this is an inline detention structure, the outlet is set equal to the existing channel invert (1 foot below channel surface) so that there is no impoundment of water during normal low flow.

At flows less than a 25-year flood event, flow will be handled through the culvert alone, while flows larger than the 25-year flood event will use the overflow weir. The detention structure will still provide a reduction in peak flows and water surface elevations downstream at flows greater than the 25-year event. However the incremental water surface elevation reduction will decrease as flow increases.

2. Kissingbower Buyout Alone

This non-structural measure would require mandatory acquisition of five properties; two are vacant and three of the properties contain a structure (refer to the Main Report Section 5.4 “Real Estate Requirements” for more detail). By demolishing these structures, they will be eliminated from the flood plain. The remaining land would be, in perpetuity, converted to greenspace. Two of the houses were inundated with 4 to 5.5 feet of water during the 100-year flood. Meanwhile, the third house received 2.5 feet of flooding above the first floor elevation.

3. Kissingbower Buyout with Park

This alternative includes the non-structural Kissingbower buyouts with the added feature of a recreation park which is intended to provide passive recreation benefits to the area. The proposed recreational park would require acquisition of five residential properties; two are vacant and three contain structures. This recreation facility, sought to be located on the 5 acquired parcels (including the bottom vacant triangular lot (0.3 of an acre) on Haynie Street), would encompass approximately 1.32 acres of the flood plain.

4. Rosedale Detention Area and Kissingbower Buyout with Park (TSP)

This alternative would consist of a combination of both the structural improvements at Rosedale Dam and non-structural improvements in the form of a recreational park in the Kissingbower area. Impacts would include a combination of impacts identified for the detention area and the buyout plans described above.

B. Locate the Project Outside of the Flood Plain

No alternatives located outside of the flood plain were considered as part of the final array. During preliminary analysis, alternatives which did not meet the goals of the project, were not cost effective, or involved HTRW and were eliminated. Some of the alternatives considered in 2005 consisted of improvements that were proposed to be constructed outside of the flood plain.

C. No Action or Alternative Actions that Serve the Same Purpose

A no action alternative was considered and rejected because without any action, the Rocky Creek Basin would continue to be subjected to frequent flooding. Such flooding would result in substantial losses to properties in the future. Subsequently, property values would be expected to decrease in the vicinity. Additional information quantifying property losses are included in the economic analysis (Appendix A) of the Feasibility Report

Step 4: Identify Potential Direct and Indirect Impacts of Associated with Flood Plain Development.

Section 4.5 of the Environmental Assessment for this project describes the impacts to the flood plain that would be expected under each alternative. With implementation of the Tentatively Selected Plan (TSP), the Rosedale Dam Detention Area would slow floodwaters within the existing flood plain and would not adversely impact the flood plain. The TSP would restore some of the lost natural flood plain storage capacity (from decades of flood plain development) and reduce economic damages from flooding in some of the developed areas of this drainage basin.

Converting residential use of the flood plain to greenspace and recreational use would have a beneficial impact to flood plain management in the affected area. The acquisition of the property for a recreation park would prohibit further development in that portion of the flood plain in the future.

Step 5: *Where practicable, design or modify the proposed action to minimize the potential adverse impacts to lives, property, and natural values within the flood plain and to restore, and preserve the values of the flood plain.*

The Rosedale Dam Detention Area would restore some of the lost natural flood plain storage capacity from decades of development and thereby reduce economic damages from flooding in some of the developed areas of this drainage basin. As designed, the Rosedale Dam Detention Area would limit downstream scour and loss of aquatic habitat by reducing the peak flow rate and energy of storm water discharges to the receiving stream. The reduction of downstream erosion may provide benefits to wetlands, associated flood plains, riparian vegetation, and bottomland hardwoods.

The non-structural feature would result in benefits to the flood plain by converting residential use of the flood plain to greenspace/recreational use in the area, which would assist in management of the flood plain.

Step 6: *Reevaluate the Alternatives.*

Although the TSP is in a flood plain, the project has been designed in order to minimize effects on flood plain values.

The no action alternative is impracticable because it will not satisfy the need to provide FRM to the affected communities.

Step 7: *Determination of No Practicable Alternative*

It is our determination that there is no practicable alternative for locating the project out of the flood zone. This is due to the need to reduce flood risks within the 500-year flood plain of the Rocky Creek Basin and the ability to mitigate and minimize impacts on human health, public property, and flood plain values.

A final notice will be published during the public review of these documents.

Step 8: *Implement the Proposed Action*

USACE will assure that this plan, as modified and described above, is executed and necessary language will be included in all agreements with participating parties. USACE will also take an active role in monitoring the construction process to ensure no unnecessary impacts occur nor unnecessary risks are taken.