

Fact Sheet
Structural Measures
(Local Protection)

Option: Channel Modification

Description: Channel modification involves widening, deepening or straightening of existing channels, creation of new channels, and the modification of highway and railroad bridges that constrict the channel. Dredging involves mechanical removal of shoaled or deposited material (sediment) from river and tributary beds.

Example(s): Small scale projects such as Molly Ann’s Brook in Hawthorne, NJ.

Benefits: Channelization carries floodwaters more quickly through an area, potentially reducing backwater flooding. Dredging can remove sediment deposits or shoaled areas in a channel or river.

Challenges: For channel improvement to be effective in lowering flood profiles at the flood damage areas, improvements would have to extend well beyond the actual damage reach and require extensive excavation, structure relocations, and acquisition of additional lands. Channelizing only portions of the river would move floodwaters more rapidly downstream, thereby accentuating problems in downstream areas. In those lower reaches influenced by tides, the effect of channelization would be reduced or nullified. In many instances, the proximity of developed property to the stream bank would require the acquisition of some of that property considered for protection. The possible adverse environmental effect of extensive channel modifications on fish and wildlife, as well as on the conservation and recreation potential of the river are major challenges. The Delaware River through the study area maintains a very mild slope along most of its length, limiting the effective flow carrying capacities of any channel modifications. Potential problems with these techniques include increased turbidity, contaminated sediments, and requirements for dredged material placement.

