Board of Appraisers Meeting

January 8, 2025

THE MIAMI CONSERVANCY DISTRICT

THE MIAMI CONSERVANCY DISTRICT

#1 Roll Call

THE MIAMI CONSERVANCY DISTRICT

#2 Compliance with Sunshine Law and Bylaws

This meeting is being held in compliance with the Sunshine Law and District and Subdistrict Bylaws. Miami Valley news media and individuals requesting such notification were notified of this meeting by electronic mail dated January 2, 2025. The meeting information was also posted on The Miami Conservancy District's website.

THE MIAMI CONSERVANCY DISTRICT

#3 Approval of Minutes

Recommendation

That the Board of Appraisers approve the meeting minutes for the November 6, 2024 meeting.

THE MIAMI CONSERVANCY DISTRICT

#4 Benefit Assessment Study

RECOMMENDATION

Presented for the information of the Board of Appraisers.

Benefit Assessment Study

a. Ongoing public outreach
b. Roadmap/Schedule
c. Stantec Phase 1 Status Update and Findings

Advisory Committee (Feb – May 2025)

- **Facilitation** by Miami Valley Regional Planning Commission
  - 11-15 people from 9 county area
- **To provide guidance** to Miami Conservancy District on Proposed Alternative(s).
- The committee **will examine the Phase 1 study of the benefit appraisal methodology including the proposed alternatives, the results of the public opinion survey, and other public feedback.**
- Collectively, **the committee will be asked to share their perspectives as community leaders in relation to the information presented to them**.

Anticipated Schedule for 7th Readjustment

Phase 1

January 23rd Board Special meeting for presentation of Phase 1 results

Phase 2

January 31st **Advisory Committee** Kick-off, meets in prep for open house/**public engagement commences in mid-April 2025**

BOD: May 22 **Special Board meeting - consider new method based on Advisory Committee/ public feedback**

BOA: Post May 22nd BOA to consider updated property appraisals

BOD: June 25 Issues resolution to Court to direct BOA to appraise benefits to properties not previously

BOD: June 25 Regular meeting - Petitions the Court in anticipation of appraisal of additional properties

July/August 2025 TBD Annual Court meeting

Entry of order per BOD resolution.

Magistrate appointed

Phase 3

August 2025 - December 2026

Advancement of the selected methodology and means to implement

Complete draft appraisal record with 2025 data for QA/QC and public open houses with real data

Roll out awareness and educational campaign through 2026-2027

Phase 4

February 2027

MCD to complete and prepare the Conservancy Appraisal Record for presentation to the BOA

March 2027: Public Notice issued for 7th Readjustment

April 2027: Exception hearings

June 2027: BOD meets to consider 2028 rates and exemptions

July/August 2027: Conservancy Court meets to consider hearings and rates.

September 2027: Conservancy Assessment Record filed with county auditors for 2028 collections

February 2028: Readjusted assessments collected

Stantec Update

Stantec

Miami Conservancy District
Benefit Assessment Study

Board of Appraisers – Meeting #3

January 8, 2025

Agenda

1. Review Direct Benefits Approach
2. Review Indirect Benefits Assumptions
3. Review Alternatives Definitions
4. Questions/Discussion
5. Next Steps

Task 1 – Evaluate Current Benefit Methodology

- Does the existing benefit appraisal methodology fairly and equitably allocate benefits to properties?
  - Use of 1913 flood depth vs. range of flood events and existing topography
  - Use of a single flood factor curve vs. varying by land use class
  - Use of building and property damages only vs. including displacement costs, business losses, social impacts

- Scope includes:
  - Data Collection / Gathering
  - Hydraulic modeling of Great Miami River with and without project
  - Application of FEMA methodology* for benefits determination
  - Development of Pilot Areas to extrapolate calculations
  - Comparison of current benefits calculation vs. alternate method (FEMA methodology)
  - Report out summarized in Technical Memorandum

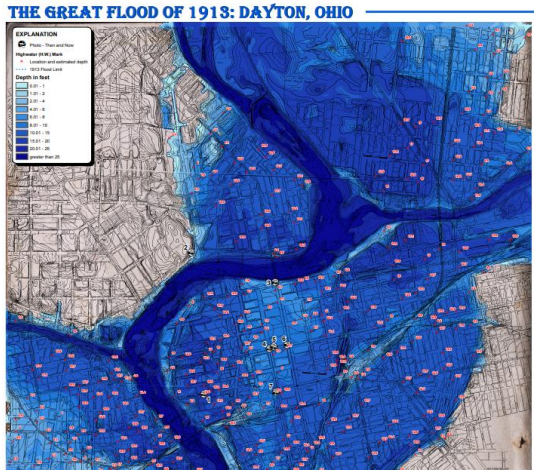
* FEMA Benefit Cost Analysis Reference Guide (June, 2009)

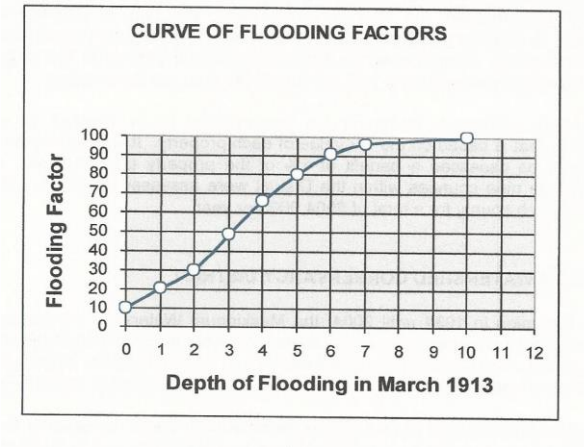
Process for Benefits Appraisal

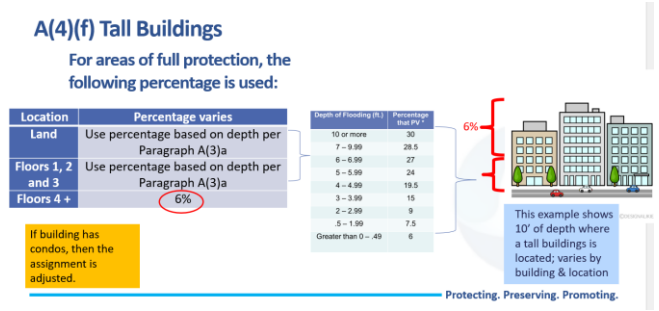
Determine Flood Risk Reduction Provided by District

Calculate Benefits Provided to People, Corporations and Other Public Entities

Appraise Benefits to Real Property and/or Political Subdivision

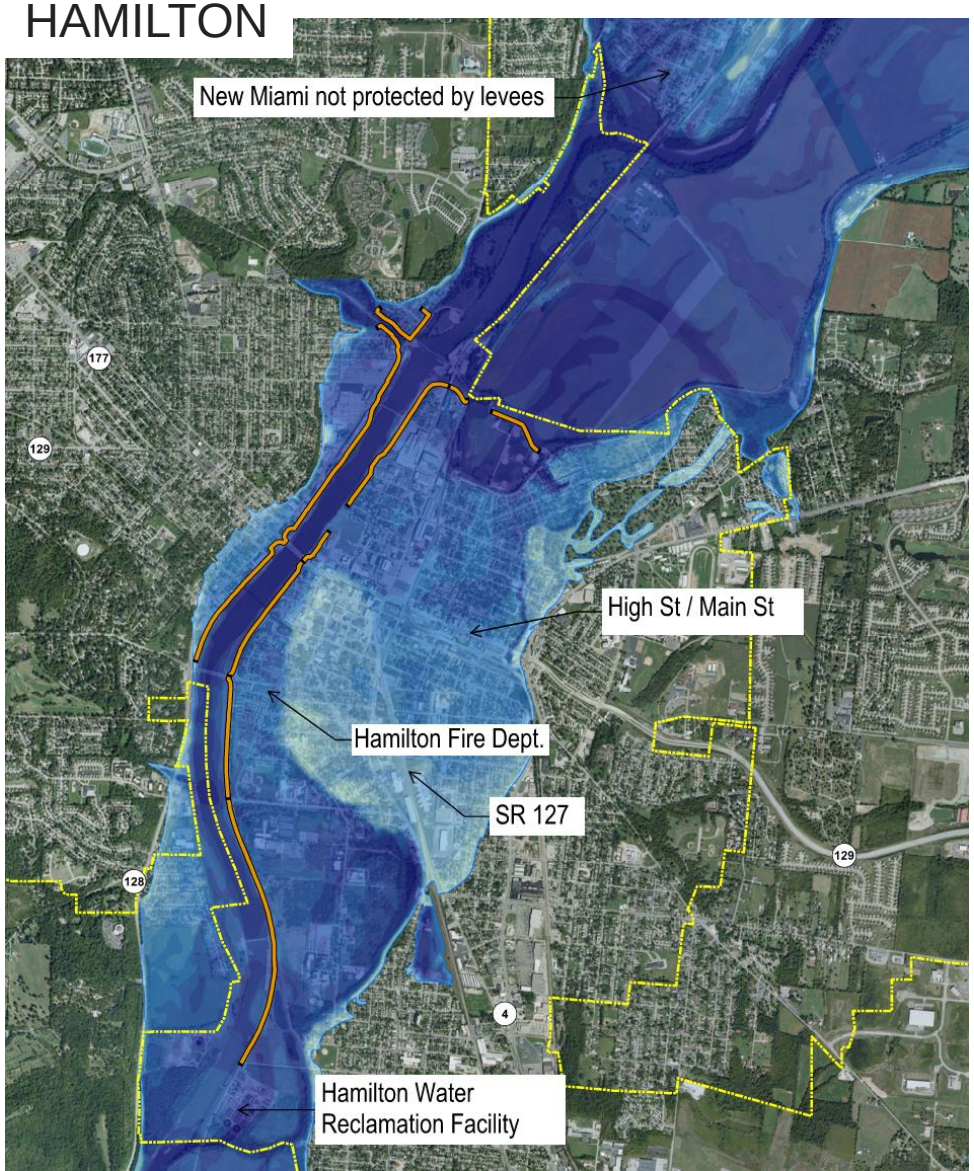




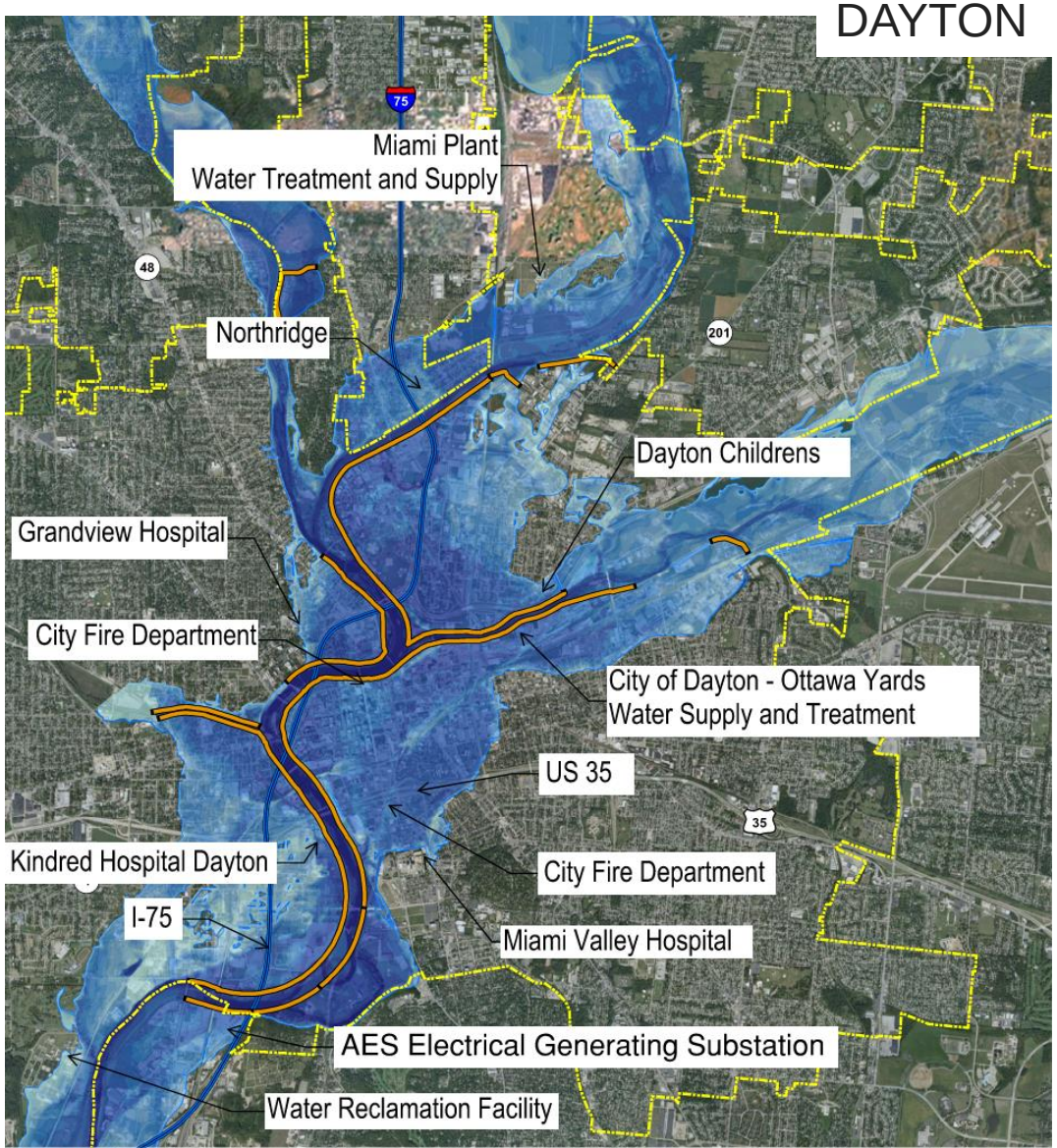


Pilot Areas

HAMILTON



DAYTON



Direct Benefits – FEMA Methodology

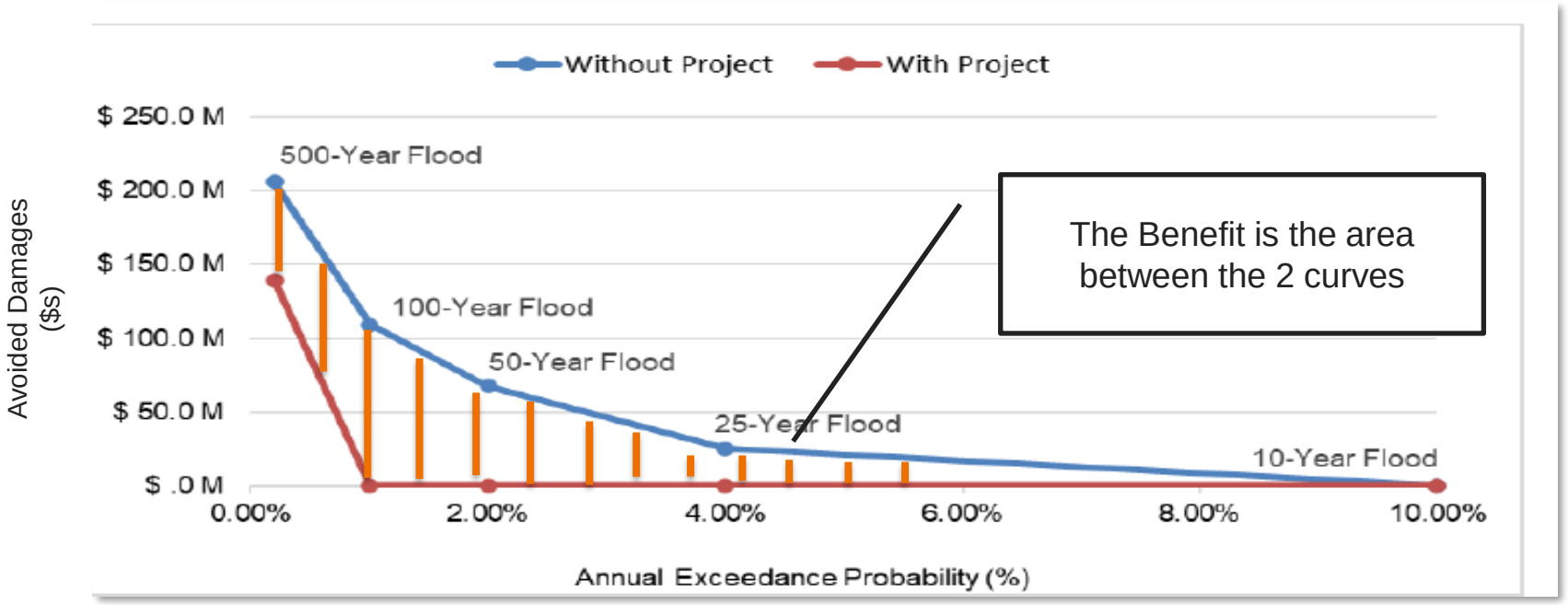
- Direct benefits calculated utilizing FEMA Benefit Cost Analysis (BCA) Methodology[1,2]
- FEMA BCA methodology includes:
  - Structural Damage
  - Contents Damage
  - Residential Displacement
  - Residential Social Costs
  - Non-Residential Displacement
    - Loss of income
    - Alternative location expense
    - Does not cover losses incurred by community

