



# Scarborough Flood Vulnerability Assessment Project Meeting #4/5

April 2<sup>nd</sup>, 2025

# Meeting Agenda

## AGENDA

1. **Welcome**
2. **Task 2 Updates:**
  - Final Memos: Data Review, Flood Vulnerability Results
  - Draft Memo: Prioritization Results
3. **Task 3 Updates**
4. **Task 4 Updates**
5. **Task 5 Updates:**
  - Review Adaptation Strategies Work Product
  - Pilot Project Updates
6. **Task 6 Updates**
7. **Task 7 Updates:**
  - StoryMap Update
8. **Discuss overall project schedule, including:**
  - Next Deliverables
  - Next Community Event
  - Next Project Meeting
9. **Adjourn**



## Task 2: Data Review & Collection

### **Task 2 is bulk of flood vulnerability work:**

- Data review (GIS assets, flood levels, etc.)
- Field work
- Flood vulnerability results
- Asset prioritization

Ultimate work product will be an ArcGIS StoryMap.

Interim memos submitted along the way for work documentation and review.



## Task 2: Data Review & Collection

### **Data Review Memo:**

- Memo summarizing data sources used in study.
- Submitted as final March 2025

### **Vulnerability Results Memo:**

- Memo summarizing vulnerability assessment methods and results.
- Submitted as final March 2025

### **Draft Asset Prioritization Memo:**

- Memo summarizing roadway prioritization.
- Submitted as draft March 2025
- Will receive comments and incorporate into final memo.

**These memos inform the content of the ArcGIS StoryMap.**



# Draft Asset Prioritization Memo

- Includes to 30 roadways sorted alphabetically
- Includes full ranked list of public roads in appendix

Table 3-2. Top 30 Ranked Roads Based on Weighted Risk Score, Alphabetical Order

| Road Name      |                |                                  |
|----------------|----------------|----------------------------------|
| Avenue 5       | Jones Creek Dr | Route 1                          |
| Avenue 6       | Kent St        | Route 9                          |
| Avenue 7       | King St        | Sawyer St                        |
| Bayview Ave    | Milliken Rd    | Shipwreck Rd                     |
| Black Point Rd | Morning St     | Snow Canning Rd                  |
| Champion St    | Ocean Ave      | Spurwink Rd                      |
| Clay Pits Rd   | Old Neck Rd    | Starbird Rd                      |
| Driftwood Ln   | Payne Rd       | Vesper St                        |
| E Grand Ave    | Pillsbury Dr   | Winnocks Neck Rd                 |
| Ferry Rd       | Pine Point Rd  | Winnocks Necks to Plummer Island |

**StoryMap:** will be updated to include prioritization once comments are received.

- Memo is technical, but summary in StoryMap will be high-level (equation, ranking matrix)
- Will include top 30 roads “un-ranked” in StoryMap

Should StoryMap link to final memos?



# Initial Prioritization of Roads

| Consequence Score | Area Impacted (# Buildings)           | Public Safety Impact                                                                                                                                                | Damage Potential, Relative Cost                                                                               | Environmental Impact               | Economic Impact                                                                                                            |
|-------------------|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| 5                 | Town-wide (>150 buildings)            | Very High:<br>- Official Evacuation Route                                                                                                                           | Very High:<br>- Has experienced damage<br>- Within wave action zone<br>- Utility infrastructure below roadway | Very High:<br>≥8 habitats impacted | Very High:<br>- Zoned as "Town and Village Center", "Industrial Zone", within the Industrial Overlay, or with AADT > 5,000 |
| 4                 | Multi-Neighborhood (75-200 buildings) | High:<br>- Access to critical infrastructure or services<br>- Unofficial Evacuation Route                                                                           | High:<br>- Within wave action zone                                                                            | High:<br>6-7 habitats impacted     | High:<br>- 1,000 < AADT < 5,000                                                                                            |
| 3                 | Neighborhood (25-75 buildings)        | Medium:<br>- No alternate route                                                                                                                                     | Medium:<br>- Revetment along roadway (e.g., scour potential)                                                  | Medium:<br>4-5 habitats impacted   | Medium:<br>- Zoned as "Beach Mixed-Use District", "Town and Village Centers 4"                                             |
| 2                 | Sub-neighborhood (5-25 buildings)     | Low:<br>- Alternate route<br>- No alternate access, but impacts property that would already be flooded (neighborhood/local street)<br>- cul-de-sac, dead end street | Low:<br>- Stillwater inundation                                                                               | Low:<br>1-3 habitats impacted      | Low:<br>- Zoned as "Town and Village Centers Transition" zone, "Town and Village Centers Fringe", "Coastal Mixed Use"      |
| 1                 | Property- Level (<5 building)         | None<br>- No impact (e.g., end of dead-end street w/ no houses affected)                                                                                            | None:<br>- High-tide inundation, no revetments or other coastal structures                                    | None:<br>No Habitats impacted      | Very Low / None:<br>- Zoned as "Residential", "Rural Farming"                                                              |

