Northeast Ohio
Regional Sewer District

NEORSD Green Infrastructure Grants Program Pre-proposal Workshop

2023 GI Grants funding round

Northeast Ohio Regional Sewer District

WELCOME!

Housekeeping

- Highly recommend utilizing the chat for comments and questions
- Mute your microphone
- Recording will start

Agenda

- District Overview and GI Grant Program
- Grant Eligibility
- Grant Criteria
- Contract
- Technical Requirement
- First-Year Maintenance
- Document Submittal Process

NEORSD Green Infrastructure Grants Program

Preproposal Workshop for the 2023 GI Grants funding round

NEORSD Overview

Keith McClintock, Manger of Watershed Programs

Who We Are...

- Created in 1972 by Court Order
- Servicing all or part of 62 member communities
- 1 million customers
- 90+ billion gallons wastewater treated each year
- 487 miles of regional streams

...And What We Do

- Wastewater Treatment Plants
- Interceptor Sewer Operation and Maintenance
- Combined Sewer Overflow Control
- Regional Stormwater Management
- Grant Funding Opportunities

Introduction

We define Green Infrastructure as stormwater source control measures that store, filter, infiltrate, harvest, and reuse or evapotranspirate stormwater to increase resiliency of infrastructure by reducing stress on wet-weather drainage and collection systems, which increase co-benefits in support of healthy environments and strong communities.

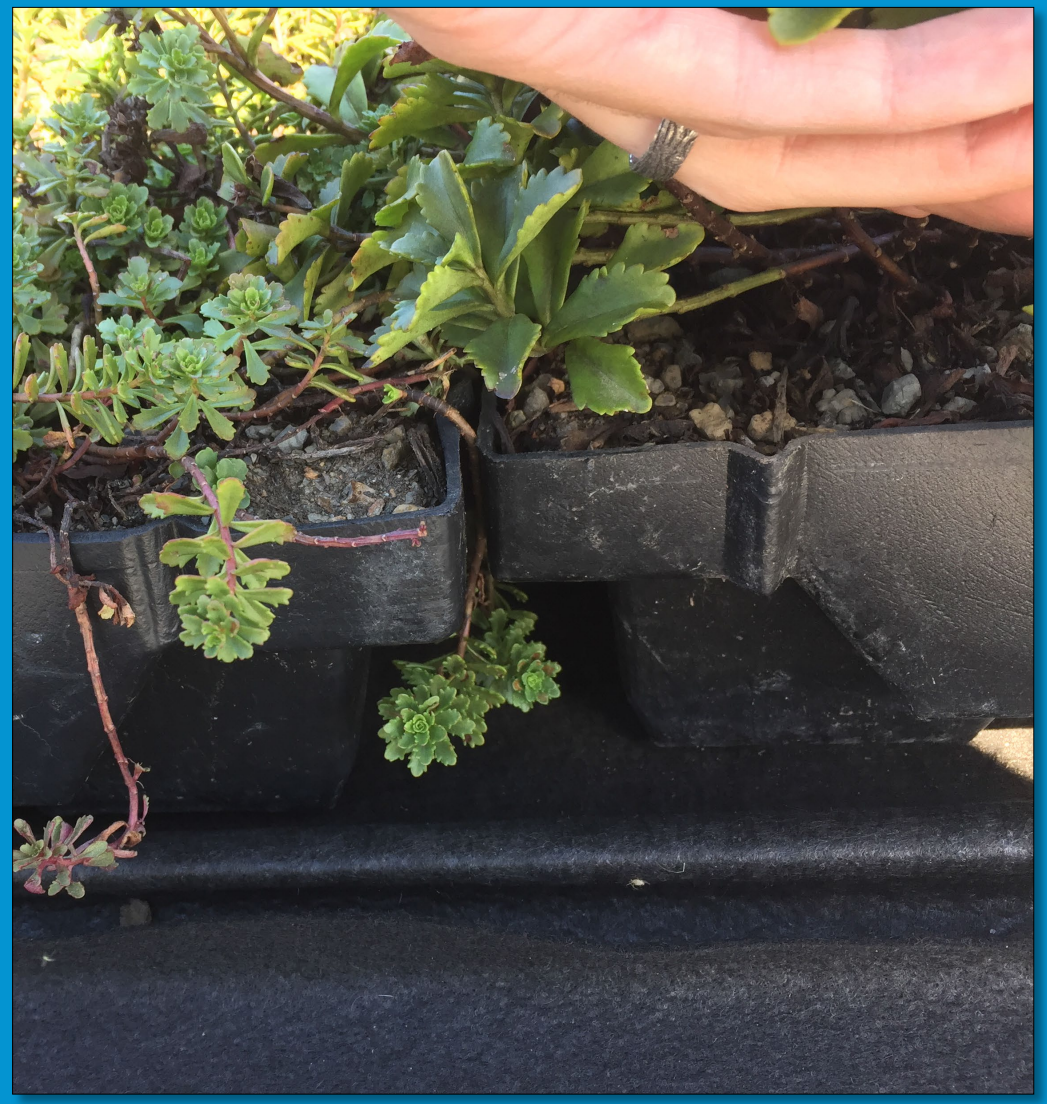
Introduction

The Green Infrastructure Grant Program (GIG) focus is funding GIG implementation and long-term maintenance projects and to remove stormwater runoff from the combined sewer collection system that **protects, preserves, enhance, and restores natural hydrologic functions within the District's combined sewer service area.**

Introduction

GI Grant Options

- Design–Only (concept)
- Design and/or Construction



Introduction

Terms of Funding

- The GI Grant is exclusively a reimbursement grant
- Reimbursement will be made on project specific invoices as related to the awarded project

Green Infrastructure Grant

Funding Round	Award Recommendations Total	Runoff Reduction gallons/year Total
2014 GREEN INFRASTRUCTURE GRANT PROGRAM	$1,746,274	7,138,890
2016 GREEN INFRASTRUCTURE GRANT PROGRAM	$1,974,747	9,658,777
2018 GREEN INFRASTRUCTURE GRANT PROGRAM	$799,130	1,730,688
2019 GREEN INFRASTRUCTURE GRANT PROGRAM	$1,908,361	4,906,083
2020 GREEN INFRASTRUCTURE GRANT PROGRAM	$1,907,656	3,888,596
2021 GREEN INFRASTRUCTURE GRANT PROGRAM	$895,432	2,978,459
2022 GREEN INFRASTRUCTURE GRANT PROGRAM*	$1,500,000	2,356,946
GRAND TOTAL	**$10,768,652.79**	**31,683,651**

*Includes Design Only Projects and Design & Construction Projects

NEORSD Green Infrastructure Grants Program

Preproposal Workshop for the 2023 GI Grants funding round

NEORSD GI Grant Eligibility

Robert Stoerkel, Community Discharge Permit Program Specialist

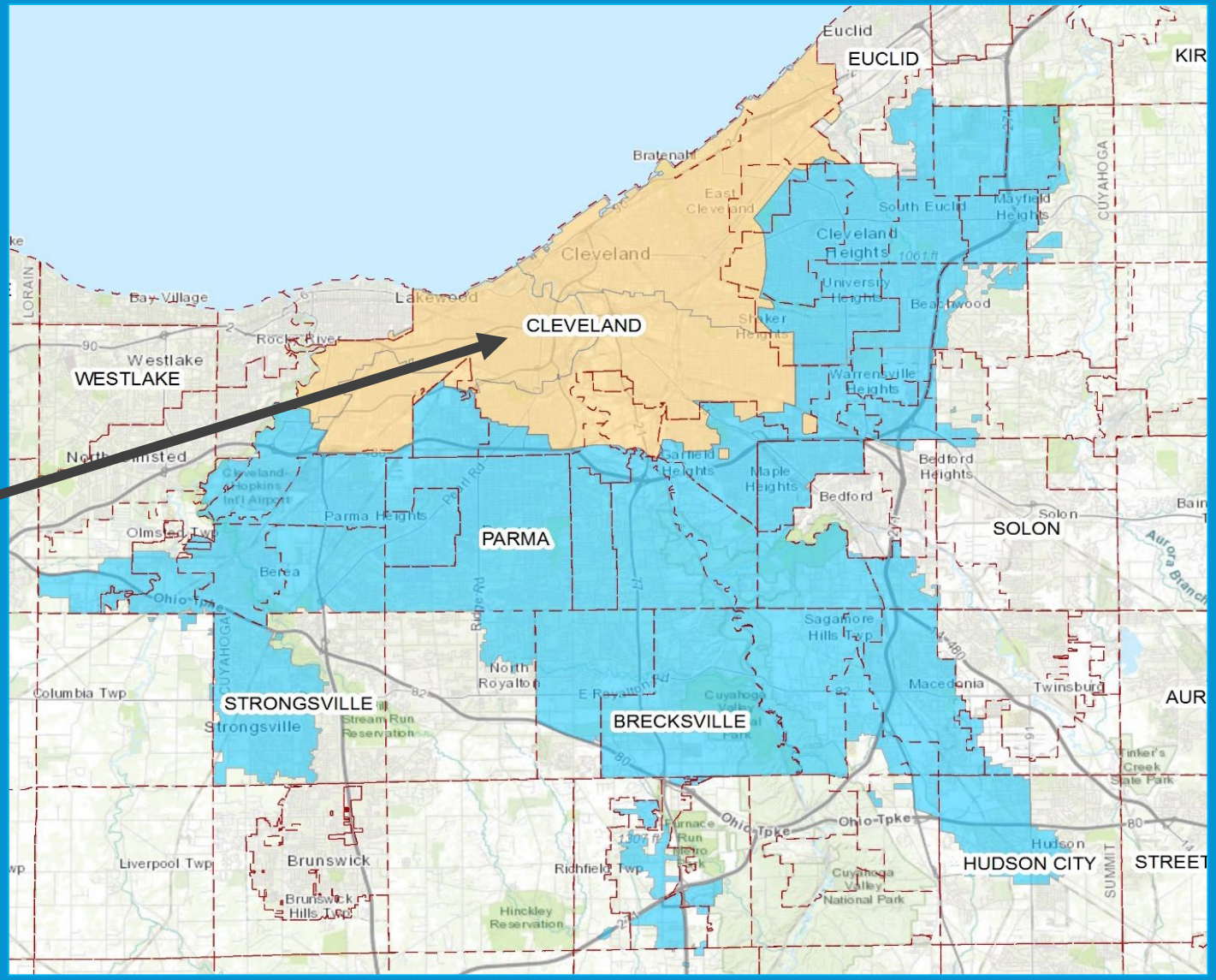
GI Grant Eligibility

The Green Infrastructure Grant Program (GIG) for the Combined Sewer Area Program focus is the **funding of green infrastructure projects to remove stormwater runoff from the combined sewer collection system within the District's combined sewer service area.**

GI Grant Eligibility

Location

Project must be located in the Sewer District's Combined Sewer Area



GI Grant Eligibility

Sewer Types and Function

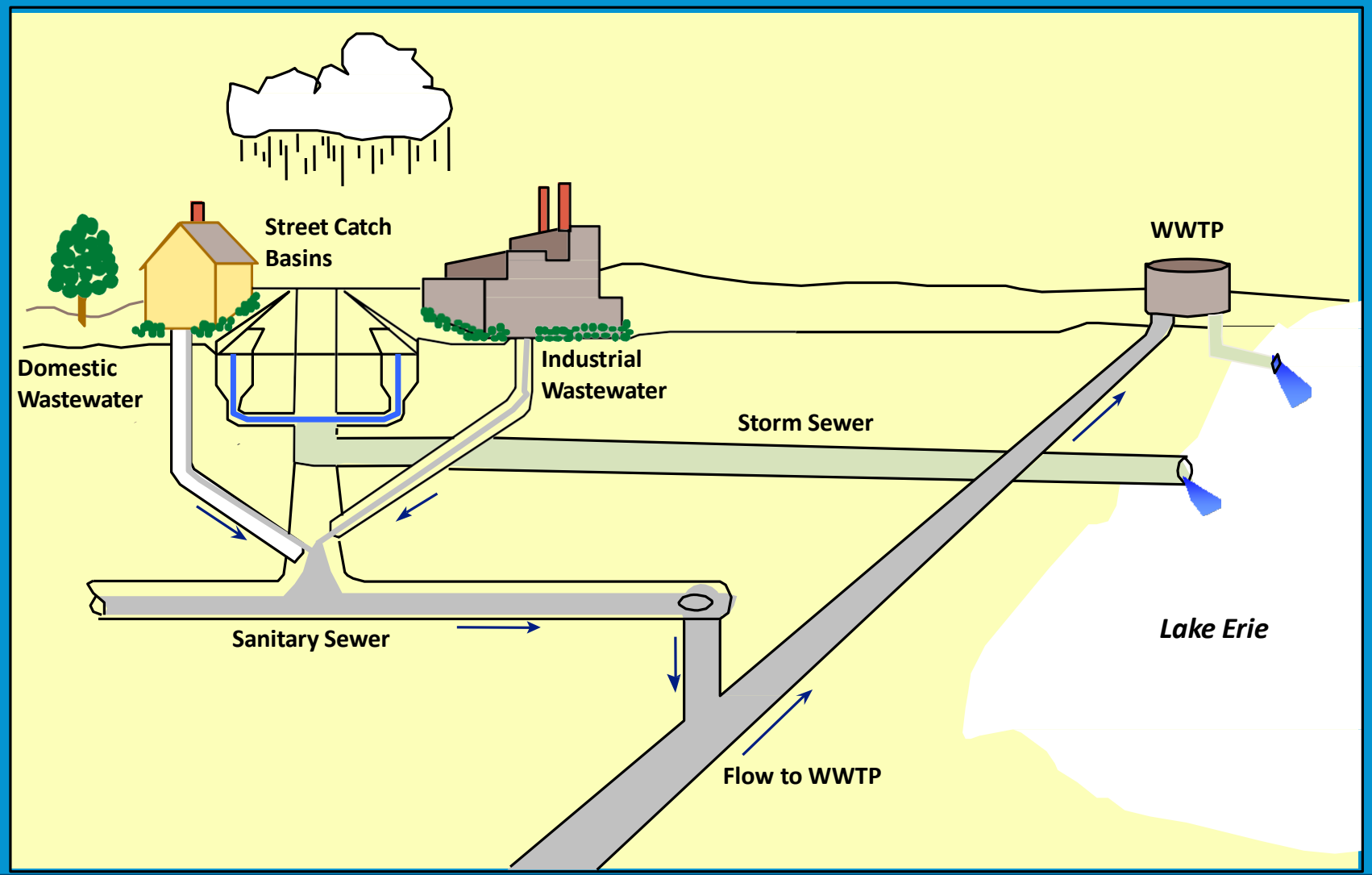
SEPARATE SANITARY SEWER

SEPARATE STORM SEWER

COMBINED SEWER

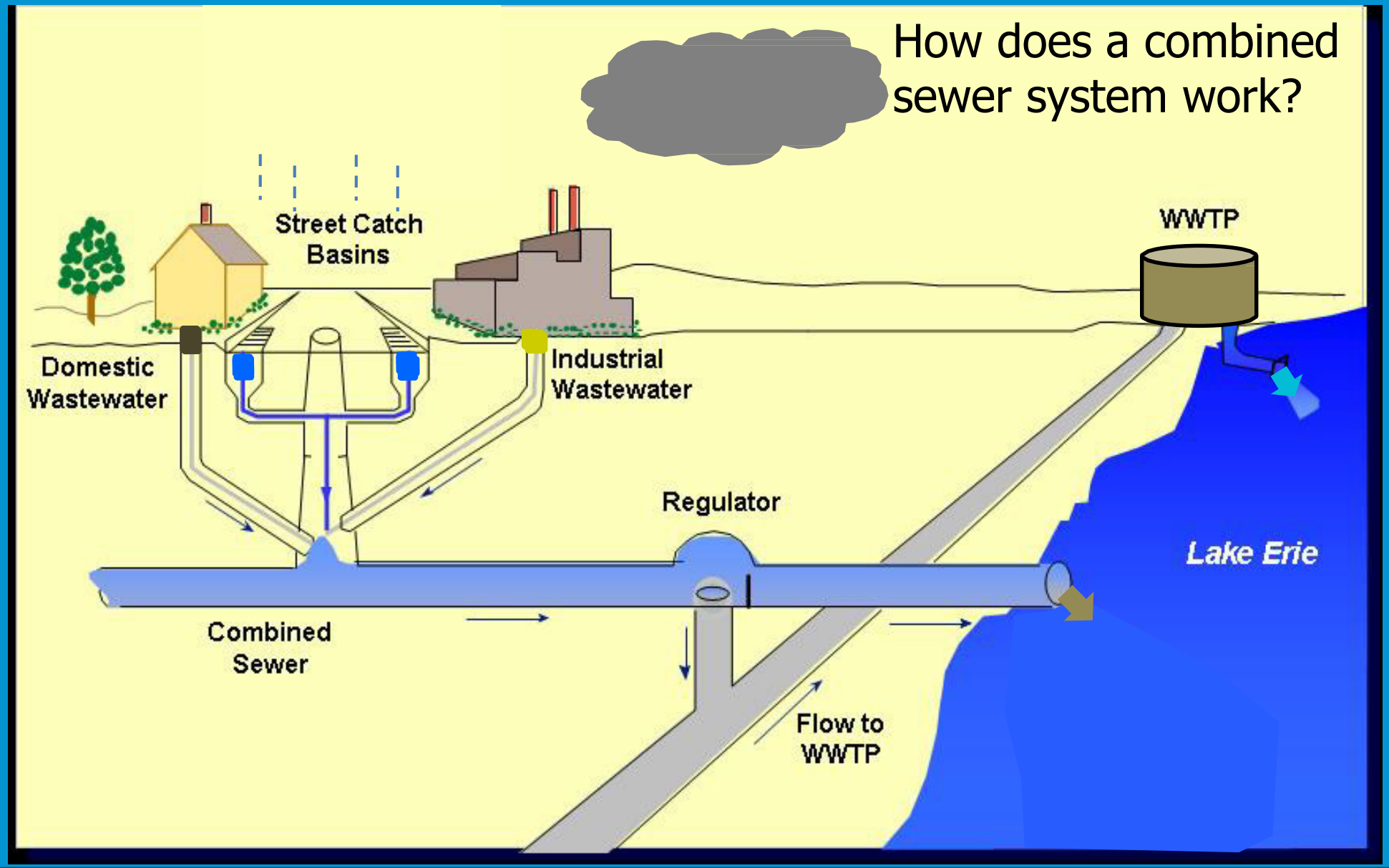
GI Grant Eligibility

Separate Sewer System



GI Grant Eligibility

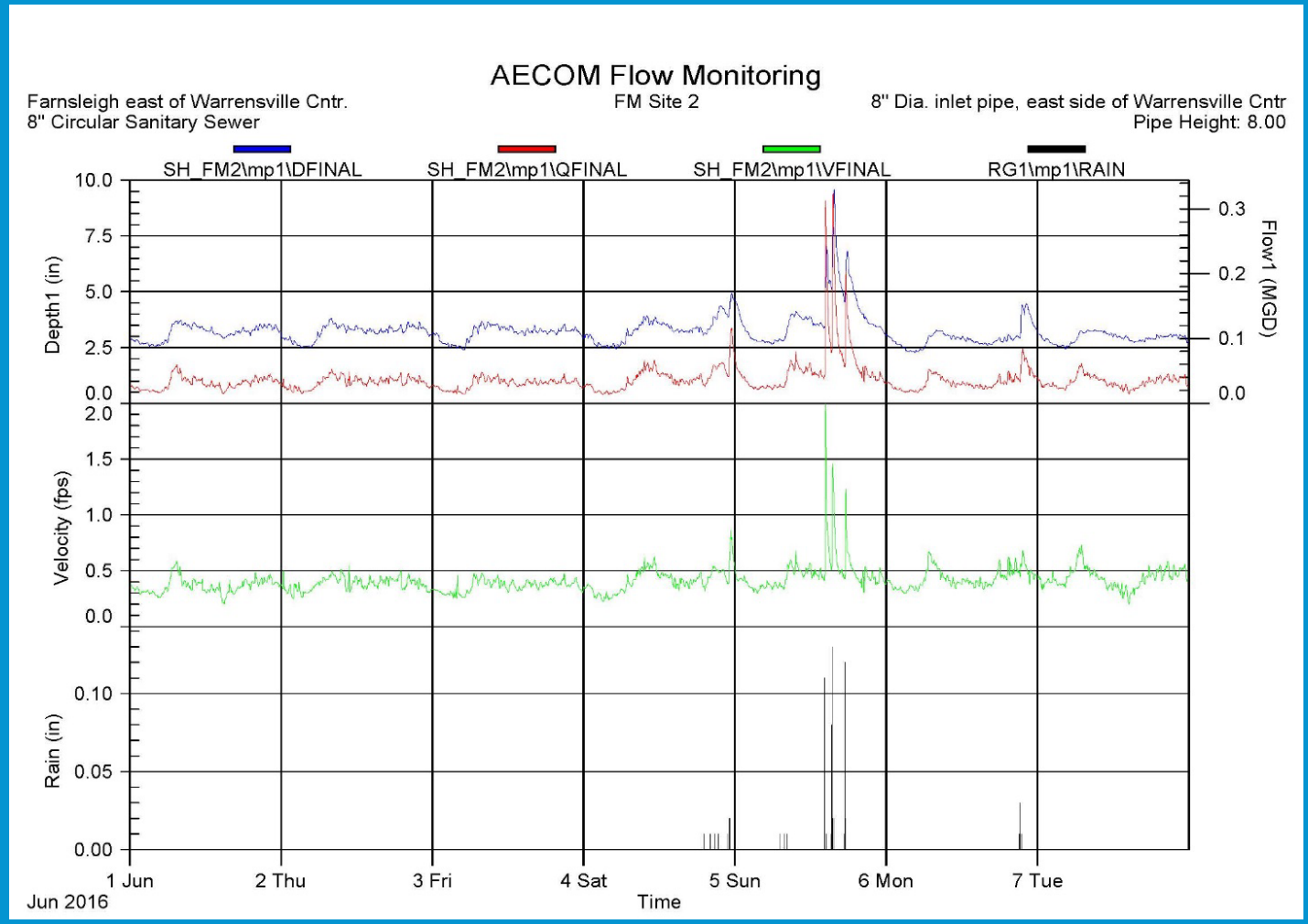
How does a combined sewer system work?



GI Grant Eligibility

Infiltration and Inflow

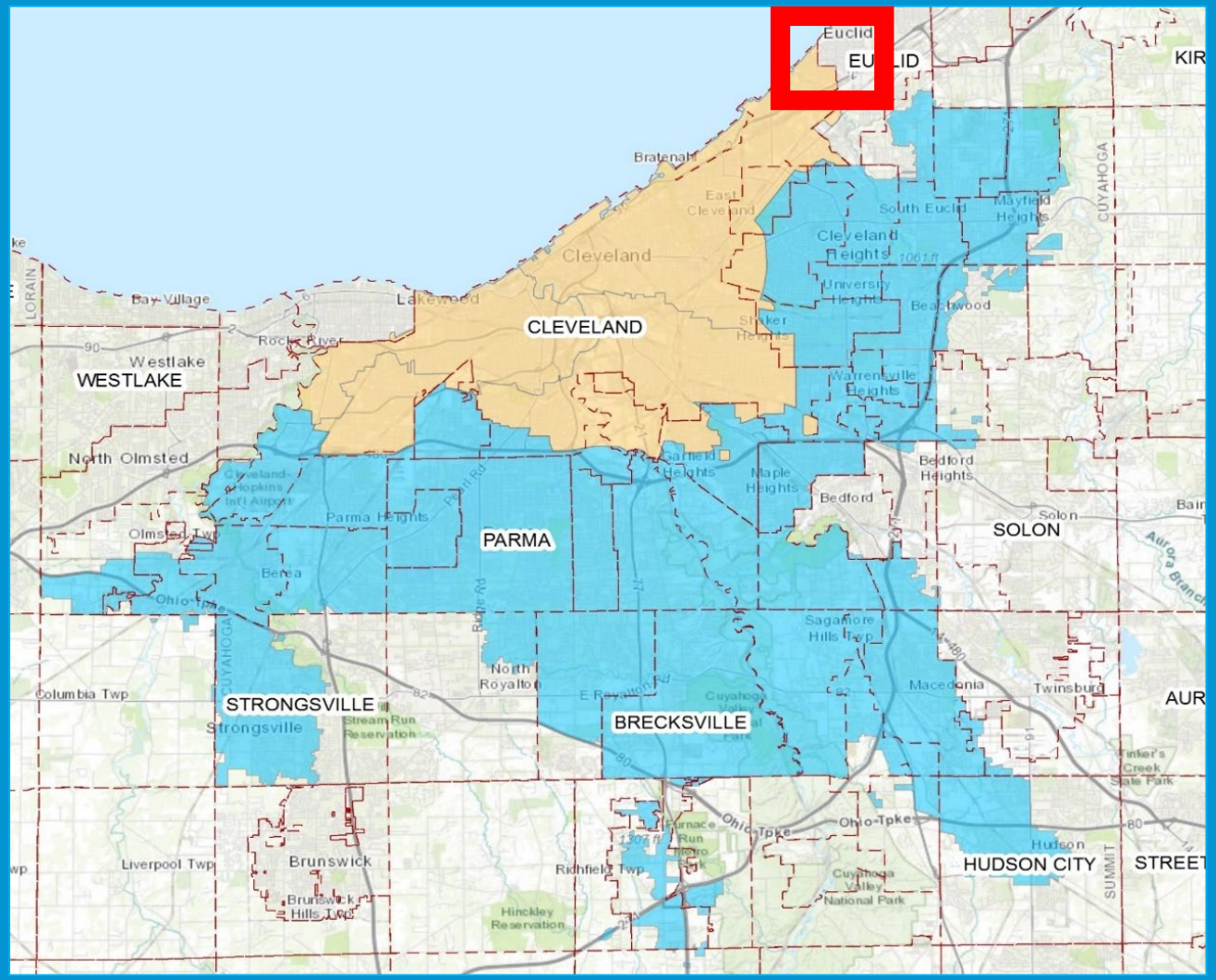
I&I



GI Grant Eligibility

Location

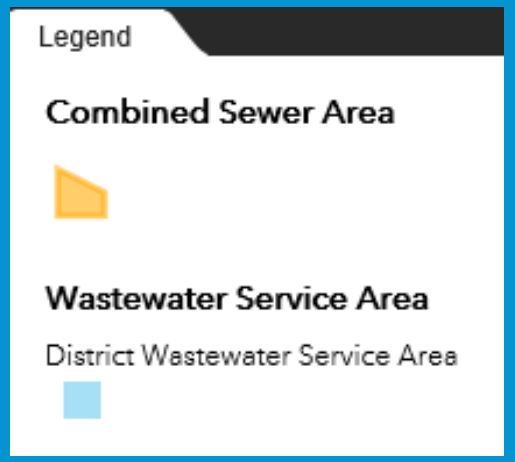
Example #1: although in combined area, some storm sewers are separated

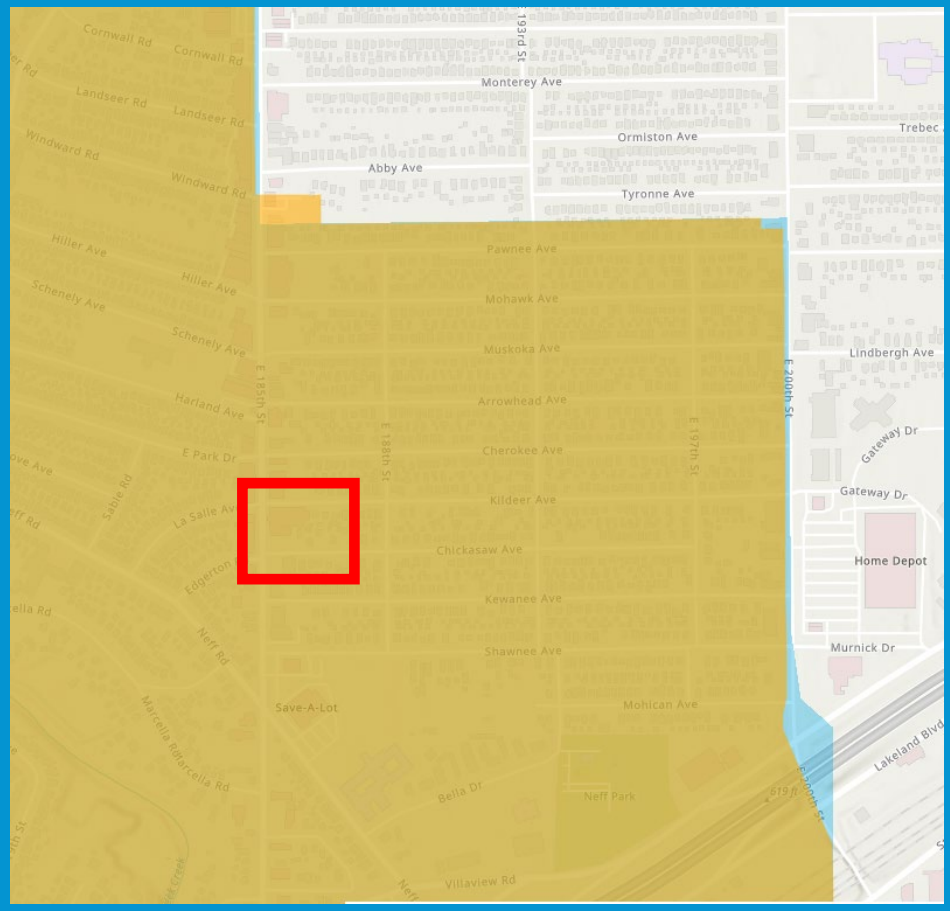


GI Grant Eligibility

Location

Example #1

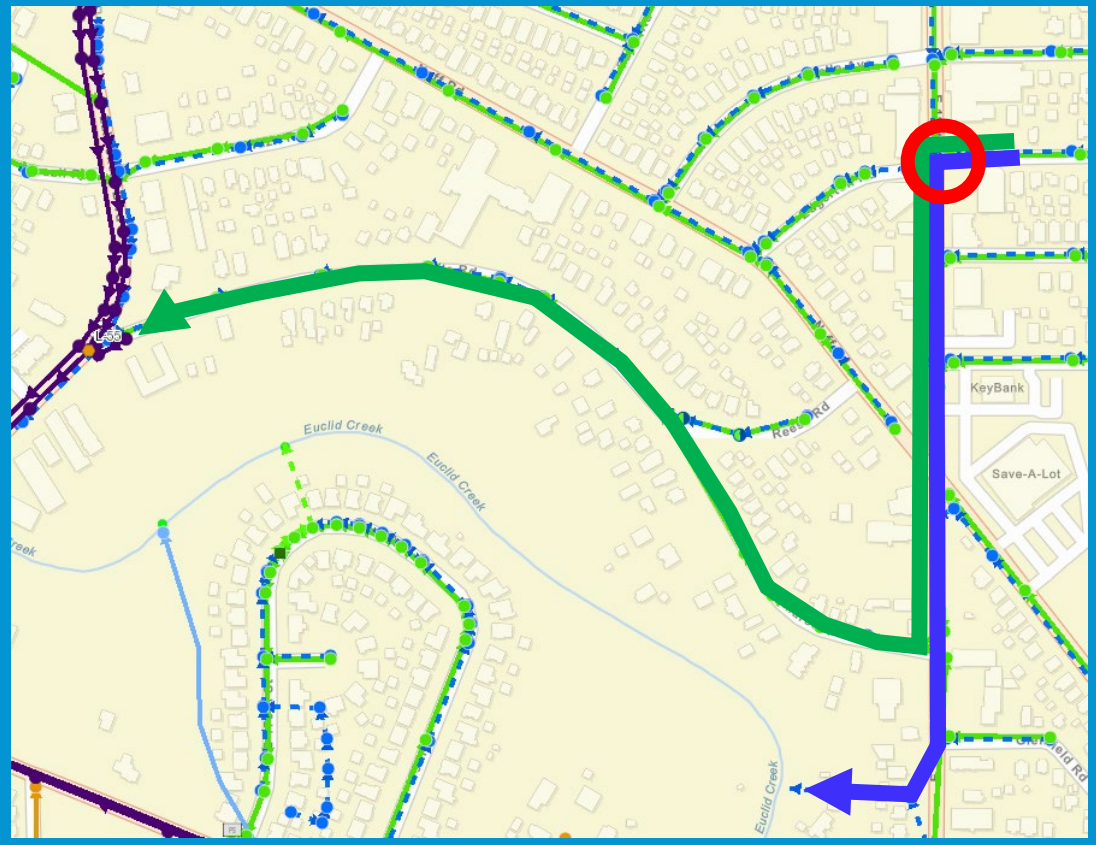




GI Grant Eligibility

Location

Example #1



GI Grant Eligibility

Location

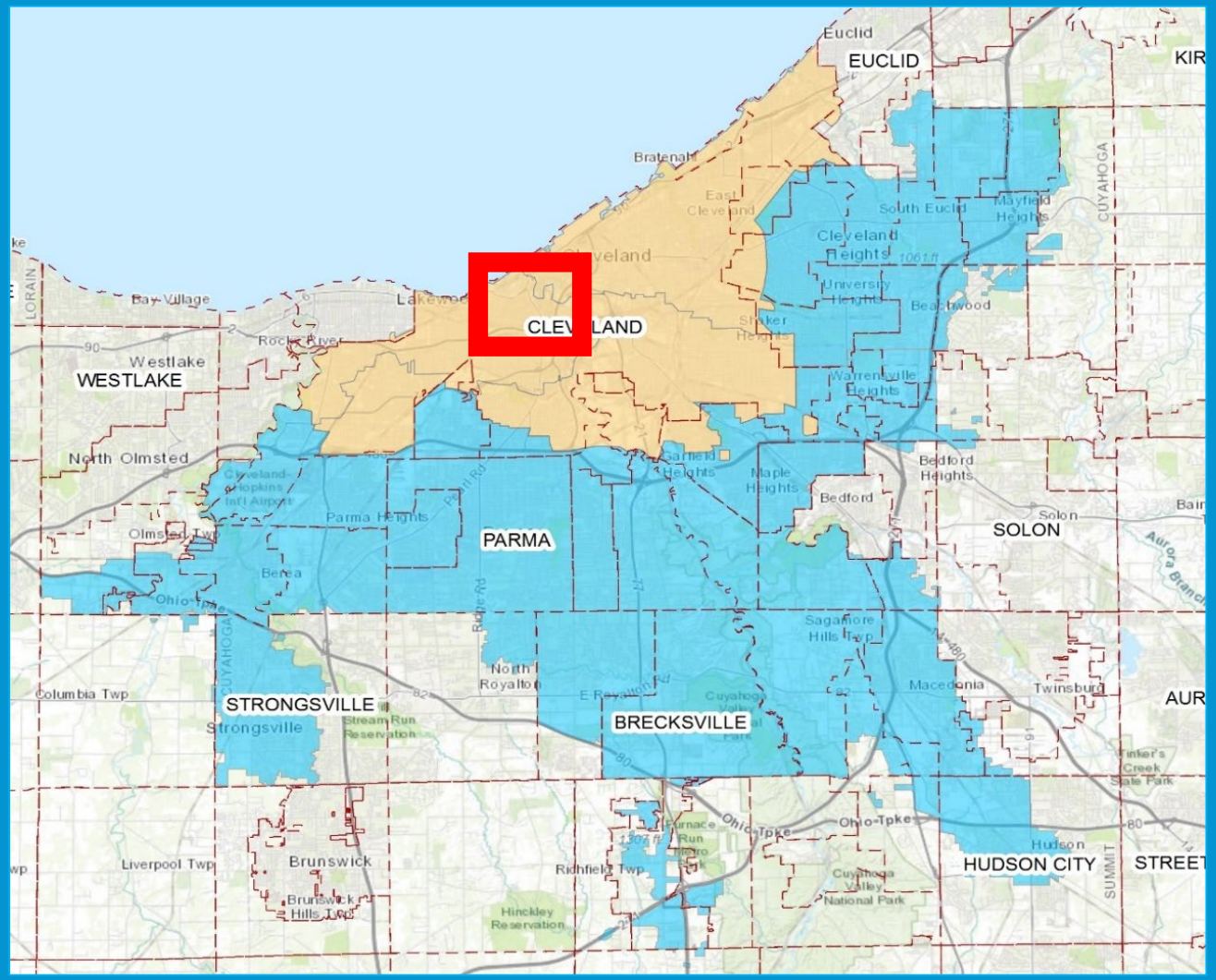
Example #1:

Storm sewers are separate from the combined sewers and discharge to the environment. Project still received a GI Grant because it was able to prove a significant reduction of inflow and infiltration (I & I) into the sanitary system, which is tributary to the combined sewer (e.g., leaky storm and sanitary sewers were adjacent to each other…removing the source of stormwater decreased I&I).

