Area 1 Existing Risk

**Identified Flood Risk Factors**

1) Existing dams help reduce flooding however, the unregulated part of basin is a major flood source during frequent floods

2) Dangerous because water rises quickly leaving little time to react.
Area 1 Potential Improvements

- Corps can not participate because costs exceed economic benefits.
- Provides considerable flood protection and may warrant consideration by others.
Identified Flood Risk Factors

1) Existing dams help reduce flooding but not enough to prevent Shunganunga Creek from becoming overwhelmed.

2) Several hundred structures inundated in the 100-yr floodplain

3) Dangerous because water rises quickly leaving little time to react.
Area 2 Potential Improvements

- Levee performance could be improved by modifications to the existing Wood Valley Dam (by others)
Area 4 Existing Risk

Identified Flood Risk Factors

1) Several hundred structures inundated in the 100-yr floodplain

2) Dangerous because water rises quickly leaving little time to react.
Area 4 Potential Improvements

Channel Modification

Topeka Blvd

SW 17th Street

SW 21st Street

0.25 0.125 0 0.25 Miles
Channel Modification

Increases conveyance by deepening/widening the channel or laying back the slopes. Decreases roughness of channel perimeter by removing obstructions, debris, and woody vegetation.

• Requires excavation and placement of soils and erosion control such as rip-rap and/or establishment of native grasses.
• Provides more channel capacity and stabilizes the banks, reducing nearby flooding.
• Increases velocity, meaning the water surface will be lower at the affected area.
Channel Modification Concept

Top Photos represent existing channel conditions

Bottom Photos represent modified channels with native grasses
Increase Dam Heights or Lower Normal Water Levels

- Increases available storage in detention
- Decreases peak flows downstream of dams
- Raising dams and spillways does not require changes in normal water elevations, but increases the available storage behind the dam.
Construct Additional Detention Basins

- Increases storage in the watershed and decreases peak flows
- Helps to control flooding locations
- Appropriate locations and flowage easements behind the dams would be required.
Construct Levees/Floodwalls

- Prevent streams from flowing across low lying areas adjacent to the stream’s channel during high water events
- Possibility along Area 2 portion of the creek