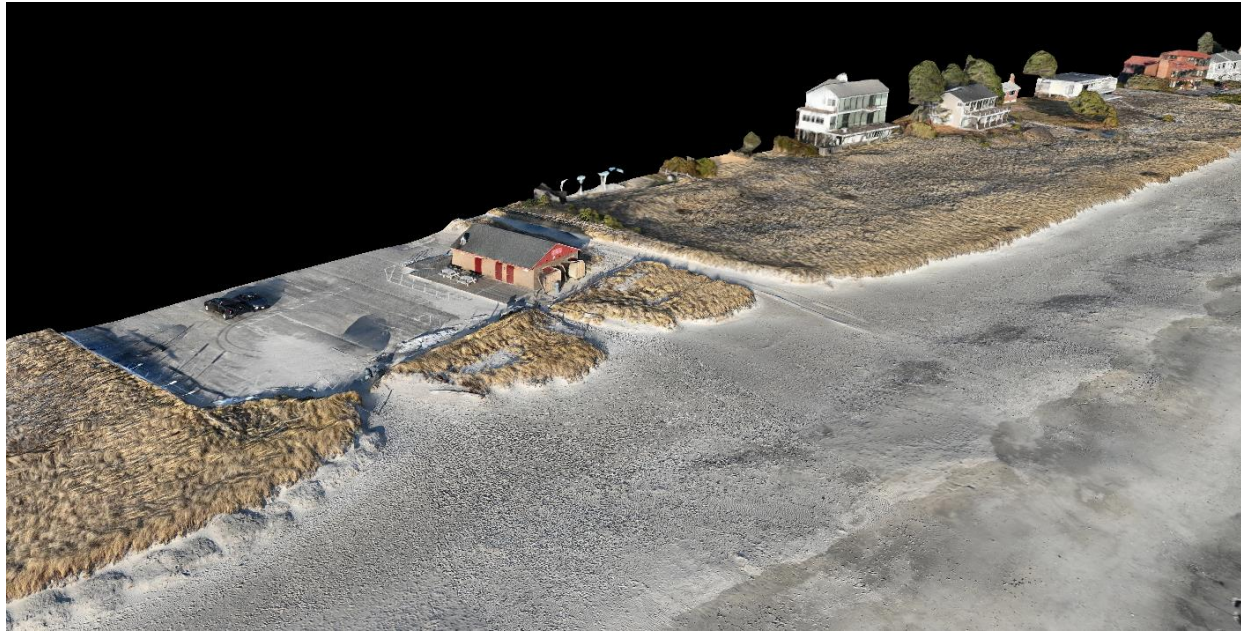


## Task 3: Drone Survey

### Drone Flight #1:

- December 13, 2024
- Higgins Beach and Pine Point Beach
- Imagery and Topographic Survey

Drone Flight #2 will be coordinated in the spring (June timeframe)



## Task 4 Updates

### **Task 4: Ordinance Review:**

- Draft is being reviewed internally
- Keeping a watch on state regulatory changes, nearby efforts