GI Grant Eligibility

Location

Example #2: although in combined area, storm sewers are separated and directly connected to a watercourse



GI Grant Eligibility

Location

Example #2

GI Grant Eligibility

Location

Example #2: Storm sewers are separate from the combined sewers and discharge directly to the river. Project was not eligible for a GI Grant because it was NOT able to prove a significant reduction of inflow and infiltration (I & I) into the sanitary system (tributary to the combined sewer).

GI Grant Eligibility

Project

Must quantifiably reduce the stormwater runoff volume to the combined sewer system

GI Grant Eligibility

Sewer District Bills

Applicant and the property associated with the proposed project must be current and in good standing with all Sewer District bills

NEORSD Green Infrastructure Grants Program

Preproposal Workshop for the 2023 GI Grants funding round

NEORSD GI Grant Applicant

Jessica S. Cotton, Grant Programs Administrator

GI Grant Program Applicants

Applicant must represent

- Member Community
- Governmental Entity
- Non-Profit 501(c)(3)
- Business working in partnership with their community

Contractual Requirements is located on NEORSD website : (https://www.neorsd.org/stormwater-2/green-infrastructure-grant-program)

GI Grant Program Applicants

Site Control

Applicant must be able to demonstrate permanent control of the project site

GI Grant Program Applicants

Use of Green Infrastructure

Project must demonstrate on-site stormwater control measures using green infrastructure

Striebinger Block Living Wall - Hingetown

GI Grant Program Applicants

Signage

- Sign design
- Signage post

Annual Inspection

- Individual Awarded Project
- NEORSD

Providence House - West

NEORSD Green Infrastructure Grants Program

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NEORSD GI Grant Contract

Katie Waag, Assistant General Counsel

GI Grant Contract

GI Project Grant Agreement

- Contracting Process
- Key Contract Provisions
- Legal Review by Attorney Prior to submitting Grant Application

(https://www.neorsd.org/stormwater-2/green-infrastructure-grant-program)

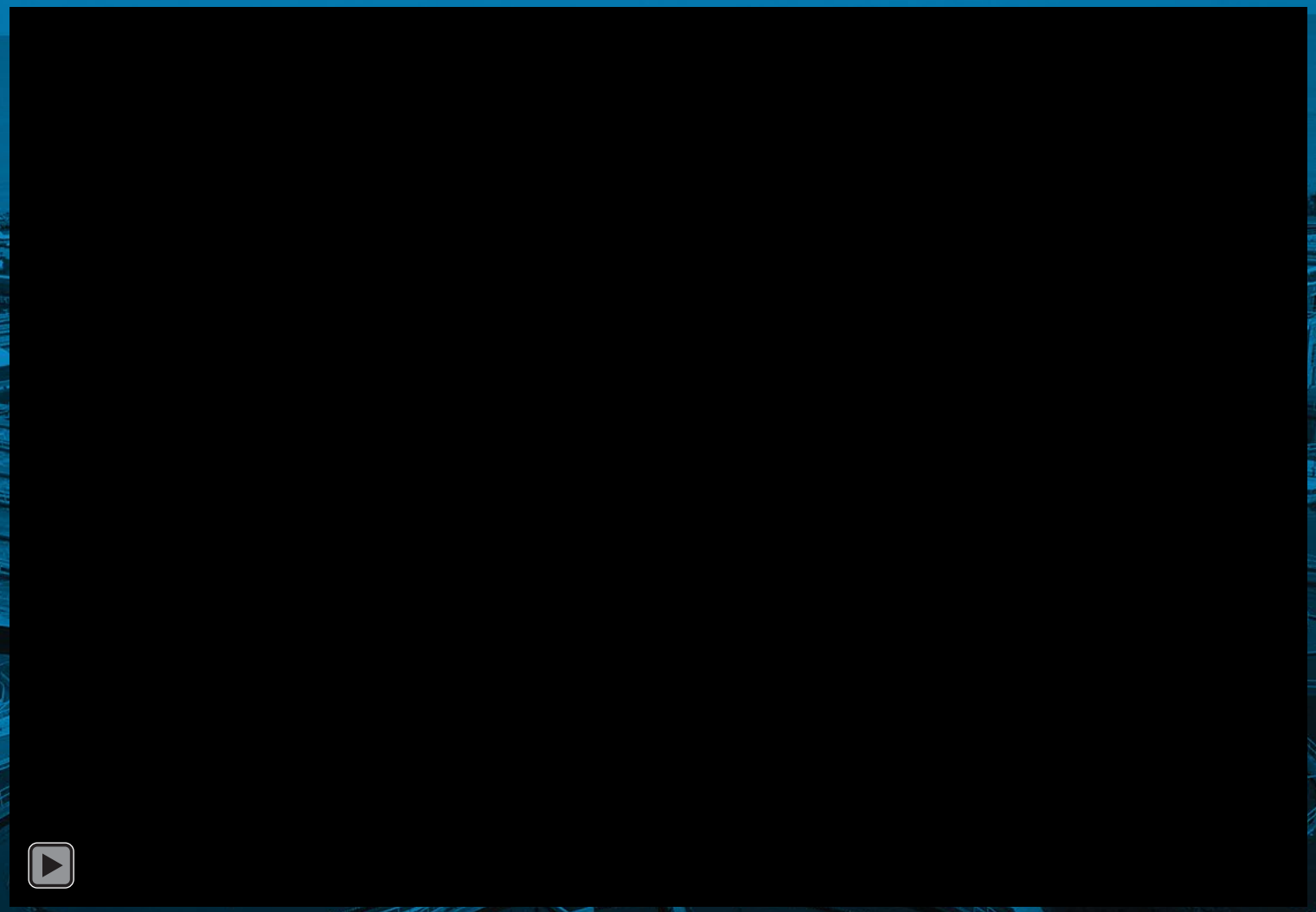
GI Grant Questions?

Raise your hand or use the chat

- Overview
- Eligibility
- Applicants
- Contract

NEORSD Green Infrastructure Grants Program

Preproposal Workshop for the 2023 GI Grants funding round



NEORSD GI Grant Evaluation Criteria and Technical Requirements

Chris Hartman, Stormwater Technical Specialist

GI Grant Evaluation Criteria

Application Scoring Rubric

GI Grant Evaluation Criteria

Expected Benefits of the Project

30 points

Anticipated volume of stormwater runoff controlled and/or removed from combined sewer system

GI Grant Evaluation Criteria

Project Feasibility

25 points

Constructability and implementation demonstrated by concept design, design plans, maps, and/or stormwater calculations

Anticipated completion date

GI Grant Evaluation Criteria

Programmatic Capacity of the Applicant to Maintain the Project for Design Life Expectancy

25 points

Ability to fund maintenance through the design life expectancy of the GI components

GI Grant Evaluation Criteria

Visibility and Additional Community Benefits

20 points

Project furthers public understanding of the value of GI to treat or remove stormwater runoff from the combined sewer system

Design Completed

10 extra points

Note: Previously funded design-only awards must submit approved plans

GI Grant Program Technical Requirements

GI Grant Program Technical Requirements

NEORSD GI Grant Program

- Title IV
- Stormwater Calculator

GI Grant Program Technical Requirements

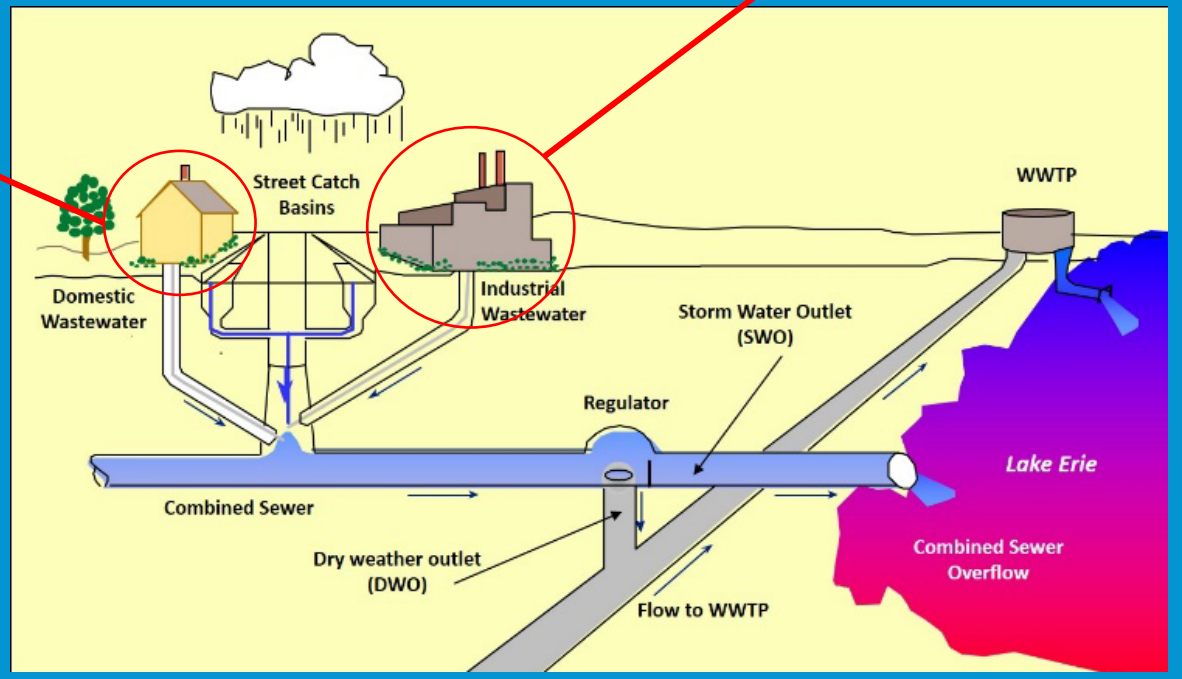
Above and Beyond Title IV

Applicants are subject to the requirements of Title IV of the Sewer District's Code of Regulations

Refer to ***Submittal Requirements for Connections to the Combined Sewer System***.

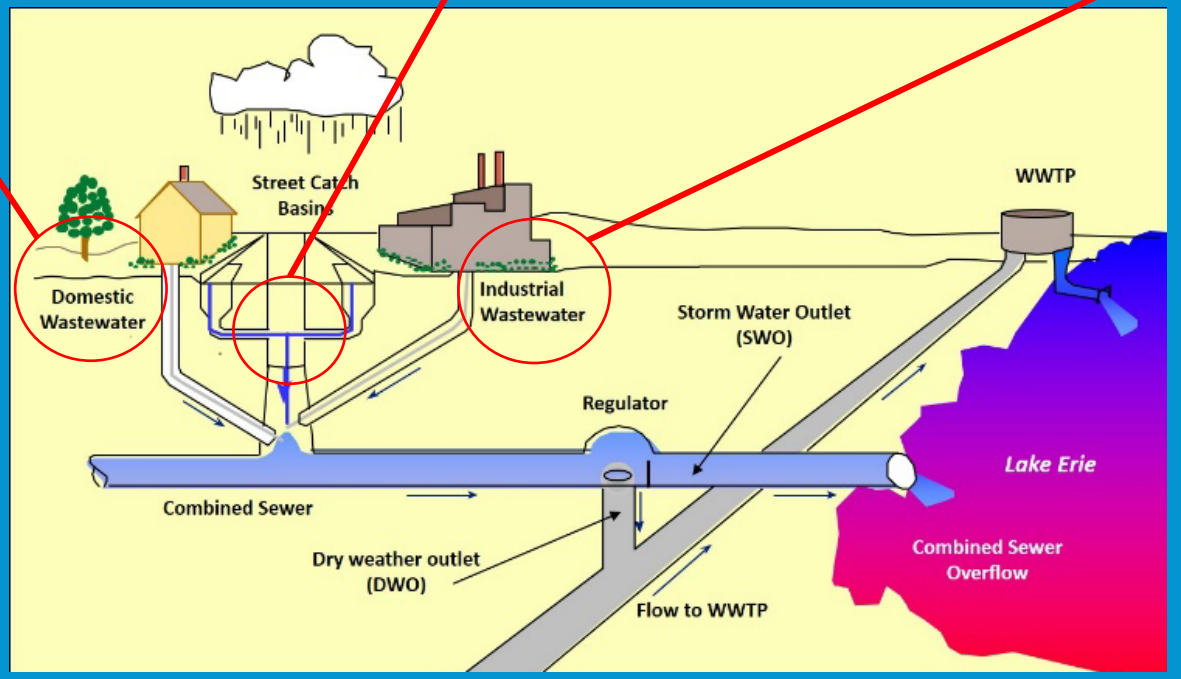
GI Grant Program Technical Requirements

What is the make up of the combined sewer system landscape



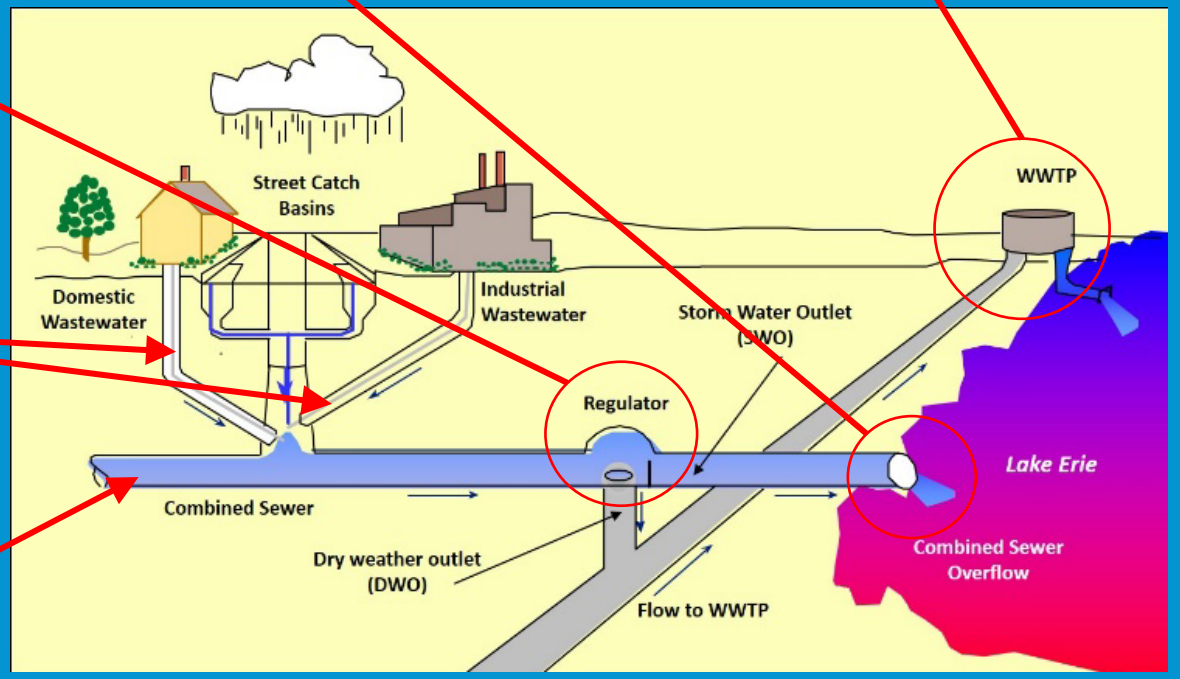
GI Grant Program Technical Requirements

What contributes to the combined sewer system?



GI Grant Program Technical Requirements

What is the infrastructure of the combined sewer system?




Local separate sanitary sewer
NEORSD interceptor sewer to Easterly WWTP
Combined sewer overflow to Lake Erie
NEORSD regulator
NEORSD interceptor sewer
Local combined sewer
CSO-204
E 72nd St
Bittern Ave
Buck Ave
82nd St
N Marginal Rd
90
176
177
2

GI Grant Program Technical Requirements

Above and Beyond Title IV

- NEORSD has the authority to:
  - control combined sewer overflows (CSOs) from the combined sewer system
  - control peak flows from local combined sewer systems
- ...at the point of connection into sewers owned by NEORSD or a member community.
- Applicable to any development activity in the combined sewer area, which includes separated sewer areas tributary to the combined system.

GI Grant Program Technical Requirements

Minimum Standards

Post-development peak flows	≤	Existing condition peak flows

Post-development peak flows to a regulator must not create increases in flow at CSO locations.

GI Grant Program Technical Requirements

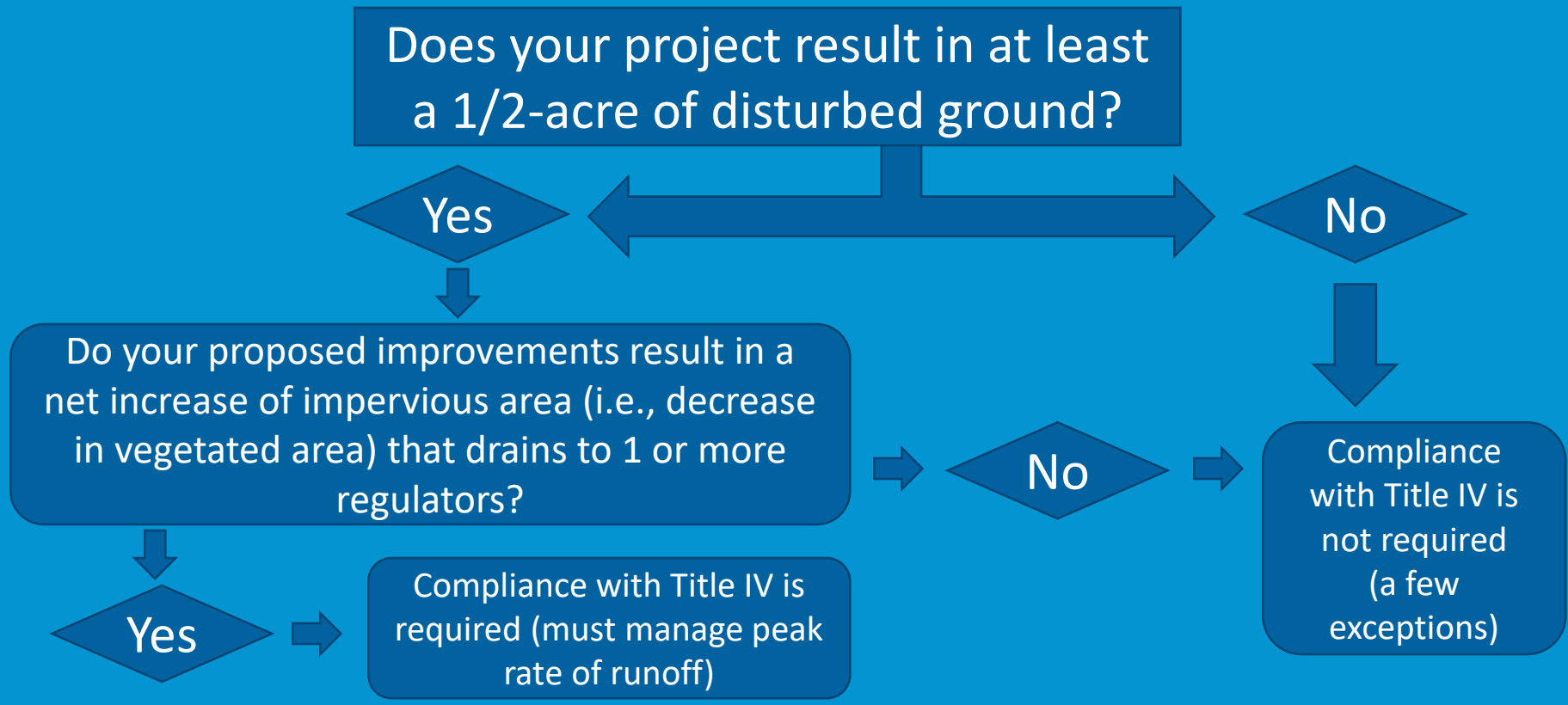
Above and Beyond Title IV

- Existing condition
  - The current land use and impervious area on the subject property at the time of submission to NEORSD.

GI Grant Program Technical Requirements

Above and Beyond Title IV

- When does Title IV come into play?



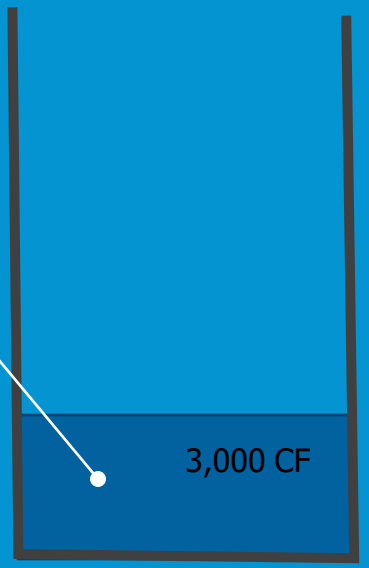
GI Grant Program Technical Requirements

Above and Beyond Title IV

- How to Manage Peak Flow (1-acre site)

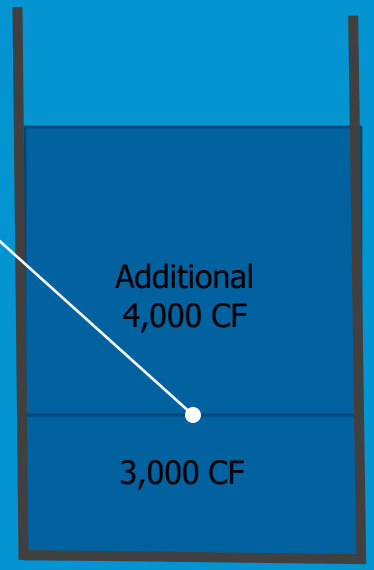
Existing Conditions (Pre)

- Undeveloped (grass)
- 1-year, 24-hr storm = 1.95”
- Resulting 3,000 cubic feet of runoff drains in 12 hrs (0.07 cfs)



Proposed Conditions (Post)

- Developed (100% impervious)
- 1-year, 24-hr storm = 1.95”
- Resulting 7,000 cubic feet of runoff must be discharged no faster than 0.07 cfs (takes 28 hours!!!)…post- peak rate discharge ≤ pre-peak rate discharge



Total volume discharged = 7,000 CF

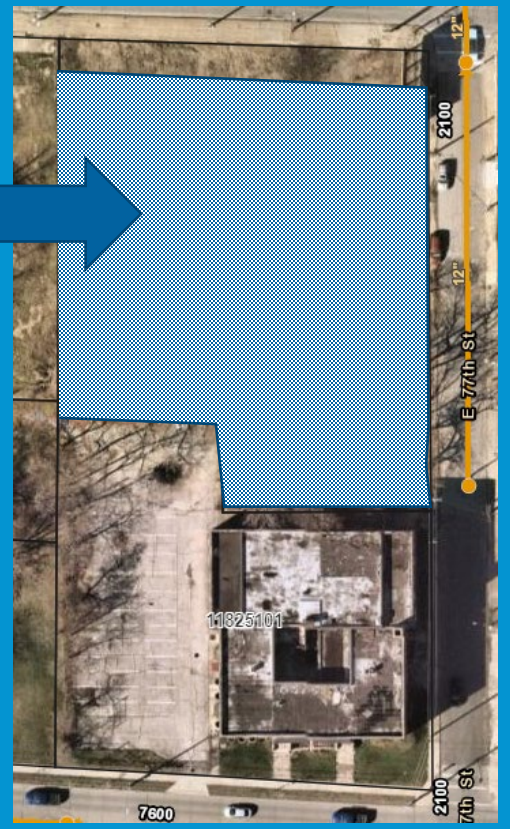
GI Grant Program Technical Requirements

Do you need to Comply with Title IV?

1.75 acres undeveloped

1.50 acres developed

Adding 1.25-acre asphalt parking lot



Do you need to comply with Title IV?

YES – increased parking lot area (decreased vegetative cover)

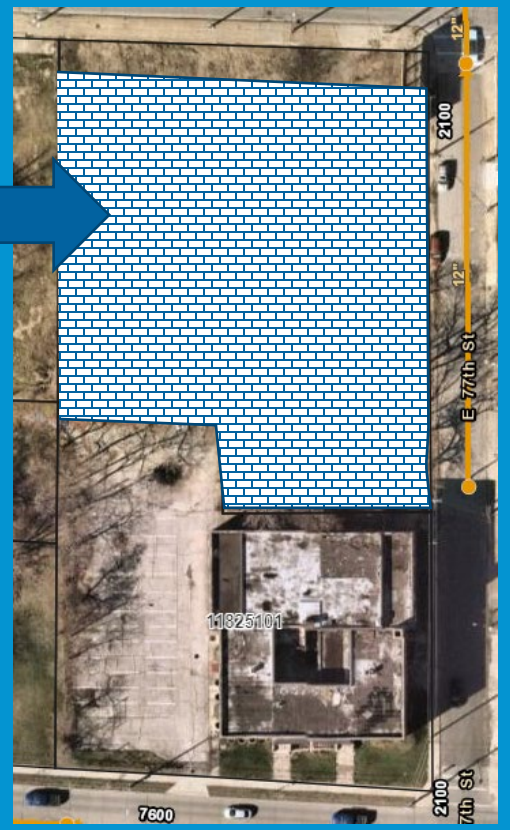
GI Grant Program Technical Requirements

Do you need to Comply with Title IV?

1.75 acres undeveloped

1.50 acres developed

Adding 1.25-acre permeable paver parking lot



Do you need to comply with Title IV?

YES – increased parking lot area (decreased vegetative cover)

GI Grant Program Technical Requirements

Do you need to Comply with Title IV?

1.75 acres undeveloped

1.50 acres developed

Do you need to comply with Title IV?

NO – did not increase impervious area

Converting 0.75-acre parking lot into permeable pavers

GI Grant Program Technical Requirements

Above and Beyond Title IV

- When does Title IV come into play?
  - Sometimes 2 regulators are involved

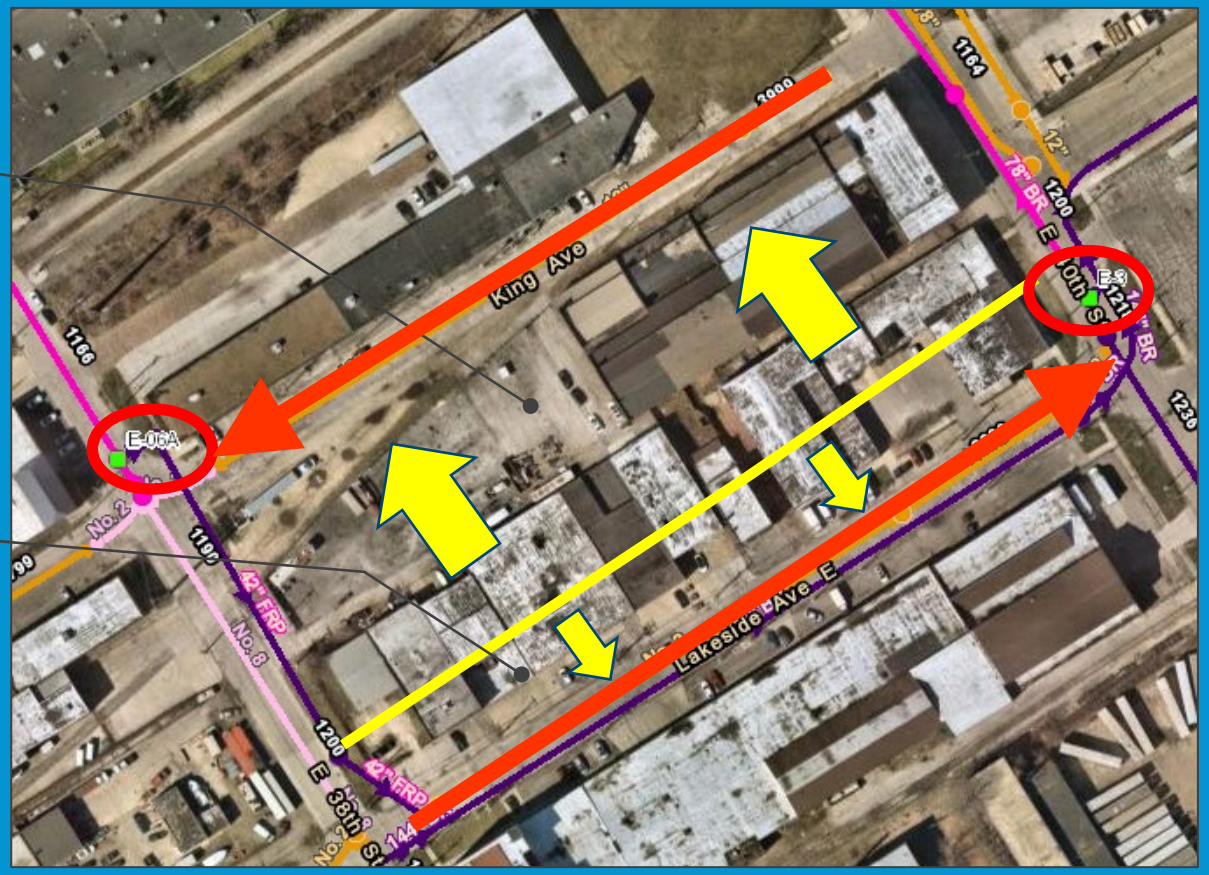
GI Grant Program Technical Requirements

Above and Beyond Title IV

Existing condition – 75% of site drains to the combined sewer on north side…peak rate discharge calculated @ 2.0 cfs

Existing condition – 25% of site drains to the combined sewer on south side…peak rate discharge calculated @ 0.5 cfs

Total combined peak rate discharge of 2.50 cfs



GI Grant Program Technical Requirements

Above and Beyond Title IV

Proposed condition – entire site drains to north combined sewer.

Developed peak rate discharge for entire site cannot exceed existing conditions peak rate to north combined sewer…2.0 cfs.

