Levees

Flood Resiliency Blueprint Principal Advisory Group (PAG):
Methodology Review

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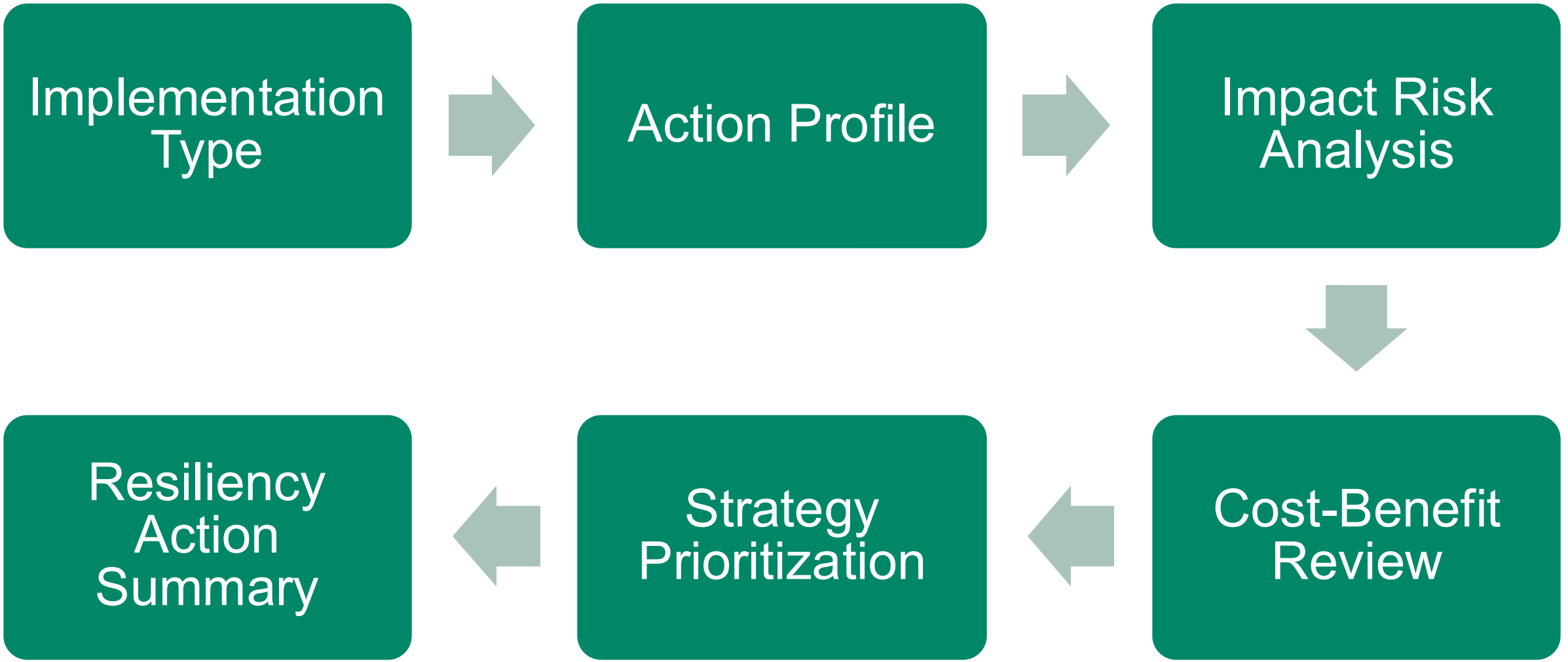
Workflow Overview



Basic Action Profiling

Option #1: Existing Levees ID

- Highlight existing infrastructure
- Build Levee Profile from USACE NLD
- Local Levee Partnership Team (LLPT) Status