## Task 5: Adaptation Strategies

### Two main products: Adaptation memo + Pilot Projects

#### 1) Adaptation memo:

- 1) Overview of broad category adaptation strategies: roads, pump stations, boat launches, etc.
- 2) Recommendations for specific assets in table form



# Task 5: Adaptation Strategies

# Adaptation Memo Specific Assets

- Top 30- 40 roads
  - Pine Point and Higgins may be addressed regionally
- Public Pump Stations
- Pine Point Fire Station
- Wastewater Treatment Plan
- Public Works Facility
- Eastern Trail

May discuss “Do Nothing” as a strategy separately and remove from table.

Does Town have damage/maintenance costs?

Example row from recommendations table:

| Asset Name | Option 1 | Cost 1 | Option 2                                       | Cost 2 | Option 3                | Cost 3 | Option 4   | Cost 4 |
|------------|----------|--------|------------------------------------------------|--------|-------------------------|--------|------------|--------|
| Ocean Ave  | Elevate  | \$\$\$ | Detour through Piper Road and Greenwood Avenue | \$     | Temporary Flood Barrier | \$     | Do Nothing | -      |



## Task 5: Adaptation Strategies

### **Pilot Projects:**

Three proposed projects based on community engagement input and discussions with Town staff

1. Payne Road Adaptation Alternatives
2. Higgins Beach / Bayview Avenue Adaptation, Fortification, and/or Dune Restoration Planning
3. Pine Point Homeowner Adaptation Guide



# Task 5: Adaptation Strategies

## Payne Road Adaptation Alternatives

- 1. Memo/report outlining flood risk, adaptation alternatives, and funding sources of adaptation
- 2. Goal to position project for funding to carry out design



## DRAFT Memo Outline:

Project Report  
Payne Road Adaptation Pilot Project  
Scarborough, Maine  
April 2025

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## Task 5: Adaptation Strategies

# Higgins Beach / Bayview Avenue Adaptation, Fortification, and/or Dune Restoration Planning

- Goal to reduce erosion and protect Bayview Avenue from damage.
- Will prepare up to 3 adaptation concepts (i.e., wall protection, dune restoration, etc.) to bring to a conversation with Maine DEP for clarification on what can and cannot be permitted in this area.
- Deliverable will be up to 3 basic sketches of design options, including notes, and documentation/recommendations from Maine DEP



## Task 5: Adaptation Strategies

Fact sheets for strategies to reduce flood risk to homes, properties, businesses

Fact sheets will include:

- Temporary/short-term measures individuals can take (i.e., sandbags, etc.)
- Home retrofit options (“flood-proofing”, elevating)
- Steps to retrofit: hiring design firm, permitting, contractor, etc.
- Additional resources

