

Executive Summary

In Phase 1, the study team reviewed U.S. Army Corps of Engineers (USACE) report, “The Blanchard River Flood Risk Management Feasibility Study Appendix B – Economics (DRAFT)”, and associated spreadsheets. The team identified the following issues and reached the following conclusions:

Benefit-Cost Ratio (BCR): The USACE only estimated the benefits and costs from a National Economic Development (NED) perspective and not from a regional (county-level) Regional Economic Development (RED) perspective. USACE originally estimated that the BCR would be 1.30 for the preferred alternative, but subsequent refinement of cost estimates has resulted in the BCR dipping just below 1.00. The study team has discovered a number of additional potential categories of benefits (see below). The addition of these benefits will likely raise the NED BCR well above 1.00 and the RED BCR even higher.

Report Content: The report did not provide cross-alternative summary tables and graphics and detailed estimates of benefits to allow comparison of alternatives and reality checking of results.

Project Spreadsheets: The study team reviewed each of the spreadsheets and found only a few insignificant calculation errors. However, the author of the spreadsheets did not link all of the data items so that full checking back to the original source of all the calculations was not possible.

Structure Values: Rather than using tax assessments, USACE valued structures using square footages from a 10% sample of floodplain structures, square foot building costs from RSMeans, and adjustments for depreciation. The report does not describe the variance between their values and tax assessments, provide average structure values the two methods provided, or compare results with Census data.

Vehicle Damages: USACE assumed floods would damage 30 percent of privately owned vehicles based on data from the Southeast Louisiana Evacuation Behavioral Report following Hurricanes Katrina and Rita. Flooding in Findlay is more likely to be associated with flash type flooding in comparison to large hurricanes. USACE makes no mention of public and commercial vehicles as well as vehicles at dealerships, auto repair shops, public parking lots, office buildings, etc. The report aggregates results for vehicles with structure and content damages rendering it impossible to judge whether the results are reasonable or comparable to actual damages.

Income losses: The report quotes USACE guidance that flood losses include income losses, which are the loss of wages or net profits to business. However, the report then makes no further mention of income losses. It is also not apparent that USACE estimated lost school days, missed medical appointments, and other social costs.

Transportation Damages: USACE did conduct an analysis of increased vehicle operating costs and travel times due to roadway closures, but never incorporated the results into the report or benefit-cost analysis. The report also notes that flooding has resulted in the closure of rail crossings, but it is not apparent that USACE estimated delays, rerouting, and other costs resulting from these closures.

Agricultural Damages: USACE did conduct an analysis of agricultural damages due to inundation, but never incorporated the results into the report or benefit-cost analysis.

Emergency Response Costs: USACE sourced estimates by structure type to the Hancock County Engineer, but did not document the methodology or describe what was included in the estimate. It is not apparent whether the estimate includes relocation and reoccupation costs.

National Flood Insurance Program (NFIP) Administrative Costs: USACE employed the average NFIP administrative cost per household, but does not provide a citation or describe the estimate. It is not clear if it is the average administrative cost for all households or for those suffering flooding.

Cleanup Costs: It is not apparent that USASCE included costs for damages to utilities, roads, rail lines, and other infrastructure, as well as cleanup of debris and restoration costs.

Discount Rates, Net Present Values, and Interest during Construction: The estimates and methodologies that USACE employed appear unusual and require additional scrutiny.

Location, Intensification, and Employment Benefits: USACE did not estimate RED benefits. Location benefits accrue when a reduction in flood risk allows new activities to locate in the floodplain. Intensification benefits accrue due to increases in income where the economic activity does not change (i.e. higher value crops). Employment benefits (i.e. jobs building levees, etc.) accrue from the construction of a project. Each of these can also be partial NED benefits when using unemployed labor in especially depressed areas.

Phase 2: The study team developed a work plan to conduct an updated and comprehensive benefit-cost Analysis (BCA) for the project.