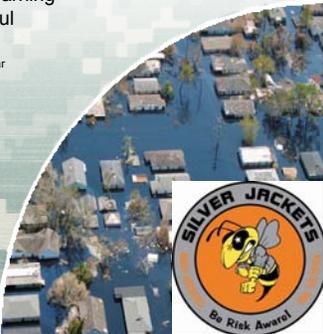


Minnesota Silver Jackets Pilot Project

Flood Inundation Map and Warning System for Downtown St. Paul

MVD
 Interagency Flood/Drought Preparedness Webinar
 January 23, 2013
 Diane Cooper, NWS Twin Cities
 Terry R. Zien, USACE St. Paul District





Flood Inundation Map and Warning System for Downtown St. Paul - Study Limits



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Flood Inundation Map and Warning System for Downtown St. Paul - Study Features



Downtown St. Paul Looking Upstream Mississippi River, Left Bank



4.30.2001

Downtown St. Paul Looking Downstream Mississippi River, Left Bank



4.30.2001

Flood Inundation Map and Warning System for Downtown St. Paul Objectives

- Leverage existing resources
 - ▶ USACE HEC-RAS model for the Mississippi
 - ▶ Existing USGS gage location and long period of record
 - ▶ NWS forecast point
 - ▶ City of St. Paul survey data
 - ▶ FEMA HAZUS Database
 - ▶ Studies by others

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Flood Inundation Map and Warning System for Downtown St. Paul Objectives - Continued

- Create a flood inundation map
 - ▶ Define flood risk
 - ▶ Scenario-based
 - ▶ Enhanced NWS forecast capabilities
 - ▶ Inform public policy decisions (land use, zoning, permitting)
 - ▶ Develop/improve flood warning systems

- Produce public education materials
 - ▶ Potential to work with the Science Museum of Minnesota
 - ▶ Video display kiosk
 - ▶ Provide information on natural and beneficial uses of the flood plain



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Flood Inundation Map and Warning System for Downtown St. Paul Objectives - Continued

- Reduce future risk to life and property!
 - ▶ Improve urban planning
 - ▶ Enhance flood warning system
 - ▶ Update existing FEMA NFIP materials for the study area
 - ▶ Promote wise use of the flood plain
 - ▶ Reduce future expenditures on recovery

- Potential to Increase CRS Credit:
 - ▶ FEMA will investigate the possibility to provide CRS credit to those communities who obtain inundation mapping studies as a tool for flood risk mitigation.



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Status Update

- Milestones Accomplished
 - ▶ Identified meaningful scenarios for HEC-RAS model
 - ▶ Gathered additional data needed for model, risk identification, and map production
 - ▶ Updated Mississippi River rating curve
 - ▶ Updating current HEC-RAS model to be used as a basis for water surface profiles to include recent LIDAR data – Jan 13

- Next Steps
 - ▶ Finalize HEC-RAS models
 - ▶ Produce inundation maps
 - ▶ Upload maps to NWS AHPS system
 - ▶ Education and outreach



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