[1]Federal Emergency Management Agency (FEMA) BCA Reference Guide. June 2009. https://www.fema.gov/media-library-data/20130726-1736-25045-7076/bca_reference_guide.pdf

[2]Federal Emergency Management Agency (FEMA) Benefit-Cost Analysis Re-engineering (BCAR), Flood Full Data Module Methodology Report. Version 4.5, May 2009. https://www.fema.gov/media-library-data/20130726-1738-25045-2254/floodfulldata.pdf

Direct Benefits Calculation

Example FEMA Benefits Estimation



FEMA Estimation Example:

- Estimate of Total Direct Benefits = sum of avoided damage costs for all property located within the pilot areas

FEMA Methodology Results

- Benefits were totaled for each incremental flood recurrence interval and land use

Total Benefits Distribution by Recurrence Interval and Land Use					
Recurrence Interval	**Residential**	**Commercial**	**Industrial**	**Exempt**	**Total**
10	$ 36,747,428	$ 127,480,860	$ 93,241,882	$ 680,526,460	$ 937,996,629
50	$ 14,884,784	$ 265,647,320	$ 8,631,793	$ 212,629,491	$ 501,793,389
100	$ 24,873,014	$ 39,503,693	$ 30,870,557	$ 59,677,954	$ 154,925,218
500	$ 12,845,243	$ 19,921,748	$ 6,217,551	$ 22,555,262	$ 61,539,803
1913 Flood (1:10,000)	$ 7,731,458	$ 5,654,991	$ 3,993,683	$ 12,907,727	$ 30,287,859
Total	**$ 97,081,927**	**$ 458,208,612**	**$ 142,955,466**	**$ 988,298,894**	**$ 1,686,542,898**

*does not include all land use categories (e.g., other)

Comparison of MCD Benefits vs. FEMA Method

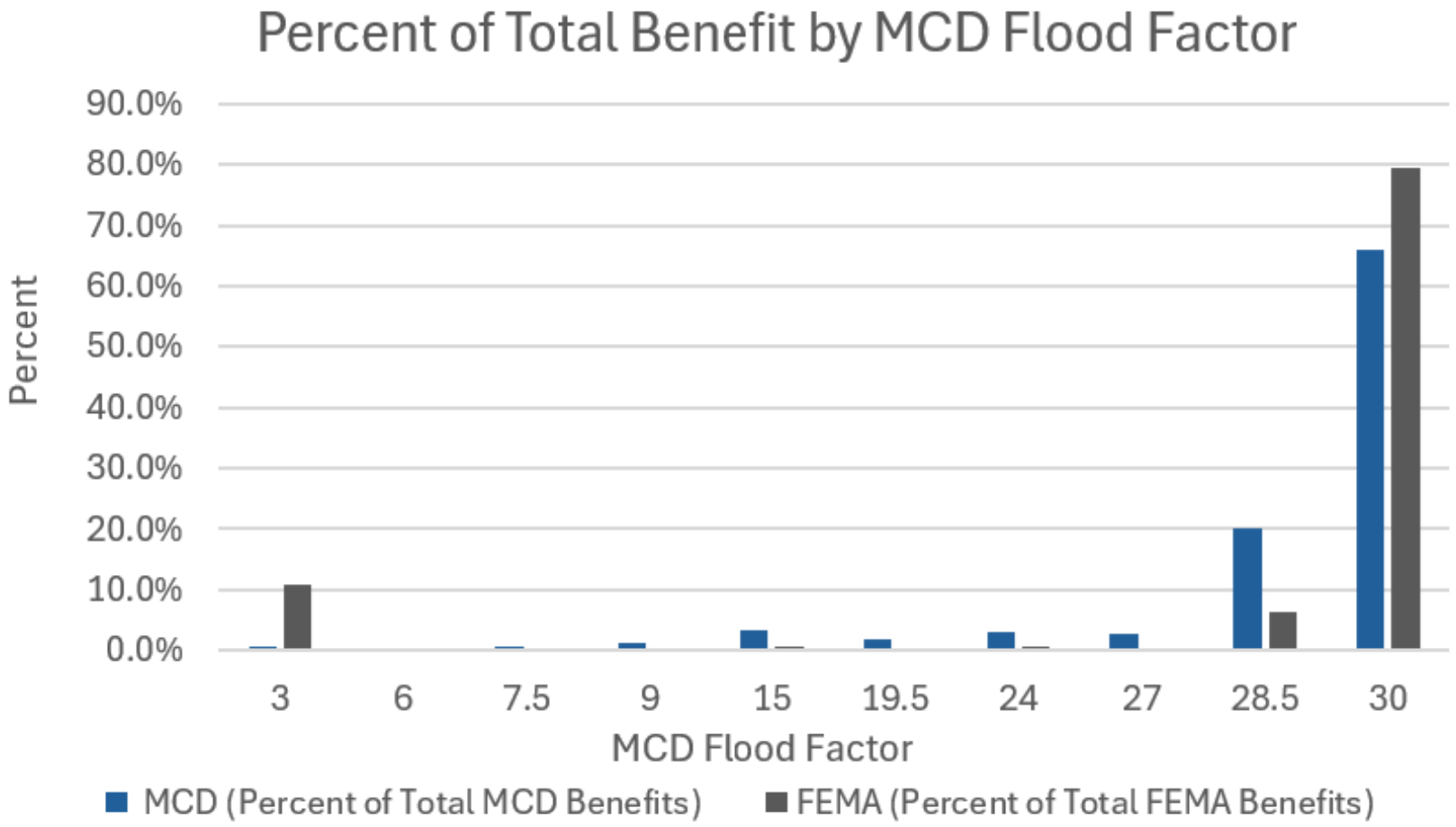
- Benefit Results for Properties in the Pilot Area and Current MCD District Boundary

MCD Flood Factor	MCD Benefit	MCD % of Total Benefits	FEMA Benefit	FEMA % of Total Benefits
3	$ 976,043	0.6%	$ 183,128,761	10.9%
6	$ 265,987	0.2%	$ 973,776	0.1%
7.5	$ 1,380,507	0.8%	$ 4,252,370	0.3%
9	$ 1,923,936	1.1%	$ 4,324,978	0.3%
15	$ 5,893,461	3.4%	$ 9,214,417	0.5%
19.5	$ 3,415,327	2.0%	$ 5,858,478	0.3%
24	$ 5,027,057	2.9%	$ 10,168,875	0.6%
27	$ 4,898,034	2.8%	$ 7,001,878	0.4%
28.5	$ 34,898,977	20.3%	$ 107,625,690	6.4%
30	$ 113,594,002	65.9%	$ 1,341,773,635	79.6%
NA	$ -	0.0%	$ 12,281,586	0.7%
	$ 172,273,331		**$ 1,686,604,443**	

* MCD benefit is from 7th Readjustment of Benefits and limited to Pilot Areas

Comparison of MCD Benefits vs. FEMA Method

- Benefit Results for Properties in the Pilot Area and Current MCD District Boundary



Comparison of MCD Benefits vs. FEMA Method

- Benefit Results for Properties in the Pilot Area and Current MCD District Boundary
- Key Take Aways:

1. FEMA direct benefits are ~10x the current benefit appraisal and fully justify the proposed O&M and capital plans
2. Current benefit appraisal undervalues the benefits provided to partially protected areas relative to other areas
3. The vast majority of benefits (~80%) are accrued by properties that flooded by more than 10 feet in 1913 flood (MCD Flood Factor 30)
4. Limited benefits are accrued for structures below 8 feet for 1913 flood and differentiating flood factors for these properties may not be necessary

Comparison of MCD Benefits vs. FEMA Method, contd.

- To provide a direct comparison of benefit distribution in pilot areas, a FEMA Flood Factor was computed and was normalized to the total MCD calculated benefit
  - Full FEMA Flood Factor = FEMA Benefit / Taxable Building Value
  - Normalized FEMA Flood Factor = Full FEMA Flood Factor x (MCD Total Benefit / FEMA Total Benefit)
- These normalized factors allow us to compare relative benefits in varying categories and to understand potential equity concerns
- Once alternative methodologies are developed these flood factors may also be used to extrapolate benefits to parcels outside of the pilot areas

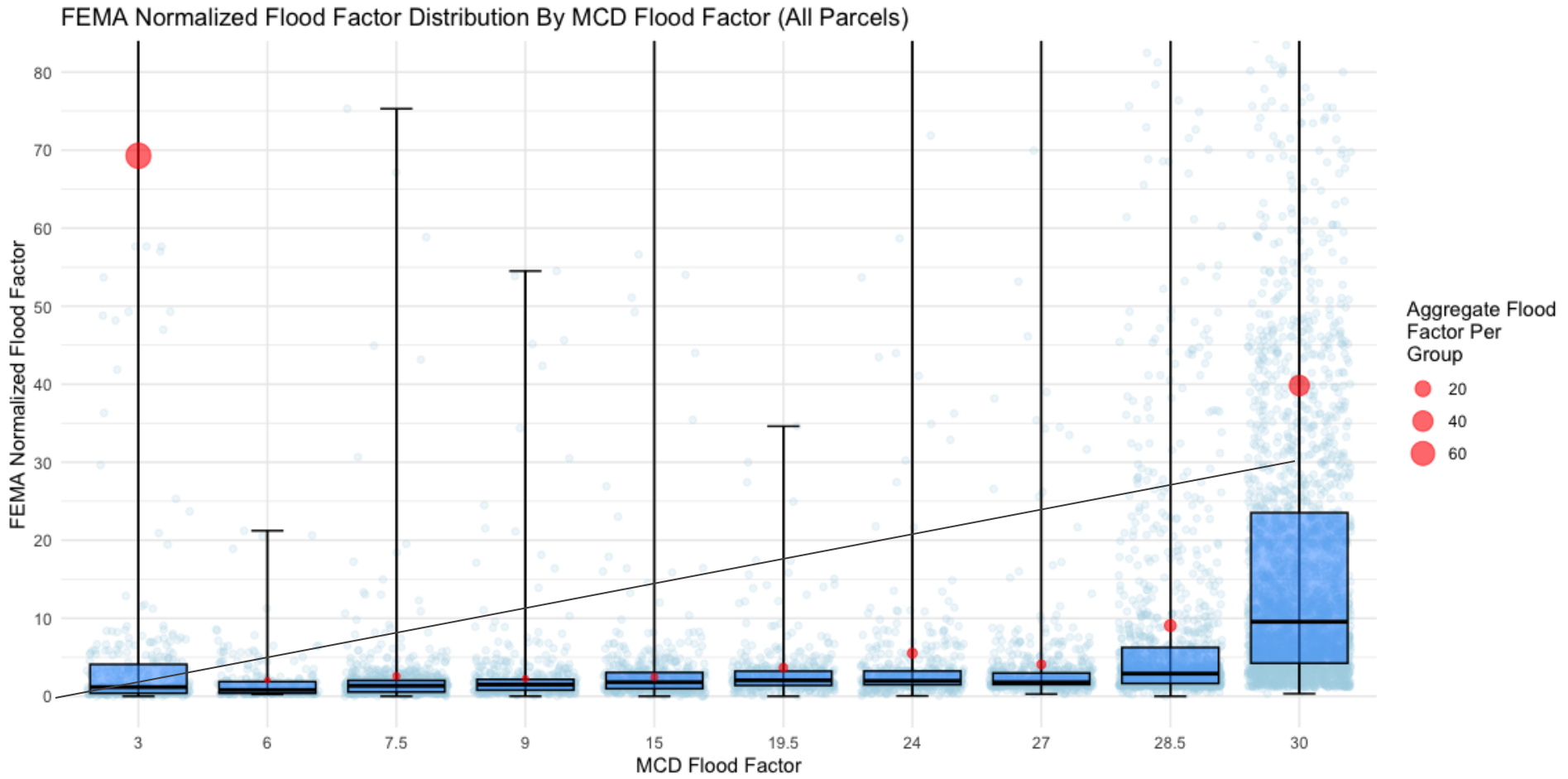
Comparison of MCD Benefits vs. FEMA Method

- FEMA Flood Factor comparison to MCD Flood Factor

MCD Flood Factor	FEMA Flood Factor	
	Median	Weighted-Average
3	1.18	69.28
6	0.81	2.07
7.5	1.35	2.58
9	1.50	2.25
15	1.80	2.47
19.5	2.05	3.68
24	1.98	5.52
27	1.79	4.09
28.5	2.9	9.06
30	9.55	39.83

Comparison of MCD Benefits vs. FEMA Method

- FEMA Flood Factor comparison to MCD Flood Factor



Comparison of MCD Benefits vs. FEMA Method

- Does Land Use Provide an Explanation for Spread in FEMA Flood Factors?

MCD Flood Factor	FEMA Flood Factor (Weighted Average)			
	Residential	Commercial	Industrial	Combined
3	3.42	60.08	6.20	69.28
6	1.70	2.42	2.80	2.07
7.5	1.89	2.24	2.21	2.58
9	2.25	2.94	2.80	2.25
15	2.60	1.91	3.88	2.47
19.5	2.07	6.46	3.79	3.68
24	2.51	11.05	4.26	5.52
27	3.39	4.69	6.58	4.09
28.5	8.02	7.19	9.19	9.06
30	11.82	36.71	58.79	39.83

Comparison of MCD Benefits vs. FEMA Method

- Does Pre-Project Flood Recurrence Interval Provide a Better Correlation than 1913 Flood Depth?

Pre-Project Recurrence Interval	FEMA Flood Factor	
	Median	Weighted Average
10	89.61	100.26
50	22.18	37.38
100	8.66	12.12
500	2.83	3.65
1913 Flood	1.19	1.16

Comparison of MCD Benefits vs. FEMA Method

- What's the effect of partial-protection vs. full protection level?

