

Why the State Should Develop a High Resolution Digital Elevation Model (DEM) And Floodplain Mapping Program

There is Window of Opportunity Now to LEVERAGE FEDERAL FUNDS

- FEMA expects funding of \$350 million for each of the next 3 fiscal years, starting in 2003, to update floodplain maps throughout the country.
- FEMA is expected to cost share at least 34% (27 million) of the total \$80 million cost to update Minnesota's 15-25 year-old floodplain maps, if a DEM is available.

Government will be COST-EFFECTIVE and EFFICIENT

- DEM is an essential data layer for multiple purposes
 - Provide data for transportation planning, utilities, and other public infrastructure
 - DEM will provide a base map to accurately delineate floodplains
 - Provide property owners in floodplains with data they need to obtain building permits (potentially saving each landowner about \$1,700 - \$3,700)
 - Efficiently process the purchase of flood insurance
 - Provide data for efficiently processing defensible land use decisions
 - Managing and developing natural resources
 - Implementing the Wetland Conservation Act
 - Updating/developing comprehensive local water plans
 - Expediting and improving the quality of soil mapping
 - Precision farming, reducing the cost from \$10 to less than \$0.50 per acre
 - Developing multi-hazard mitigations plans

Estimated COST SAVINGS

- Cities, counties, and state agencies could save approximately \$60 million every 4 years if a DEM was available.
 - Currently, local government and state agencies spend \$15 million per year to collect elevation data independently.
- The Benefit/Cost Ratio of a high-resolution DEM is more than 3.5:1 based on existing programs in other states because of the increased efficiency in data collection and the multiple applications of the data.
- Developing a statewide high-resolution DEM has onetime state costs of \$41 million that can be spread out and spent over 4 years.
- DEM will help reduce Minnesota's flood damages (\$3.2 billion for the decade of the 1990s) by approximately 30%-40%, by providing critical data for accurate flood forecasting, advance flood-fighting measures, and emergency actions to prevent damages.

Projected cost is \$80 million...\$41 million for DEM, \$27 million for floodplain mapping and \$12 million for Information/Technology/Personnel

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