## Pine Point Homeowner Adaptation Guide



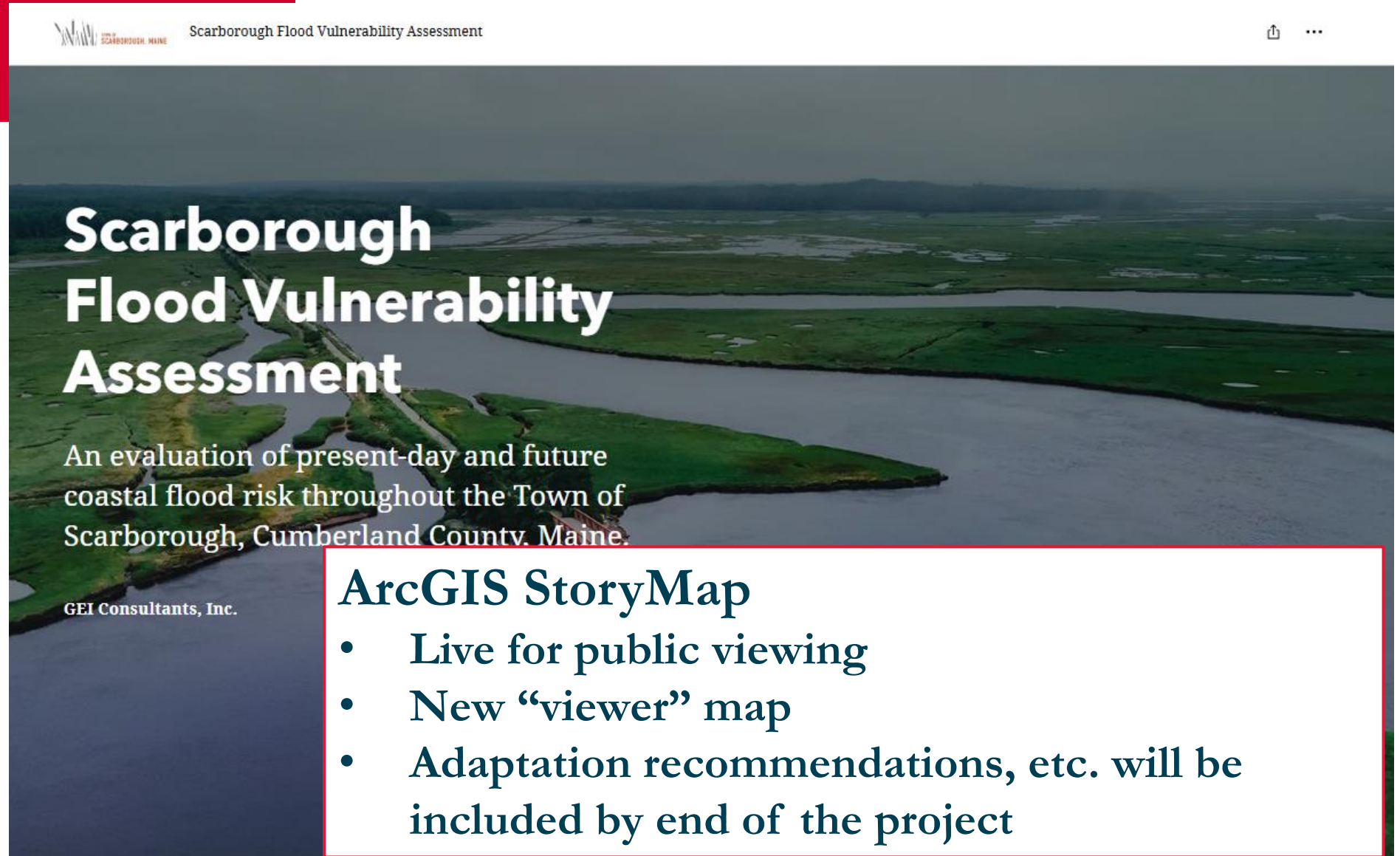
## Task 6: Community Engagement

### **Next Community Events:**

End of Project Public Presentation – June/July 2025 (or August?)