MCD Flood Factor	Levee Protected Areas		Partial Protection	
	Median	Weighted Average	Median	Weighted Average
10	92.51	97.58	57.34	113.33
50	26.27	38.58	10.52	10.55
100	9.88	12.41	5.77	9.13
500	2.98	3.86	2.54	2.45
1913 Flood	1.39	1.31	0.52	0.81

Summary of Direct Benefits Evaluation

- Additional Take Aways:

1. Use of flood zone boundaries could simplify appraisal updates and provide equal or better accuracy in benefit estimation

2. Differentiation between residential and commercial/industrial/institutional structures may provide more accuracy in benefit estimation

3. Partial protection areas receive less benefit relative to full protection areas in the same “without project” flood zone

Task 2 – Evaluate Benefits to the Broader Community

- How do the indirect benefits received by the entire community compare to the direct benefits currently appraised?

- Scope includes:
  - Leveraging results of hydraulic modeling from Task 1
  - Review potential indirect benefits of wastewater treatment plants, hospitals, roads, EMS
  - Compare to direct benefits

Overview

Indirect Benefits ***are***:

- Benefits to the broader community (Benefits can be accrued to individuals that were not directly impacted by flooding).
- Accrued on a population basis
- Answers the question: *"How would area residents depending on this service be impacted should the service be unavailable due to a flood?"*
- Typical outputs include
  - Opportunity cost of time (i.e. the cost of additional travel time)
  - The value of the service provided (i.e. the value of potable water)
  - Cost of potential lives lost (i.e. the lives lost due to increased hospital wait times)

Indirect Benefits ***are not***:

- Are not benefits from building/land values
- Are not accrued on a "parcel" basis
- Does not answer the question: "*What is the dollar value of the damage to a building from a flood?"*

Indirect Benefits Categories

Loss of Hospital Services	Delay of Roads and Bridges	Loss of Emergency Medical Services
Loss of Potable Water	Loss of Wastewater	Loss of Electric

General Methodology

Step 1: Determine the indirect benefits that experience flooding without project.

Step 2: Determine the population served by those indirect benefits.

Step 3: Calculate using FEMA[3] methodology the daily/hourly cost of the loss of the indirect benefits.

Step 4: Estimate the level of flooding With and Without Project for all flood events.

Step 5: Estimate the duration that the indirect benefit is closed/unavailable for With and Without Project for all flood events.

Step 6: Multiply the daily/hourly cost by the total duration of closure for With and Without Project

Step 7: Subtract the EAD for With project from the EAD for Without Project to determine the Total Net Indirect Benefit for that benefit category.

[1]Benefit-Cost Analysis Sustainment and Enhancement, Standard Economic Value Methodology Report" (FEMA, 2023)

Total Indirect Benefit Results

Indirect Benefit Category		Total EAD		NPV 50-Year Forecast
Loss of Hospital Services	$	561,463	$	14,360,701
Loss of EMS Services	$	658,650	$	16,846,471
Delay of Road and Bridges	$	814,423	$	20,830,719
Loss of Wastewater Services	$	4,235,034	$	108,320,671
Loss of Water Services	$	29,526,475	$	755,207,048
Loss of Electric Services	$	27,498,147	$	703,327,935
Total Indirect Benefits EAD	$	63,294,191	$	1,618,893,544

Hospitals – Indirect Benefit Components

Cost of Extra Distance to Hospital

- Extra travel time to alternative hospital
- Number of additional daily emergency department (ED) visits

Cost of Additional Wait Times

- Annual ED visits for all hospitals before and after shutdown
- Wait time increase per patient for each hospital

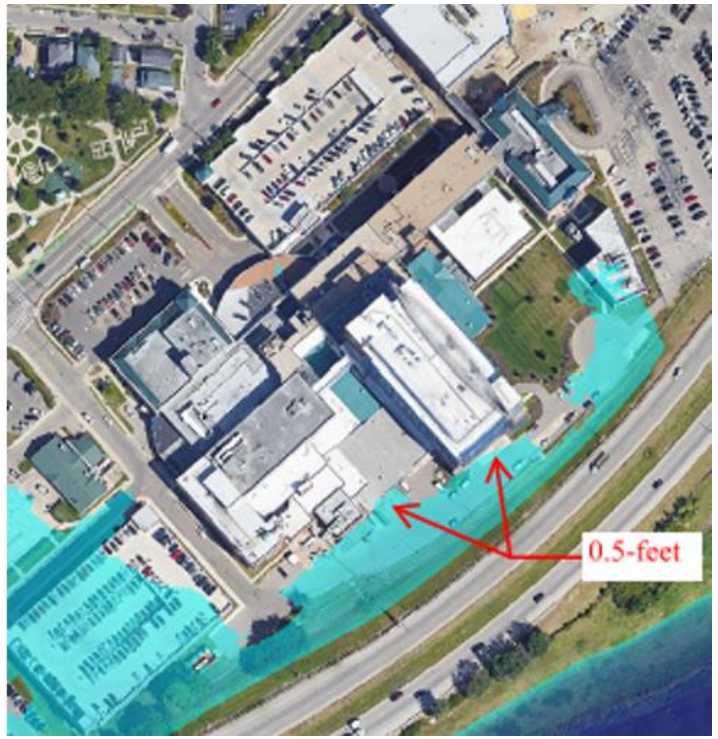
Potential Cost in Lives Due to Extra Distance

- Increase in number of fatalities from acute myocardial infarction (AMI) and unintentional injuries (UI) due to increased distance to hospitals