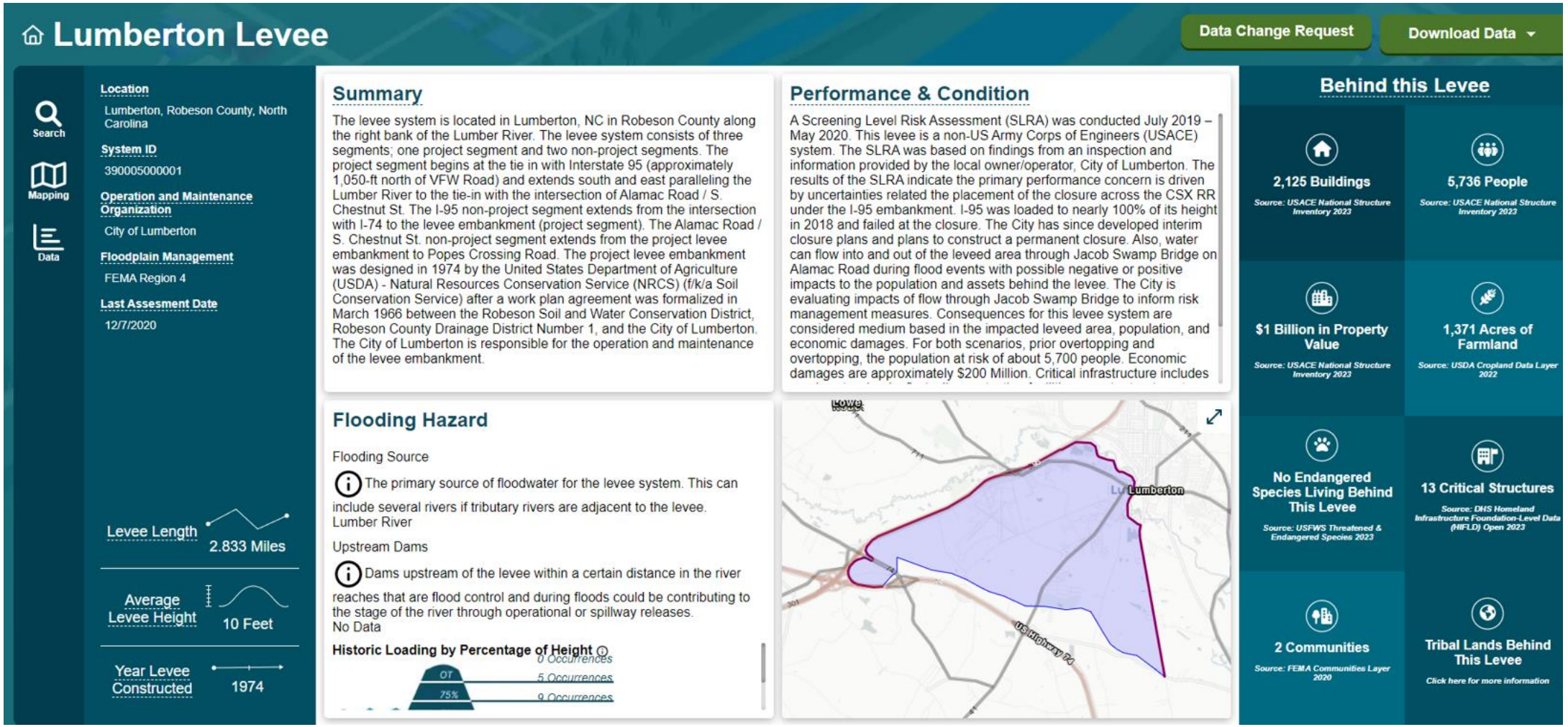
Option #2: New Levees/Floodwalls

- Build Levee Profile from user-input
- Preliminary site analysis
- Preliminary design considerations

Action Impact Risk Analysis

- Performance & Consequence
  - Target Flood Scenario
  - Flood risk reduction potential
    - Existing Pre-Action
    - Expected/Reduced Post-Action (Tier-2)
  - Potential affected hazards
  - Levee accreditation criteria (FEMA NFIP 44 CFR §65.10)