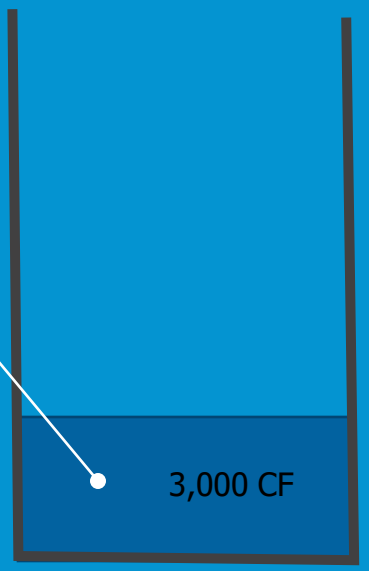
GI Grant Program Technical Requirements

Above and Beyond Title IV

- What does Green Infrastructure Accomplish? Volume Reduction (1-acre site)

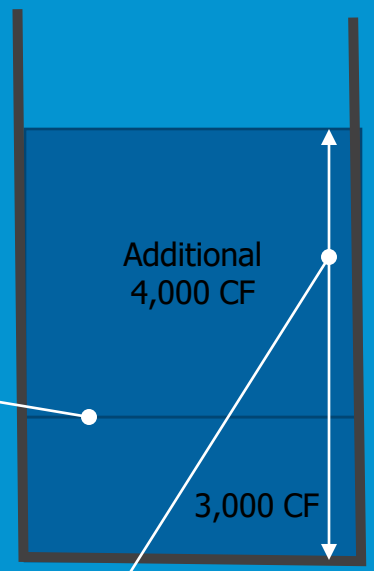
Existing Conditions (Pre)

- Undeveloped (grass)
- 1-year, 24-hr storm = 1.95”
- Resulting 3,000 cubic feet of runoff drains in 12 hrs (0.07 cfs)



Proposed Conditions (Post)

- Developed (100% impervious)
- 1-year, 24-hr storm = 1.95”
- Resulting 7,000 cubic feet of runoff



Total volume discharged < 7,000 CF

Goal: ≤ 3,000 CF

GI Grant Program Technical Requirements

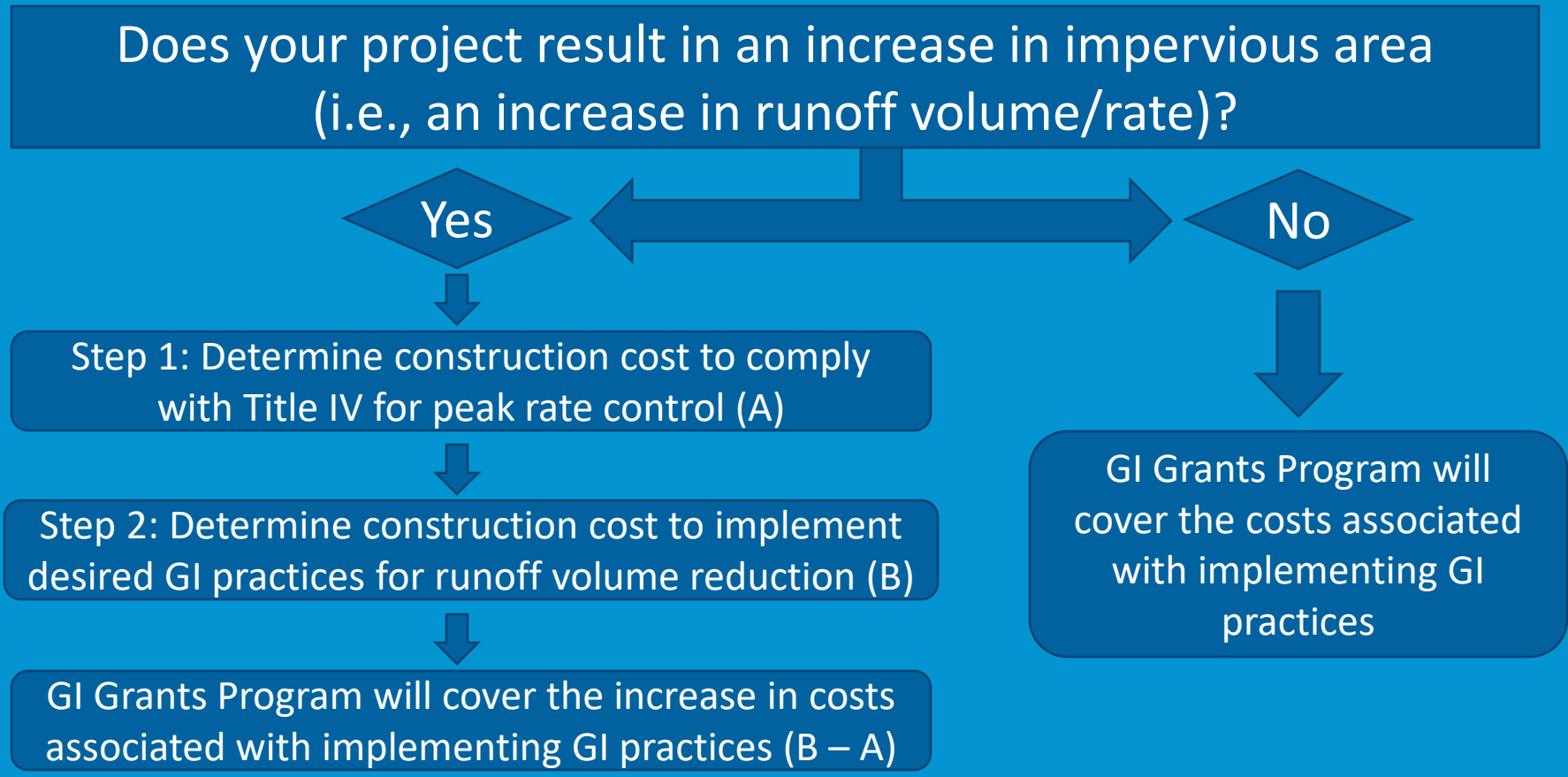
Above and Beyond Title IV

Stormwater Management Method	Pre-development Runoff Volume Discharged	Post-development Runoff Volume Generated	Post-development Runoff Volume Discharged
Peak Rate (Title IV)	3000 Cubic Feet	7000 Cubic Feet	7000 Cubic Feet
Green Infrastructure	3000 Cubic Feet	7000 Cubic Feet	≤ 3000 Cubic Feet

GI Grant Program Technical Requirements

Above and Beyond Title IV

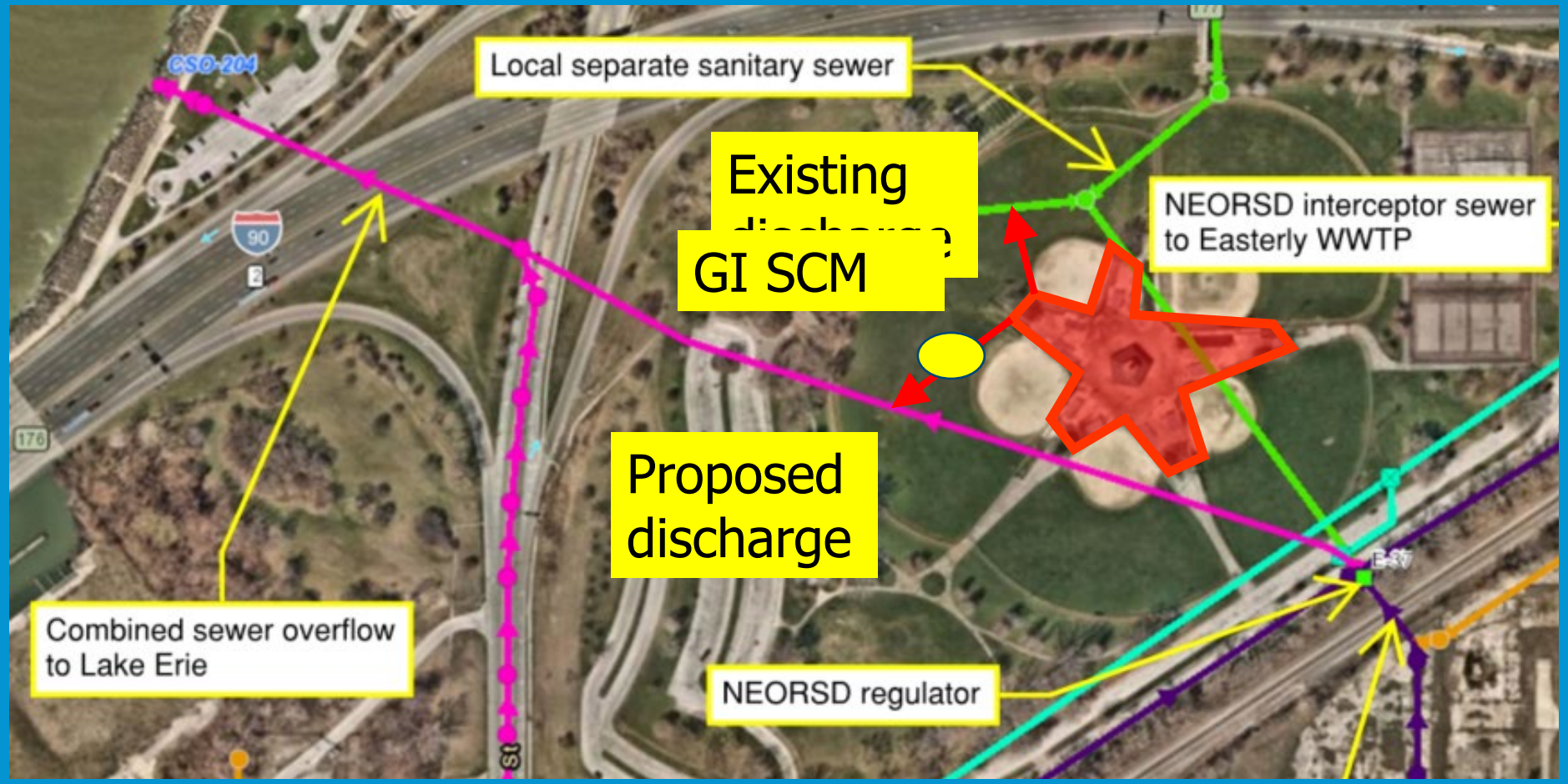
- What Project Costs will the Grant Cover?



GI Grant Program Technical Requirements

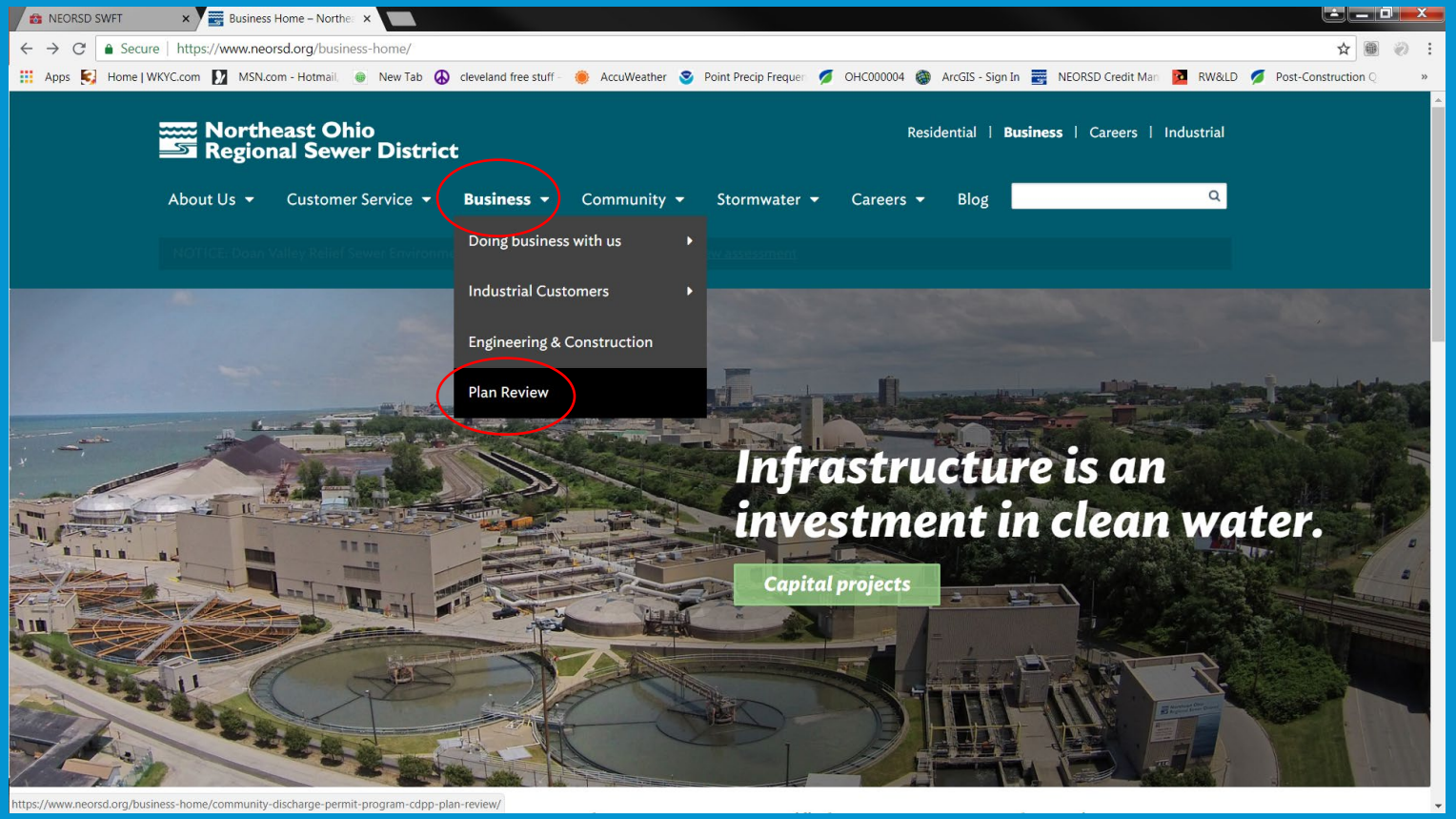
Above and Beyond Title IV

- If you propose to disconnect stormwater runoff from the combined sewer system and instead connect it to the environment or a CSO pipe (downstream of a regulator)…
  - Title IV will no longer require stormwater control measures (SCM) that provide treatment for 100% of the water quality volume (WQv) associated with the drainage area being disconnected from the combined sewer system.
  - Still must meet applicable local and state requirements
  - GIG Program will cover the cost of SCMs required by others, provided they meet the definition of green infrastructure


CSO-204
Local separate sanitary sewer
Existing
GI SCM
NEORSD interceptor sewer
to Easterly WWTP
Proposed
discharge
Combined sewer overflow
to Lake Erie
NEORSD regulator
90
E 9th St

