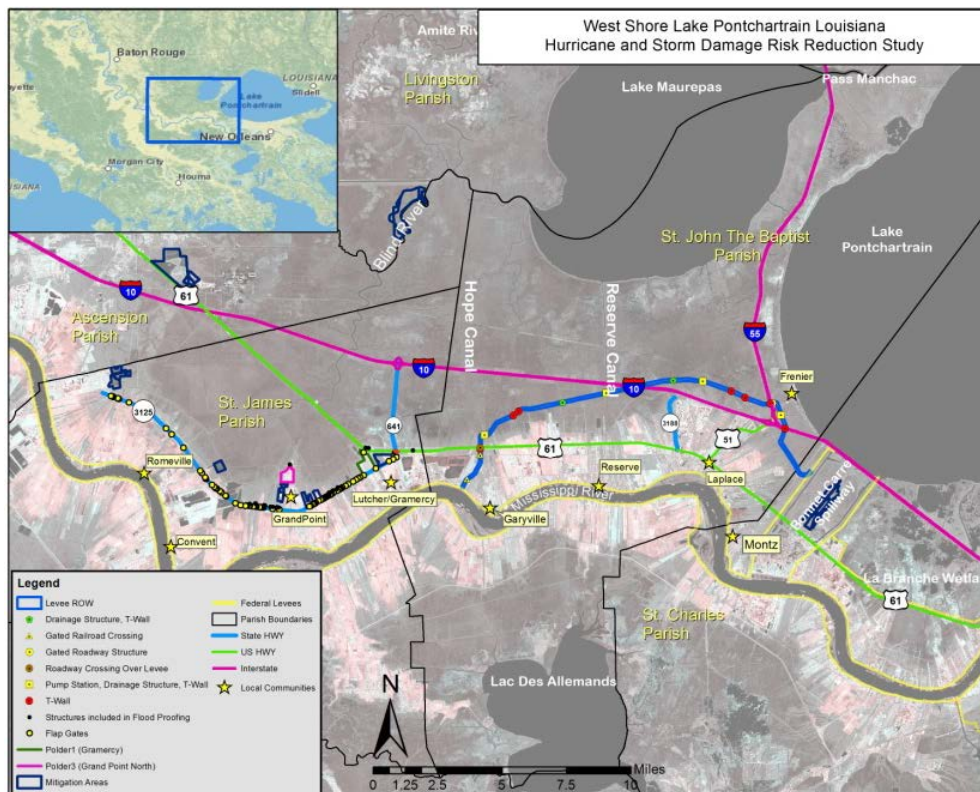


West Shore Lake Pontchartrain Hurricane and Storm Damage Reduction Project, LA

16 September 2014



ABSTRACT: The West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction (WSLP) project will provide risk reduction measures to address tropical/hurricane storm surge events in St. Charles, St. John the Baptist and St. James Parishes in southeast Louisiana. The Coastal Protection and Restoration Authority Board of Louisiana (CPRAB) is the non-federal cost-share sponsor.

WSLP communities are at increasing risk to storm surge flooding due to

wetland loss and relative sea level rise. The project purpose is to reduce the risk of flood damages caused by hurricane and tropical storm surges. An overview of the entire risk reduction system is shown above. The Recommended Plan is Alternative C, which includes an 18.27-mile levee around Montz, Laplace, Reserve and Garyville, reducing risk to over 7,000 structures. The construction of the levee system in St. Charles and St. John the Baptist Parishes would be based on a 1% probability storm level of risk reduction (commonly known as a '100-year storm') and a 2020 intermediate sea level rise condition and would include future lifts to maintain that protection.

The recommended plan also includes the construction of localized risk reduction measures that focused on addressing existing damages in St. James Parish. These measures includes berms and flapgates on existing drainage and roadway features in the communities of Gramercy, Lutchet and Grand Point. These communities are located outside of the proposed levee system. The Recommended Plan also includes raising 14 residential structures; flood proofing 4 non-residential structures to +3.0 feet above the ground elevation; and constructing 5 smaller berms for 5 light industrial/warehouse facilities. All measures will initial provide a level of risk reduction above a 1% probability storm level of risk



reduction storm stage in 2020. Future lifts for these berms, to compensate for any relative sea level rise impacts, are not included as part of this plan. The sponsor is responsible for the operation, maintenance, repair, rehabilitation and replacement (OMRR&R) of the berms at the elevation for which the berms were designed and constructed. In the future, the effectiveness of the nonstructural measures would depend on the actual rate of relative sea level rise.

There is a potential for direct, indirect and cumulative impacts to wetlands, wildlife, fisheries, and water quality due to the implementation of the recommended plan. Habitat impacts that require compensation include 1,090 Average Annual Habitat Units (AAHUs) of swamp habitat and 99 AAHUs of bottomland hardwood (BLH) habitat. To compensate for these impacts, the mitigation plan includes restoration of 3,002 acres of swamp, 156 acres of BLH and the purchase of 72 AAHUs of swamp mitigation bank credits. Mitigation would be constructed in St. Charles, St. James, Ascension, and Livingston Parishes.

Based on FY 2015 price levels, the estimated first cost of the Recommended Plan is approximately \$718,091,000, which would be cost-shared federal \$437,117,000 (65 percent) and non-federal \$280,974,000 (35 percent). Of that amount, the cost of lands, easements, rights-of-way, relocations, and dredged or excavated material disposal areas (LERRD) is estimated at \$26,559,000, all of which is eligible for LERRD credit as part of the non-Federal sponsor's 35% cost share. The CPRAB would be responsible for the OMRR&R of the project after construction, at a cost currently estimated at about \$5,023,000 per year.

Based on FY 2015 price levels, the current 3.5% discount rate and a 50-year period of analysis, the average annual costs of the project are estimated to be \$34,568,000, including monitoring and OMRR&R. The Recommended Plan would reduce potential coastal storm damages by 73% in the study area compared to the no-action alternative. The equivalent average annual benefits are estimated to be approximately \$97,205,000, with net average annual benefits of approximately \$62,637,000. The benefit to cost ratio is approximately 2.81 to 1.

Report Documentation: Pertinent documentation on the project, the results of the CWRB and subsequent Washington-Level Review Actions are linked below:

- [CWRB Agenda](#)
- [Project Map/Placemat](#)
- [Project Summary](#)
- [CWRB Briefing Slides](#)
- [CWRB Lessons Learned](#)
- CWRB Meeting Record
- State & Agency Review Comments Letters
- Documentation of Review Findings
- Signed Chief of Engineers Report
- Advanced Copy to Congressional Committees
- ASA (CW) Memo to OMB
- OMB Response
- ASA (CW) Transmittal to Congress
- Signed Record of Decision
- Authorization