Action Impact Risk Analysis: Existing Levees



Action Impact Risk Analysis: New Levees/Floodwalls

Guidance for Flood Risk Analysis and Mapping, Levees

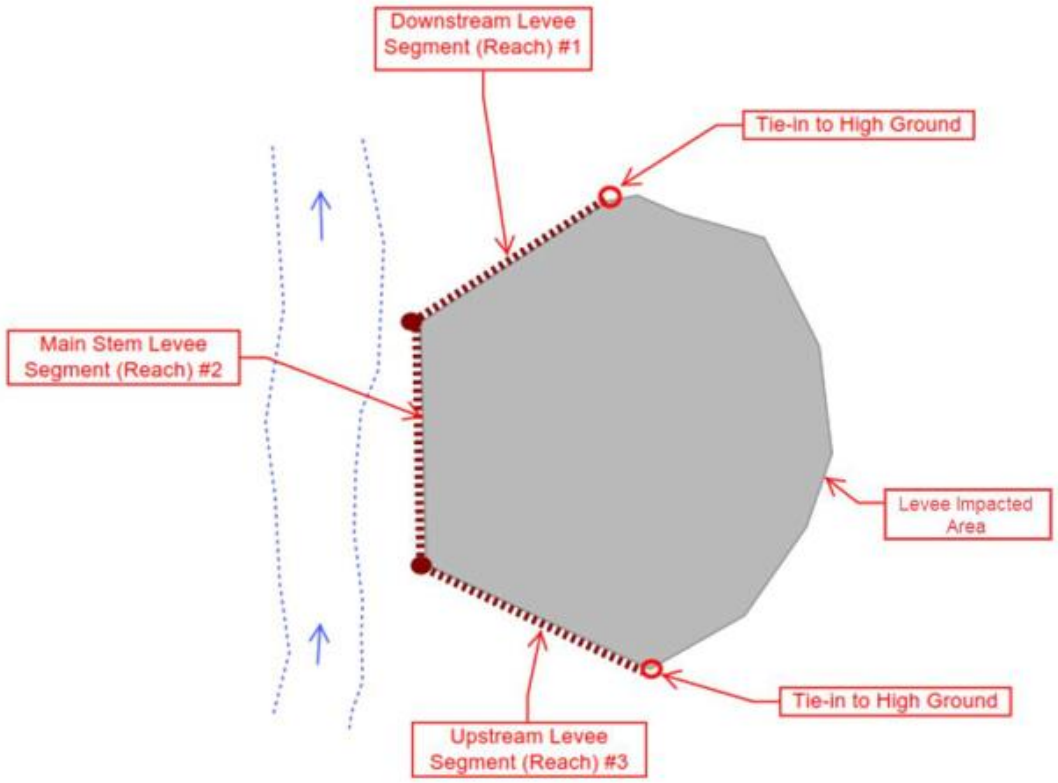
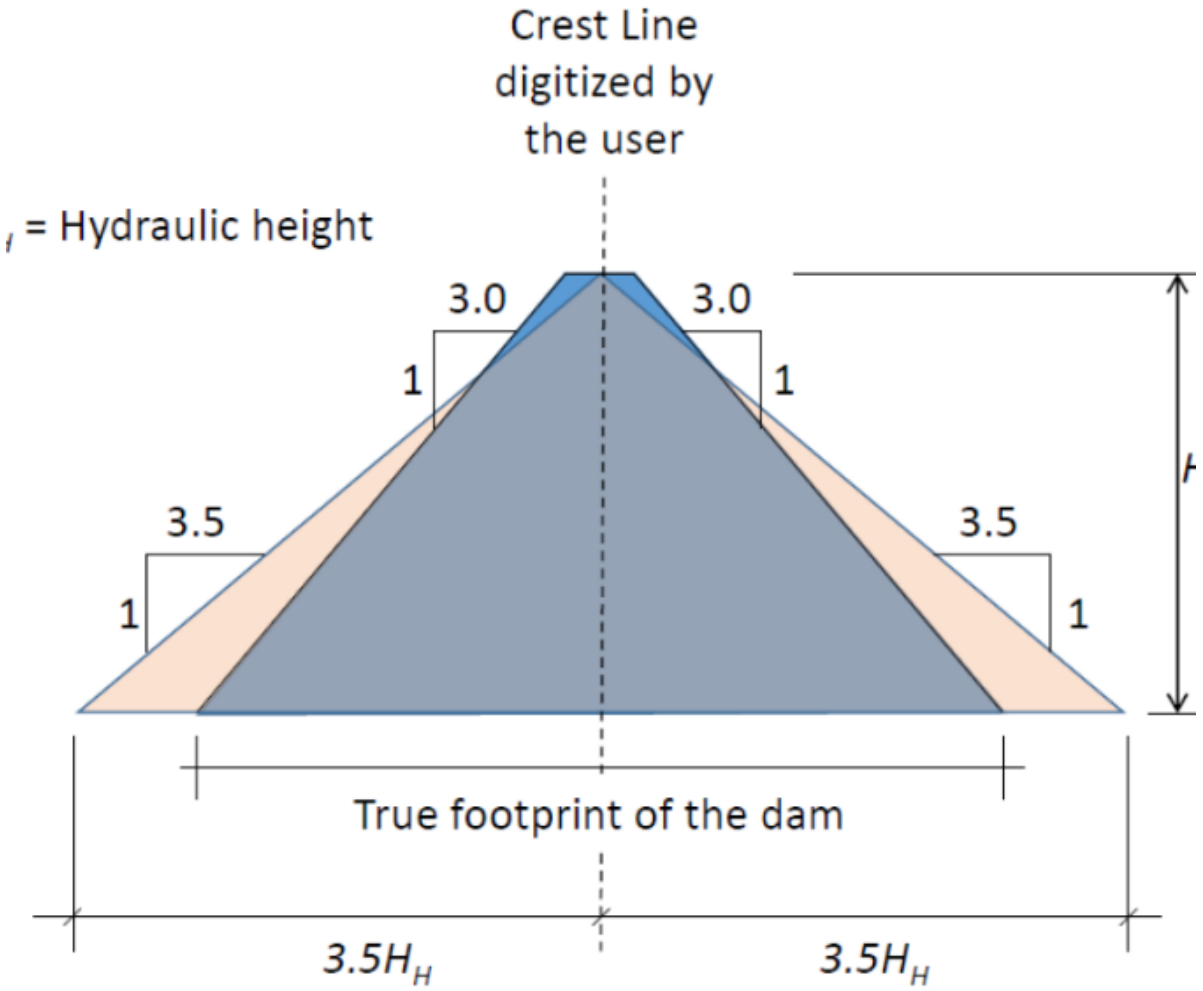