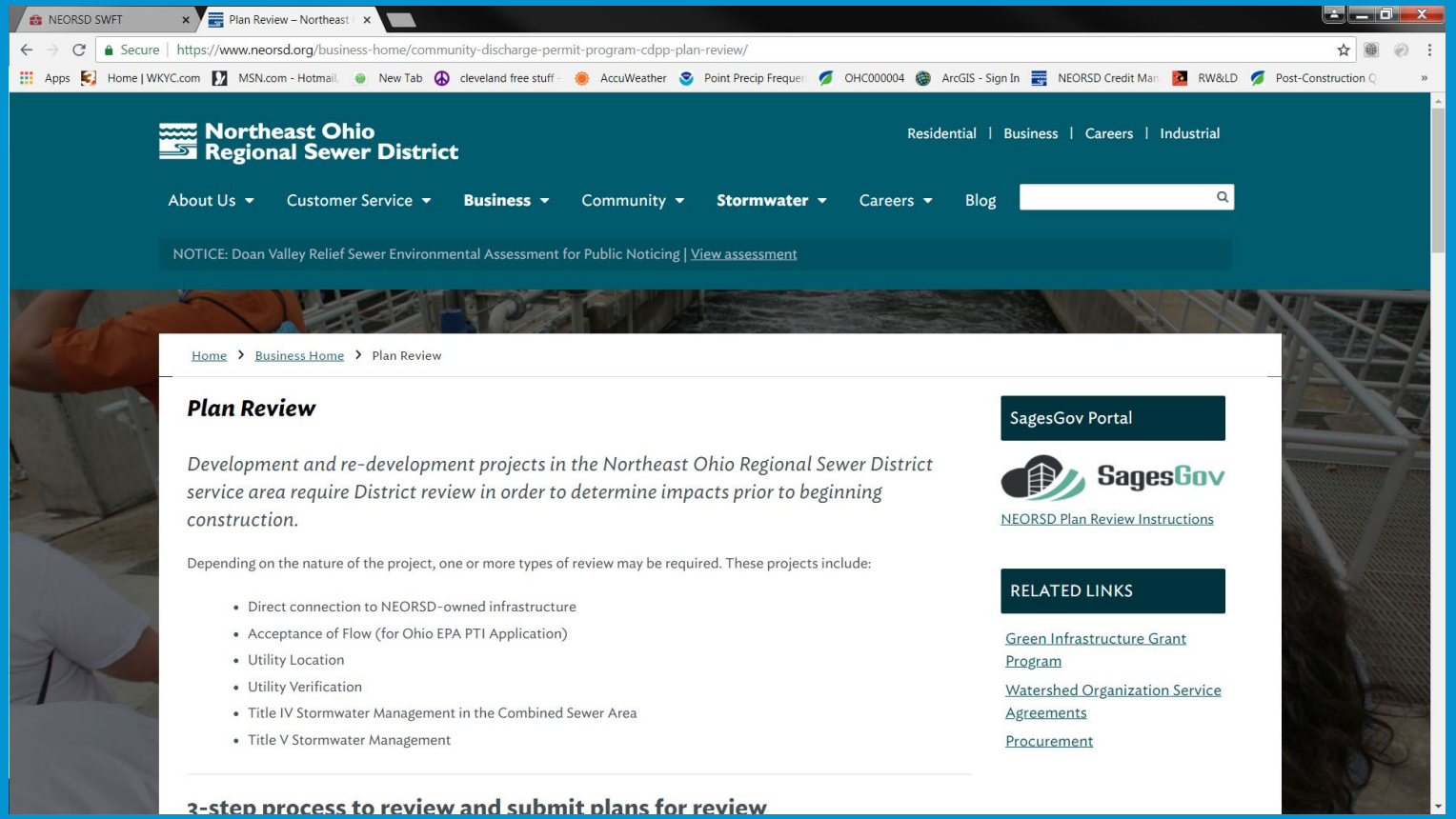
GI Grant Program Technical Requirements

Above and Beyond Title IV



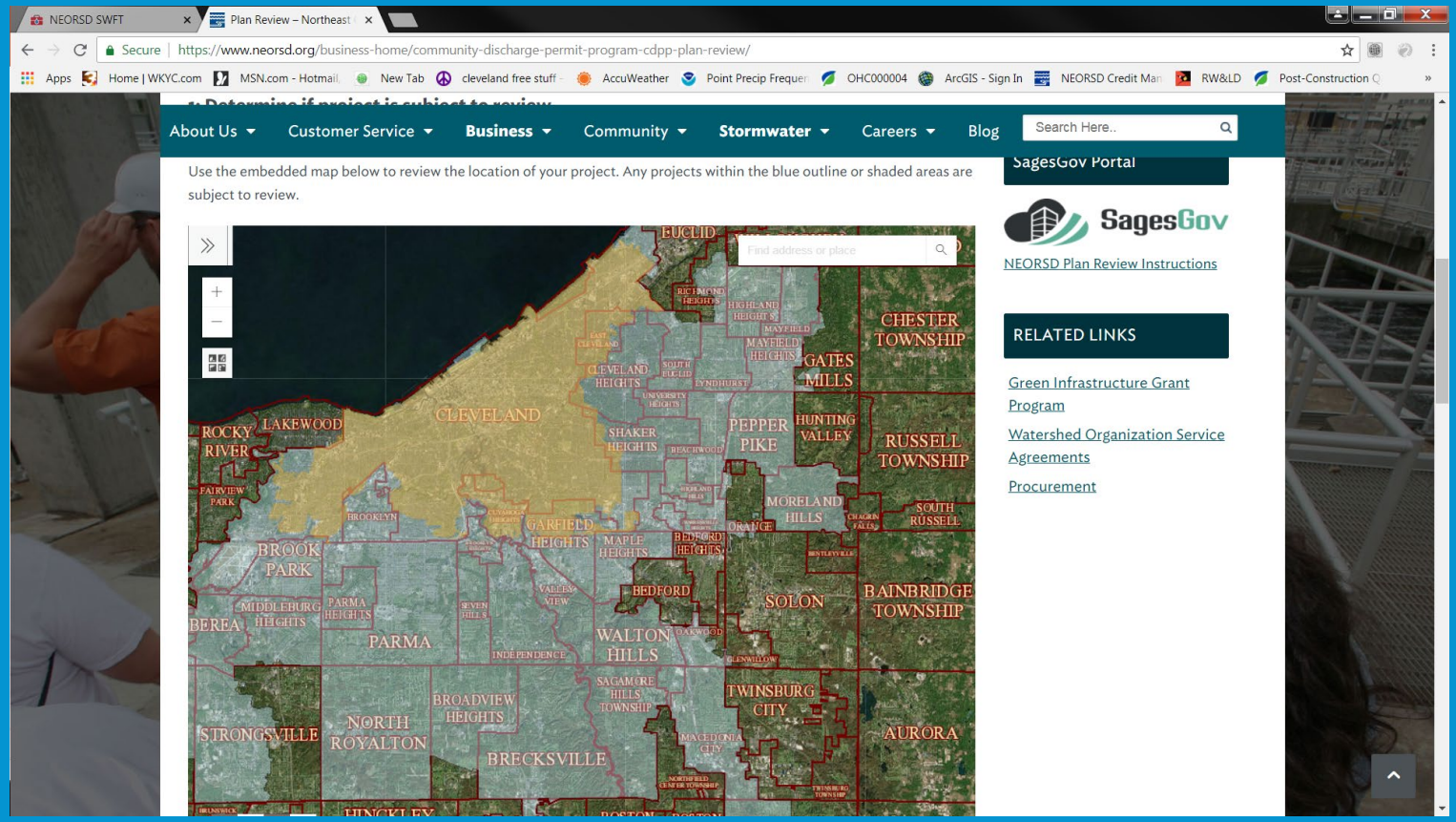
GI Grant Program Technical Requirements

Above and Beyond Title IV



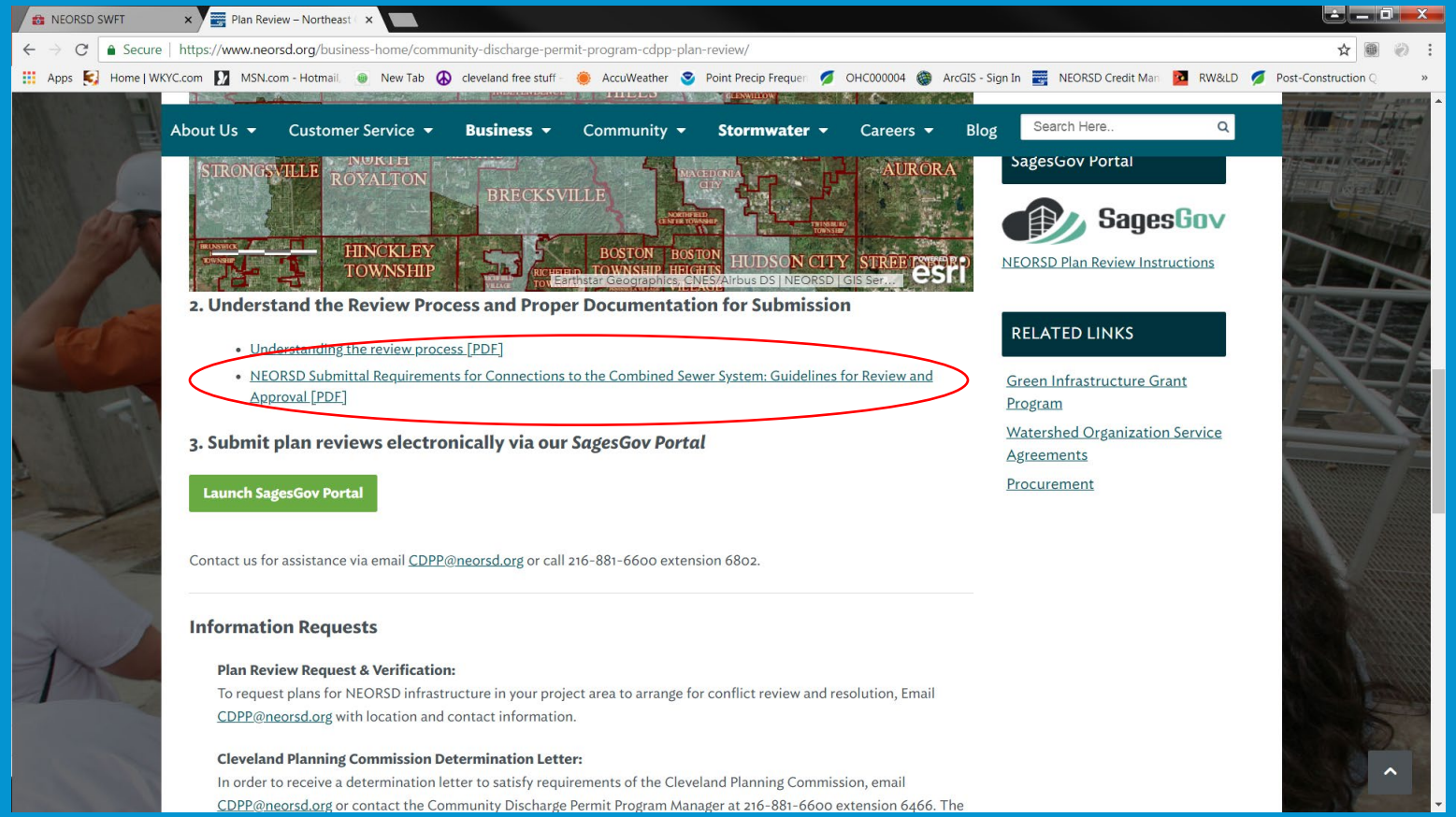
GI Grant Program Technical Requirements

Above and Beyond Title IV



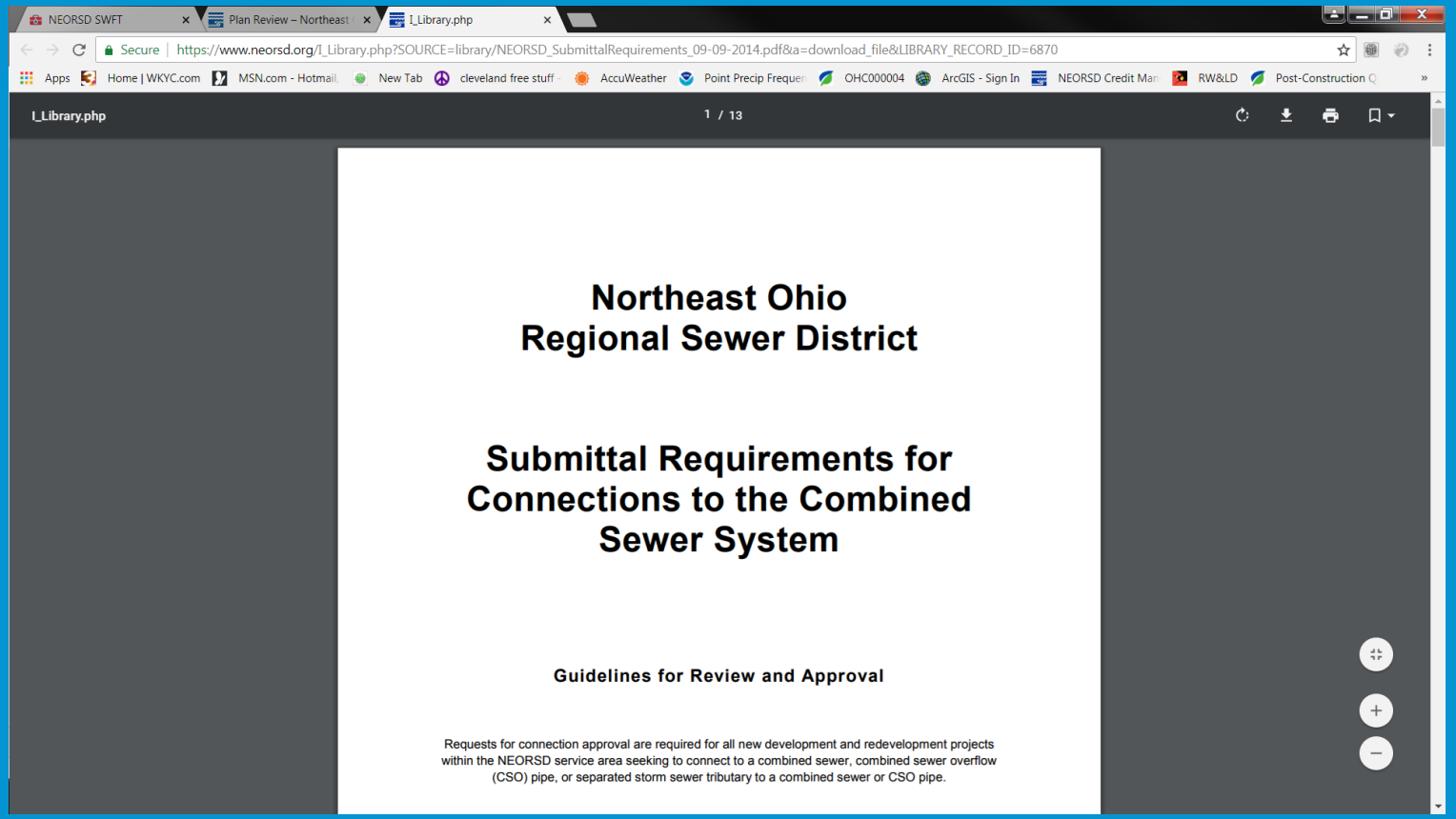
GI Grant Program Technical Requirements

Above and Beyond Title IV



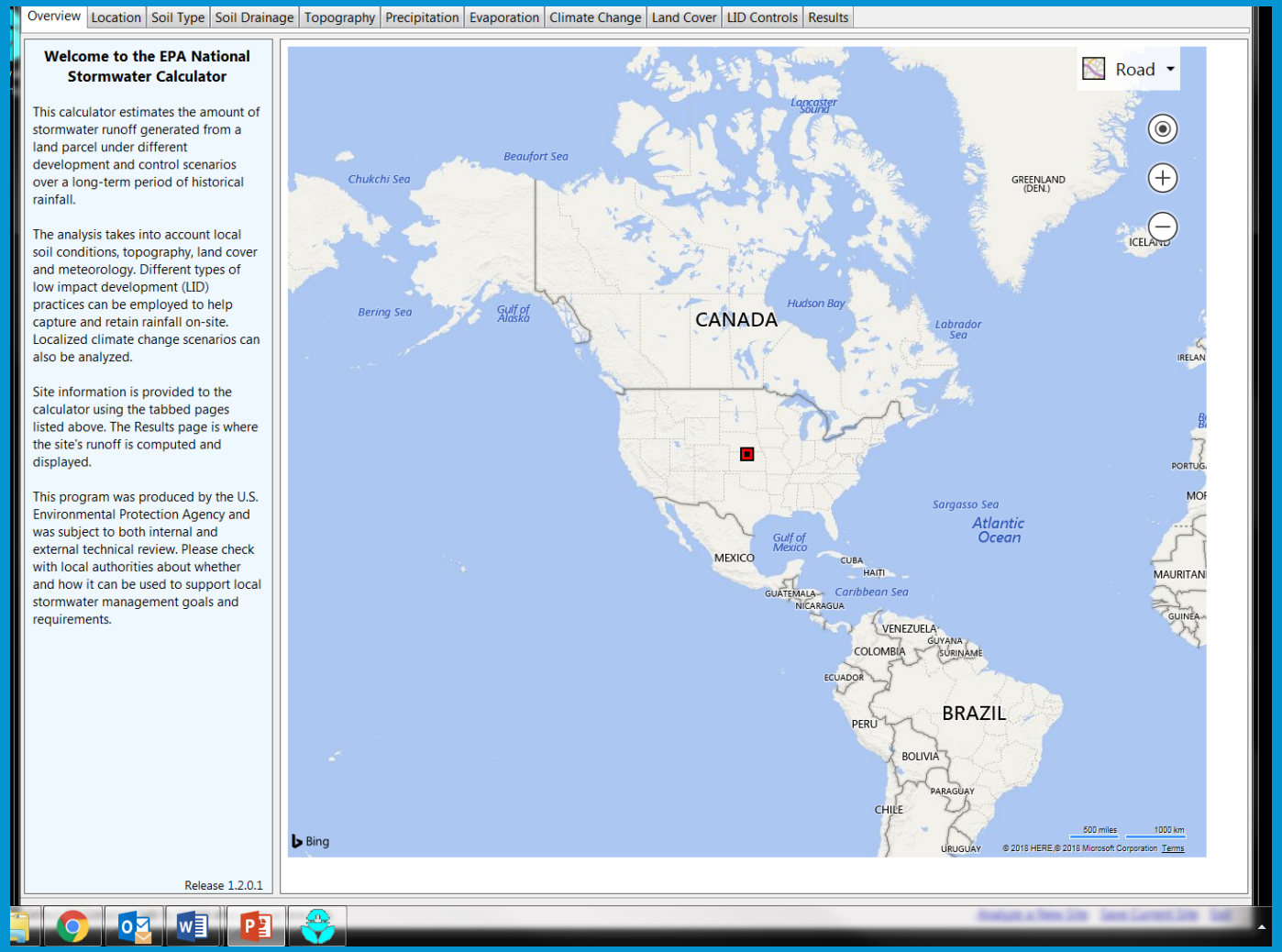
GI Grant Program Technical Requirements

EPA National Stormwater Calculator



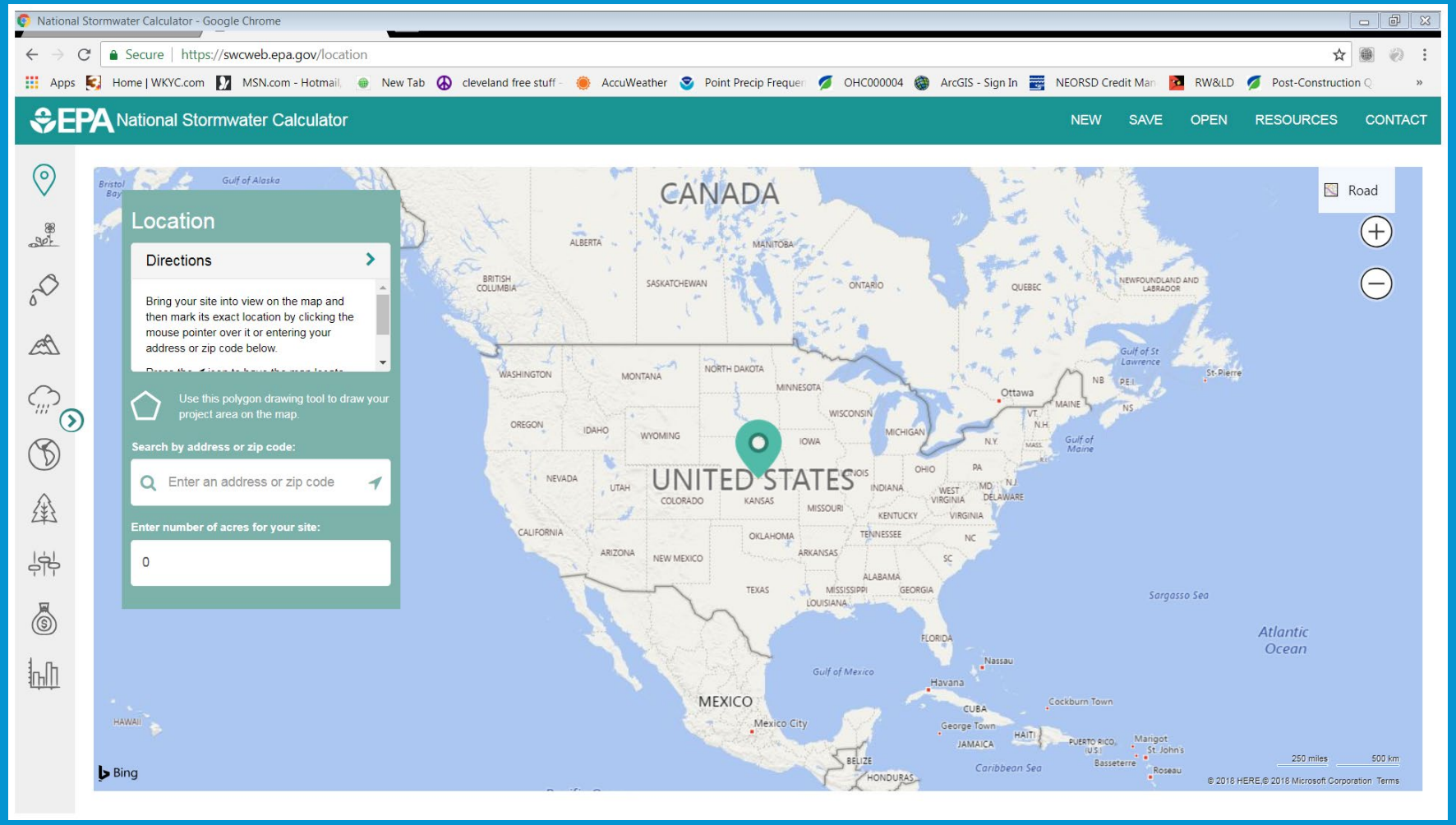
GI Grant Program Technical Requirements

EPA National Stormwater Calculator



GI Grant Program Technical Requirements

EPA National Stormwater Calculator

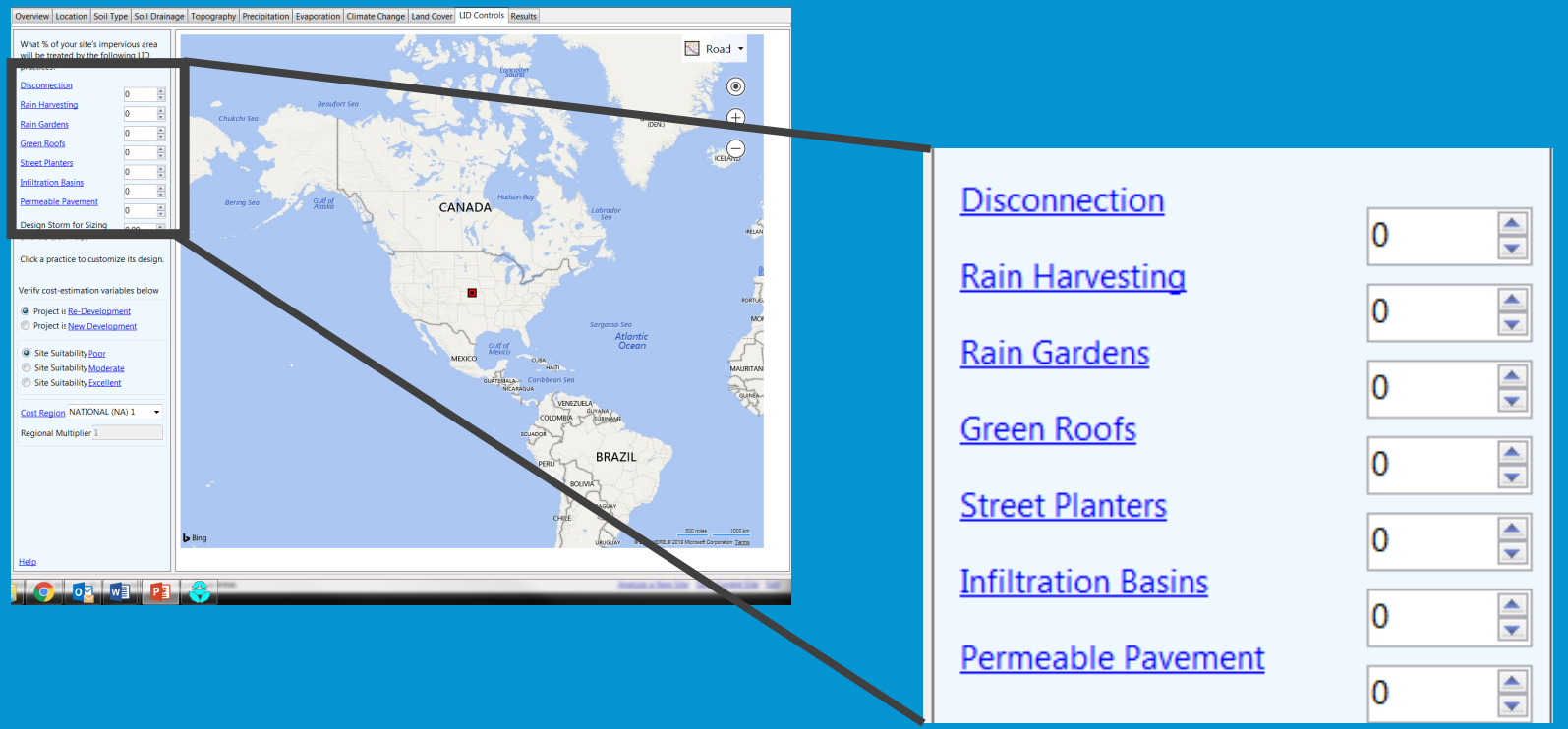


GI Grant Program Technical Requirements

EPA National Stormwater Calculator
Low Impact Development (LID) Control

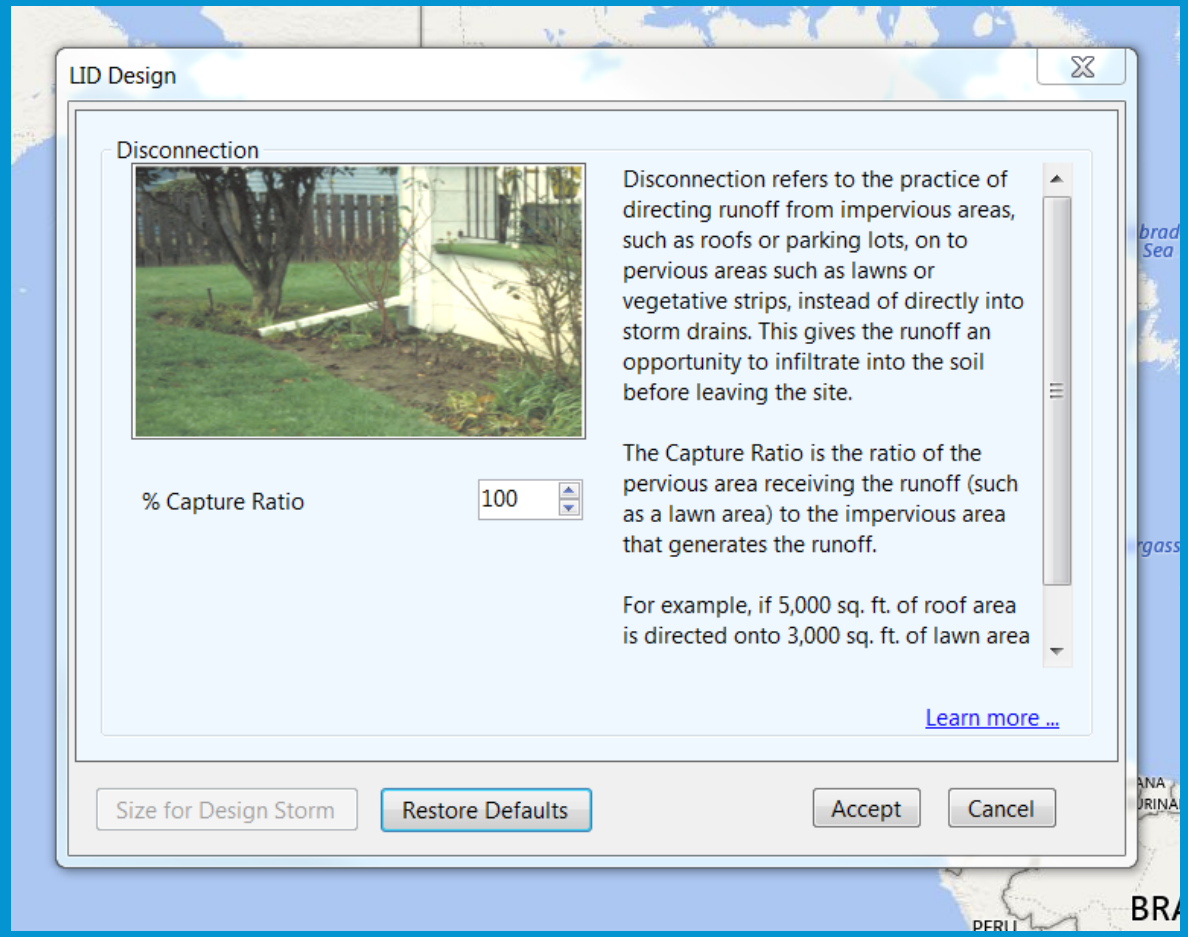
GI Grant Program Technical Requirements

EPA National Stormwater Calculator Low Impact Development (LID) Control



GI Grant Program Technical Requirements

EPA National Stormwater Calculator LID Control - Disconnection

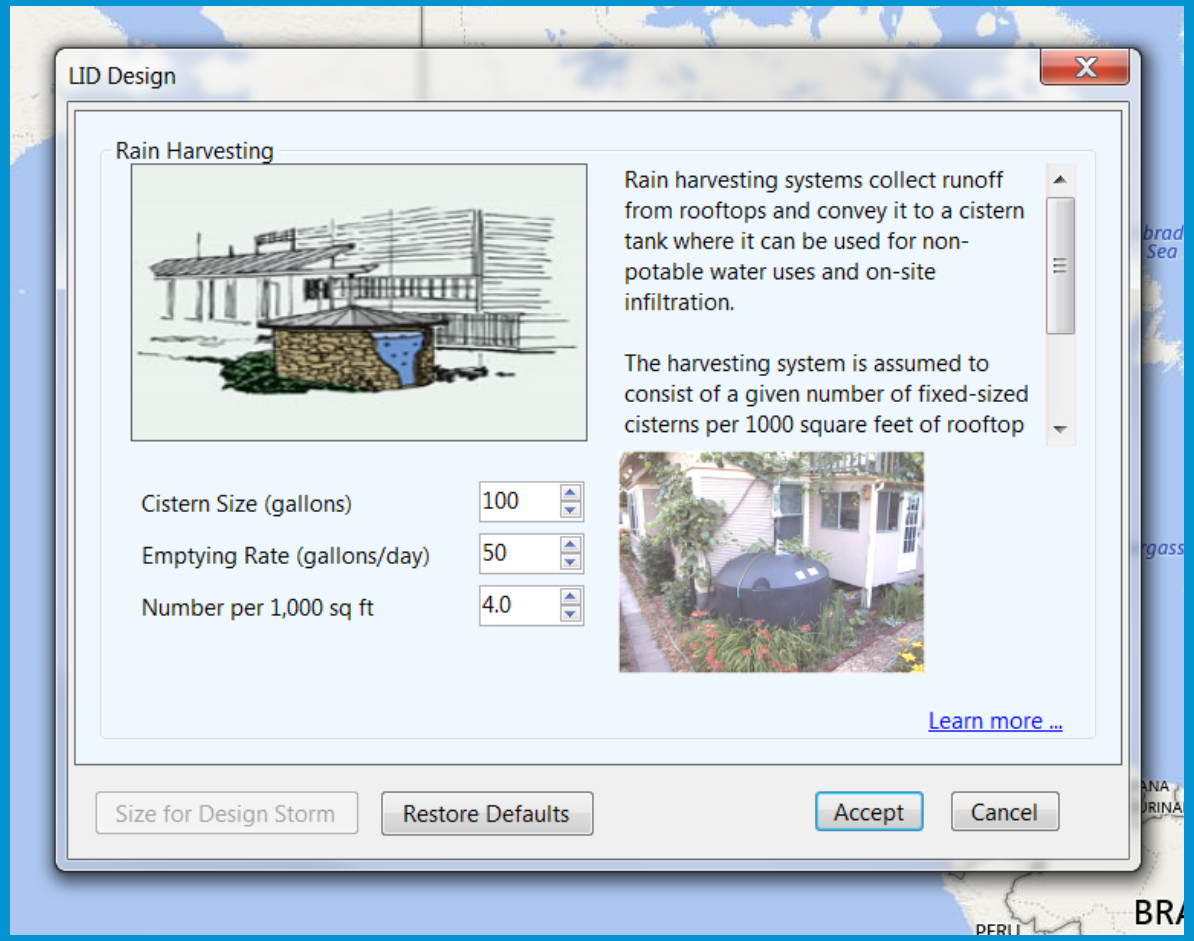


The Capture Ratio is the ratio of the pervious area receiving the runoff (such as a lawn area) to the impervious area that generates the runoff.

For example, if 5,000 sq. ft. of roof area is directed onto 3,000 sq. ft. of lawn area then the Capture Ratio would be 3,000 / 5,000 or 60%.

GI Grant Program Technical Requirements

EPA National Stormwater Calculator LID Control – Rain Harvesting

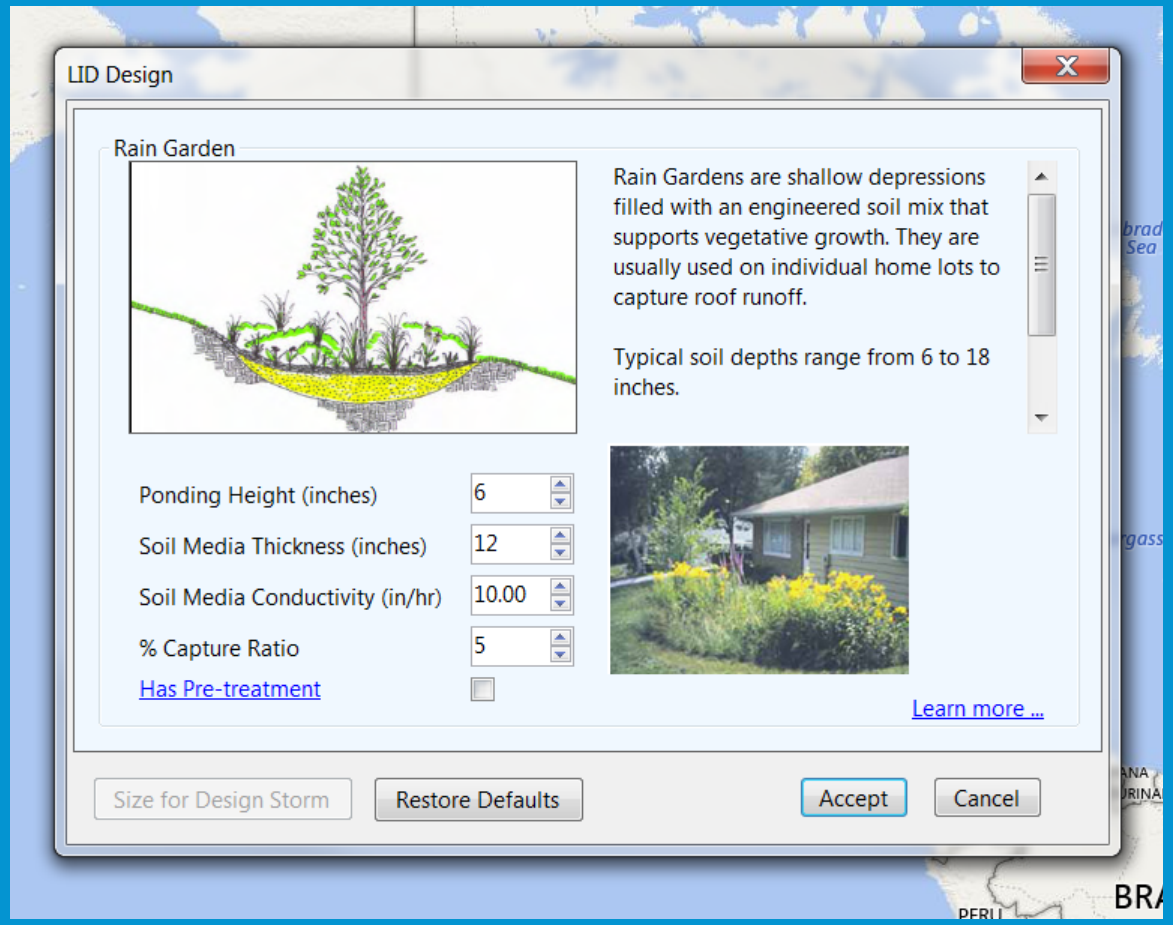


The harvesting system is assumed to consist of a given number of fixed-sized cisterns per 1,000 square feet of rooftop area captured.

The water from each cistern is withdrawn at a constant rate and is assumed to be consumed or infiltrated entirely on-site.

GI Grant Program Technical Requirements

EPA National Stormwater Calculator LID Control – Rain Garden

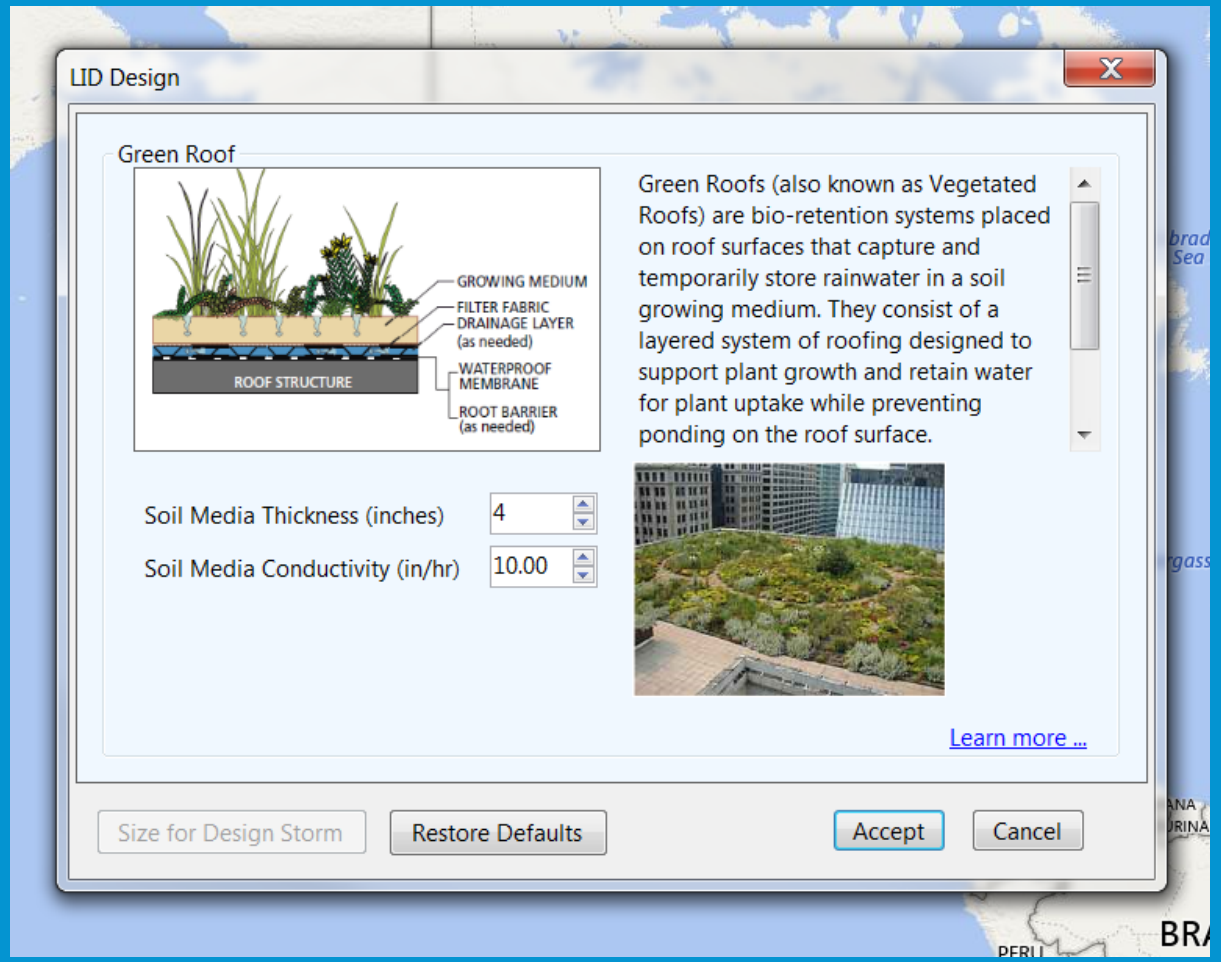


The Capture Ratio is the ratio of the rain garden's area to the impervious area that drains onto it.

For example, if 1,000 sq. ft. of roof area is directed onto 300 sq. ft. of rain garden area then the Capture Ratio would be 300 / 1,000 or 30%.

GI Grant Program Technical Requirements

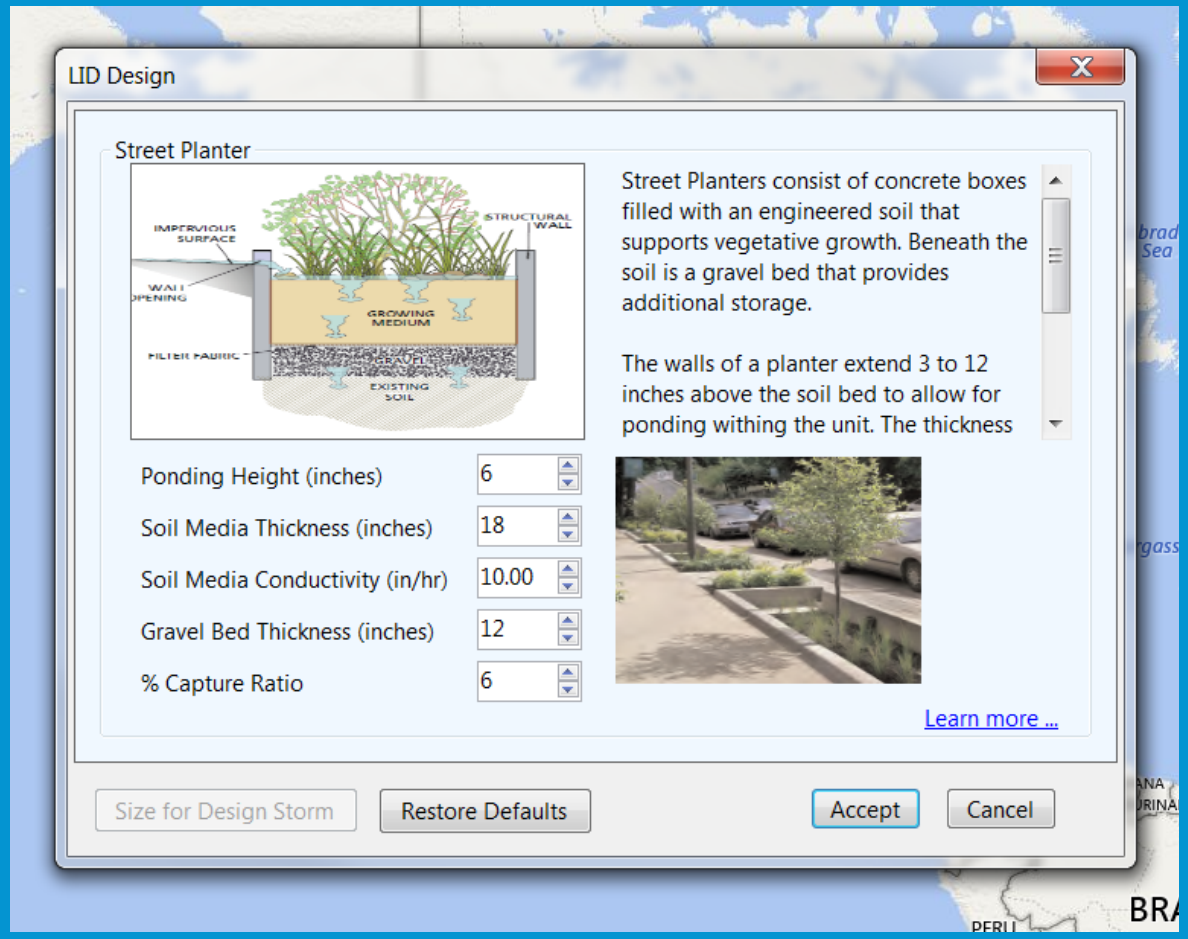
EPA National Stormwater Calculator LID Control – Green Roof



The thickness used for the growing medium typically ranges from 3 to 6 inches.

GI Grant Program Technical Requirements

EPA National Stormwater Calculator LID Control – Street Planter

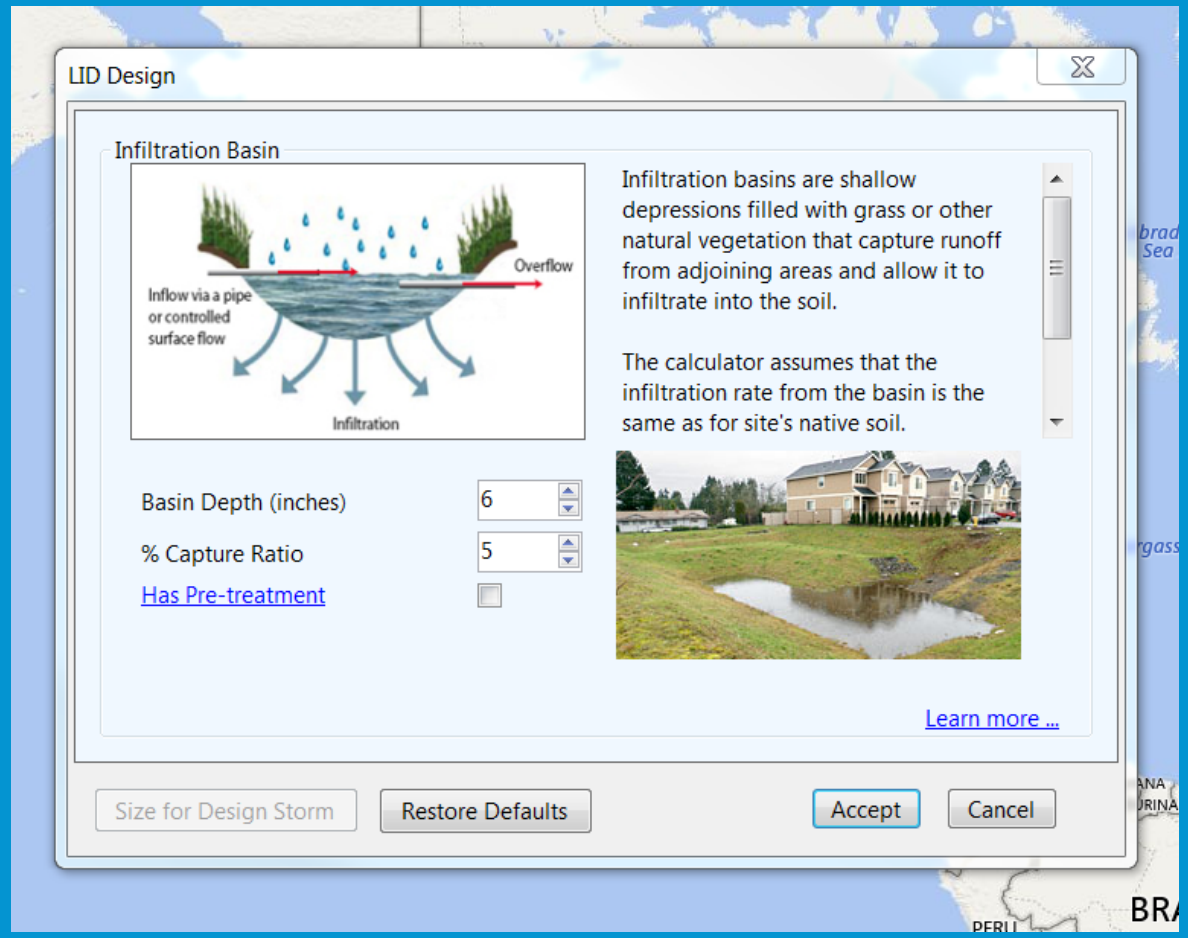


The walls of a planter extend 3 to 12 inches above the soil bed to allow for ponding within the unit. The thickness of the soil growing medium ranges from 6 to 24 inches while gravel beds are 6 to 18 inches in depth.

The planter's Capture Ratio is the ratio of its area to the impervious area whose runoff it captures.

GI Grant Program Technical Requirements

EPA National Stormwater Calculator LID Control – Infiltration Basin

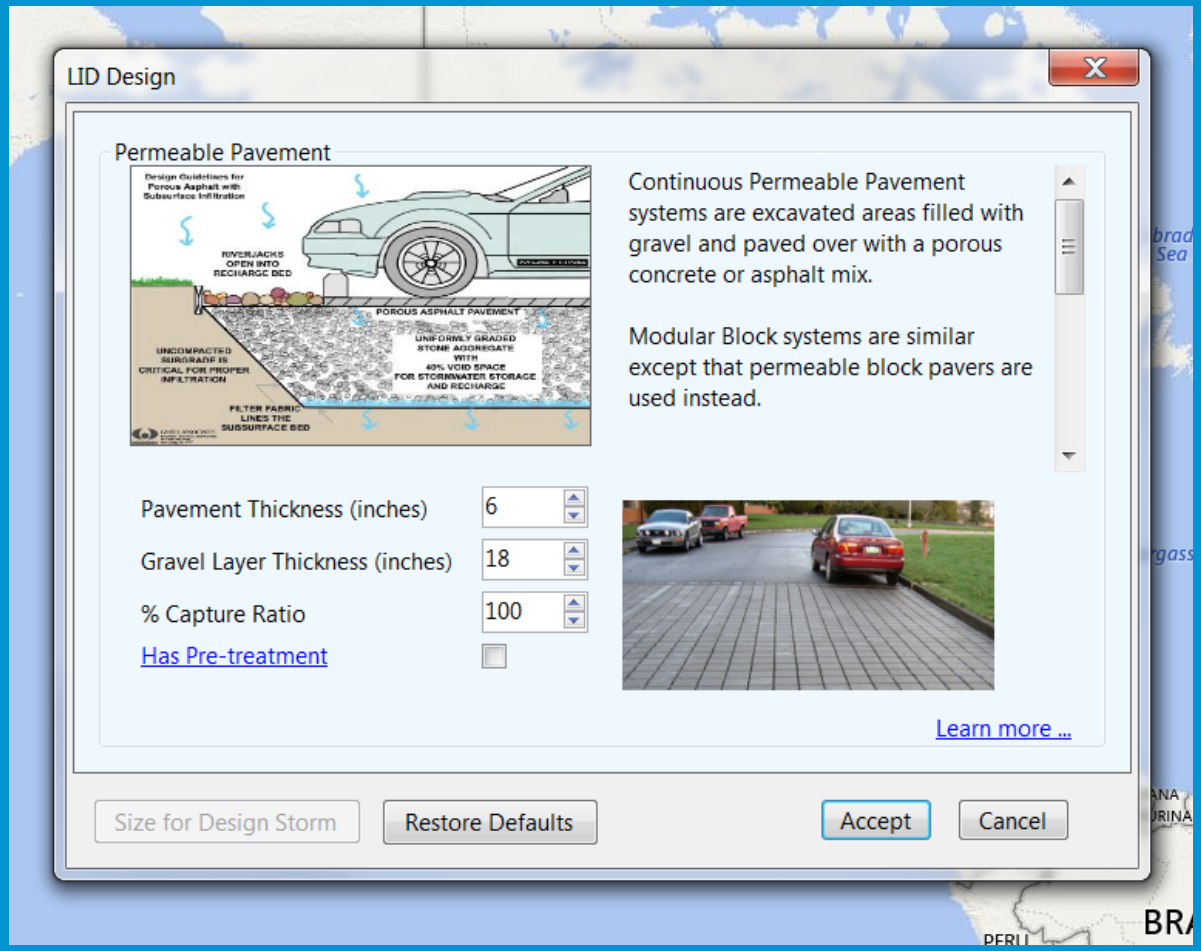


The basin's Capture Ratio is the area of the basin relative to the impervious area whose runoff it captures.