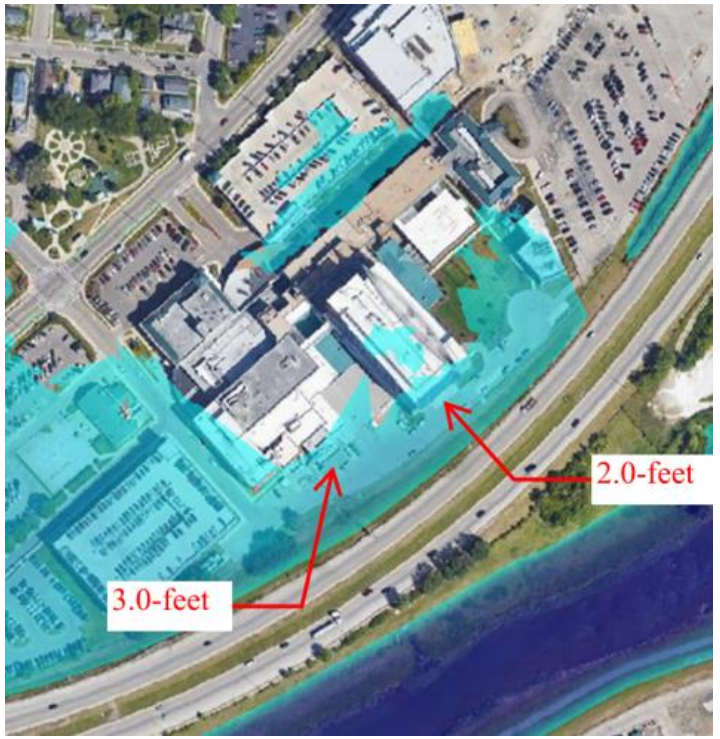
*Per day of hospital shutdown

Hospital Expected Flooding

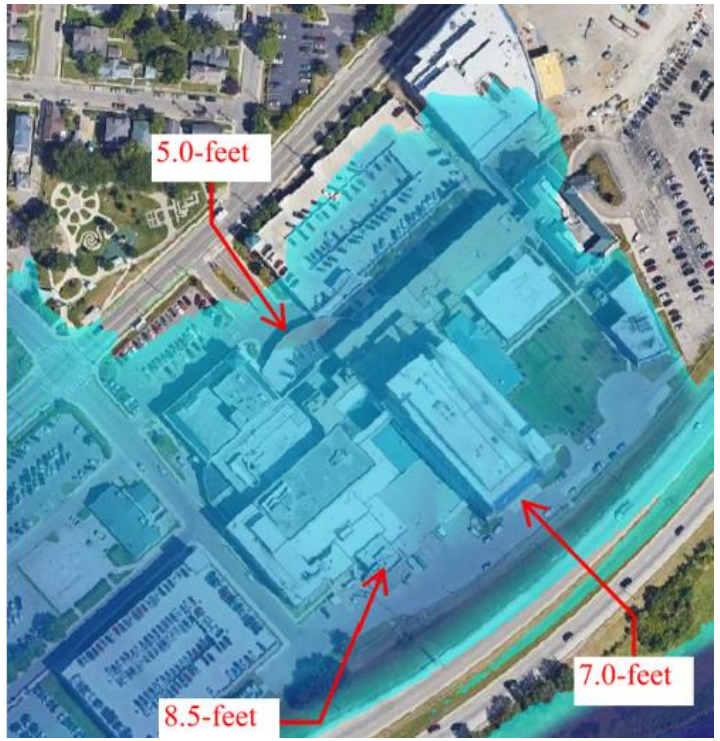
100 Year Flood, w/o Project



500 Year Flood, w/o Project

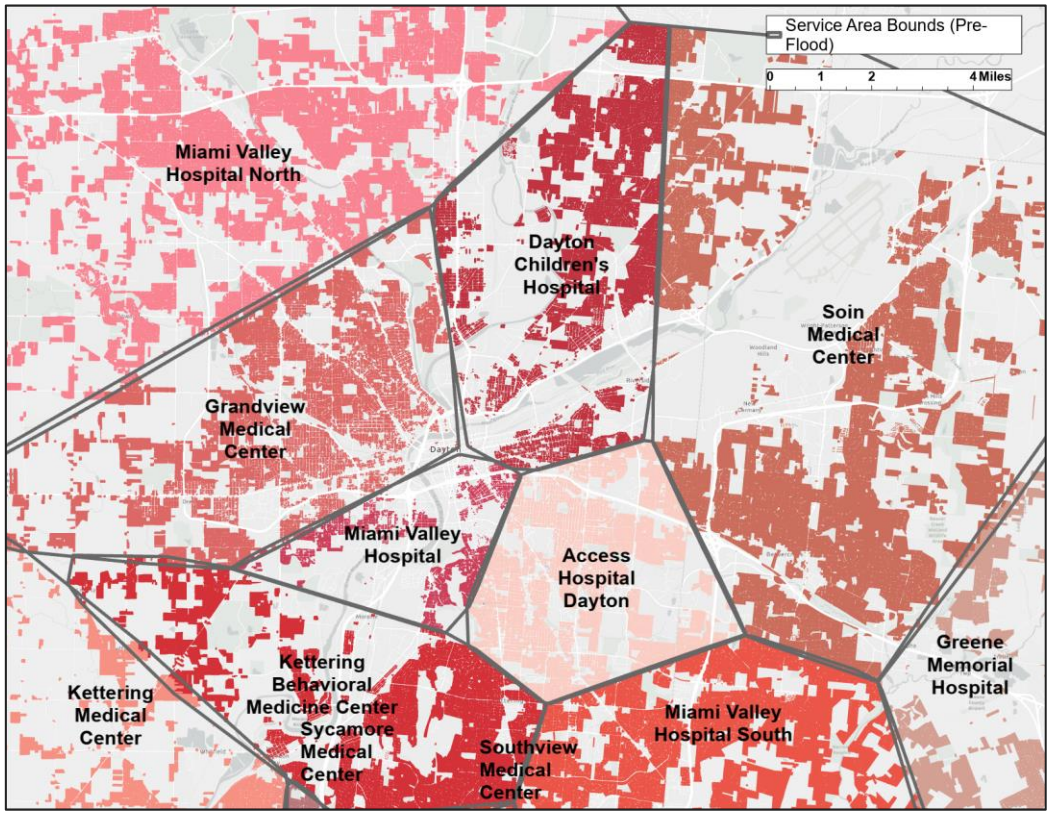


1913 Flood w/o Project

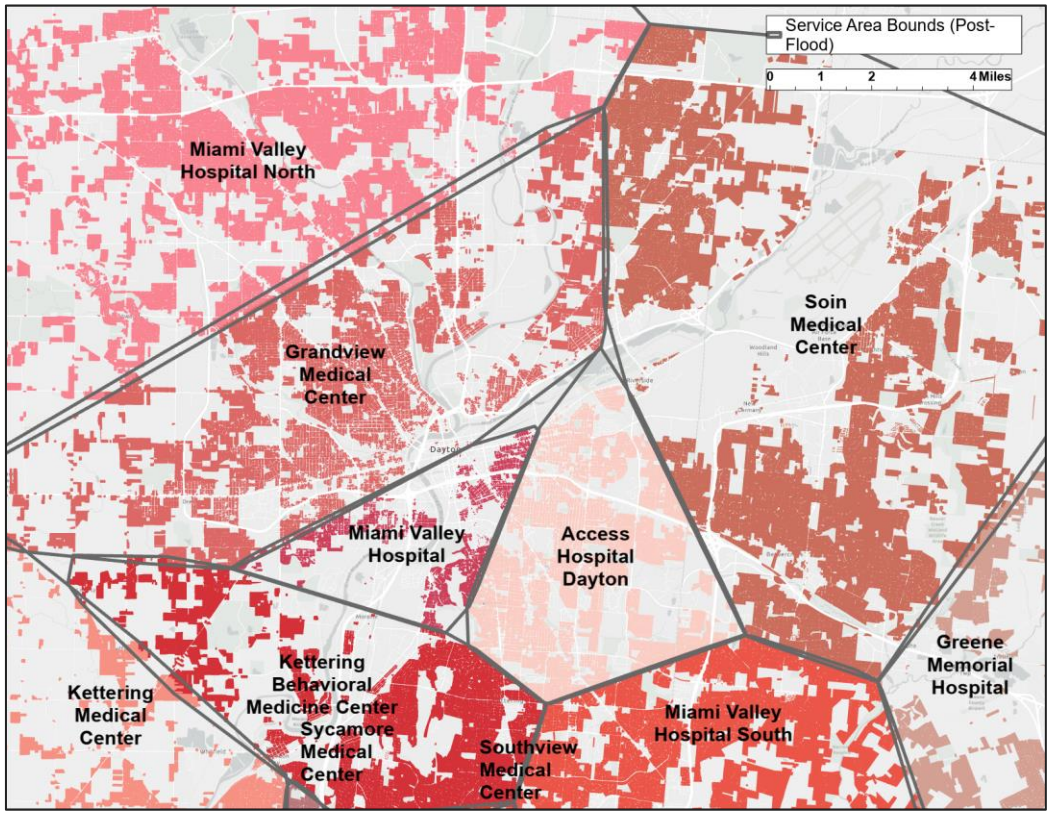


Hospitals – Service Area

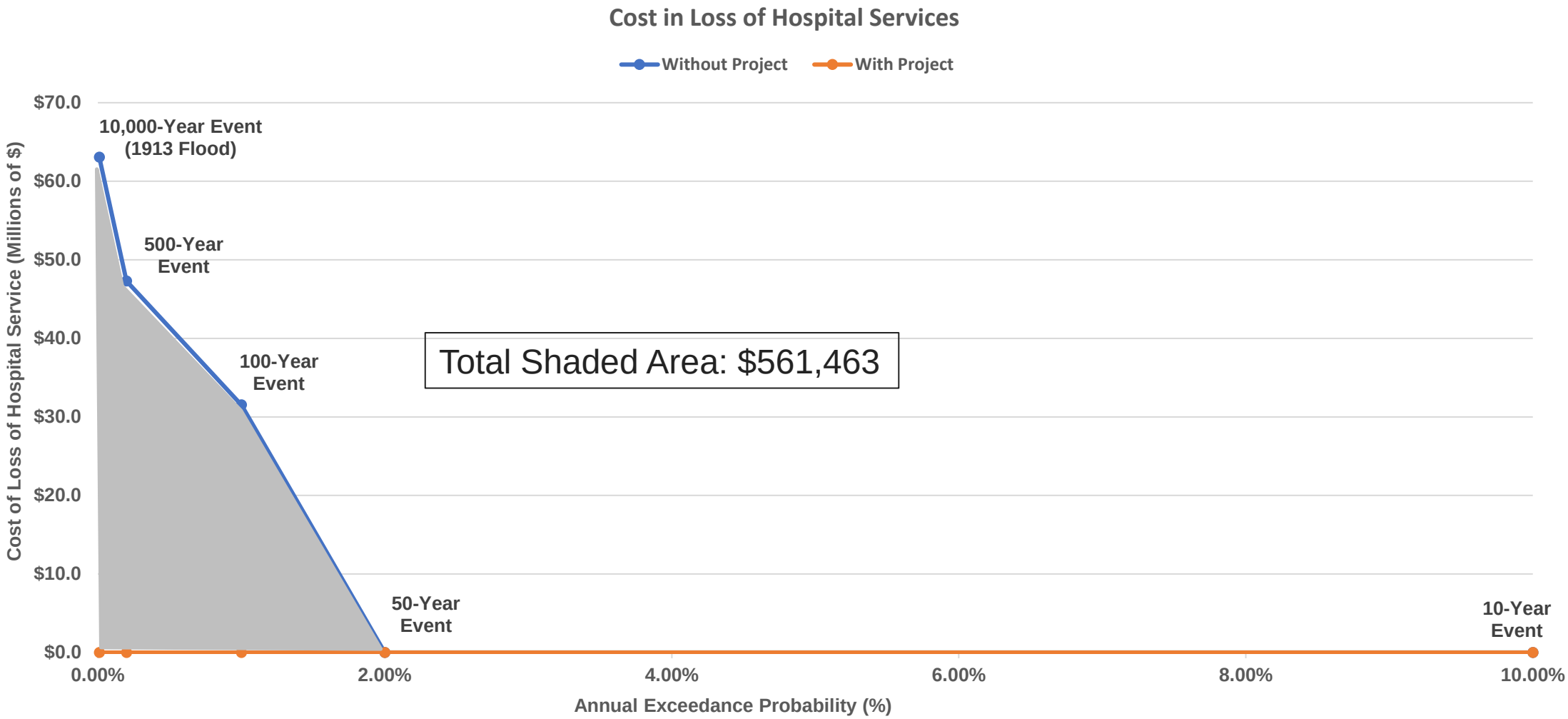
Service Area Bounds Without Flood



Service Area Bounds With Flood



Hospitals – Total Benefit



*Total Benefit is area between the Without and With Project costs.

EMS – Indirect Benefit Components

Number of Cardiac Arrests Treated by EMS

Average EMS Response Time

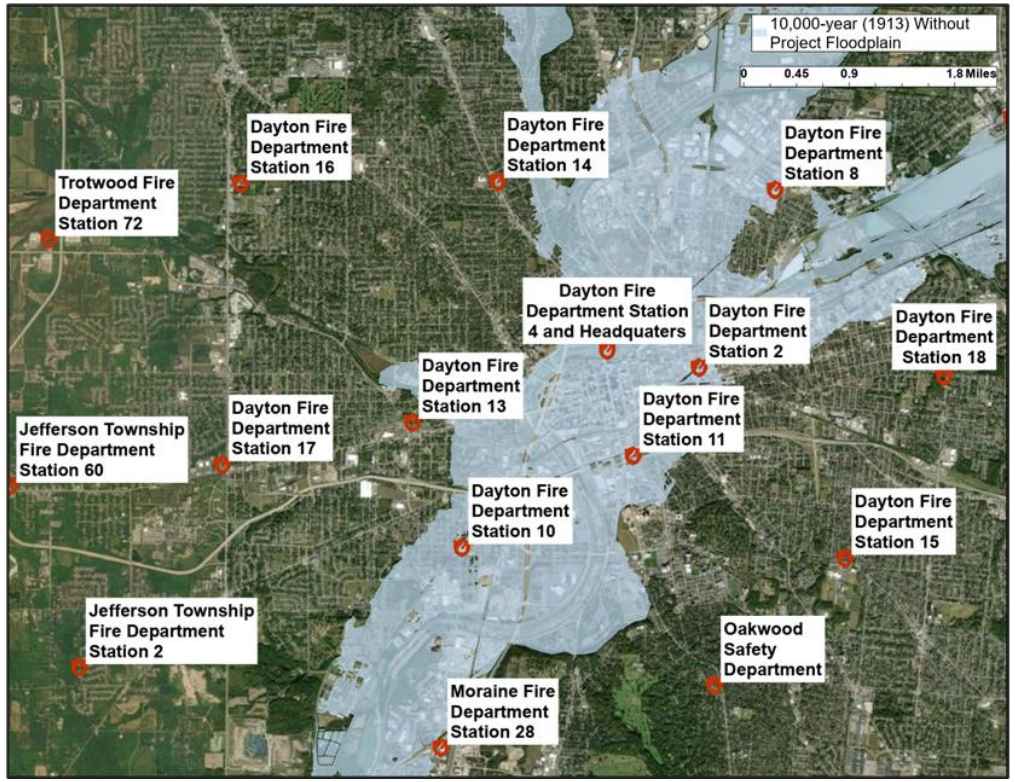
Probability of Survival Before and After Flood

Inc. in Deaths due to Increased Response Time

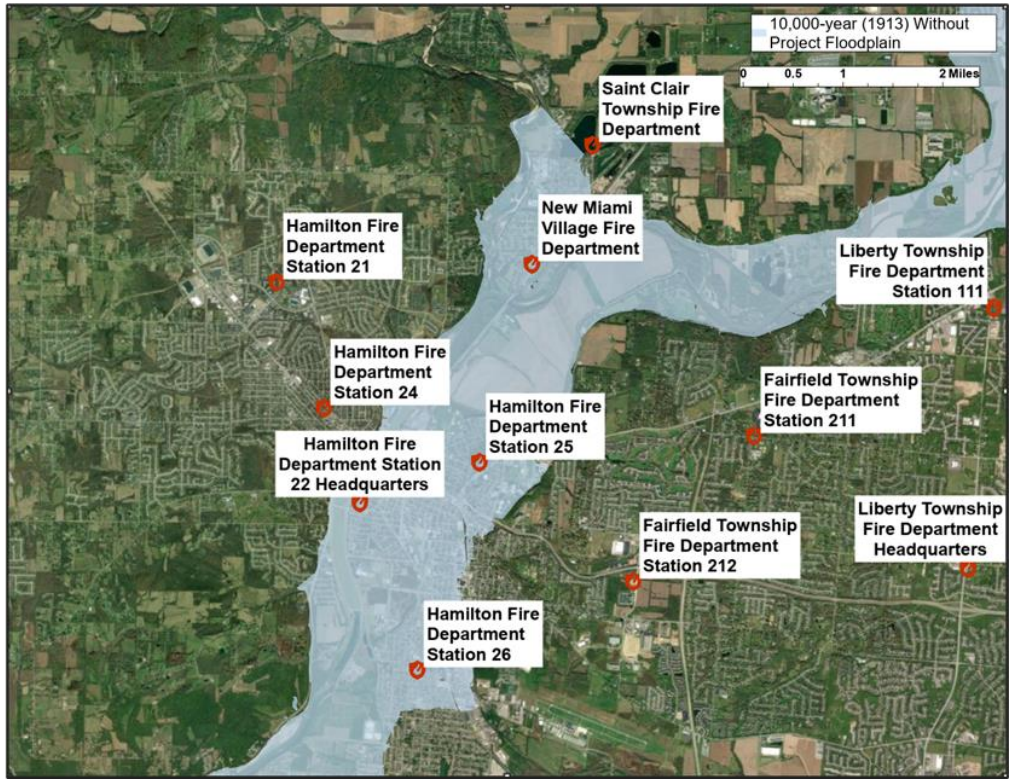
*Per day of EMS Delay

EMS – Expected Flooding

Dayton EMS Locations



Hamilton EMS Locations

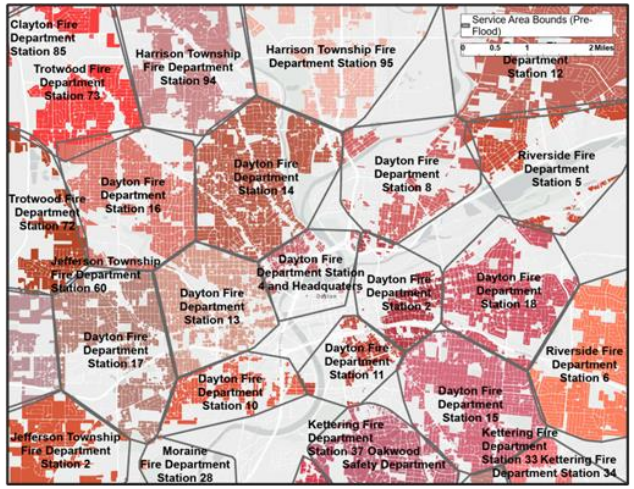


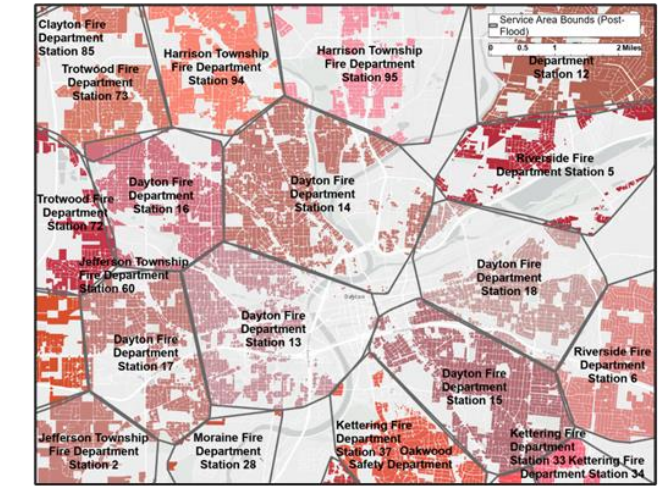
EMS – Service Area

Service Area Bounds (Without Flood)

Service Area Bounds (With Flood)

Dayton EMS Locations





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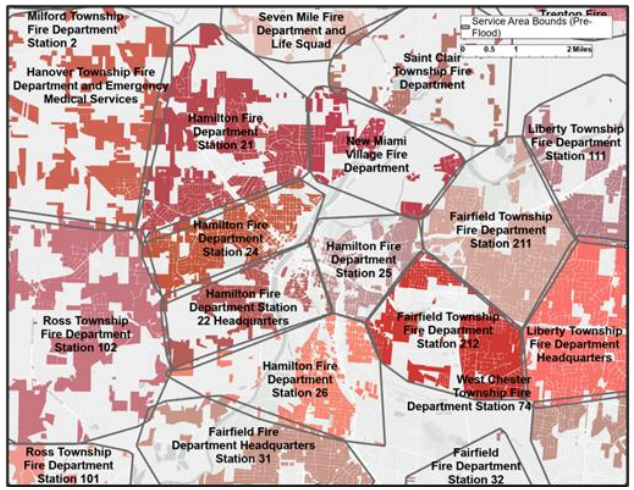
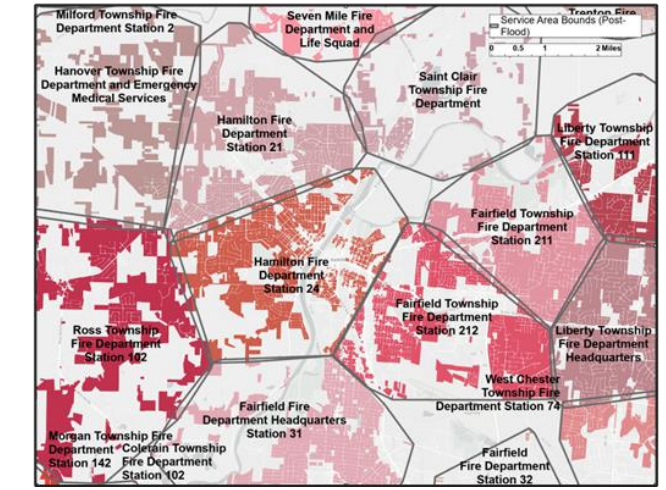
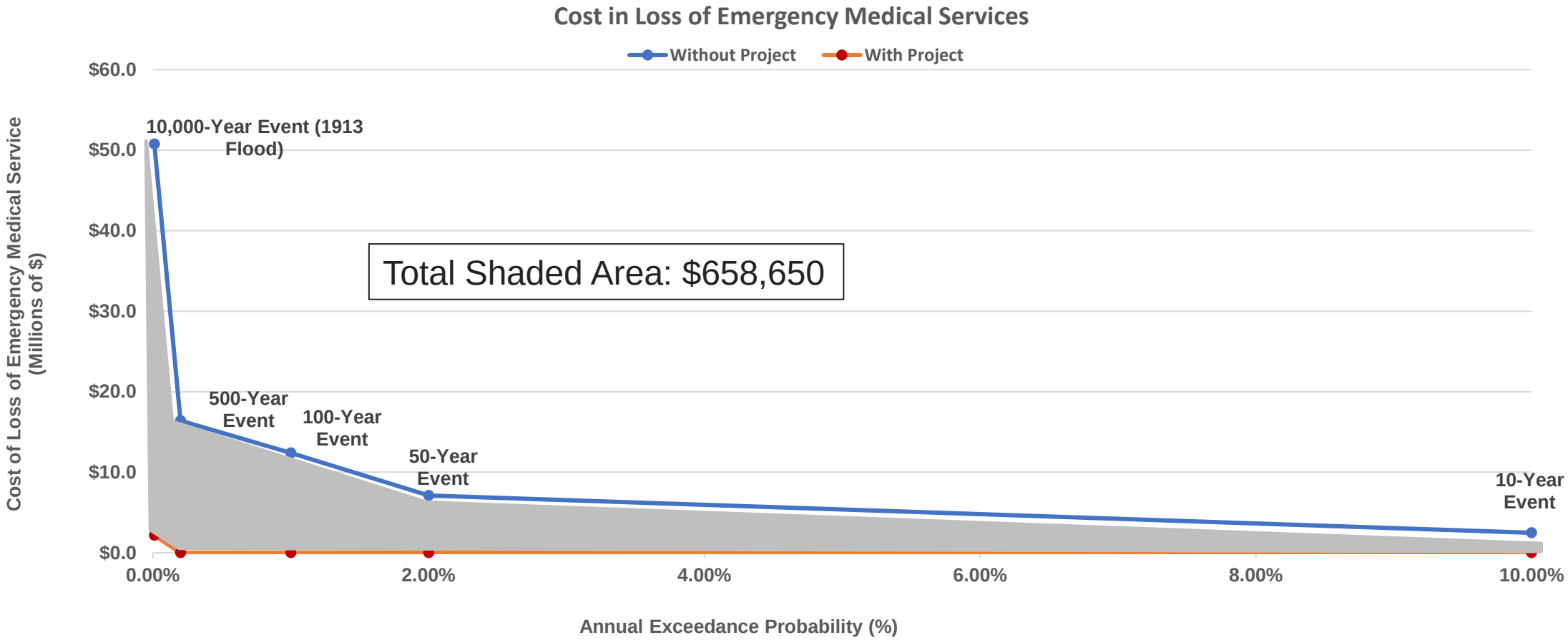




EMS – Total Benefit



*Total Benefit is area between the Without and With Project costs.