Figure 1: Example Levee System A



Cost-Benefit Review

- AACE No. 18R-97 Class 4 ROM%
- Existing Damage Costs Pre-Action
- Loss Avoidance Costs (Reduced Damage Costs Post-Action)
- Total Mitigation Action Cost = total associated capital cost(s) + annual O&M/lifecycle costs
- BCR "Cost Effectiveness" = Loss Avoidance Costs / Total Mitigation Action Cost

Action Strategy Prioritization

- Feasibility ranking mechanism
  - Technicality
  - Regulatory Compliance/Urgency
- Minimum threshold scoring system

Criterion	Weight (%)
USACE Levee Safety Action Classification (LSAC)	20%
Population at Risk (PAR)	20%
Emergency Preparedness and O&M Plans Availiability	20%
Potential Failure Mode Analysis (PFMA)	10%
Structural Feasibility	10%
Levee Ownership / Sponsor	5%
Environmental Consequences	5%
Benefit-Cost Ratio (BCR)	5%
Community/Stakeholder Efforts	5%

Resiliency Action Summary

- Qualitative inputs for additional project context:
  - Problem Statement & Objectives/Expected Outcomes
  - Assumptions & Constraints
  - Program Work Plan
  - Stakeholder Collaboration Efforts

Possible Optimizations for V3

Action Strategy Prioritization

Improved BCA Handling

Tier-2 Modeling Integration

Mediator for NLSP support

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