For example, if 50,000 sq. ft. of roof area is directed into 5,000 sq. ft. of infiltration basin area then the Capture Ratio would be 5,000 / 50,000 or 10%.

GI Grant Program Technical Requirements

EPA National Stormwater Calculator LID Control – Permeable Pavement



Normally all rainfall will immediately pass through the pavement into the gravel storage layer below it where it can infiltrate at natural rates into the site's native soil.

Pavement layers are usually 4 to 6 inches in height while the gravel storage layer is typically 6 to 18 inches high.

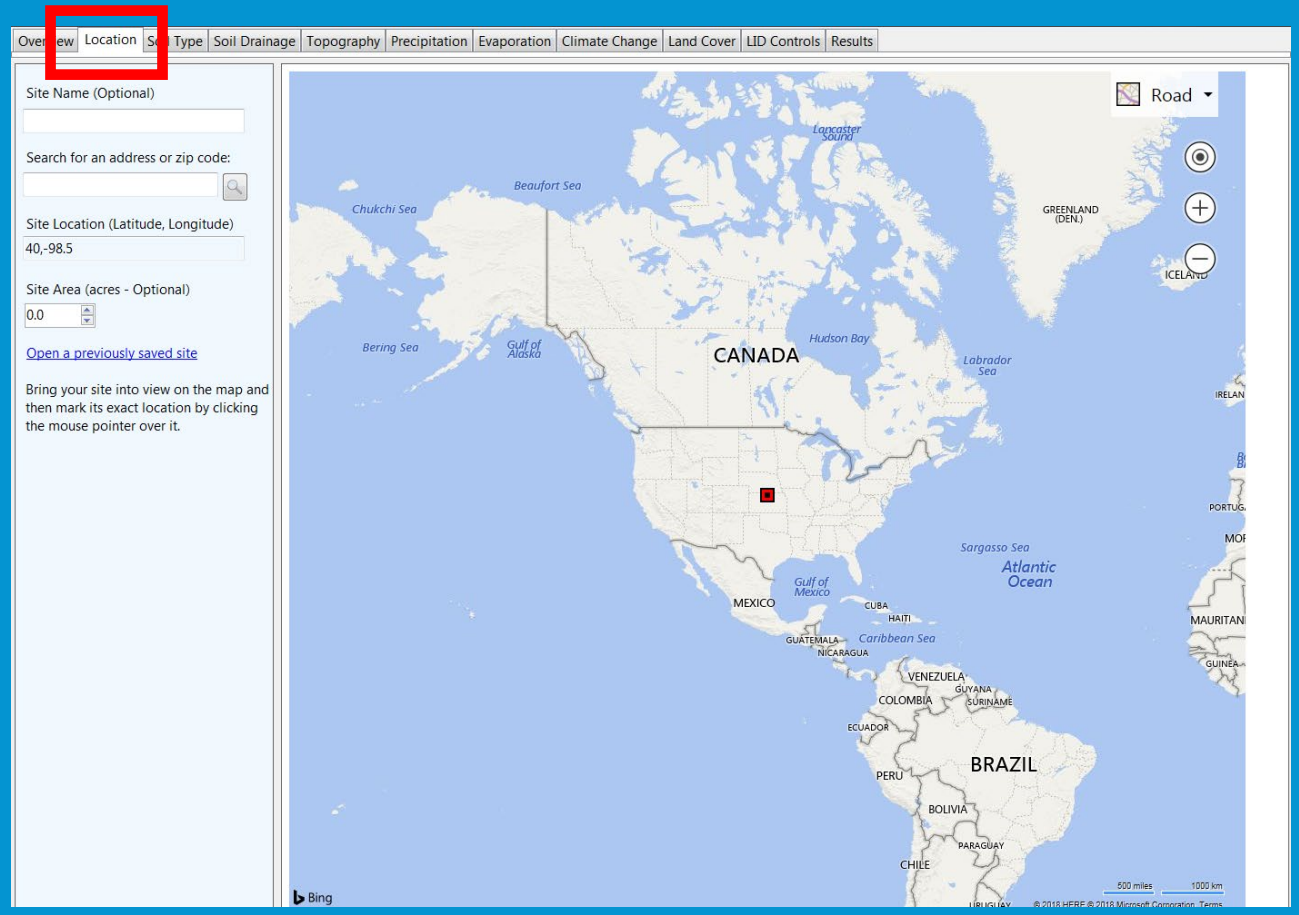
The Capture Ratio is the percent of the treated area (street or parking lot) that is replaced with permeable pavement.

GI Grant Program Technical Requirements

EPA National Stormwater Calculator Modules

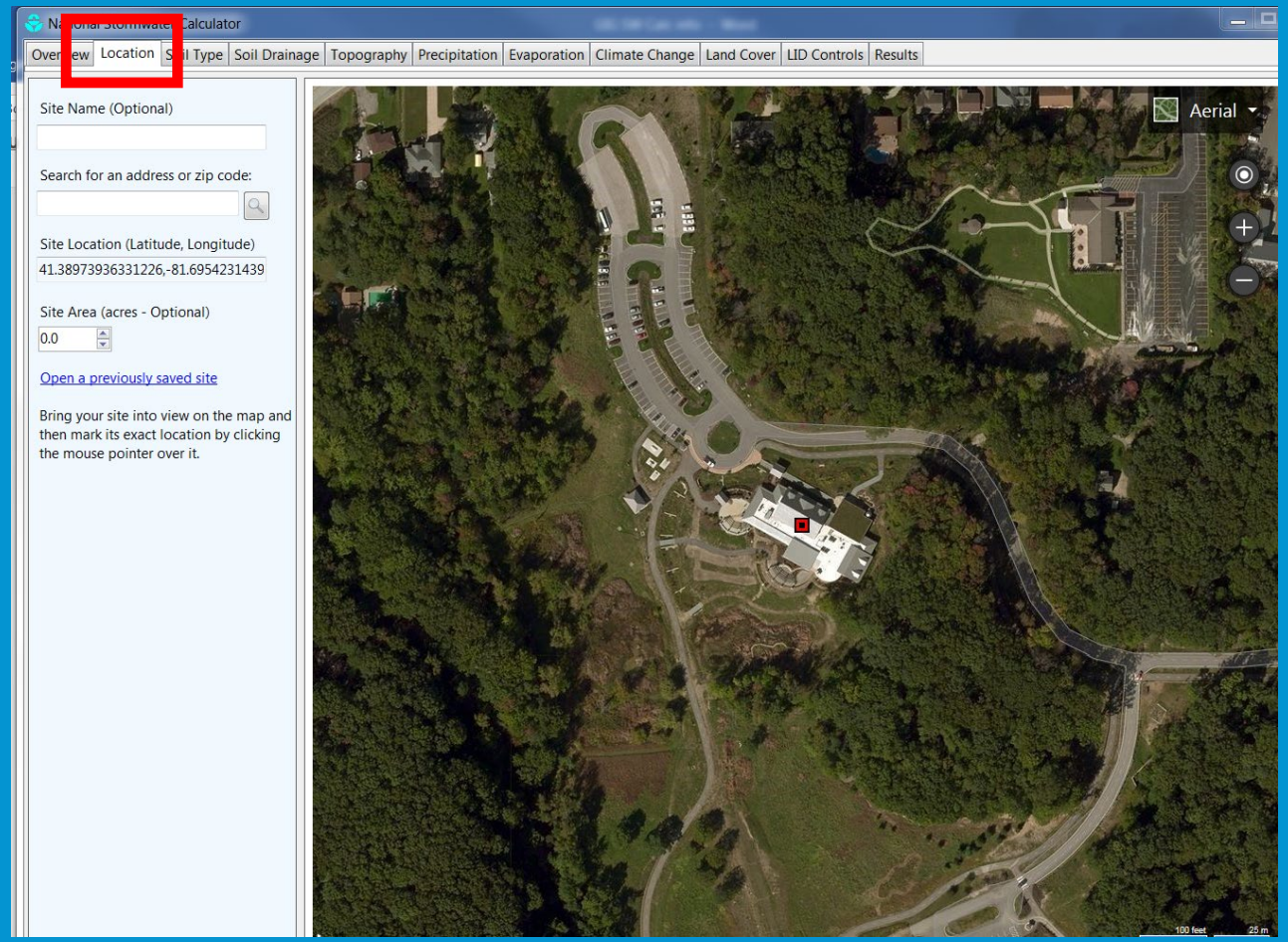
GI Grant Program Technical Requirements

EPA National Stormwater Calculator Modules – Location



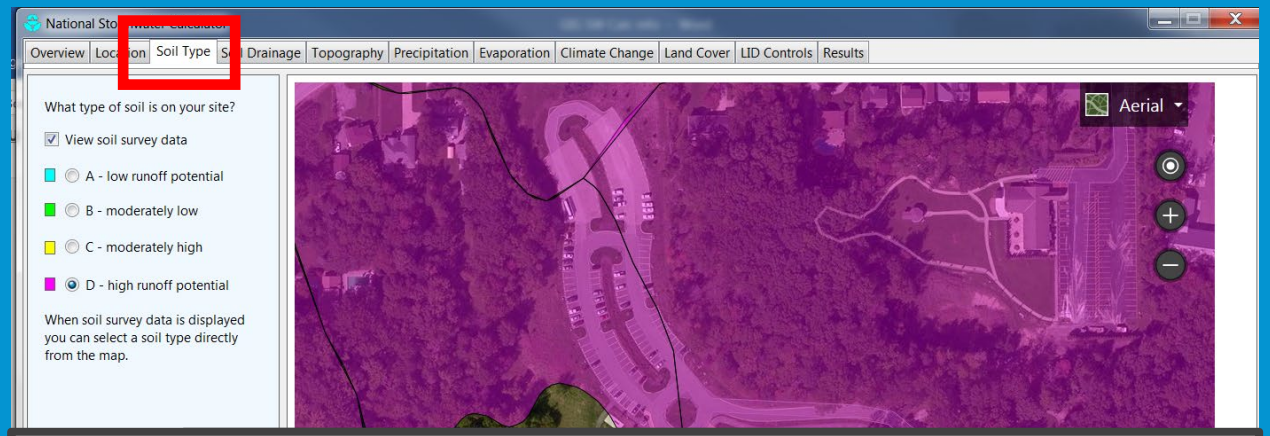
GI Grant Program Technical Requirements

EPA National Stormwater Calculator Modules – Location



GI Grant Program Technical Requirements

EPA National Stormwater Calculator Modules – Soil Type

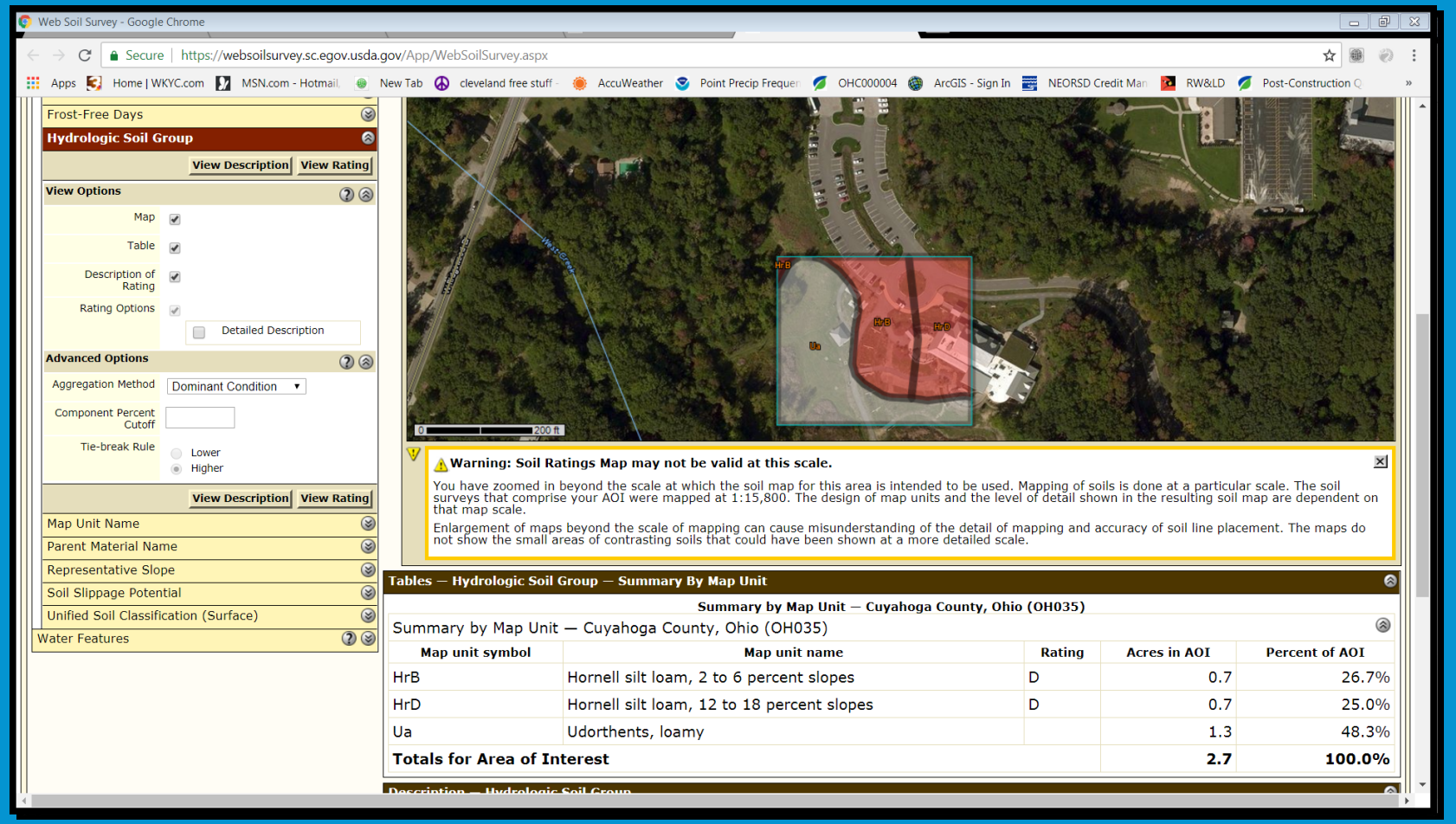


Hydrologic Soil Group Default Values for Runoff Potential

A – Sand (low runoff/high infiltration)
B – Sandy Loam (moderately low runoff)
C – Clay Loam (moderately high runoff)
D – Clay (high runoff/low infiltration)

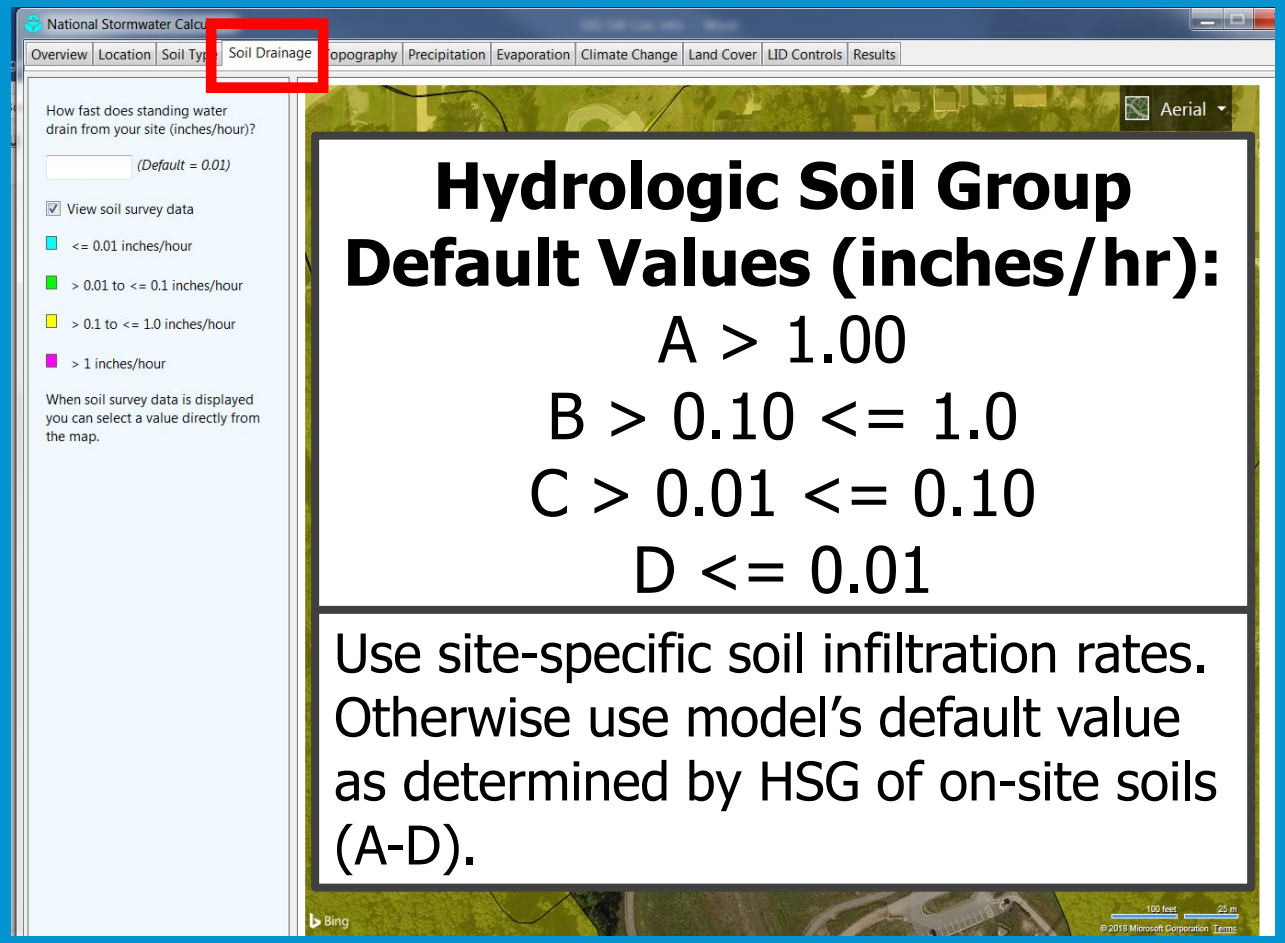
GI Grant Program Technical Requirements

EPA National Stormwater Calculator Modules – Soil Type



GI Grant Program Technical Requirements

EPA National Stormwater Calculator Modules – Soil Drainage



GI Grant Program Technical Requirements

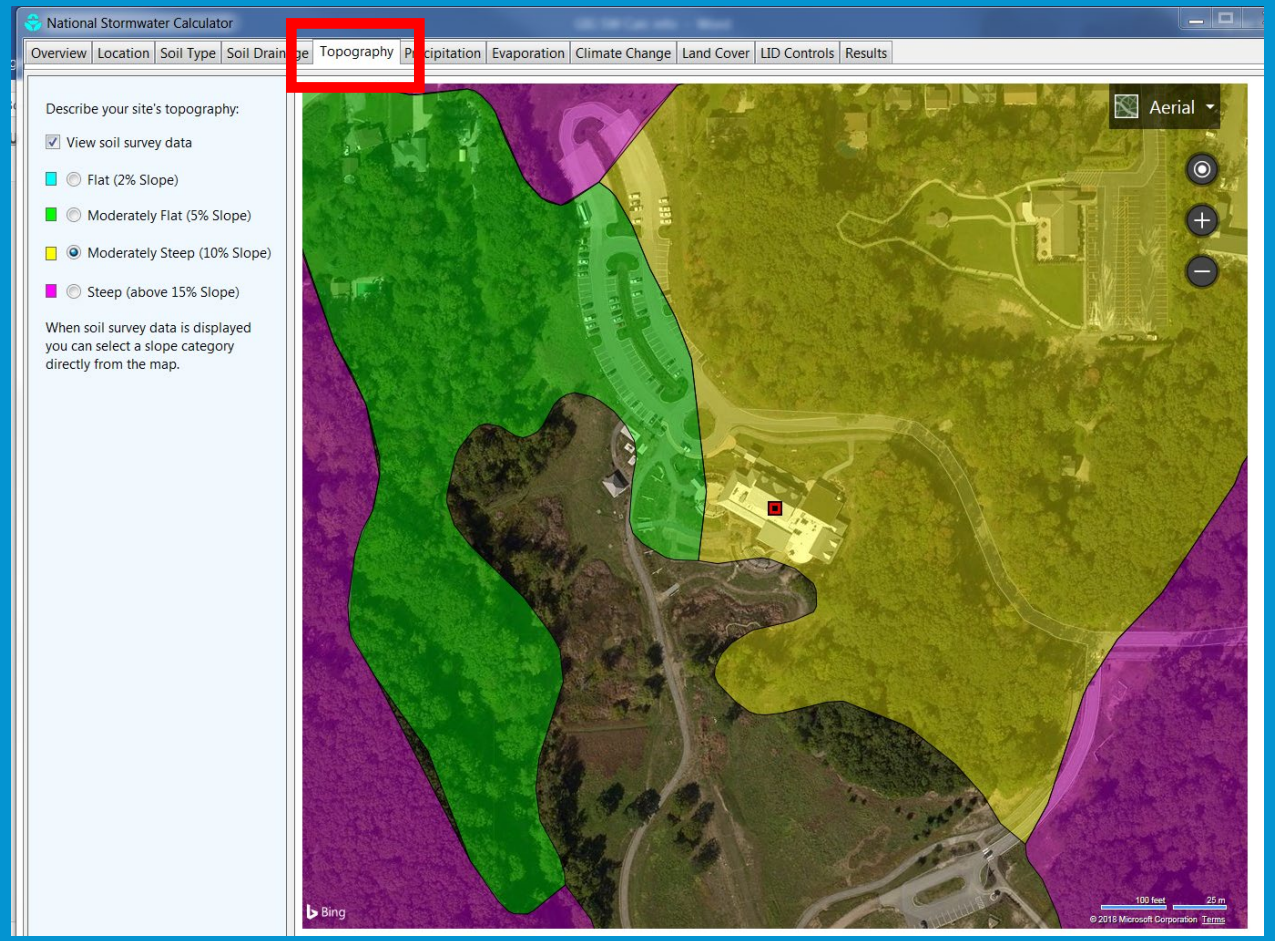
EPA National Stormwater Calculator Modules – Infiltration Testing

Use site-specific soil infiltration rates. Otherwise use model's default value as determined by HSG of on-site soils (A-D).

- ENSURE INFILTRATING SCMS PROPOSED TO MEET AND/OR EXCEED TITLE IV REQUIREMENTS ARE DESIGNED PER THE RESULTS OF ON-SITE SUBGRADE INFILTRATION TESTING USING APPROVED METHODS FROM THE FOLLOWING SOURCES:
  - Ohio Rainwater and Land Development Manual
  - Other state stormwater management manuals as recognized by the District
  - The District can consider designs that deviate from current standards on a case-by-case basis.