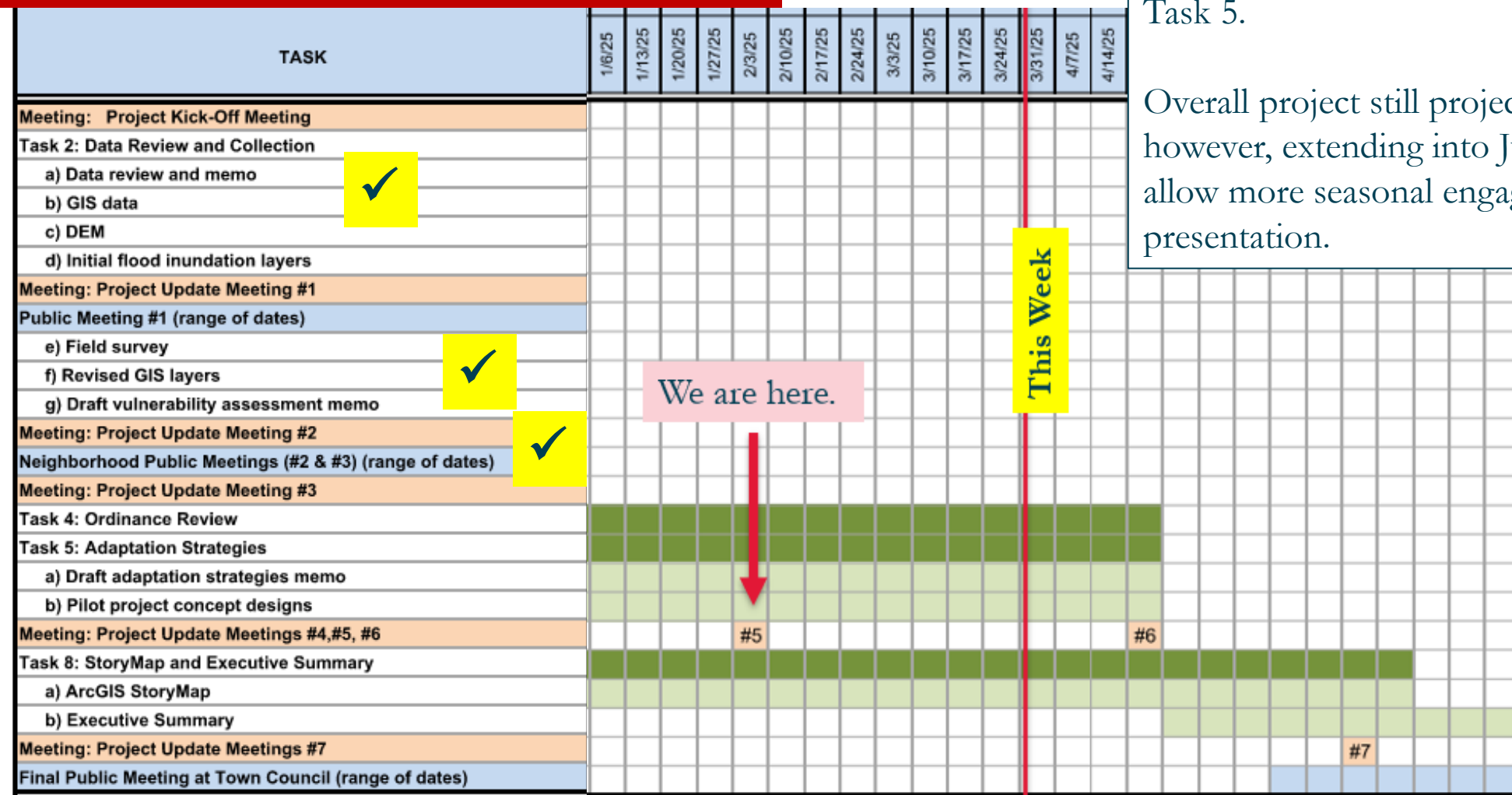
## Task 7: StoryMap



# Project Schedule

We are approximately 6 weeks behind schedule on Task 5.

Overall project still projected to be finished on time, however, extending into July or early August could allow more seasonal engagement of final presentation.



## Current Deliverables

### Data Review Memo: Task 2.1

- Summary of flood vulnerability data reviewed and used as part of this study.



### Flood Risk Memo and Prioritization Memo: Task 2.7

- Summary of flood exposure methodology and results
- DRAFT prioritization memo



### ArcGIS StoryMap: Task 7

- Will be updated with prioritization, adaptation.



## Next Deliverables / Community Events

### **Next Deliverables:**

- Final draft of prioritization memo
- Draft ordinance review memo: May 2025
- Draft adaptation strategies: May 2025
- Draft Pilot Projects: May/June 2025

### **Next Community Events:**

End of Project Public Presentation – June/July 2025



## Next Project Meeting

### Project Update Meeting #5/6:

- Virtual meeting mid-May.

### Purpose:

- Progress on Pilot Projects.
- Progress on overall adaptation strategies.
- Progress on ordinance review.
- Review of ArcGIS StoryMap for prioritization information.



Thank you!  
Questions?



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