Road and Bridges – Indirect Benefit Components

Cost per Hour of Road Closure

- Average Annual Daily Traffic
- Expected Detour Route Time (Minutes)

*Per hour of road closure

Roads & Bridges – Roads of Interest*

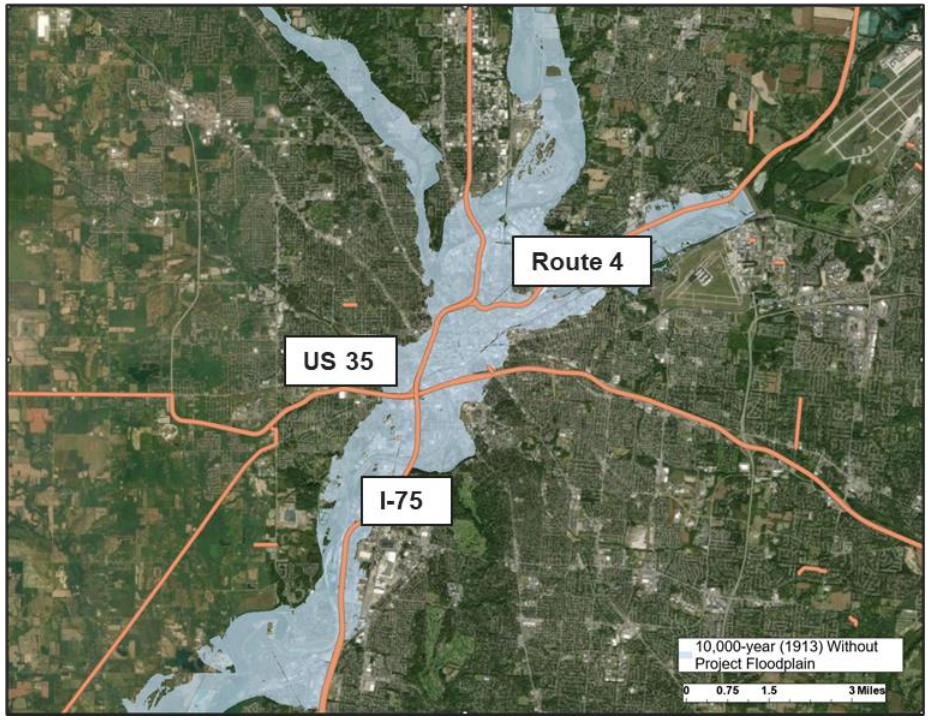
Pilot Area	Road	Average Annual Daily Traffic*	Detour (Minutes)**
Dayton	US 35	69,100	100
	Route 4	40,291	78
	I-75	105,634	99
Hamilton	SR 127	9,216	183
	High Street	31,657	180

*Ohio Department of Transportation.

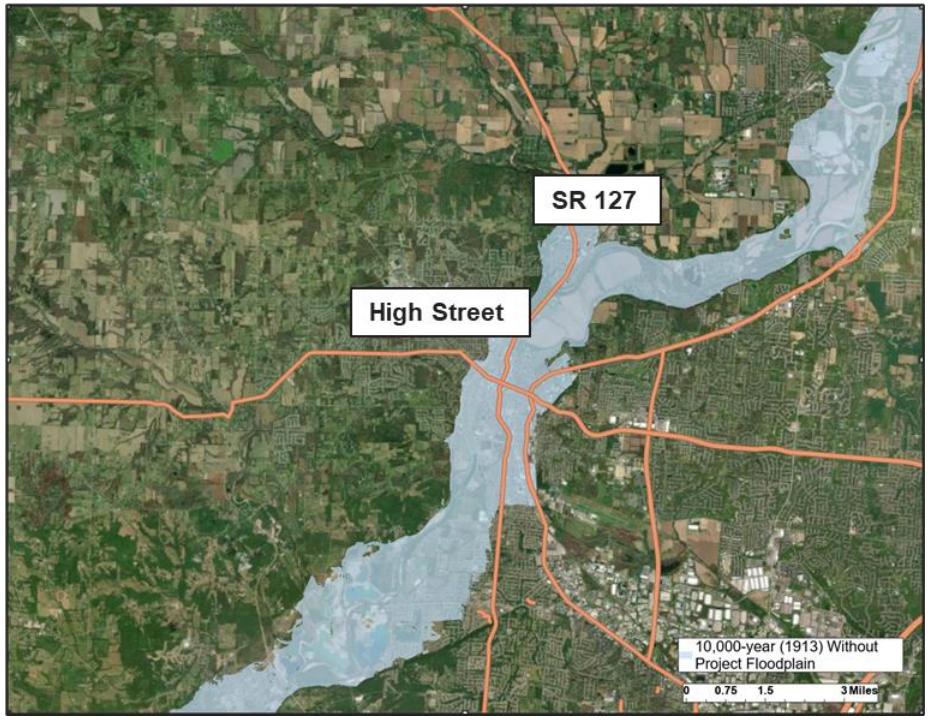
**Using Google Maps. Assuming same detour for all flood events. Not accounting for additional traffic during events.

Roads & Bridges – Expected Flooding

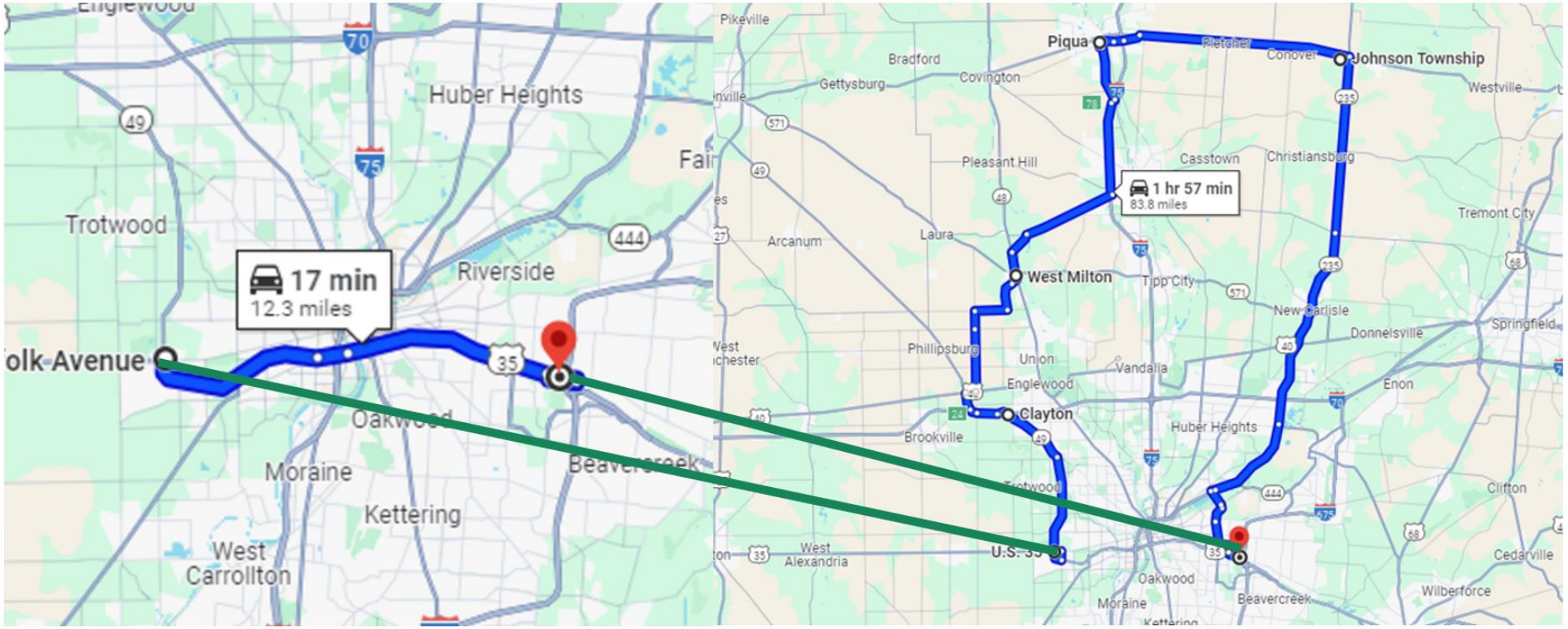
Dayton Roads (1913 Without)



Hamilton Roads (1913 Without)



Roads & Bridges – Detour Determination: Dayton



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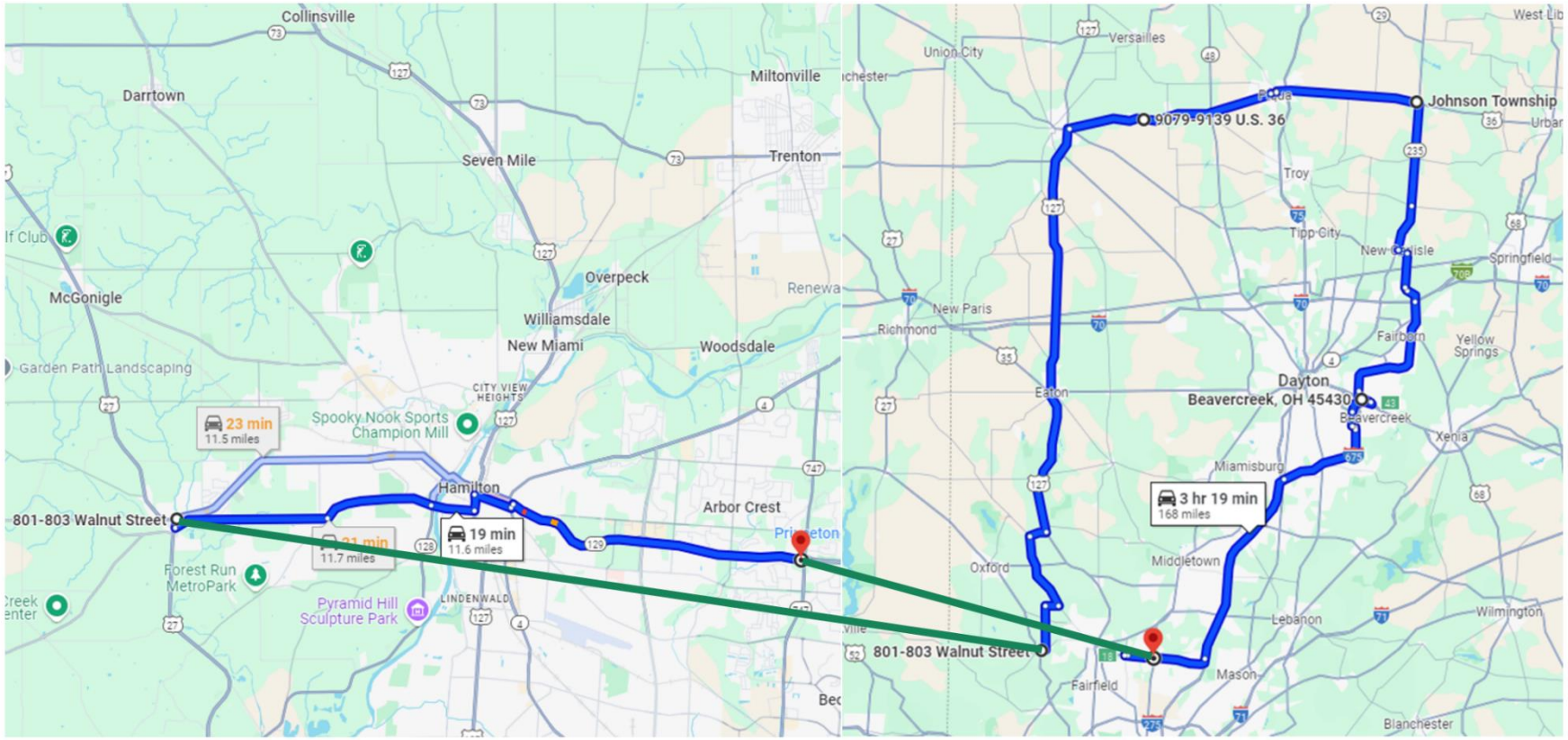
Roads & Bridges – Detour Determination: Hamilton



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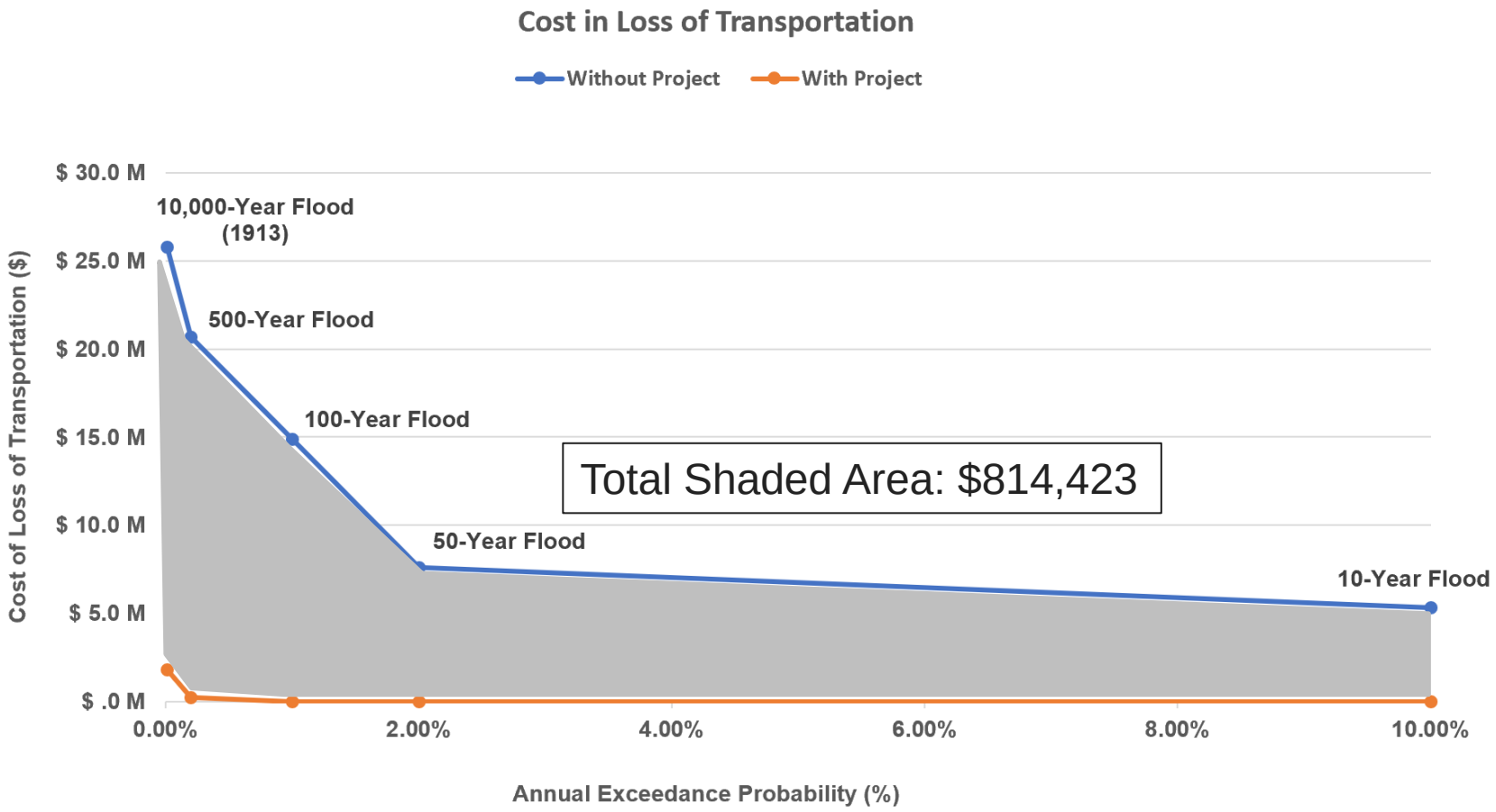
DRAFT – FOR DISCUSSION PURPOSES

Roads and Bridges – Total Benefit



*Total Benefit is area between the Without and With Project costs.