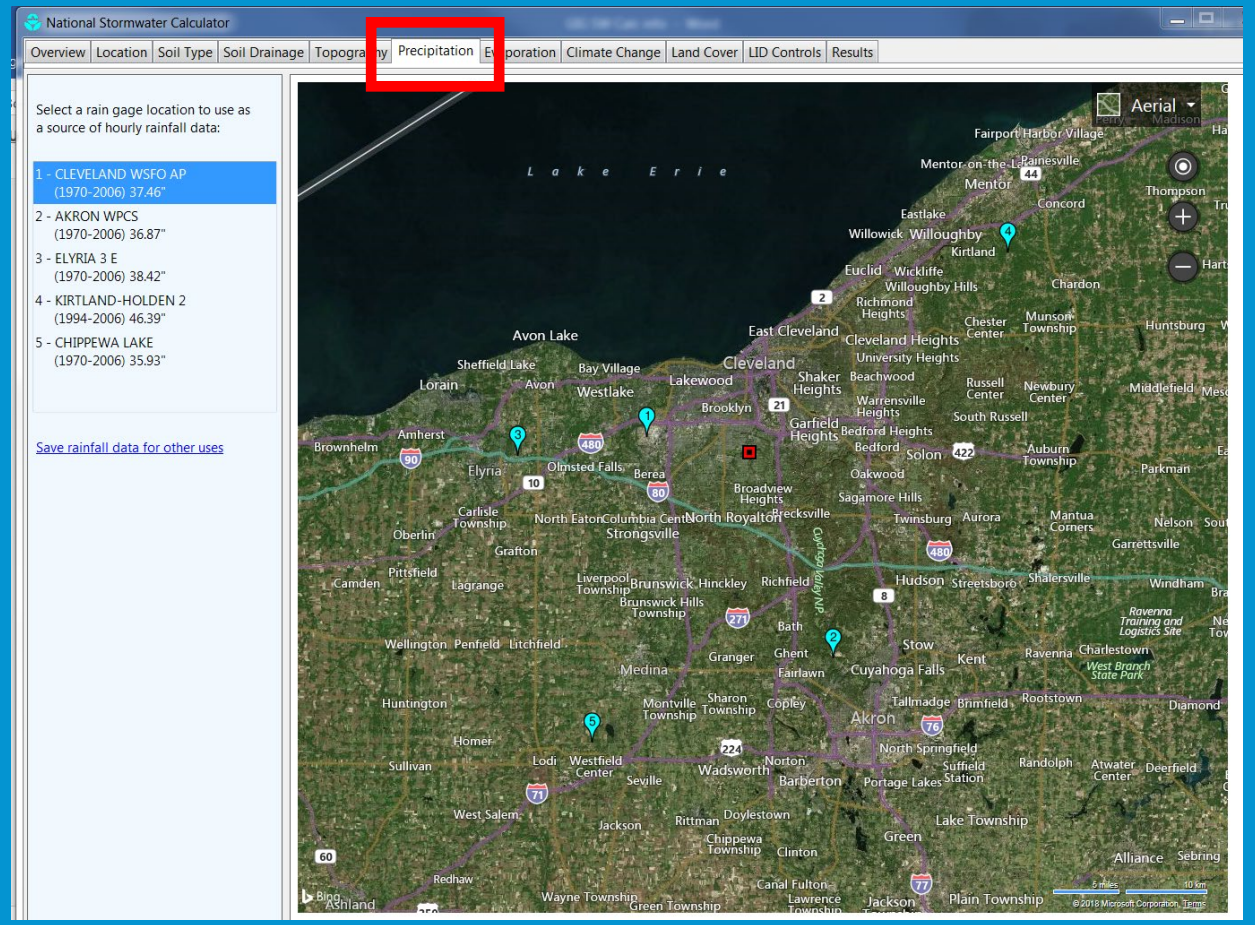
GI Grant Program Technical Requirements

EPA National Stormwater Calculator Modules – Topography



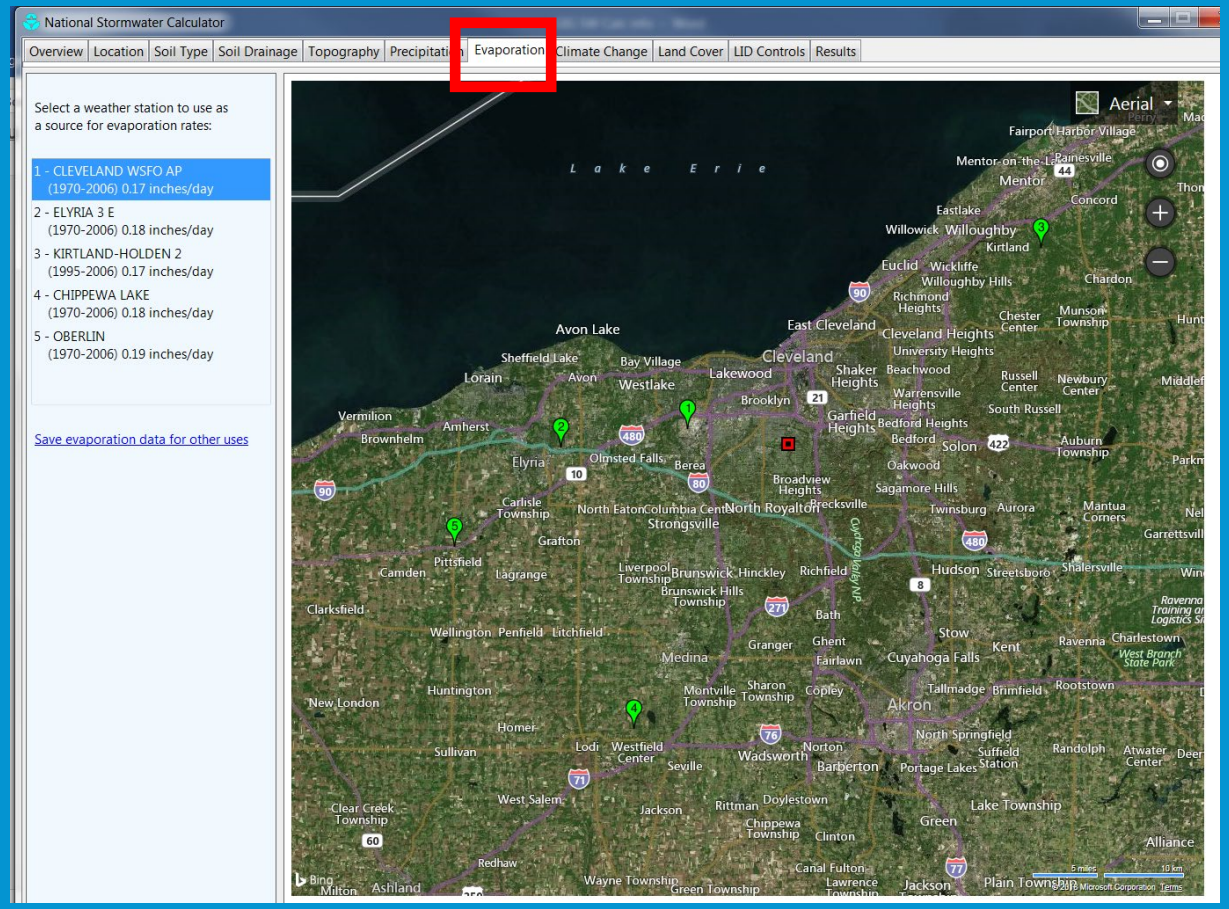
GI Grant Program Technical Requirements

EPA National Stormwater Calculator Modules – Precipitation



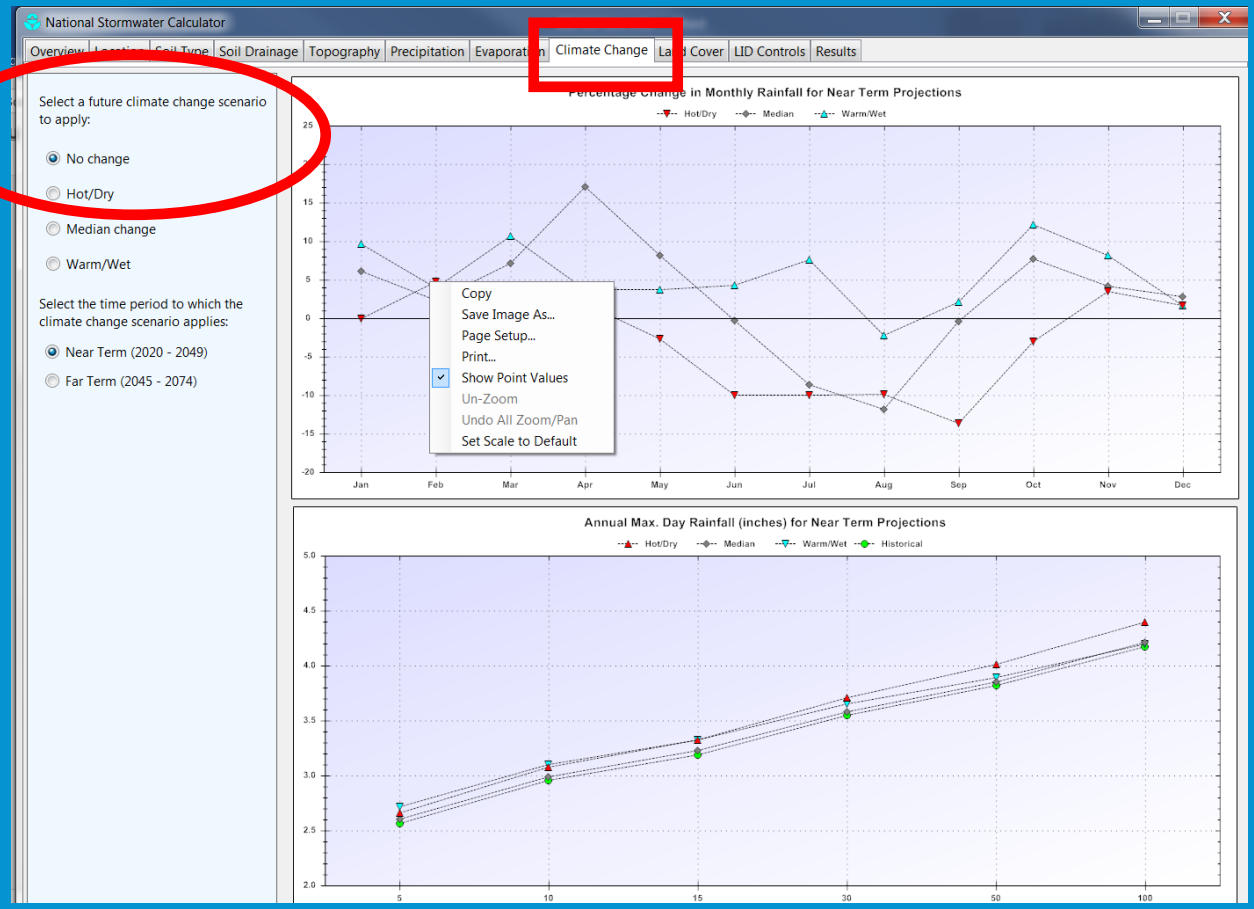
GI Grant Program Technical Requirements

EPA National Stormwater Calculator Modules – Evaporation



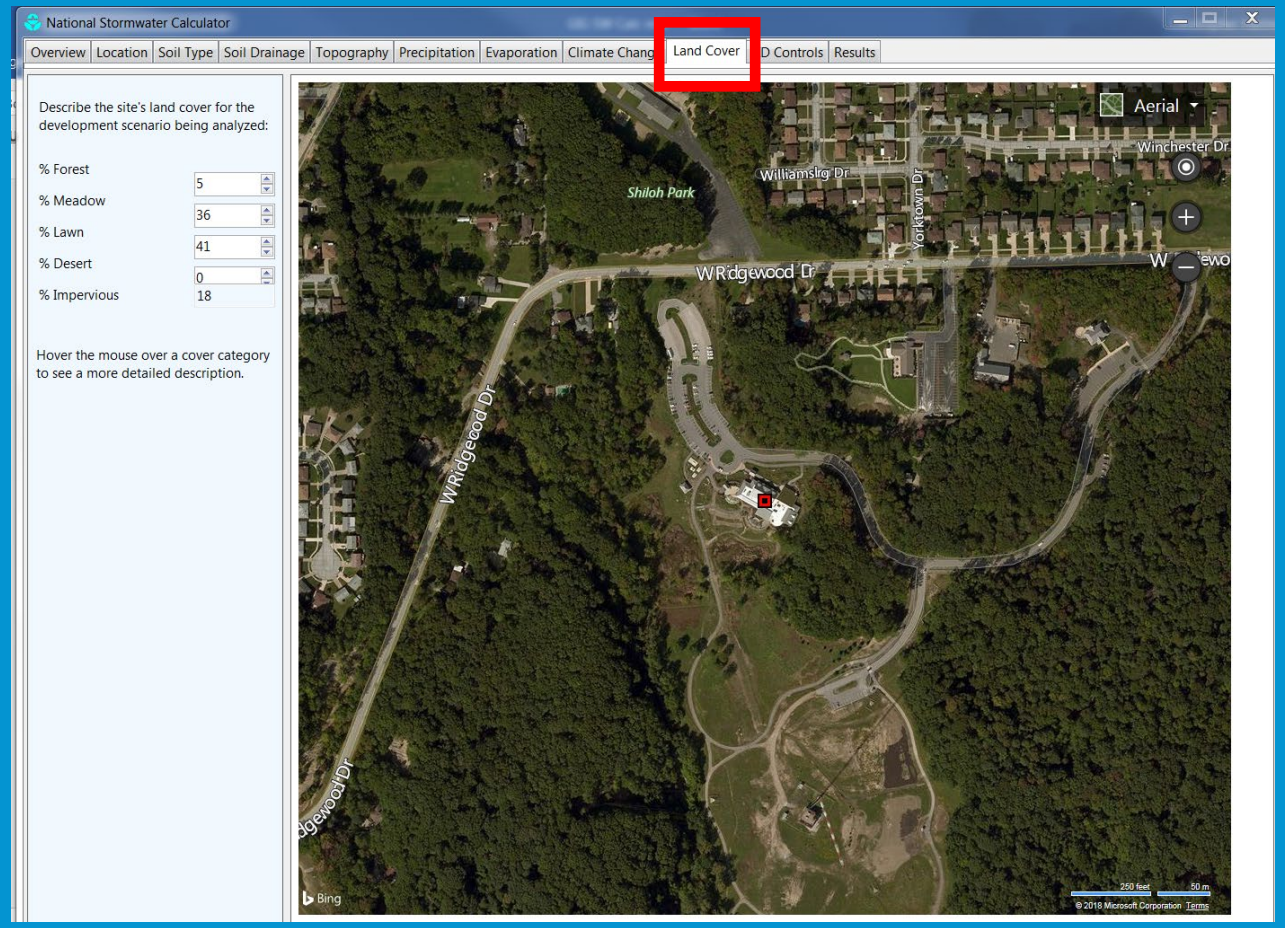
GI Grant Program Technical Requirements

EPA National Stormwater Calculator Modules – Climate Change



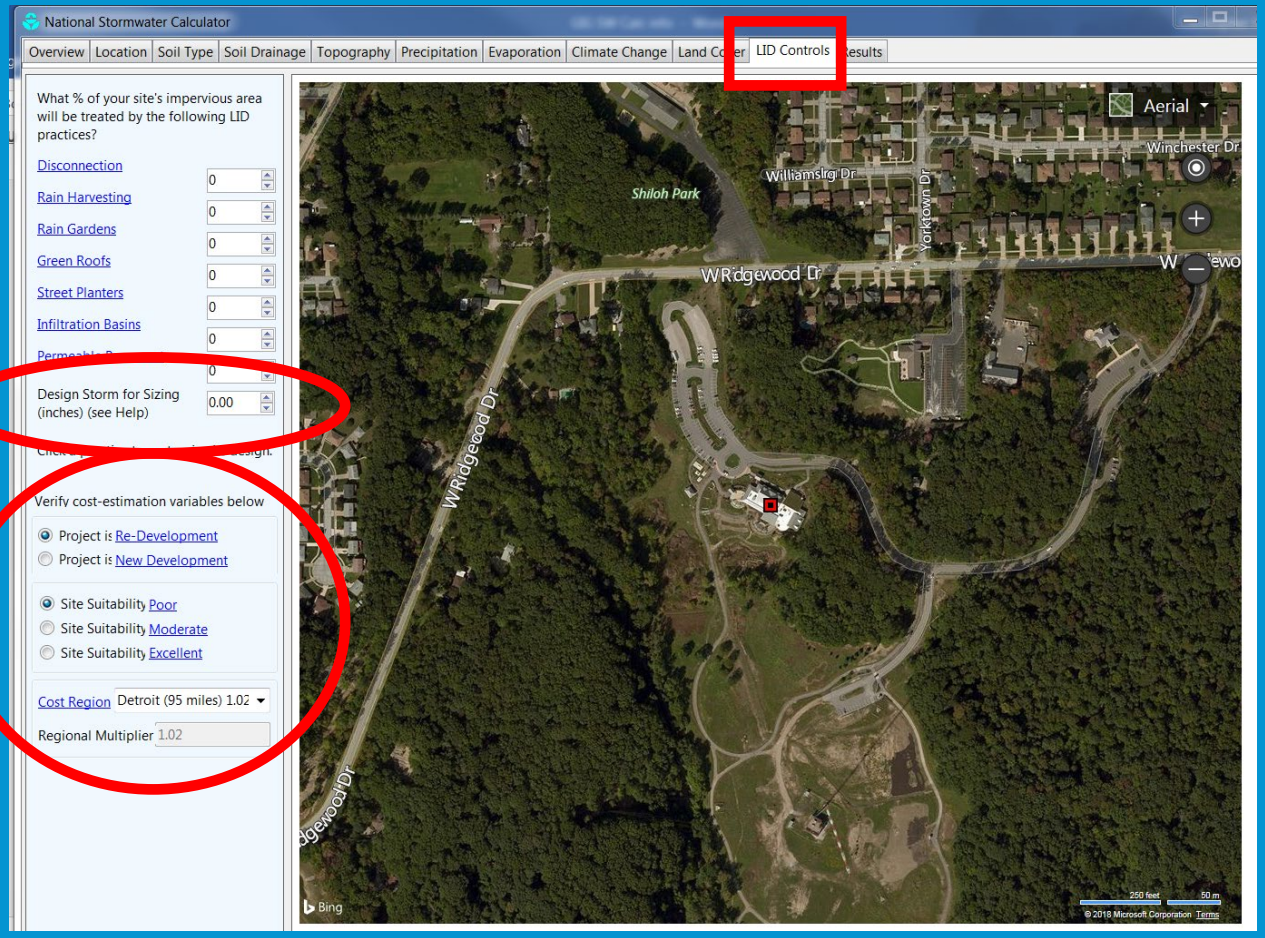
GI Grant Program Technical Requirements

EPA National Stormwater Calculator Modules – Land Cover



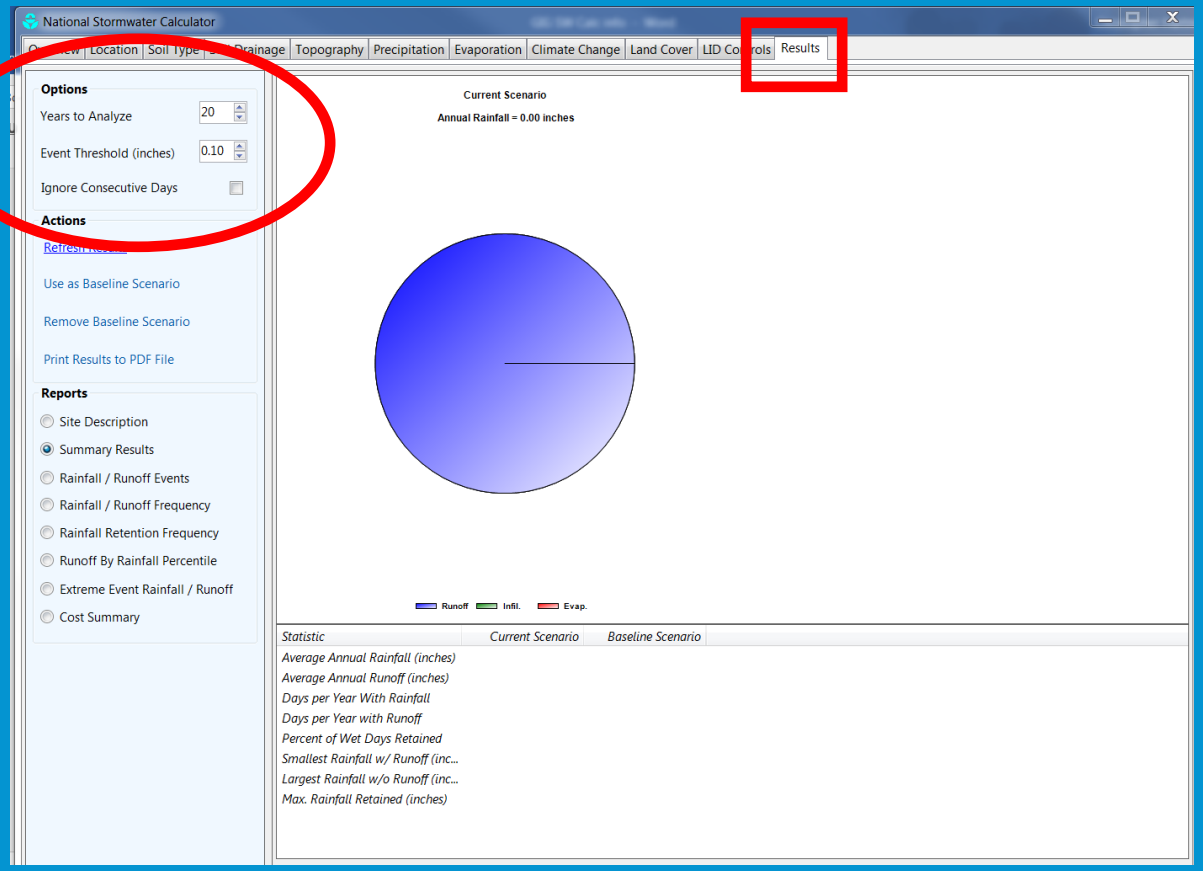
GI Grant Program Technical Requirements

EPA National Stormwater Calculator Modules – LID Controls



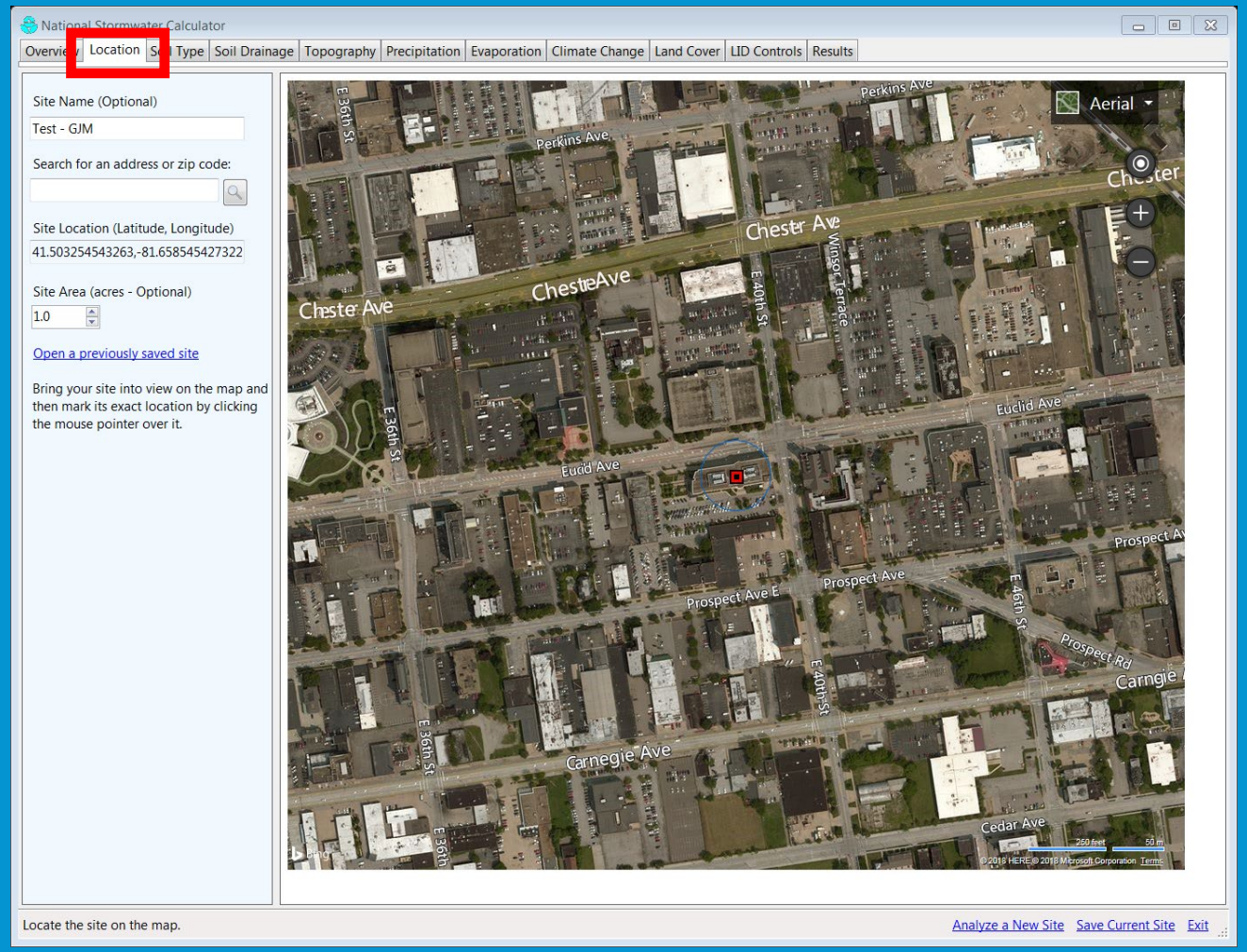
GI Grant Program Technical Requirements

EPA National Stormwater Calculator Modules – Results



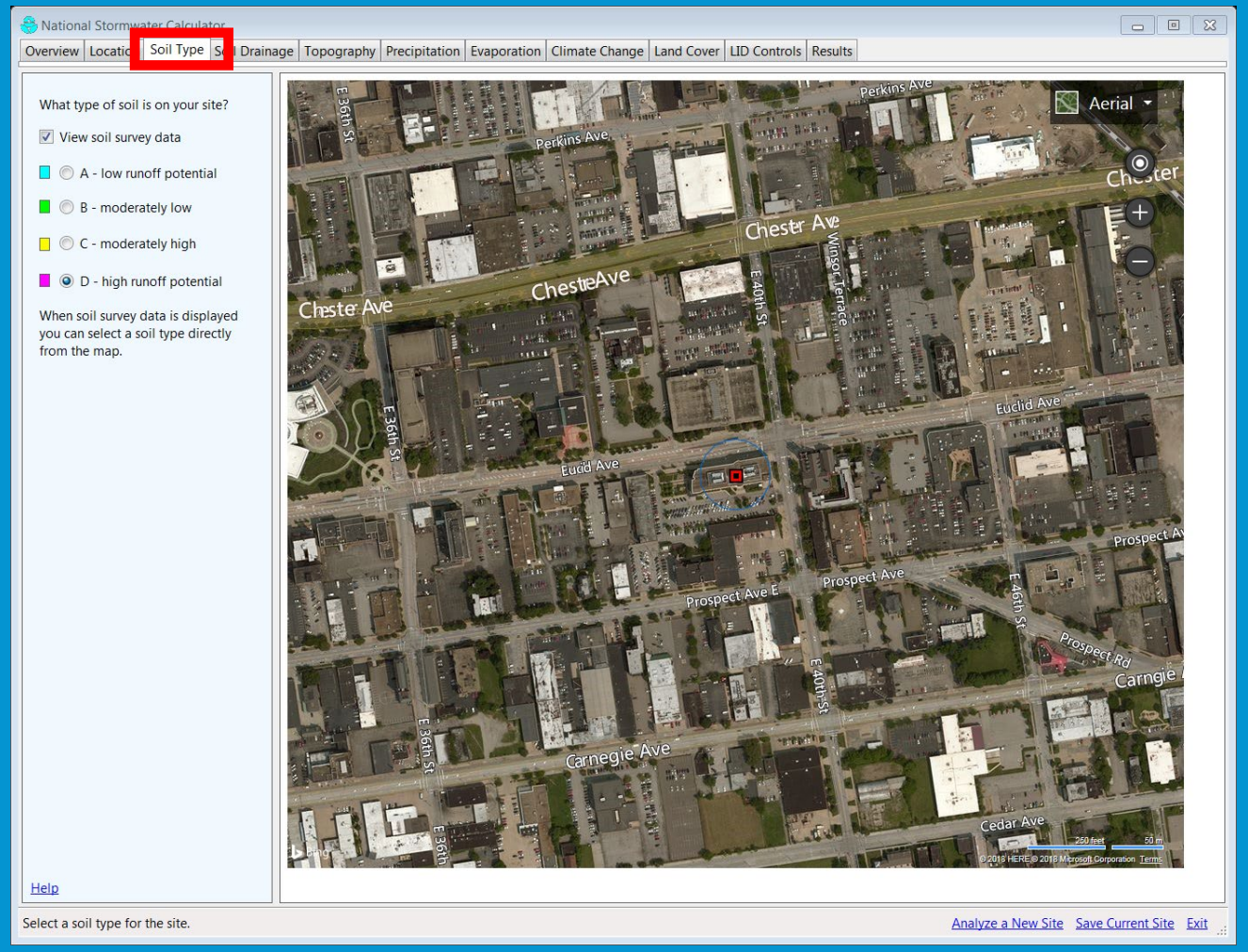
GI Grant Program Technical Requirements

EPA National Stormwater Calculator Modules – Existing Conditions



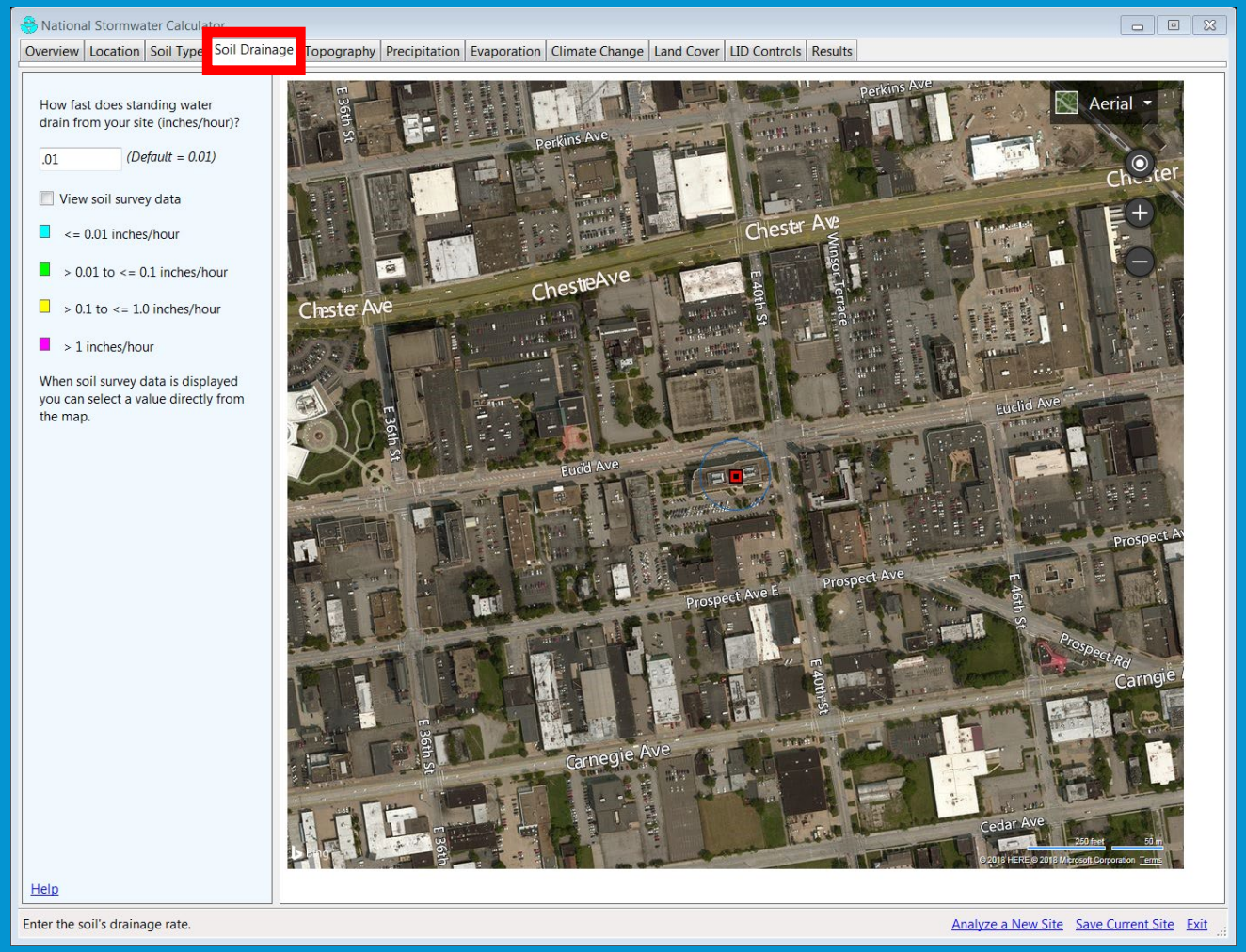
GI Grant Program Technical Requirements

EPA National Stormwater Calculator Modules – Existing Conditions



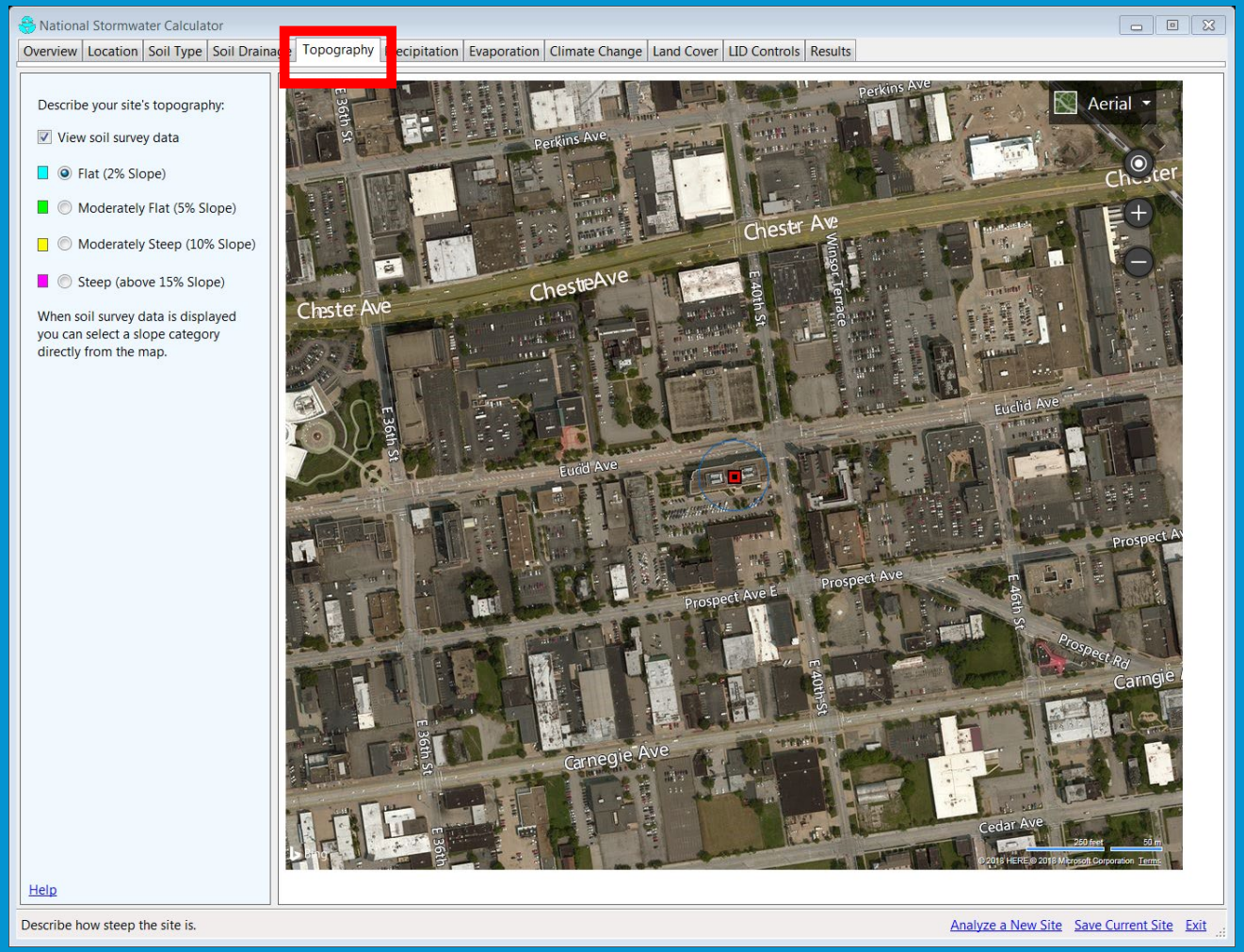
GI Grant Program Technical Requirements

EPA National Stormwater Calculator Modules – Existing Conditions



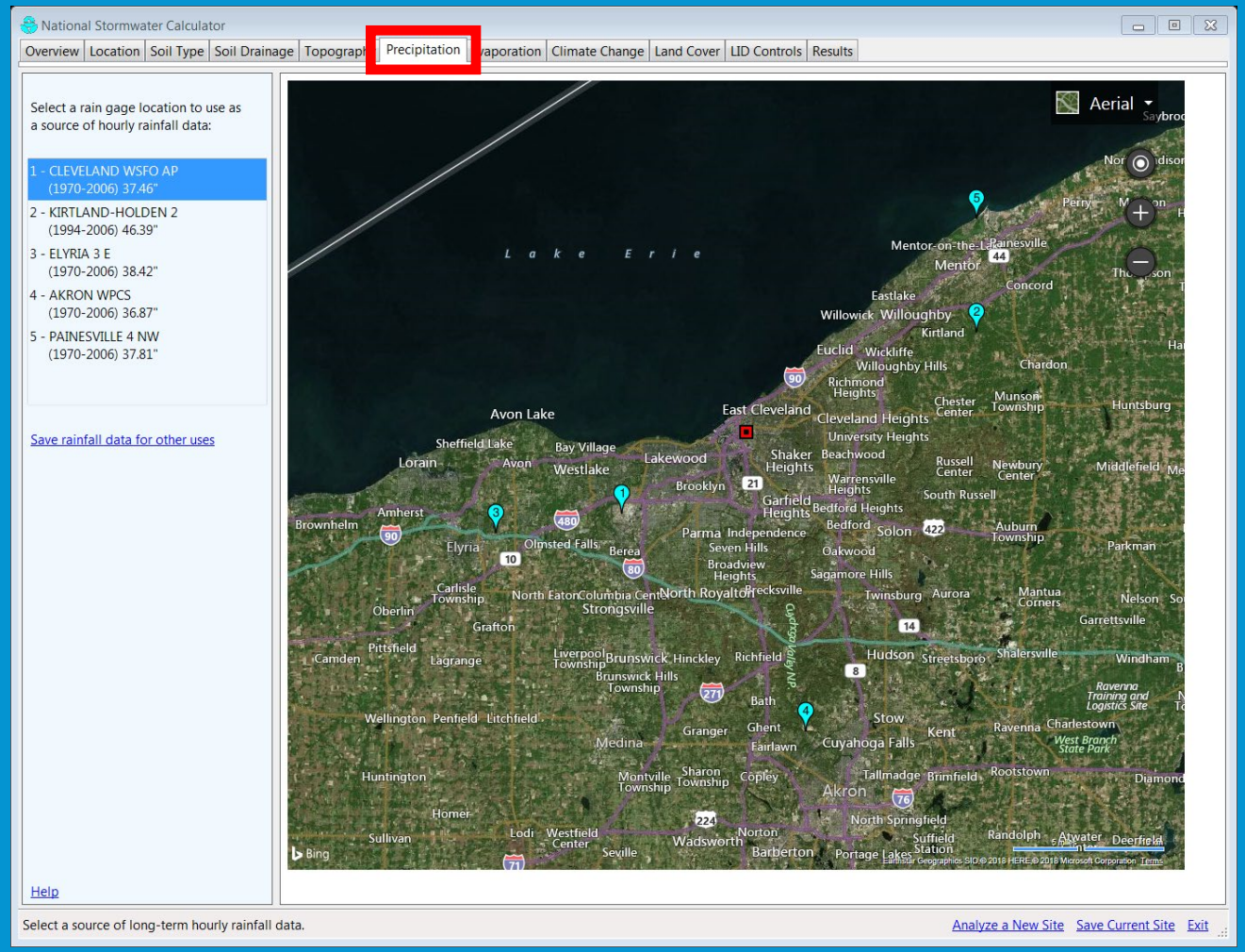
