South Howard Flood Relief Project

Benefit-Cost Analysis Summary

The Benefit-Cost Ratio (BCR) is a tool used by federal, state, and local governments to evaluate whether a project's anticipated benefits outweigh its costs over the life of the infrastructure. A BCR of 1.0 or higher generally indicates that the project's benefits equal or exceed its costs. The key factors used to calculate the BCR are outlined below:

- Structure damage
- Structure contents
- Time displaced from structure
- Vehicles damaged from flood water
- Roadway damage
- # of traveling public affected
- The BCR calculation is usually based on a 50-year service life, although the infrastructure in this project is expected to have a useful life approaching 100 years.
- Municipal pump stations typically last 30–50 years and require substantial maintenance throughout their service life.

The City's Stormwater Division works to reduce roadway flooding, protect public safety and keep the community moving, while also reducing structural flooding wherever possible.

The South Howard Flood Relief Project does both. It will reduce chronic street flooding and improve access to a hospital, medical offices, homes and dozens of businesses, while protecting 96 structures during a 5-year, 8-hour storm and approximately 230 homes and businesses during a Milton-like storm.

Similar projects have kept a major evacuation route at Dale Mabry/Henderson passable and reduced longstanding neighborhood street flooding through the Lower Peninsula Project. **South Howard delivers those same roadway benefits while protecting more structures than both projects combined.**

South Howard Flood Relief Project

- Cost Benefit Ratio 1.2
- Total Project Cost: ~$100M
- Structure Flood Relief 5yr/8 storm event: 96 structures
- Milton like event ~230 structures
- Gallons of water removed: 20M

UPPER PENINSULA

The project relieved chronic flooding at Dale Mabry and Henderson to ensure a clear evacuation route during major weather events. **During a 5yr/24hr storm, fewer than 10 homes are saved from flooding; however, during a major storm event, additional homes would be saved.**

Upper Peninsula Project

- Cost Benefit Ratio 1.5
- Total Project Cost: ~$40M
- Equivalent Cost in Today's Dollars: $49M
- Structure Flood Relief 5yr/24 storm event: <10 structures
- Gallons of water removed 13.7M

LOWER PENINSULA

The project successfully relieved long-term street flooding in the residential neighborhoods around Himes Ave and Interbay Blvd, south of Gandy Blvd. **The modeling showed that during a 5yr/8hr storm, fewer than 10 homes would be saved from flooding;** however, during a major weather event, that number would increase.

Lower Peninsula Project

- Cost Benefit Ratio 0.73
- Total Project Cost: ~$60M
- Equivalent Cost in Today's Dollars: $71M
- Structure Flood Relief 5yr/24 storm event: <10 structures
- Gallons of water removed 11.4M

The project's cost-benefit ratio meets the criteria set by both the Southwest Florida Water Management District and the Florida Department of Environmental Protection (FDEP), supporting its eligibility for permitting and funding.

Additional benefits include:

- **Supporting the local economy:** Many of the structures benefiting from flood protection are businesses that contribute to the City's economy.
- **Maintaining access to medical care:** The project reduces flooding near critical medical facilities, helping patients and emergency services maintain access during severe weather.
- **Protecting roadway infrastructure:** Reducing repeated flooding helps extend the life of City streets by limiting erosion and damage to the road base, reducing long-term maintenance needs and costs.