Water Treatment Plants – Indirect Benefit Components

Impact to Economic Activity	Impact to Residential Customers
• Population Served • $68.78 per Person per Day (FEMA, 2024)	• Population Served • $81.58 per Person per Day (FEMA, 2024)

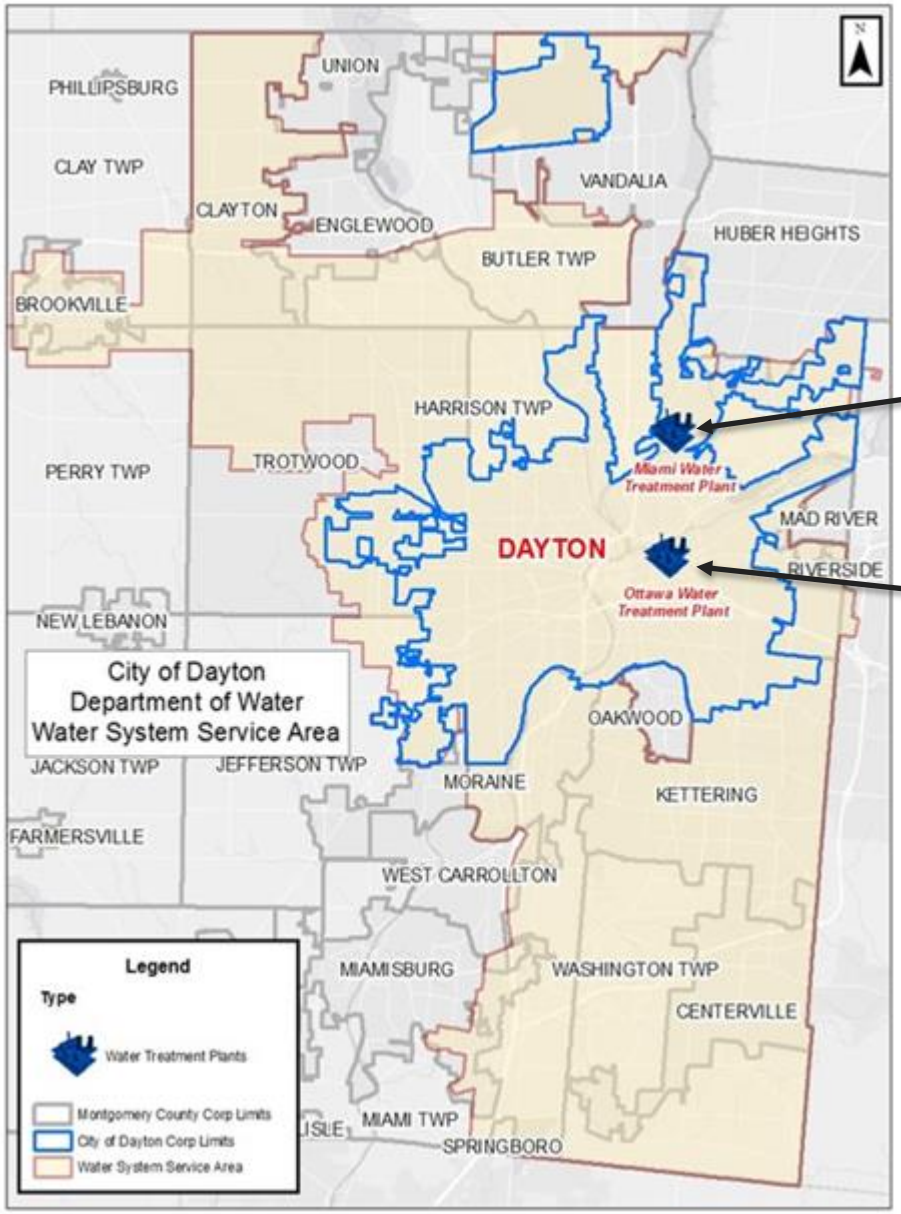
*Per day of facility shutdown

Water Treatment Plants – WTPs of Interest

Pilot Area	Water Treatment Plant	Service Population
Hamilton	Hamilton Pws North Plant	63,000*
Dayton	Miami WTP (North)	133,333**
	Ottawa Water Treatment Plant	266,667**

*Source: City of Hamilton, Executive Director of Infrastructure
** Source: City of Dayton Department of Water, Division Manager

Water Treatment Plants – Service Areas



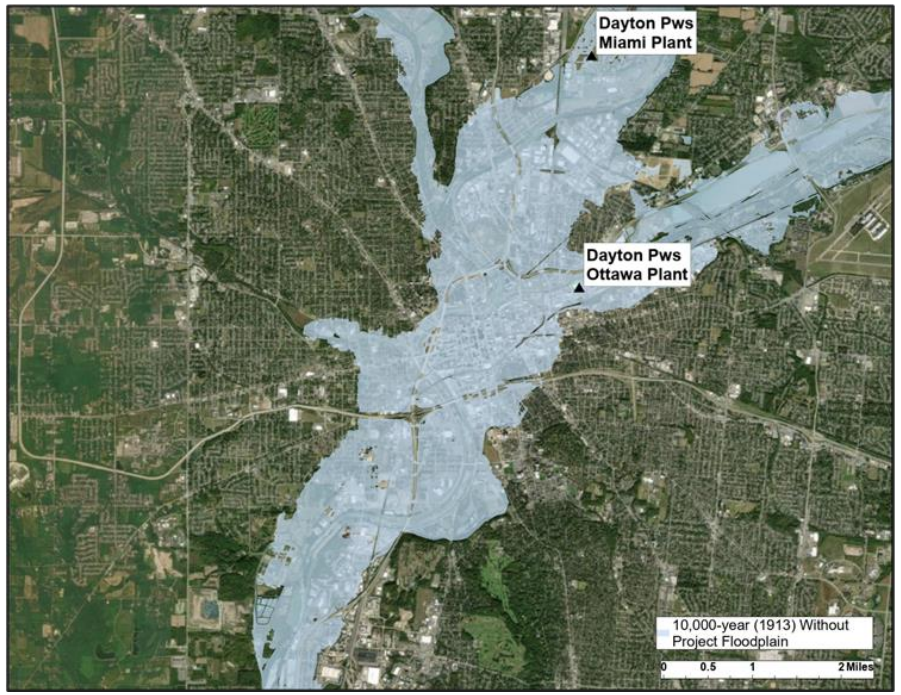
Miami WTP (NORTH)

Ottawa WTP

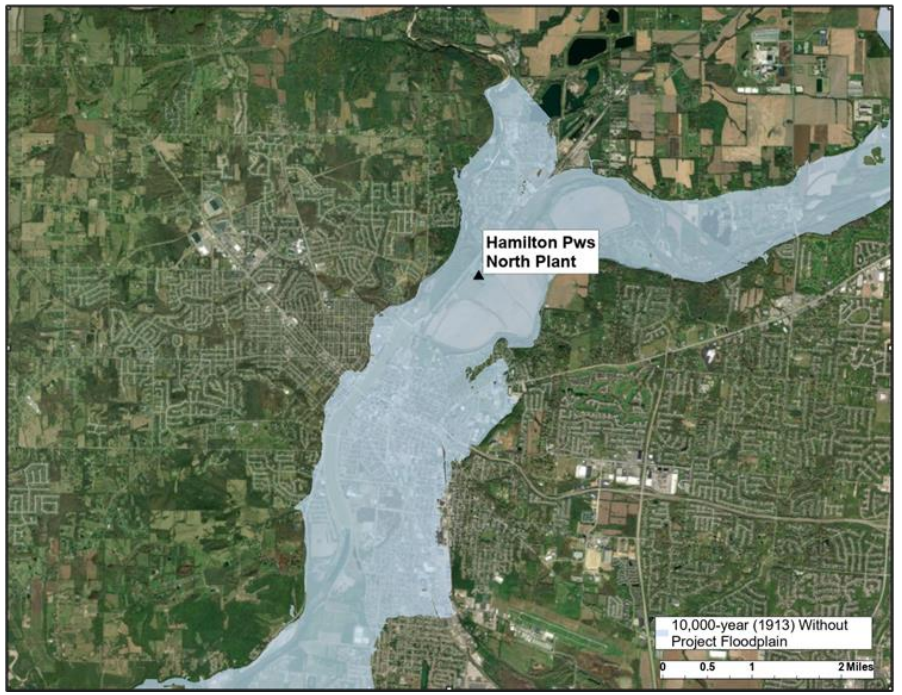
** Source: City of Dayton Department of Water, Division Manager

Water Treatment Plants – Expected Flooding

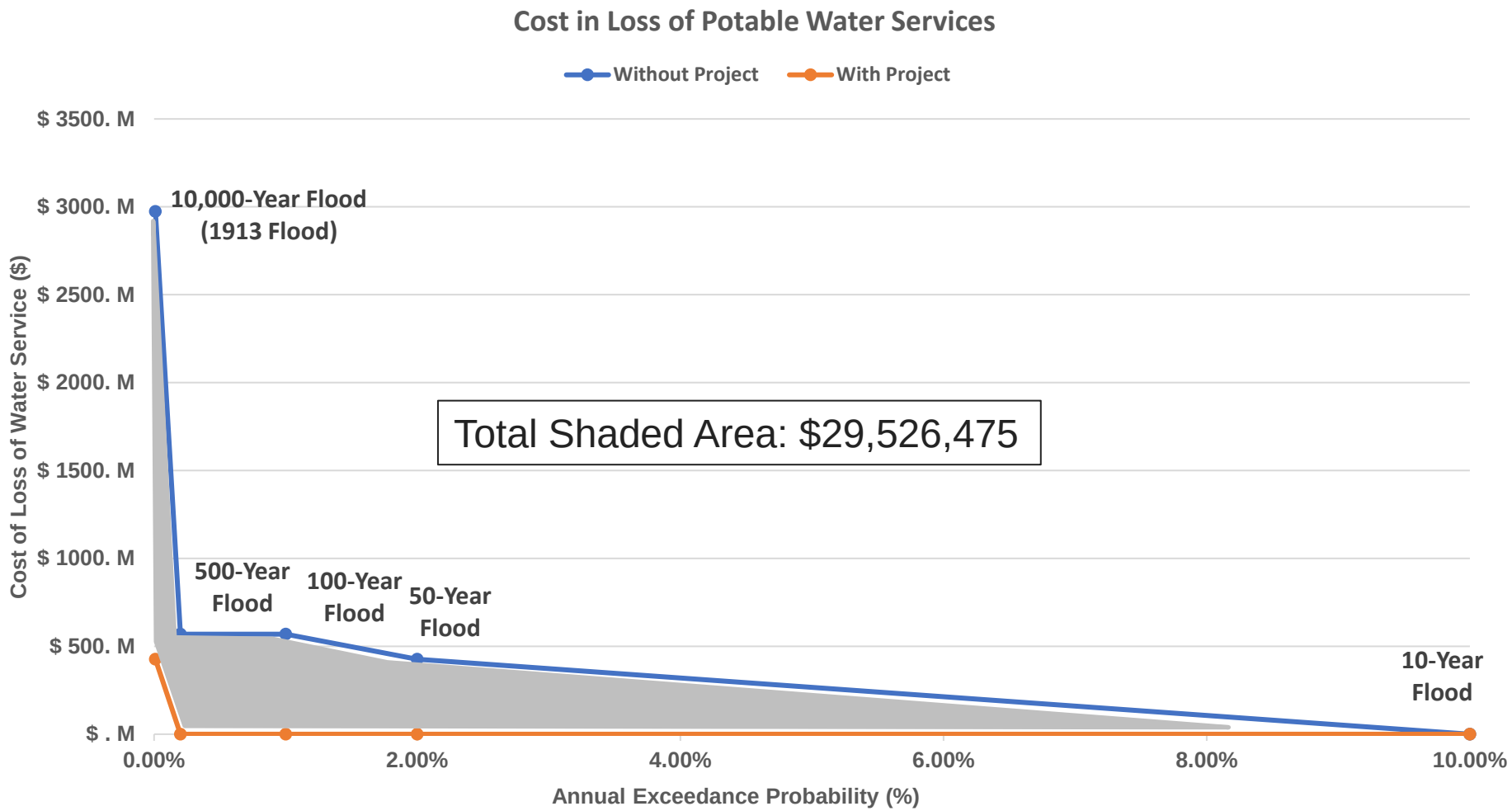
Dayton WTP (1913 Without-Project)



Hamilton WTP (1913 Without-Project)



Water Treatment Plants – Total Benefit



*Total Benefit is area between the Without and With Project costs.

Wastewater Treatment Plants – Indirect Benefit Components

Impact to Economic Activity

- Population Served
- $70.71 per Person per Day (FEMA, 2024)

*Per day of facility shutdown

Wastewater Treatment Plants – WWTPs of Interest

Pilot Area	Wastewater Treatment Plant	Service Population
Hamilton	Fairfield WWTP	44,000*
Dayton	Dayton WWTP	340,000**

*Source: City of Fairfield, Public Utilities Director
** Source: City of Dayton Department of Water, Division Manager

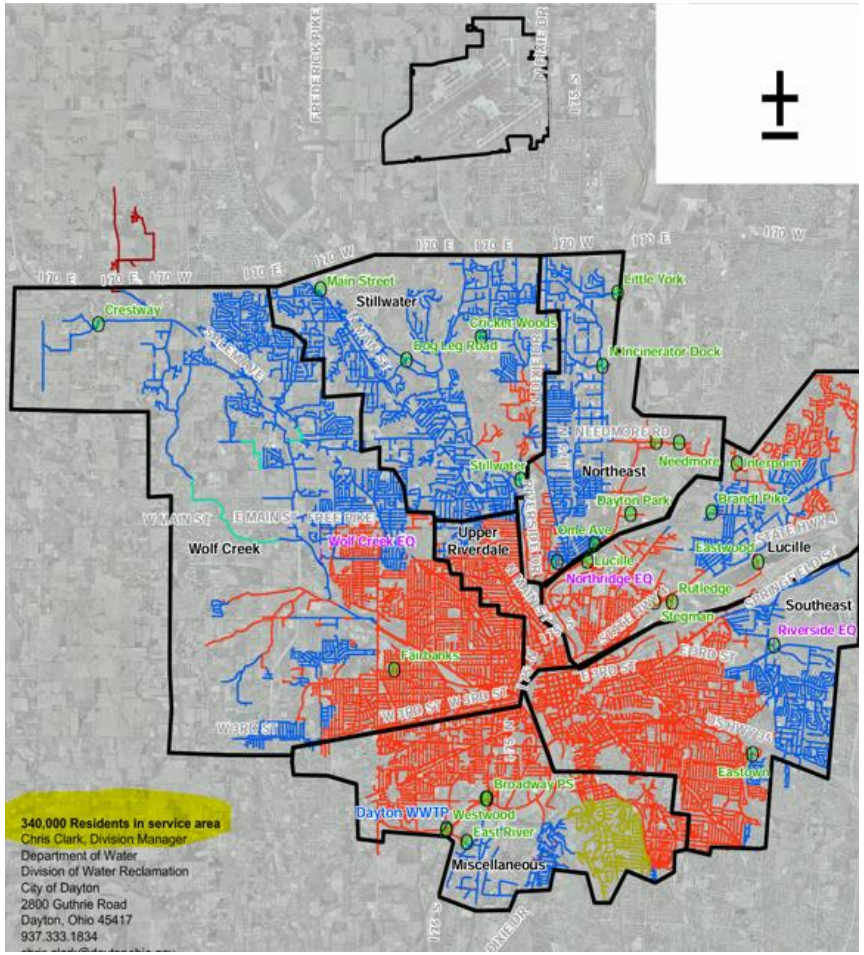
Wastewater Treatment Plants – Service Areas