GI Grant Program Technical Requirements

EPA National Stormwater Calculator Modules – Existing Conditions



GI Grant Program Technical Requirements

EPA National Stormwater Calculator Modules – Existing Conditions



GI Grant Program Technical Requirements

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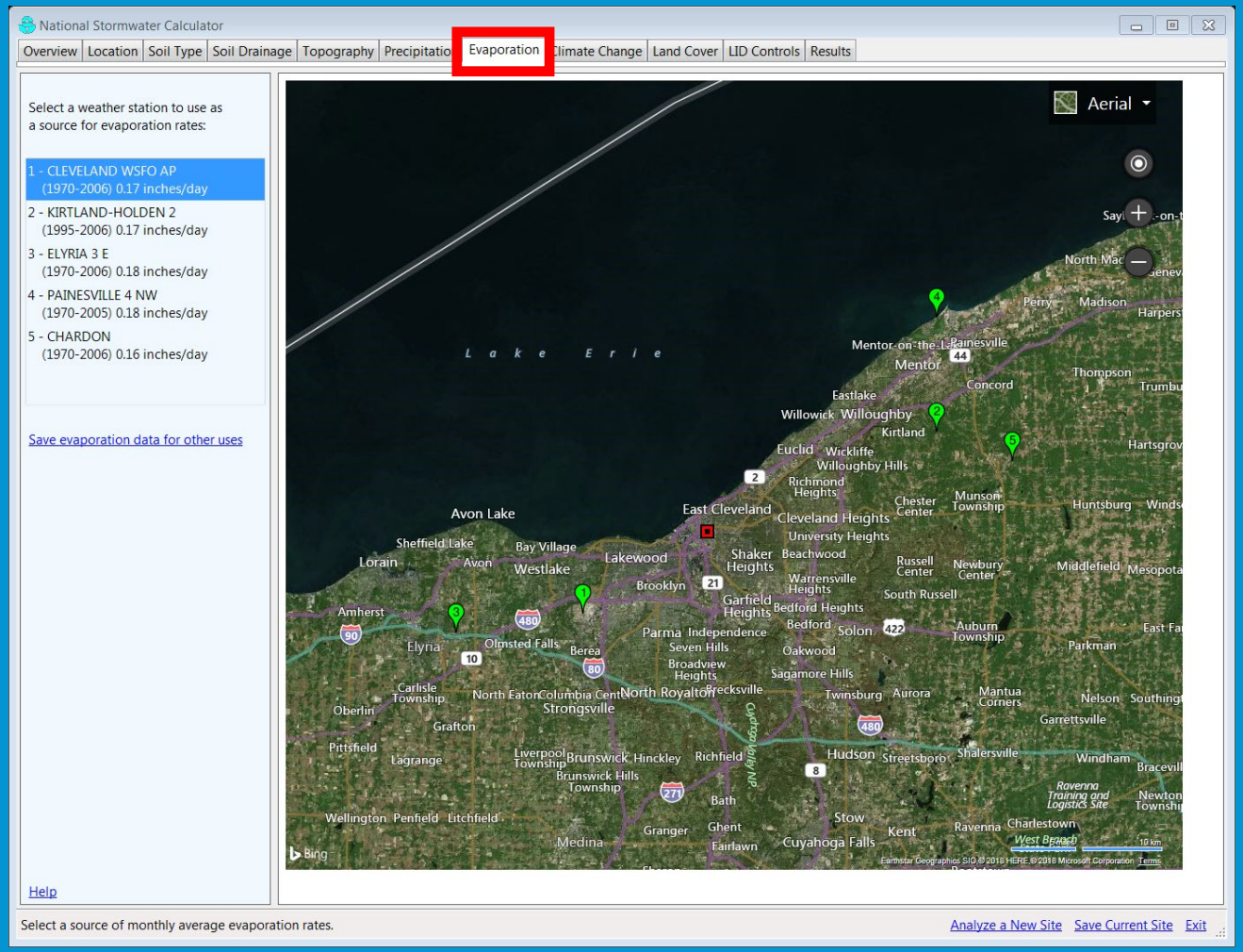
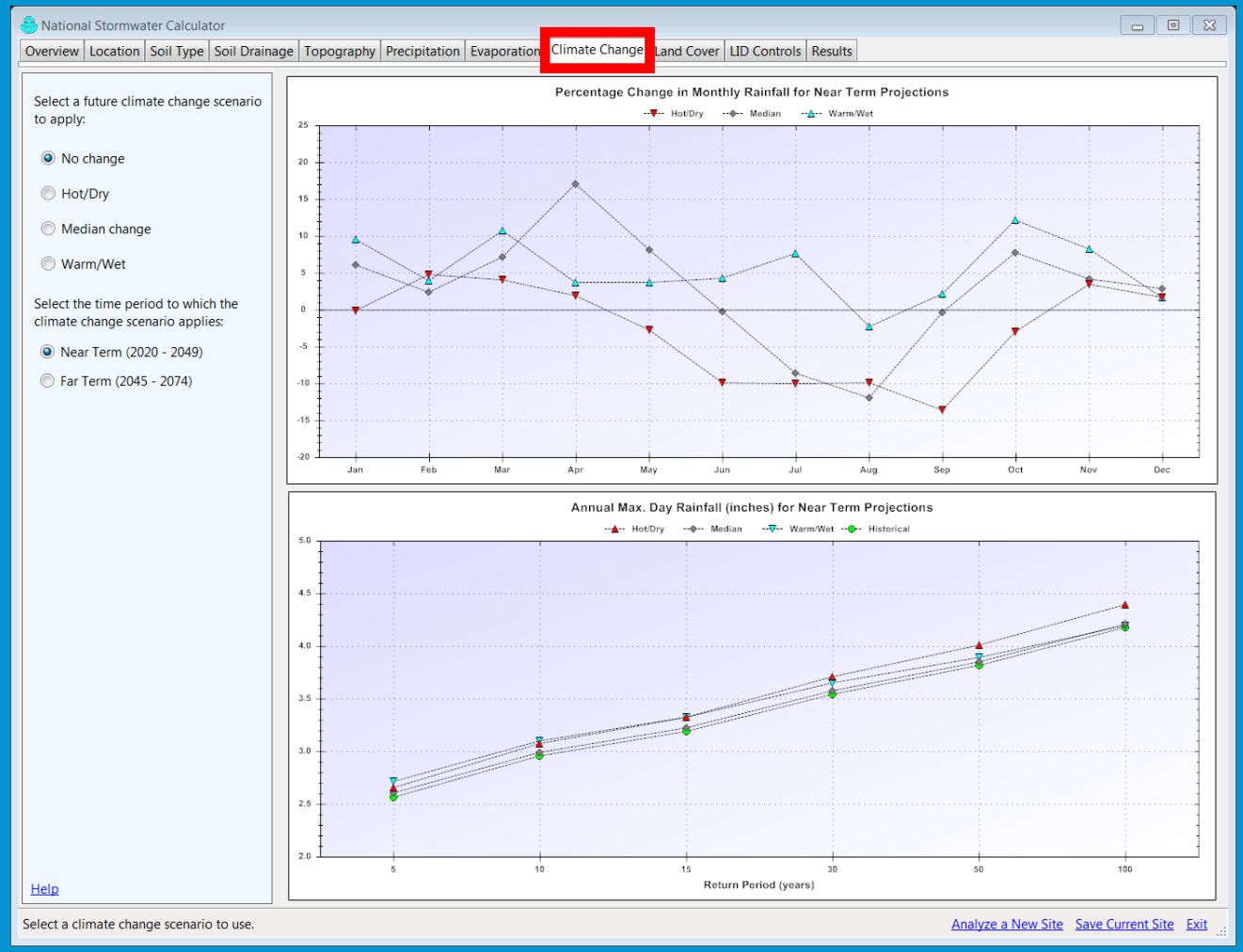


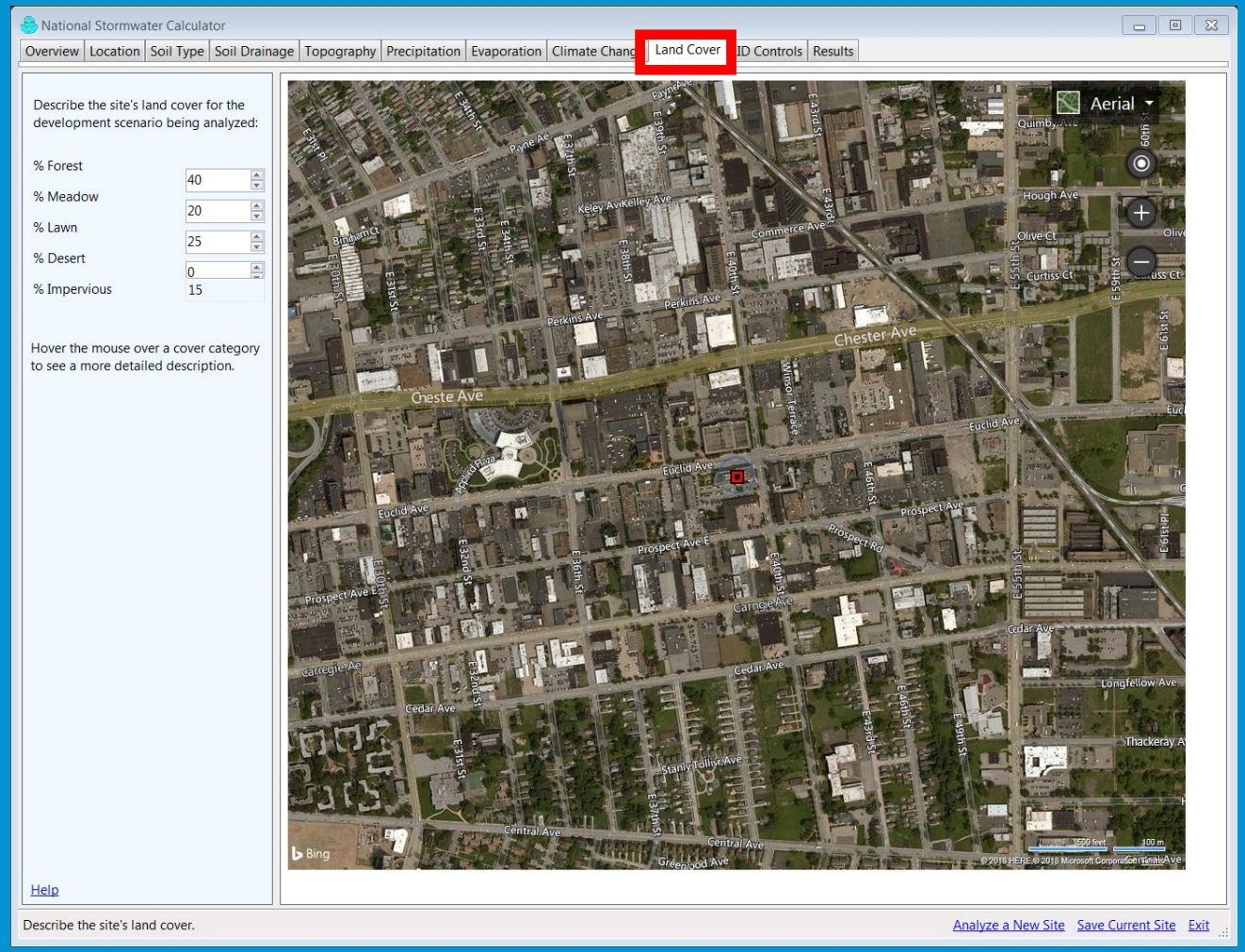
GI Grant Program Technical Requirements

EPA National Stormwater Calculator Modules – Existing Conditions



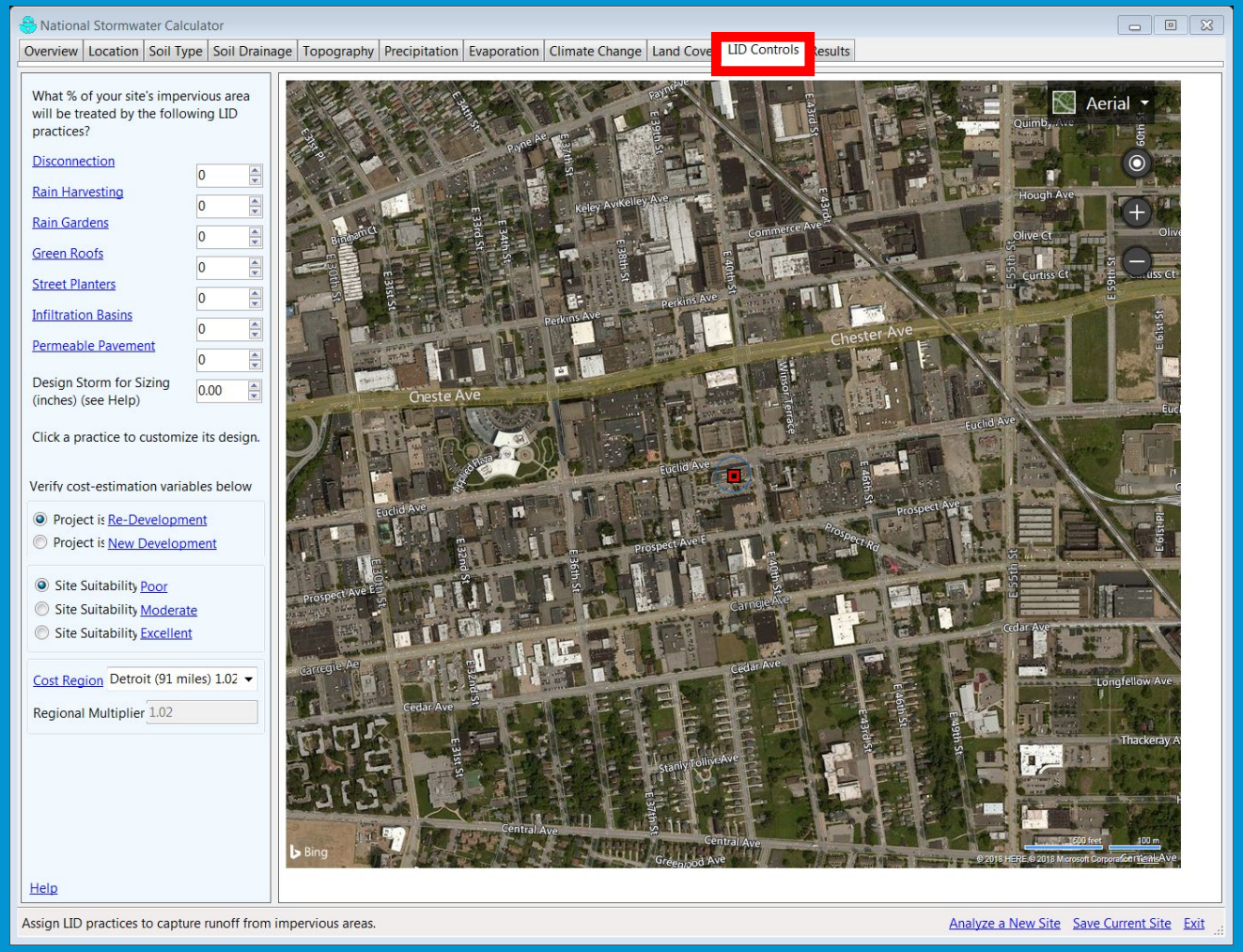
GI Grant Program Technical Requirements

EPA National Stormwater Calculator Modules – Existing Conditions



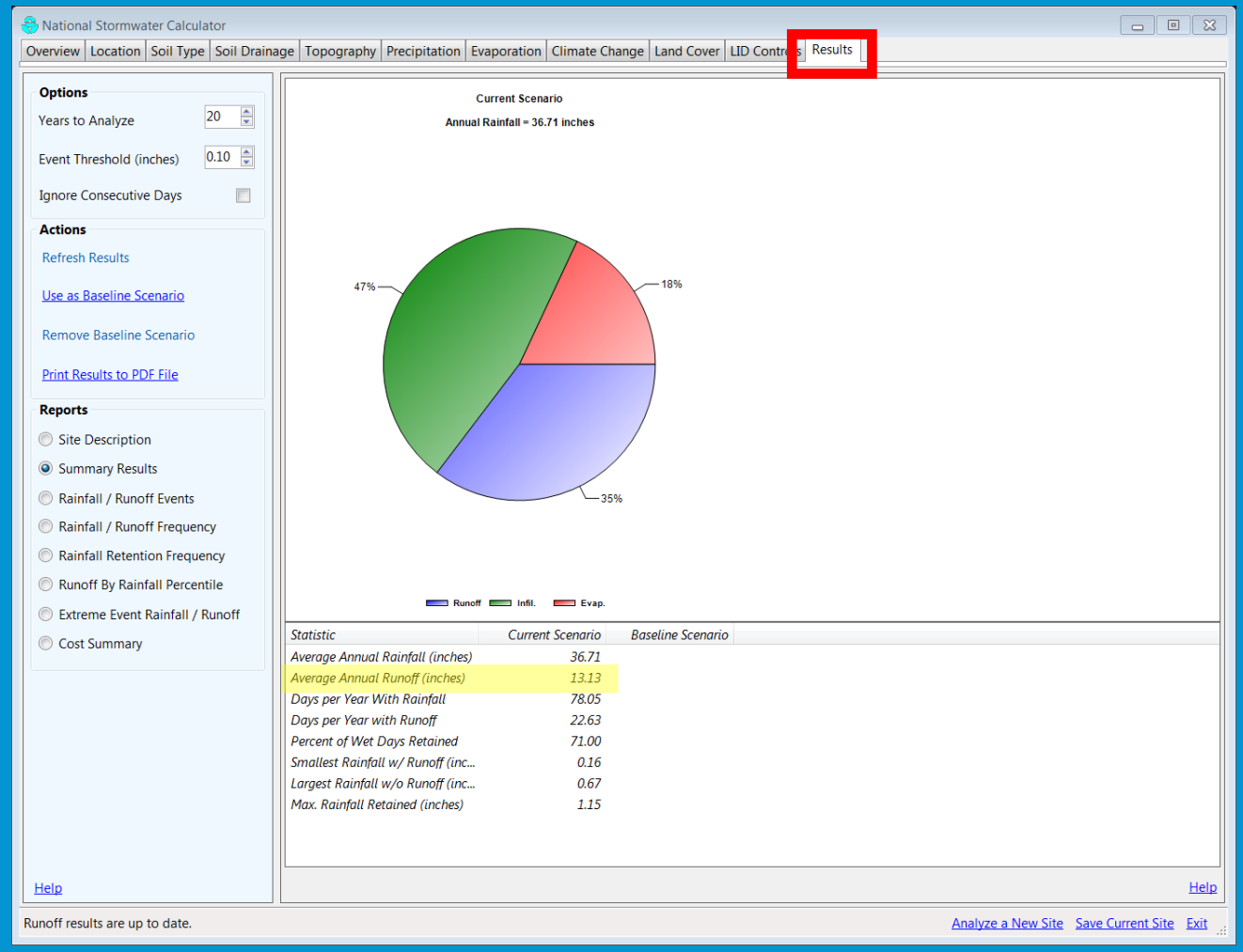
GI Grant Program Technical Requirements

EPA National Stormwater Calculator Modules – Existing Conditions



GI Grant Program Technical Requirements

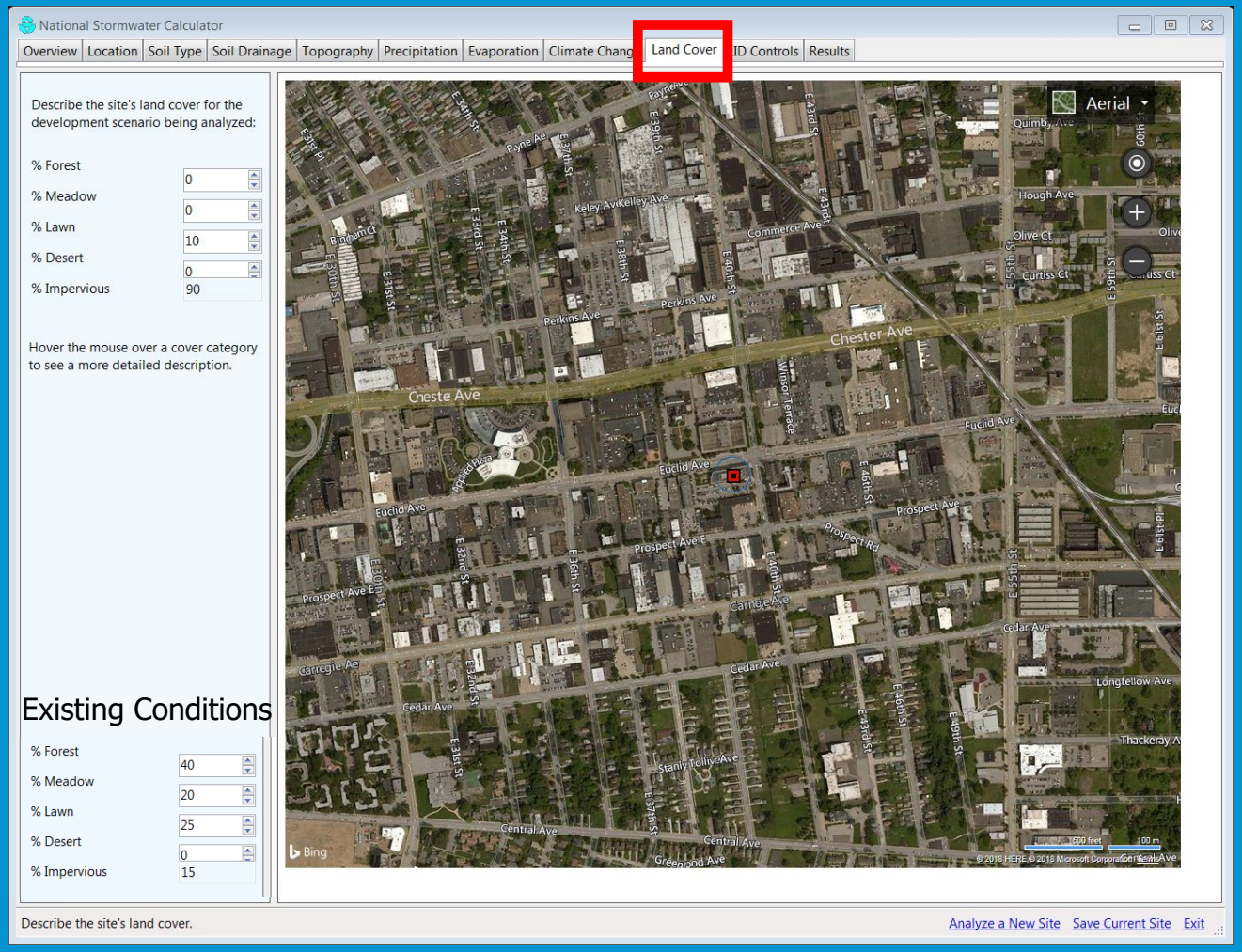
EPA National Stormwater Calculator Modules – Existing Conditions



GI Grant Program Technical Requirements

EPA National Stormwater Calculator - Baseline Scenario

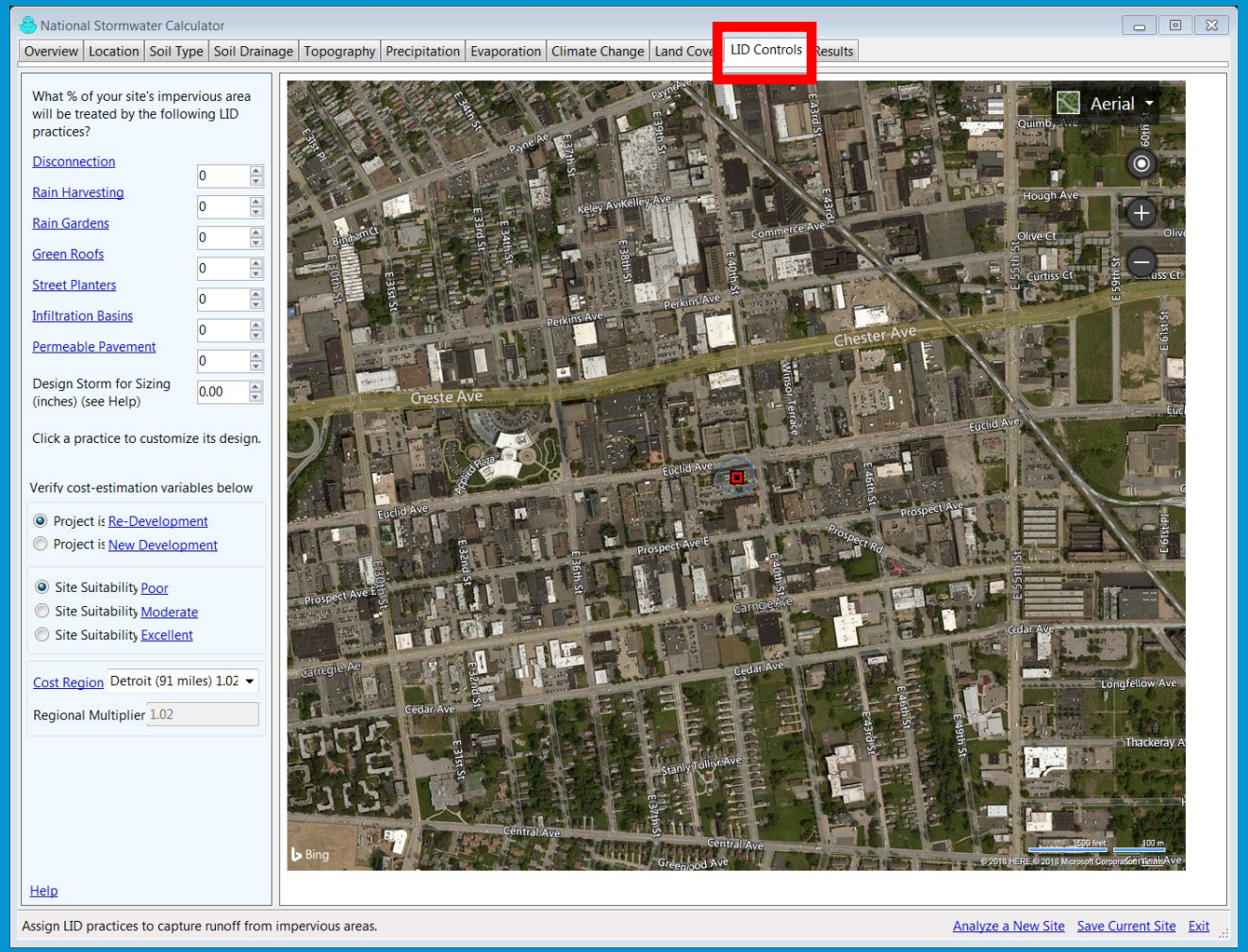
Meeting Minimum Title IV Requirements



GI Grant Program Technical Requirements

EPA National Stormwater Calculator - Baseline Scenario

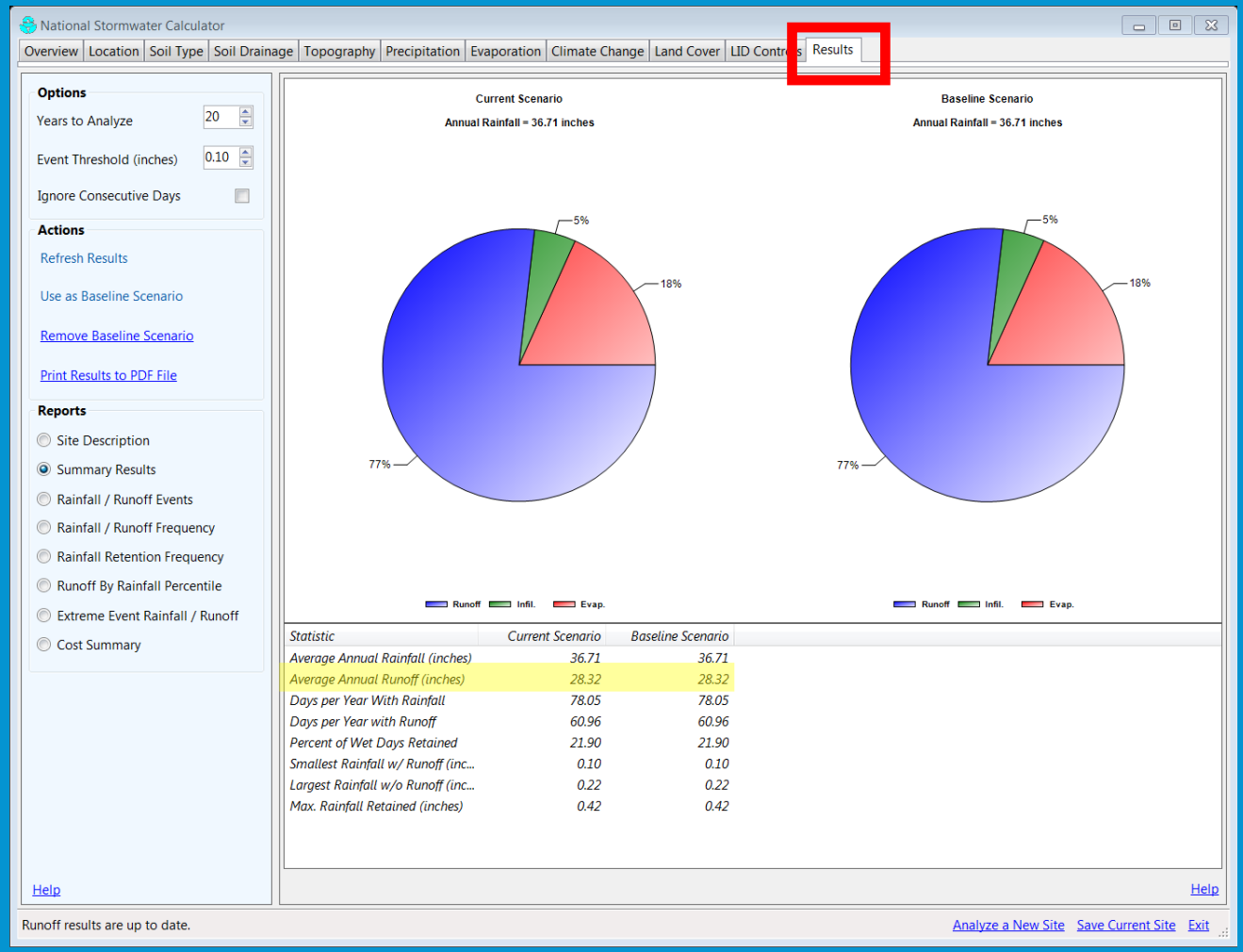
Meeting Minimum Title IV Requirements



GI Grant Program Technical Requirements

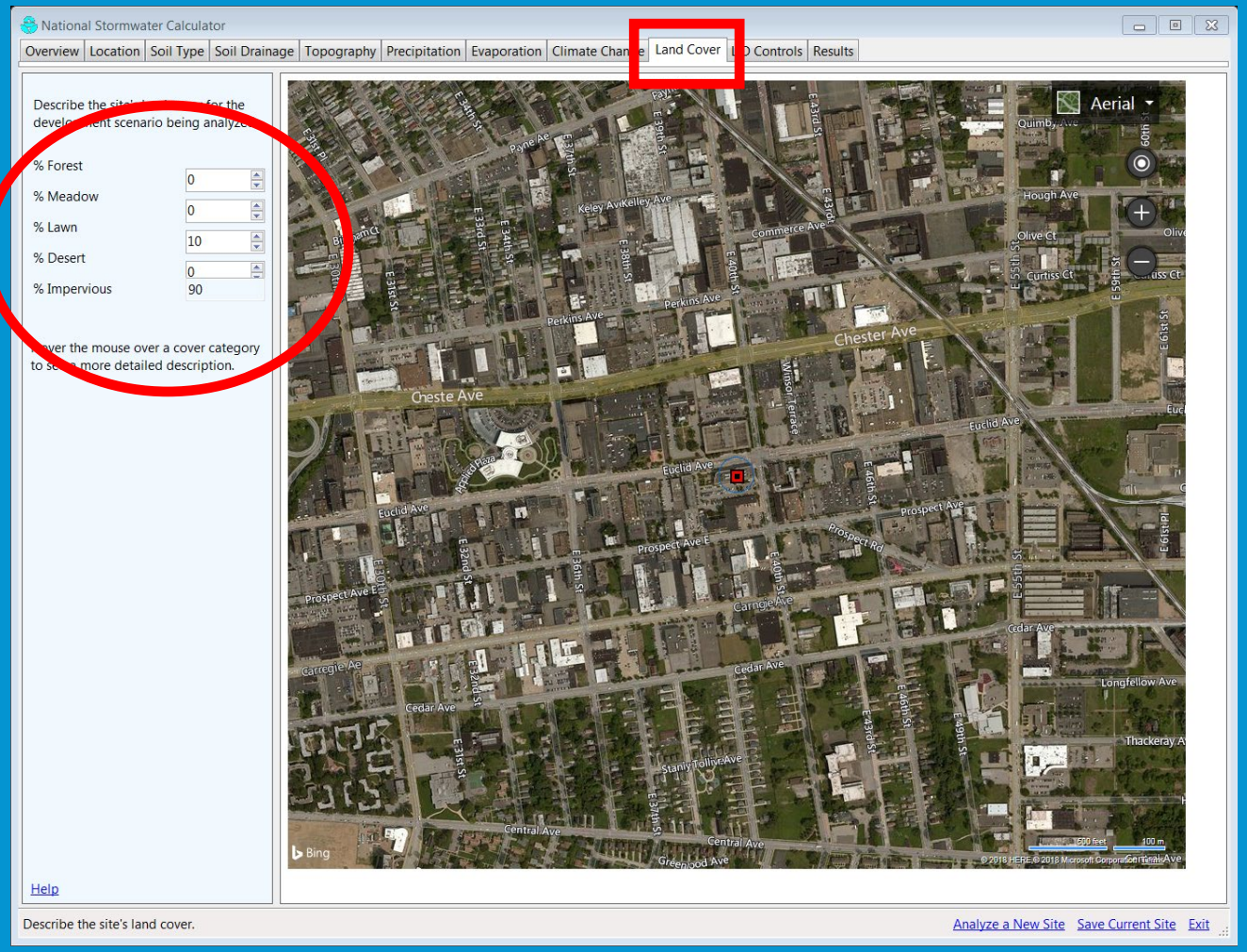
EPA National Stormwater Calculator - Baseline Scenario