Fairfield WWTP

Fairfield Wastewater Treatment Plant
44,000 Residents

Jason Hunold
Public Utilities Director
City of Fairfield, Ohio
5021 Groh Lane
513-858-8348

Dayton WWTP

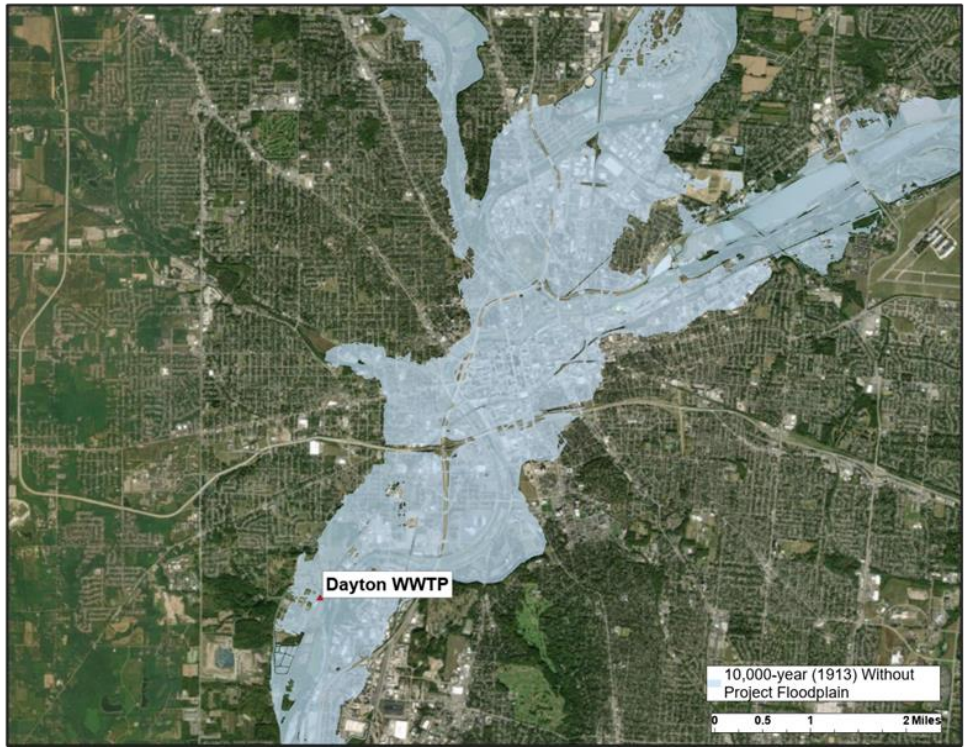


*Source: City of Fairfield, Public Utilities Director
** Source: City of Dayton Department of Water, Division Manager

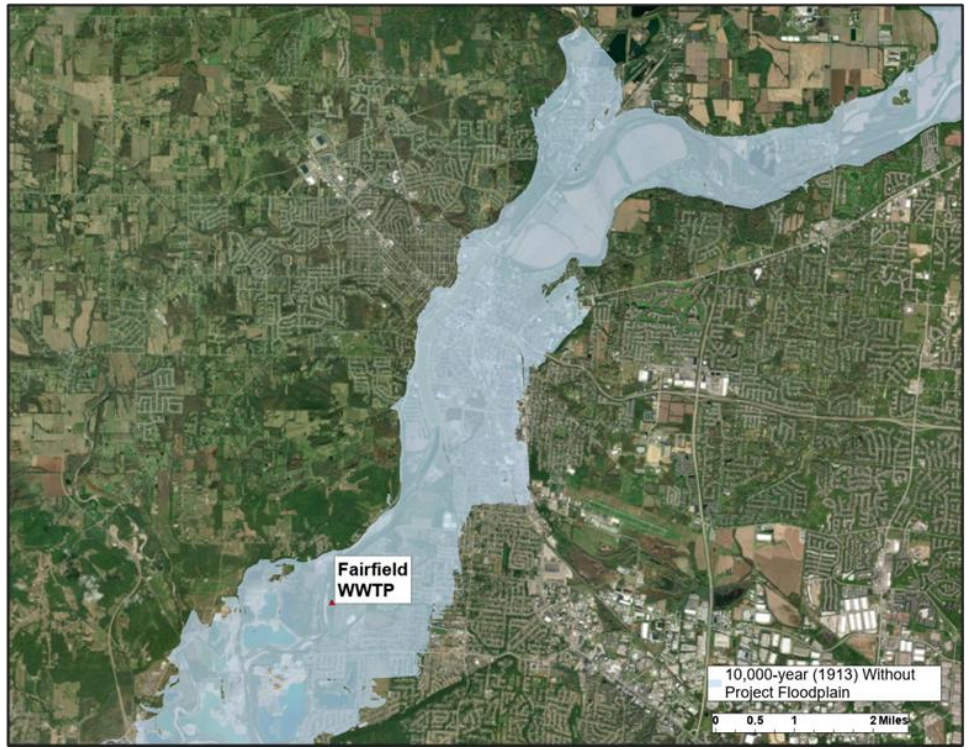
DRAFT – FOR DISCUSSION PURPOSES

Wastewater Treatment Plants – Expected Flooding

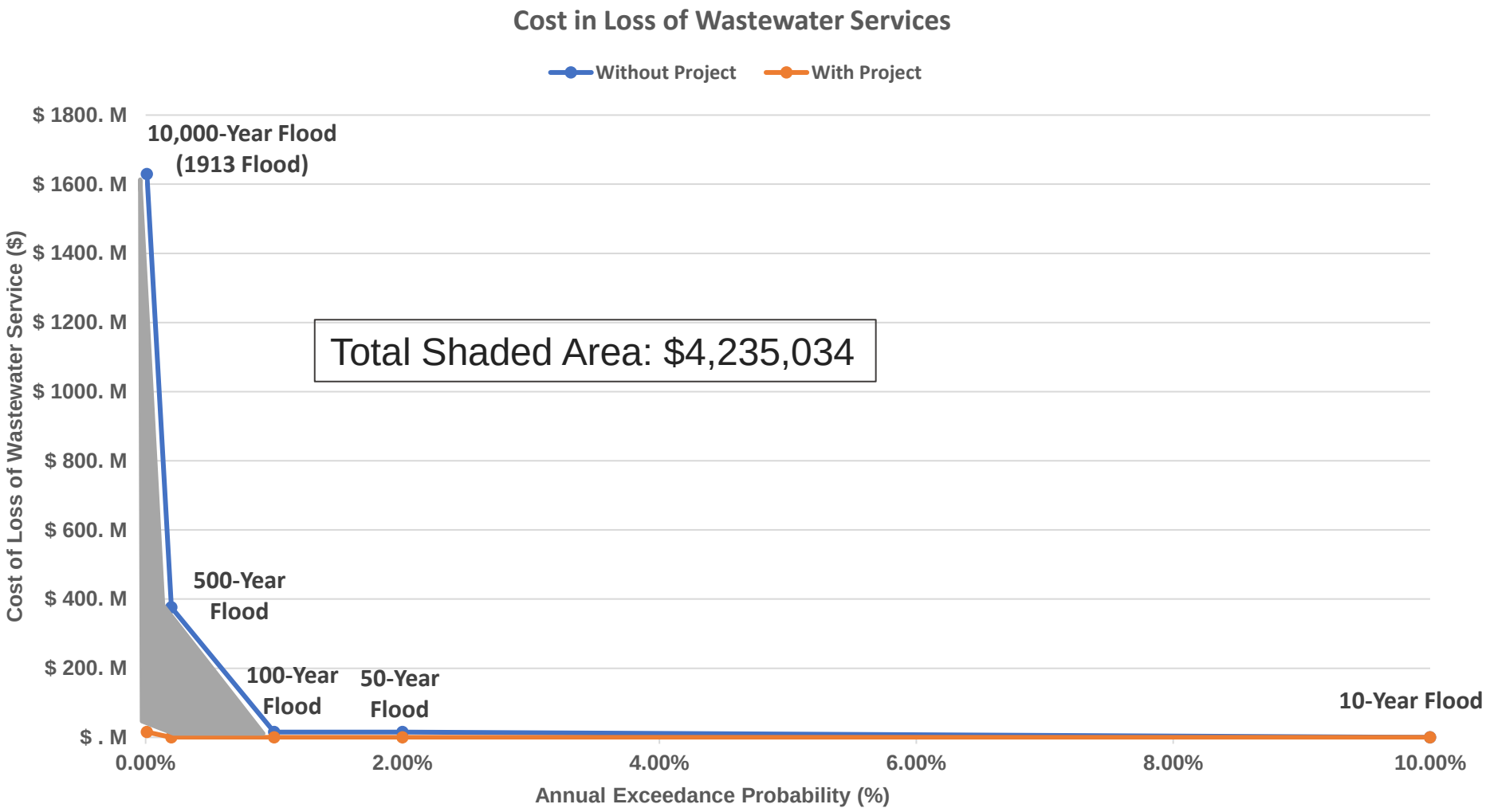
Dayton WWTP (1913 Without-Project)



Hamilton WWTP (1913 Without-Project)



Wastewater Treatment Plants – Total Benefit



*Total Benefit is area between the Without and With Project costs.

Electric Plants – Indirect Benefit Components

Impact to Economic Activity	Impact to Residential Customers
• Population Served • $177.63 per Person per Day (FEMA, 2024)	• Population Served • $35.49 per Person per Day (FEMA, 2024)

*Per day of facility shutdown

Electric Plants – Plants of Interest

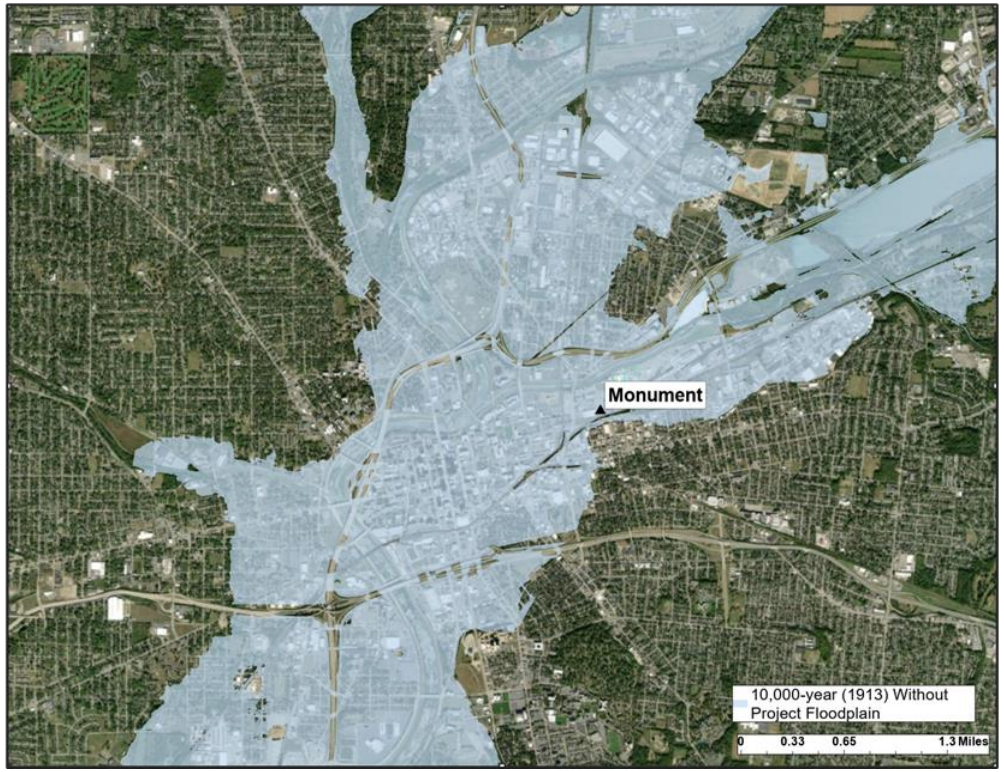
Pilot Area	Electric Plant	Service Population
Hamilton	Hamilton (OH)	527,000*
Dayton	Monument	62,997**

*Source: myprofile.aes-ohio.com/Outages/Outages.html

** Source: Utility Operations — City of Hamilton, OH and U.S. Census Bureau QuickFacts: Hamilton city, Ohio

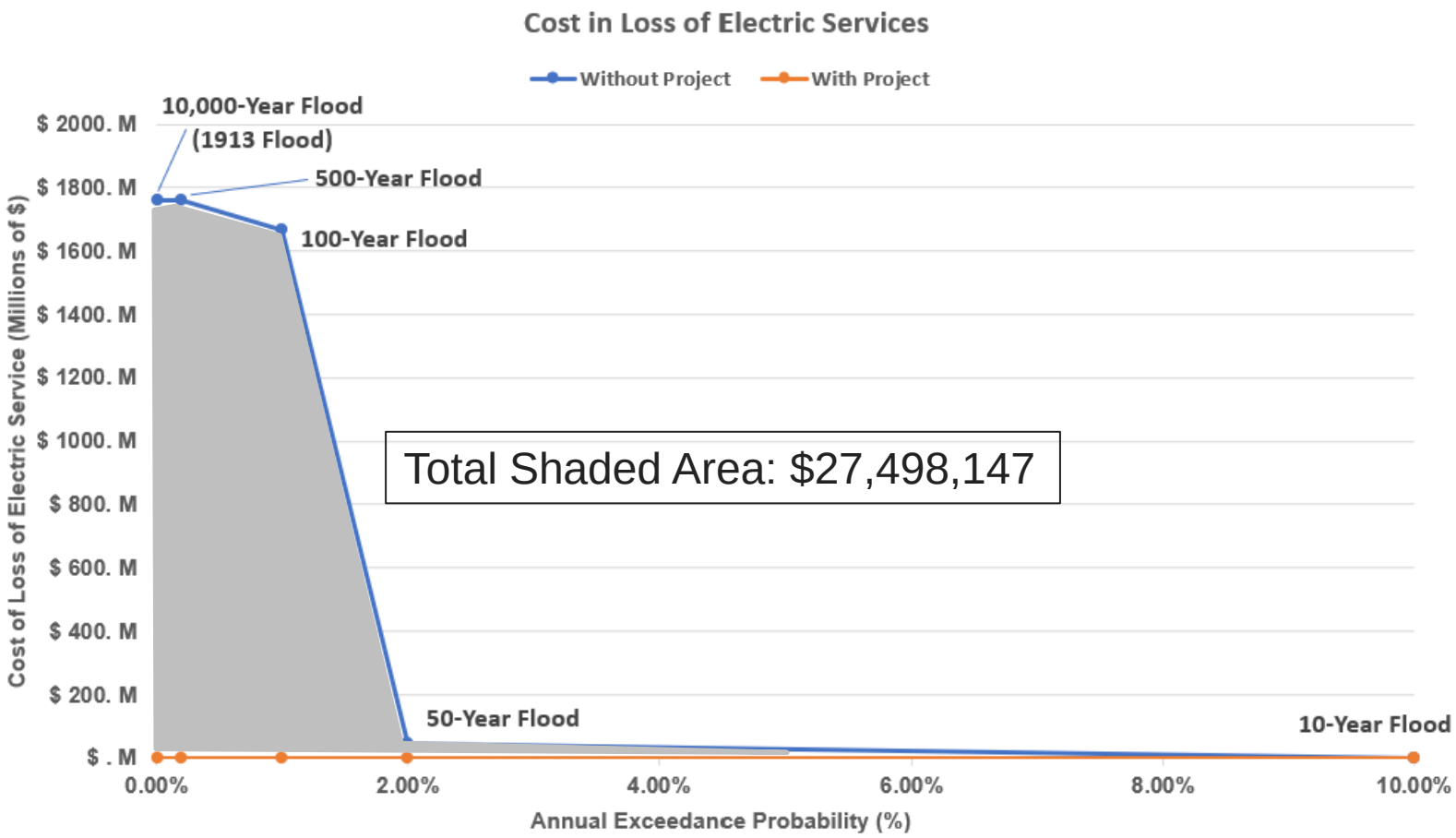
Electric Plants – Expected Flooding

Dayton Power Infrastructure (1913 w/o Project)



Hamilton Power Infrastructure (1913 w/o Project)

Electric Plants – Total Benefit

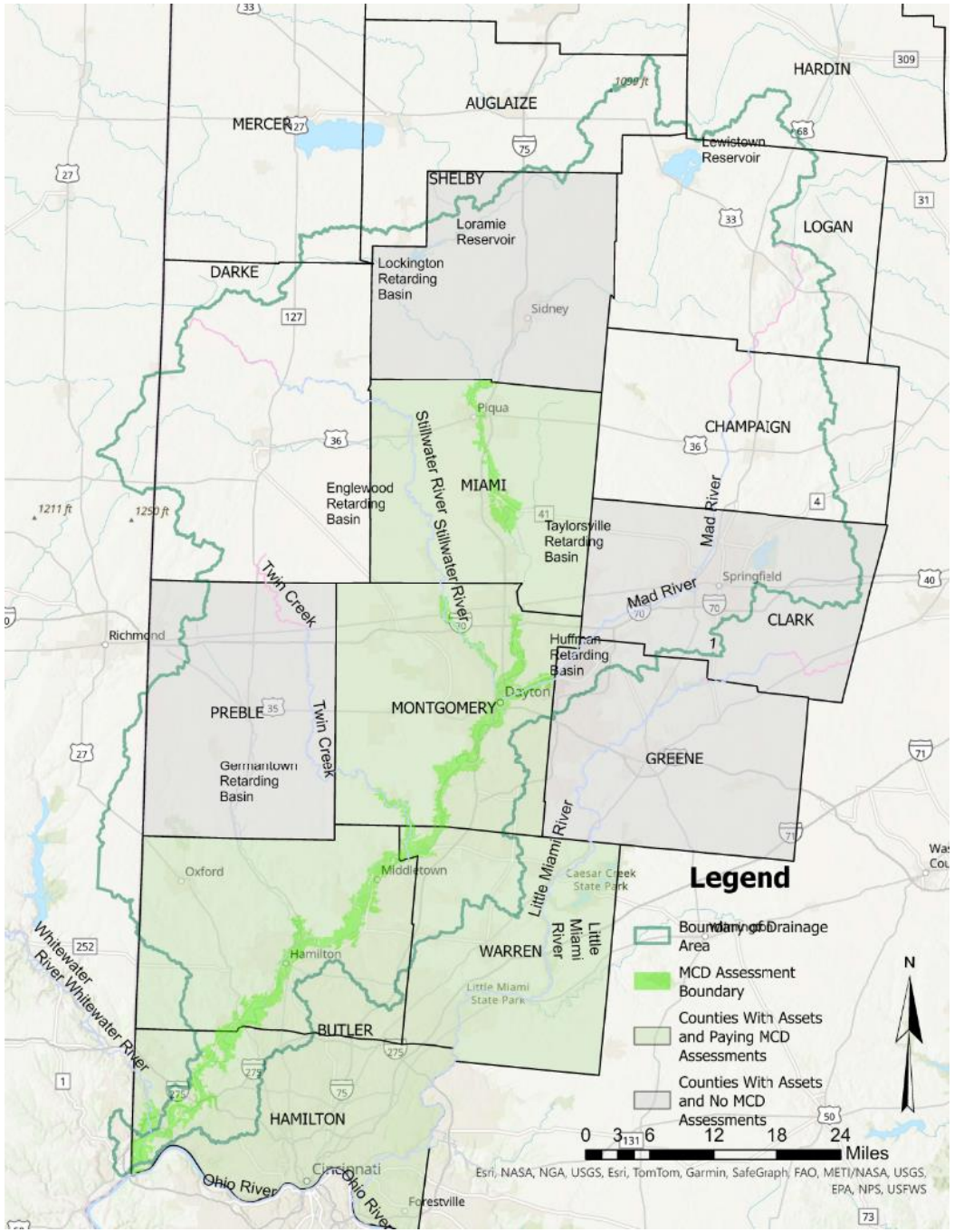


*Total Benefit is area between the Without and With Project costs.


Alternatives

District Boundary

- Options
  - Current MCD Boundary
    - Official Plan limits
    - 1913 flood extents within “green” counties
      - Hamilton
      - Butler
      - Warren
      - Montgomery
      - Miami
    - Within extents of MCD infrastructure in “gray” counties
      - Preble
      - Greene
      - Clark
      - Shelby
  - Alternate Revised MCD Boundary
    - Boundary of Great Miami River watershed
    - Within the limits of each of 9 counties

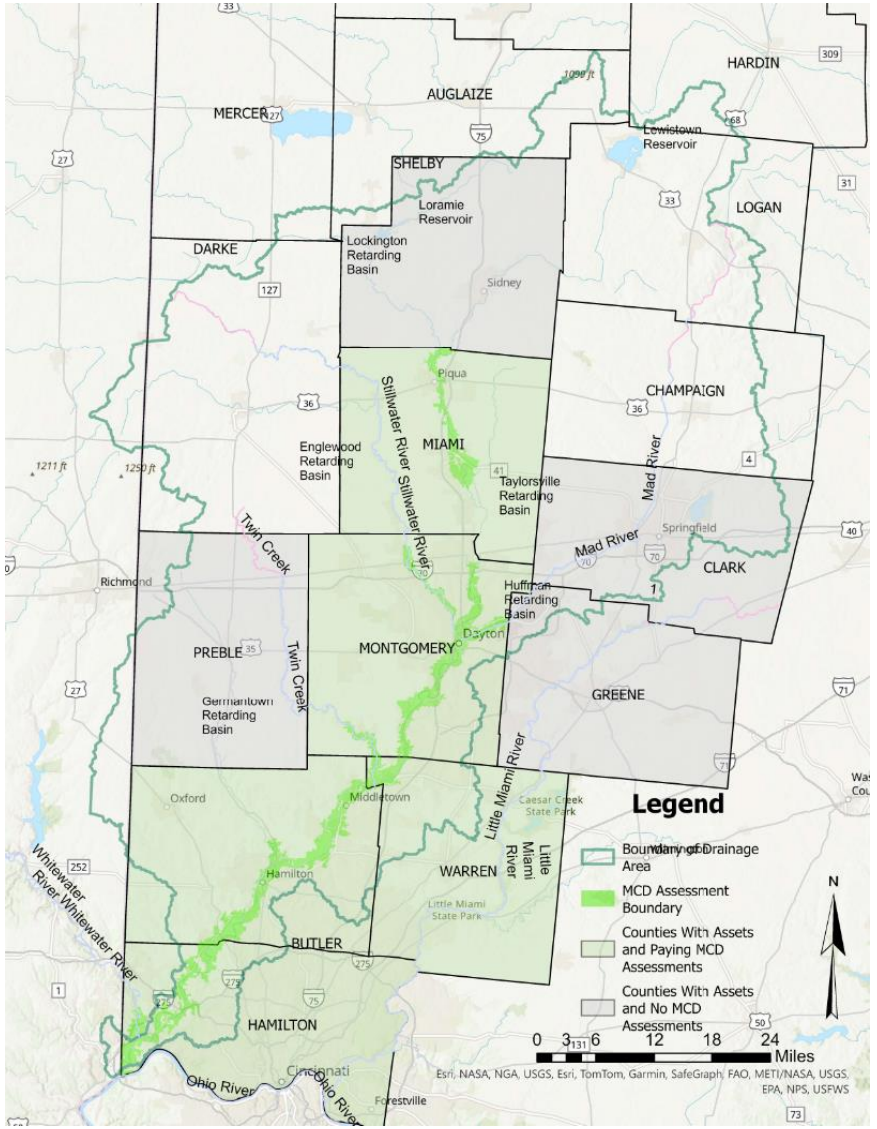


Direct Benefit Appraisal Methodologies

- Options
  - Update Flood Factor Curve – Keep 1913 Flood Depth Reference
    - **Adjust Partial Protection Factor**
    - **Reduce the # of Divisions b/w 6 and 30**
    - Add a multiplier for commercial and industrial properties
  - Utilize Pre-Project Flood Limits to Spatially Define Flood Factor
    - **Three Zones: 10-500; 500 – 10,00; and > 1:10,000 up to OPF**
    - **Consider a multiplier for partially protected areas**
    - **Consider a multiplier for commercial and industrial properties**
  - Flat Rate/Stormwater Contribution by Equivalent Residential Unit (ERU)
    - Everyone appraised equally
    - **Vary by commercial / industrial / residential**

Indirect Benefit Appraisal Methodologies

- Options
  - Equivalent Residential Unit (ERU) Calculation
    - Stormwater Runoff Based
    - Considers Land Use Type
    - Total Area and Impervious Area
  - Flat Amount
    - **Everyone appraised equally**
    - Vary by commercial / industrial / residential
    - **Vary based on location/County/zones**



Benefit Appraisal Alternatives

- Alternative 1 - Revised District Boundary - Contributing Community Approach
- Alternative 2 - Direct & Indirect Benefits Combination – Revised District Boundary Approach
- Alternative 3 - Direct & Indirect Benefits Combination – Benefitting Community
- Alternative 4 - Simplified Benefit Appraisal

Alternative 1 – Revised District Boundary – Contributing Community Approach

	Alternative 1
District Boundary	Boundary of the Great Miami River watershed that falls within the limits of the 9 counties
Direct Benefit Appraisal	Calculated with FEMA methodology, summed with indirect benefits; appraised based on stormwater contribution of each property
Indirect Benefit Appraisal	Calculated with FEMA methodology, summed with direct benefits; appraised based on stormwater contribution of each property
Assessment Basis	ERU Based. All residential parcels are considered 1 ERU, and Non-Res ERUs are determined by impervious area.
Unit Assessments?	Yes – Units (municipalities and counties) at 40% of individual direct benefits

Alternative 1 – Use of Contributing ERUs

- Precedent for approach:
  - Miami County vs City of Dayton (1915)

    *The court in the establishment of the district might well conclude that in the ordinary and natural course of events an acre of land within the watershed [***19] but twenty miles from the improvement would probably case as big a burden of rainfall as an acre of land immediately adjoining the improvement, and that taking care of this surplus water, acre for acre throughout the district, would be of substantially equal benefit to the real property of that district.*

  - Muskingum and Margaret Creek Conservancy Districts

  - California Benefit Assessment Act of 1982 (Section 54711)

    The amount of the assessment imposed on any parcel of property shall be related to the benefit to the parcel which will be derived from the provision of the service. Except as provided in subdivision (d) or (e) of Section 54715, ***in the case of a benefit assessment for flood control services, the benefit may be determined on the basis of the proportionate storm water runoff from each parcel.***

Alternative 2 – Direct & Indirect Benefits Combination - Revised District Boundary Approach

	Alternative 2
District Boundary	Revised District Boundary – includes 9 counties within watershed boundary for indirect benefits
Direct Benefit Appraisal	Direct benefits assumed at ~50% of total benefits; 3 flood zone approach with modifying factors
Indirect Benefit Appraisal	Indirect benefits assumed at ~50% of total benefits
Assessment Basis	Property value for direct benefits plus uniform rate for all developed parcels; vacant parcels at nominal uniform rate
Unit Assessments?	Yes - Units (municipalities and counties) at 40% of individual direct benefits

Alternative 2 - Benefit Appraisal Highlights

District Boundary	Direct Benefits	Indirect Benefits	Unit Benefits

• Direct benefits appraised to Current Boundary
• Indirect benefits appraised to Revised Boundary
	• Parcels within Current Boundary
	• **Grouped by 3 flood recurrence zones**
	  • **10 – 500 yr**
	  • **500 – 10,000 yr**
	  • **> 10,000 yr**
	• Modifying factors include land use & protection level
		• Proportion of total benefits based on indirect benefits analysis
		• Developed parcels within Revised Boundary
		• Vacant parcels appraised nominal share
			• Municipalities and Counties within Current Boundary
			• 40% of individual direct benefits in those areas

Alternative 3 – Direct & Indirect Benefits Combination - Benefitting Community

	Alternative 3
District Boundary	Revised District Boundary – includes 9 counties within watershed boundary for indirect benefits
Direct Benefit Appraisal	Direct benefits assumed at ~50% of total benefits; flood zone approach with modifying factors
Indirect Benefit Appraisal	Indirect benefits assumed at ~50% of total benefits; two-zone benefit appraisal
Assessment Basis	Property value for direct benefits plus 2-tiered uniform rate for indirect benefits (reduced rate for “gray” counties)
Unit Assessments?	Yes - Units (municipalities and counties) at 40% of individual direct benefits

Alternative 3 - Benefit Appraisal Highlights

District Boundary

- Direct benefits appraised to Current Boundary
- Indirect benefits appraised to Revised Boundary

Direct Benefits

- Parcels within Current Boundary
- **Grouped by 5 flood recurrence zones**
  - **10 – 50 yr**
  - **50 – 100 yr**
  - **100 – 500 yr**
  - **500 – 10,000 yr**
  - **> 10,000 yr**
- Modifying factors include land use & protection level

Indirect Benefits

- Proportion of total benefits based on indirect benefits analysis
- Developed parcels within Revised Boundary
- **Two zones differentiate between indirect benefits received by counties**
- Vacant parcels appraised nominal share

Unit Benefits

- Municipalities and Counties within Current Boundary
- 40% of individual direct benefits in those areas

Alternative 4 – Simplified Benefit Appraisal

	Alternative 4
District Boundary	No change but assessments apply to properties up to OPF (1913 +40%)
Direct Benefit Appraisal	Reduced flood factors
Indirect Benefit Appraisal	Unit benefits for all 9 counties
Assessment Basis	Current methodology with expanded unit assessments
Unit Assessments?	Yes – Units (municipalities and counties) at 40% of individual direct benefits; Indirect unit benefits for all 9 counties

Alternative 4 - Benefit Appraisal Highlights

District Boundary	Direct Benefits	Indirect Benefits	Unit Benefits
• Direct benefits appraised to Current Boundary • Expands assessments to the 1913 + 40% boundary	• Maintain current approach • Parcels within Current Boundary • **Simplified flood factors into 3 groups based on direct benefit data**	• See Unit Benefits	• **Municipalities and 9 Counties within Current Boundary** • 40% of individual direct benefits in those areas • Indirect unit assessment for all 9 counties

Discussion/Questions

Alternative 1

- Revised District Boundary
- Aggregated direct & indirect benefits
- Appraisal based on stormwater contribution of a parcel by land use type

Alternative 2

- Current & Revised District Boundary
- Direct benefits for 3 flood recurrence zones within current boundary
- Indirect benefits for developed parcels within revised boundary

Alternative 3

- Current & Revised District Boundary
- Direct benefits for 5 flood recurrence zones within current boundary
- Indirect benefits for developed parcels in 2 zones within revised boundary

Alternative 4

- District Boundary – 1913 +40%
- Direct benefits for 3 (consolidated) flood factors within current boundary
- Indirect benefits are Unit benefits to all counties

Next Steps

- Present alternatives to Board of Directors (BOD) January 23, 2025
- Develop recommendations of preferred alternative for BOD

THE MIAMI CONSERVANCY DISTRICT

#5 Future BOA Meetings

Recommendation

The Board is requested to consider future meeting dates.

THE MIAMI CONSERVANCY DISTRICT

#6 Adjourn