Meeting Minimum Title IV Requirements



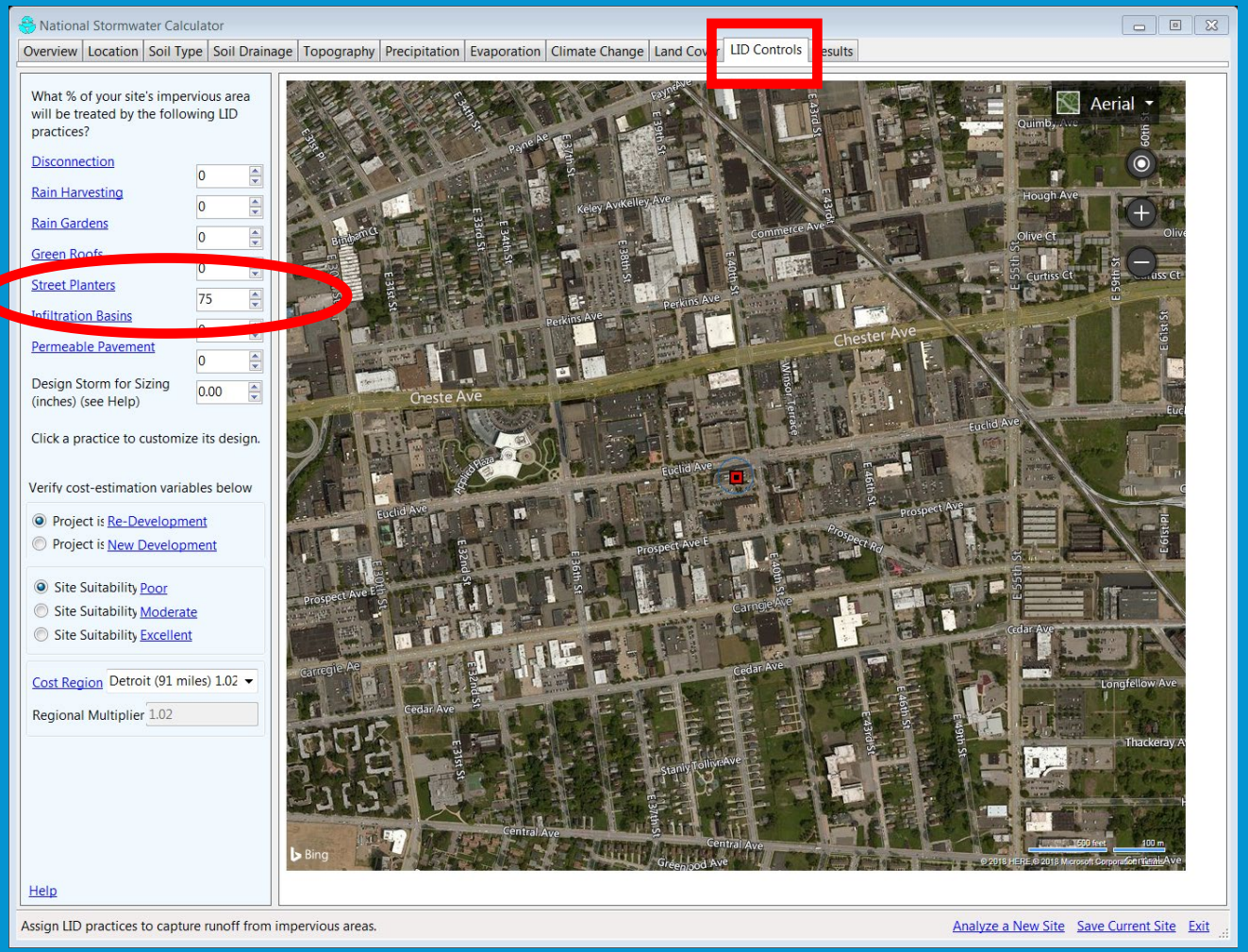
GI Grant Program Technical Requirements

EPA National Stormwater Calculator – with Green Infrastructure



GI Grant Program Technical Requirements

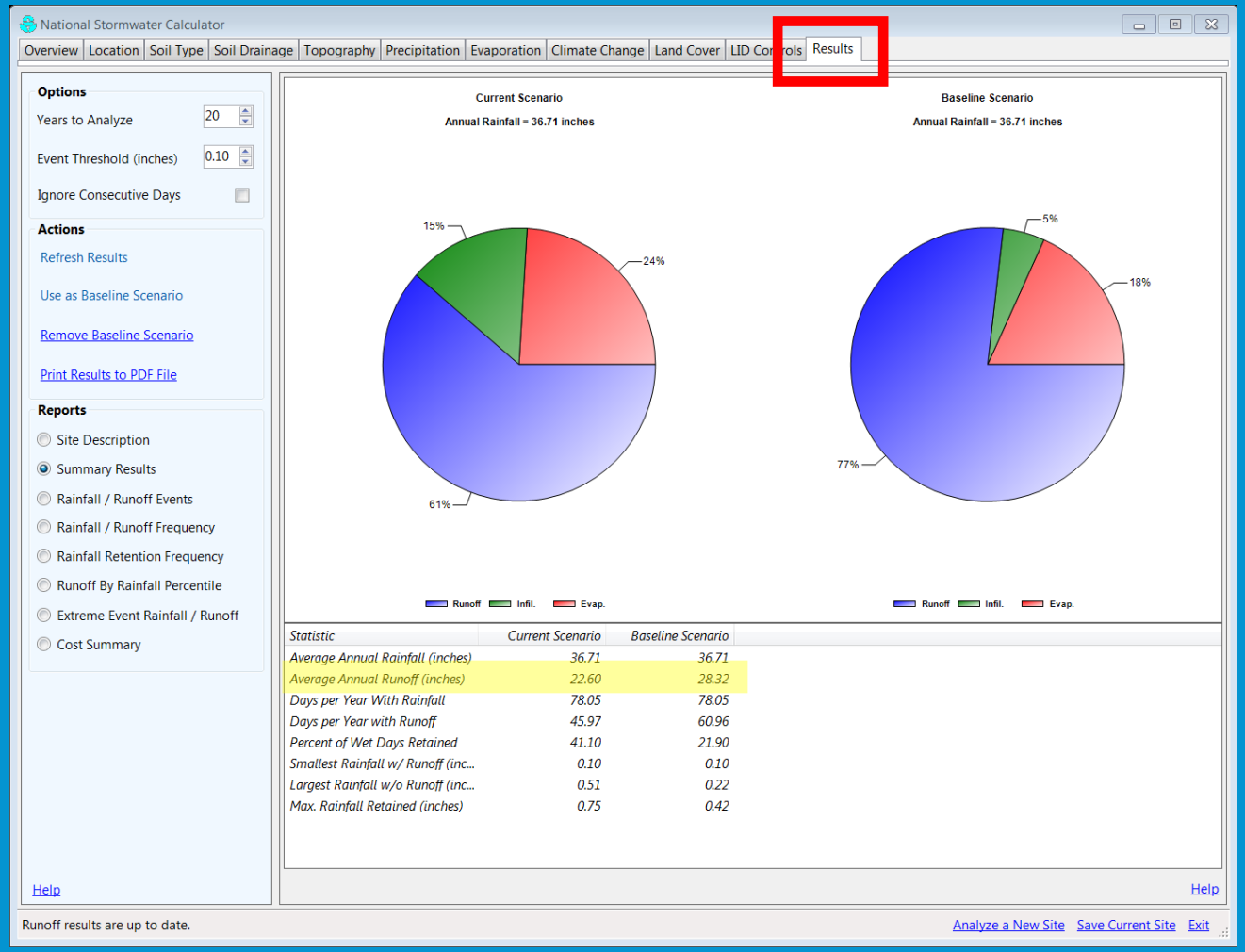
EPA National Stormwater Calculator – with Green Infrastructure



GI Grant Program Technical Requirements

EPA National Stormwater Calculator – with Green Infrastructure

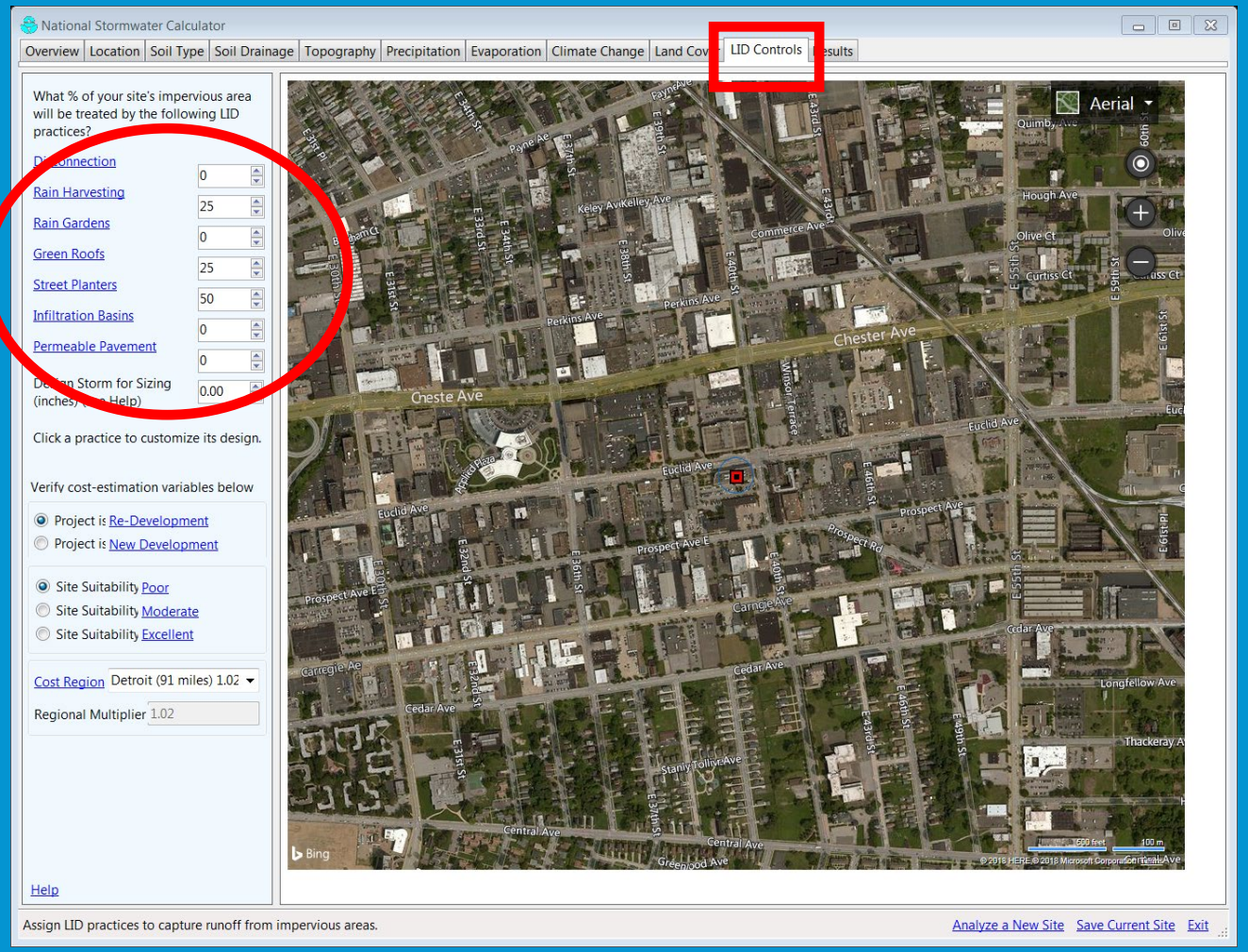
75% of Impervious Area to Street Planters



GI Grant Program Technical Requirements

EPA National Stormwater Calculator – with Green Infrastructure

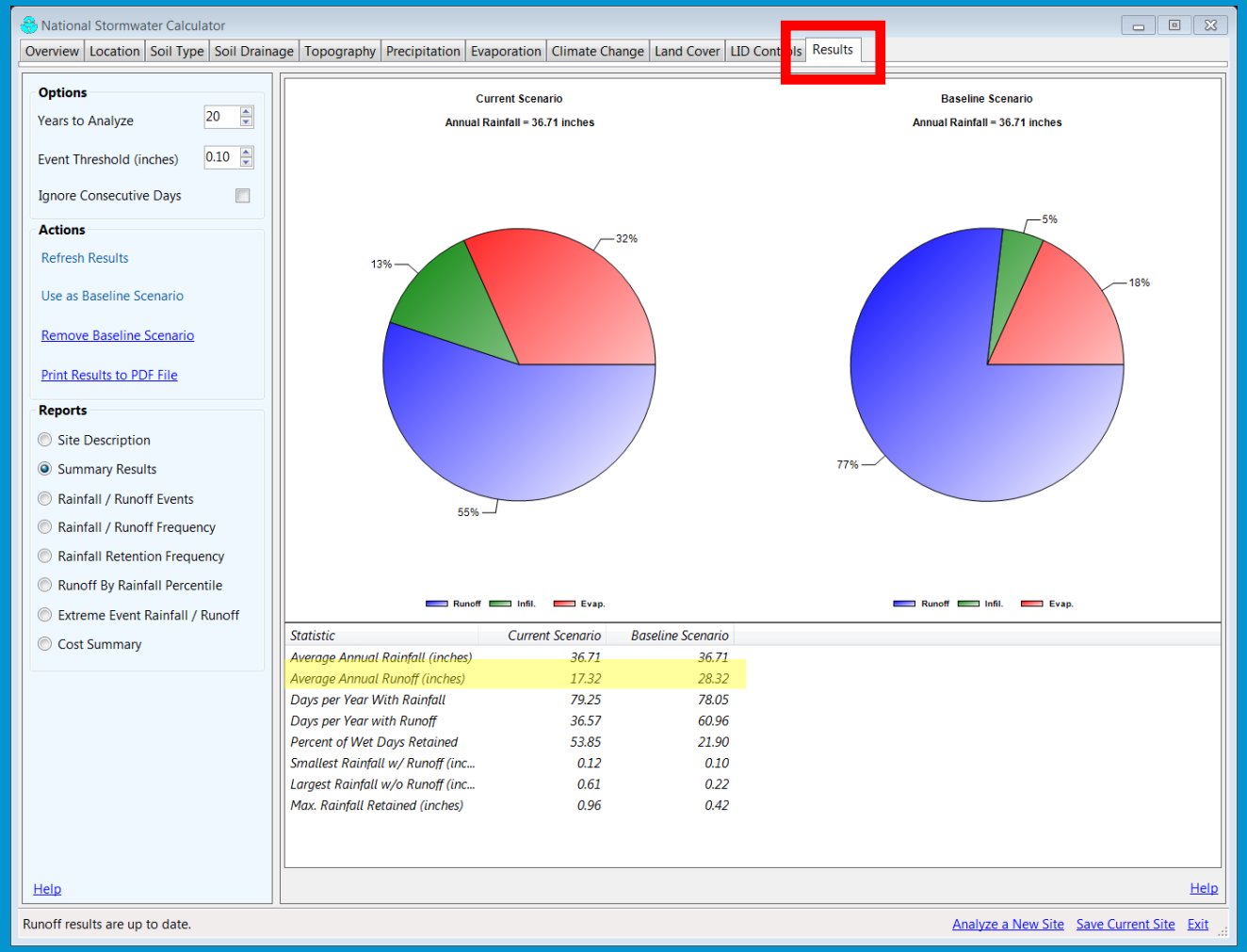
Multiple LID Controls



GI Grant Program Technical Requirements

EPA National Stormwater Calculator – with Green Infrastructure

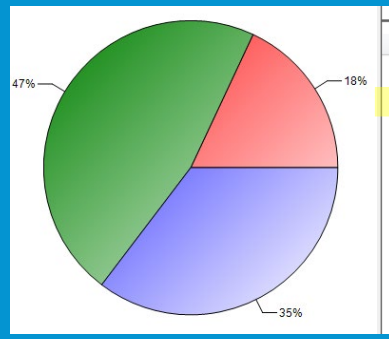
Multiple LID Controls



GI Grant Program Technical Requirements

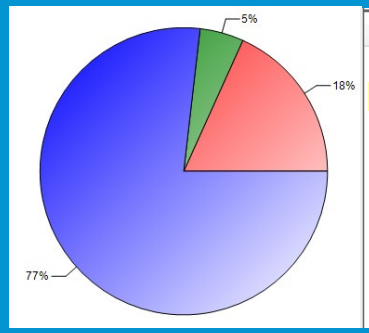
EPA National Stormwater Calculator

Existing Conditions



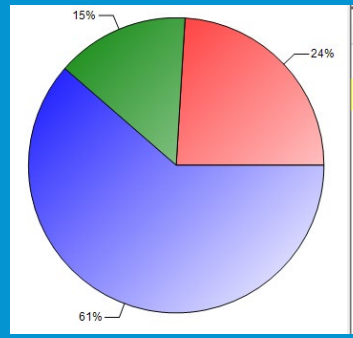
Statistic	Current Scenario
Average Annual Rainfall (inches)	36.71
Average Annual Runoff (inches)	13.13
Days per Year With Rainfall	78.05
Days per Year with Runoff	22.63
Percent of Wet Days Retained	71.00
Smallest Rainfall w/ Runoff (inc...	0.16
Largest Rainfall w/o Runoff (inc...	0.67
Max. Rainfall Retained (inches)	1.15

Minimum Title IV Requirements (Baseline Scenario)



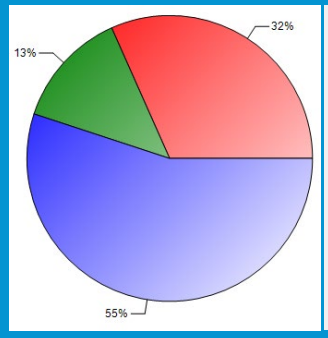
Statistic	Current Scenario
Average Annual Rainfall (inches)	36.71
Average Annual Runoff (inches)	28.32
Days per Year With Rainfall	78.05
Days per Year with Runoff	60.96
Percent of Wet Days Retained	21.90
Smallest Rainfall w/ Runoff (inc...	0.10
Largest Rainfall w/o Runoff (inc...	0.22
Max. Rainfall Retained (inches)	0.42

75% of Impervious Area to Street Planters



Statistic	Current Scenario
Average Annual Rainfall (inches)	36.71
Average Annual Runoff (inches)	22.60
Days per Year With Rainfall	78.05
Days per Year with Runoff	45.97
Percent of Wet Days Retained	41.10
Smallest Rainfall w/ Runoff (inc...	0.10
Largest Rainfall w/o Runoff (inc...	0.51
Max. Rainfall Retained (inches)	0.75

Multiple LID Controls



Statistic	Current Scenario
Average Annual Rainfall (inches)	36.71
Average Annual Runoff (inches)	17.32
Days per Year With Rainfall	79.25
Days per Year with Runoff	36.57
Percent of Wet Days Retained	53.85
Smallest Rainfall w/ Runoff (inc...	0.12
Largest Rainfall w/o Runoff (inc...	0.61
Max. Rainfall Retained (inches)	0.96

GI Grant Program Technical Requirements

EPA National Stormwater Calculator – Helpful Hints

Baseline Scenario

- Use existing conditions (pre-development) when impervious area does not increase
- Use proposed conditions that meet the minimum NEORSD Title IV requirements when impervious area increases

GI Grant Program Technical Requirements

EPA National Stormwater Calculator – Helpful Hints

Treatment Trains

- The SWC does not model treatment trains…beyond its capabilities
- Use Stormwater Management Model (SWMM); or…
- Be creative…justify your assumptions

GI Grant Program Technical Requirements

EPA National Stormwater Calculator – Helpful Hints

Treatment Trains

- A 15,000 sq.ft. Green Roof (GR) discharges to Permeable Pavement (PP)
- **Step 1:** Run the model for just the GR and its drainage area. Results in 45% capture; so assume 8,250 sq.ft. of the GR (55% of 15,000 sq.ft.) continues to behave as impermeable and goes to the PP.
- **Step 2:** Run the model for just the PP and its drainage area, but also take into account the additional 8,250 sq.ft. of impervious area from the GR.
- The results from the PP model run should be used as your final result.

GI Grant Program Technical Requirements

EPA National Stormwater Calculator – Helpful Hints

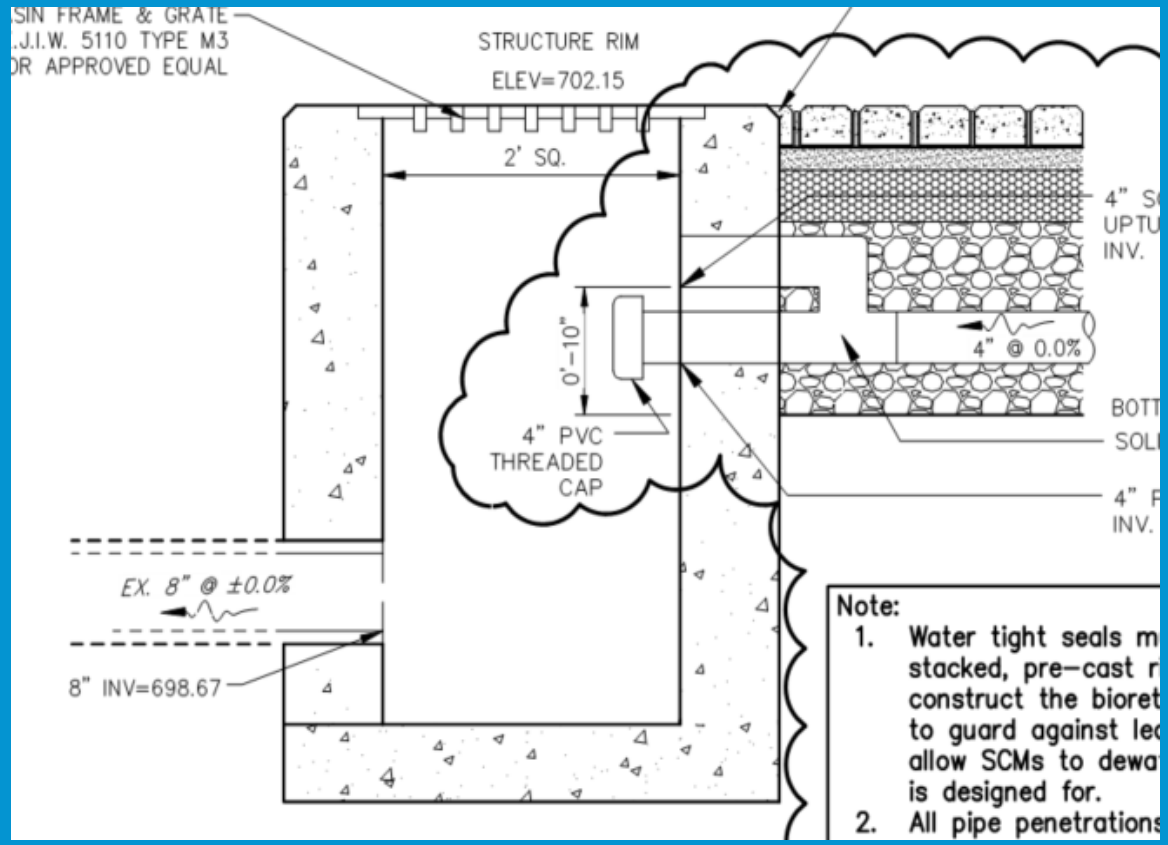
Underdrains

- Unless ideal soil conditions exist, underdrains are a necessary design feature for street planters and permeable pavement.
- Proposed standard underdrains will not negatively affect your grant application.
- Encouraged to alter the design of your underdrains to maximize infiltration potential (e.g., adding an upturned elbow).

GI Grant Program Technical Requirements

EPA National Stormwater Calculator – Helpful Hints

Upturned Elbow



GI Grant Program Technical Requirements

EPA National Stormwater Calculator – Helpful Hints

Unique Control Practices

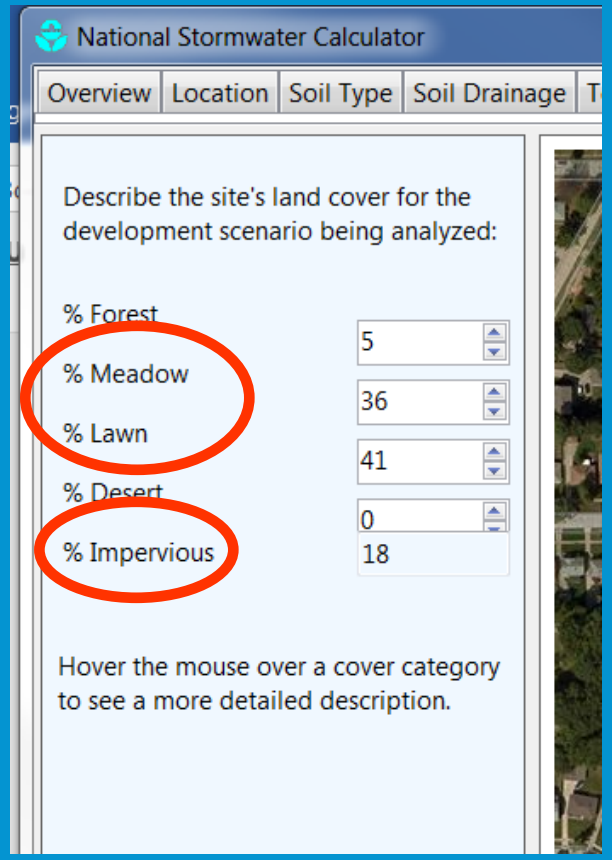
- If a proposed practice does not fit the mold of any of the calculator's options, use best professional judgement to select one or more of the seven LID Controls, and provide a brief narrative to justify selection.

GI Grant Program Technical Requirements

EPA National Stormwater Calculator – Helpful Hints

Land Cover Module

- Account for footprints of rain gardens, street planters and infiltration basins as Meadow or Lawn.
- Account for footprints of permeable pavement and green roofs as Impervious

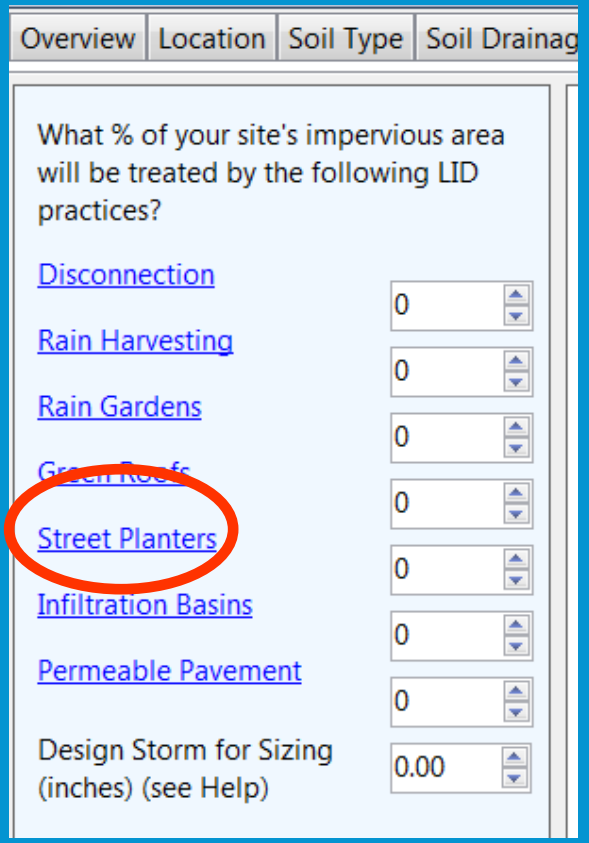


GI Grant Program Technical Requirements

EPA National Stormwater Calculator – Helpful Hints

LID Controls Module

- Bioretention cells & infiltration trenches = Street Planters
- Footprints of rain gardens, street planters and infiltration basins = Meadow or Lawn
- Footprints of permeable pavement and green roofs = Impervious



GI Grant Program Technical Requirements

First-Year Maintenance

Your request must account for the first 12 months maintenance

- Why?
  - Good knowledge of “how” to maintain, but underestimating “how much” it costs to maintain.
  - First year is most critical (especially with plants)
  - A reality check on what it takes!
- We will be there along the way

GI Grant Program Technical Requirements

First-Year Maintenance

- Grant request must account for expenses to maintain your project
- Must include detailed cost-estimate for first 12-months of maintenance
- Account for labor, materials, landscaping, equipment rental, contracts, etc.
- DIY or utilize contracts
- Reimbursement process works the same

GI Grant Program Technical Requirements

First-Year Maintenance

- GI SCMs with landscaping (plants)
  - Weeding, watering, mulching, trash removal, pre-treatment device cleaning, etc.
- Porous Pavement
  - Professional sweeping 2-4x for first year, replenish stone (pavers), etc.

GI Grant Program Technical Requirements

First-Year Maintenance

- Rainwater Harvesting
  - Inspection, cleaning, testing equipment, winterizing, etc.
- Infiltrating SCMs
  - Pre-treatment device cleaning, trash removal, etc.

GI Grant Program Technical Requirements

First-Year Maintenance

- For more technical information…go to FAQ

- USEPA Stormwater Calculator FAQs (for NEORSD GIG Application purposes)

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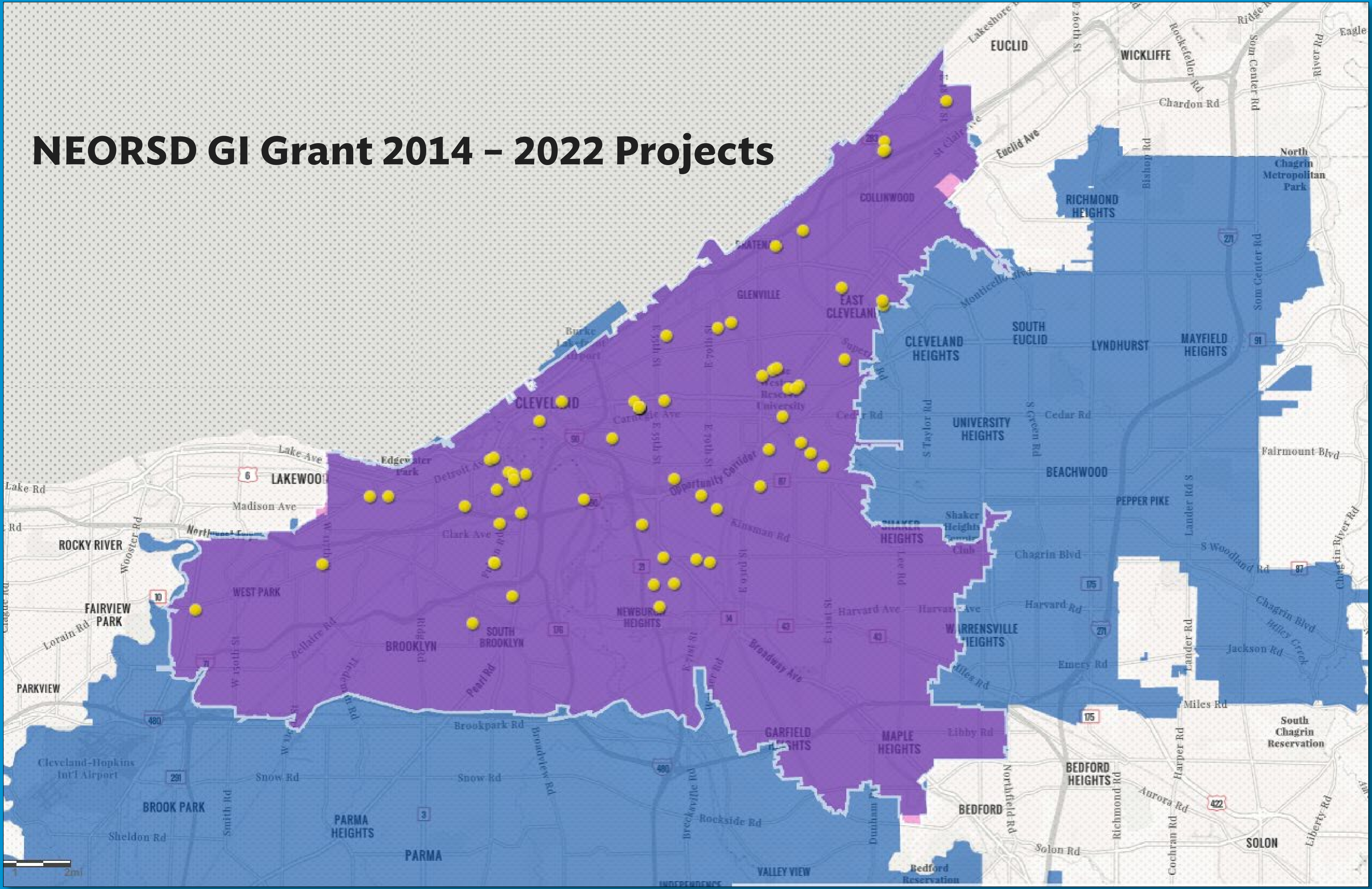
NEORSD Green Infrastructure Grants Program

Preproposal Workshop for the 2023 GI Grants funding round

NEORSD GI Grant Document Submittal Process

Jessica S. Cotton, Grant Programs Administrator

NEORSD GI Grant 2014 – 2022 Projects



GI Grant Program Document Submittal Process

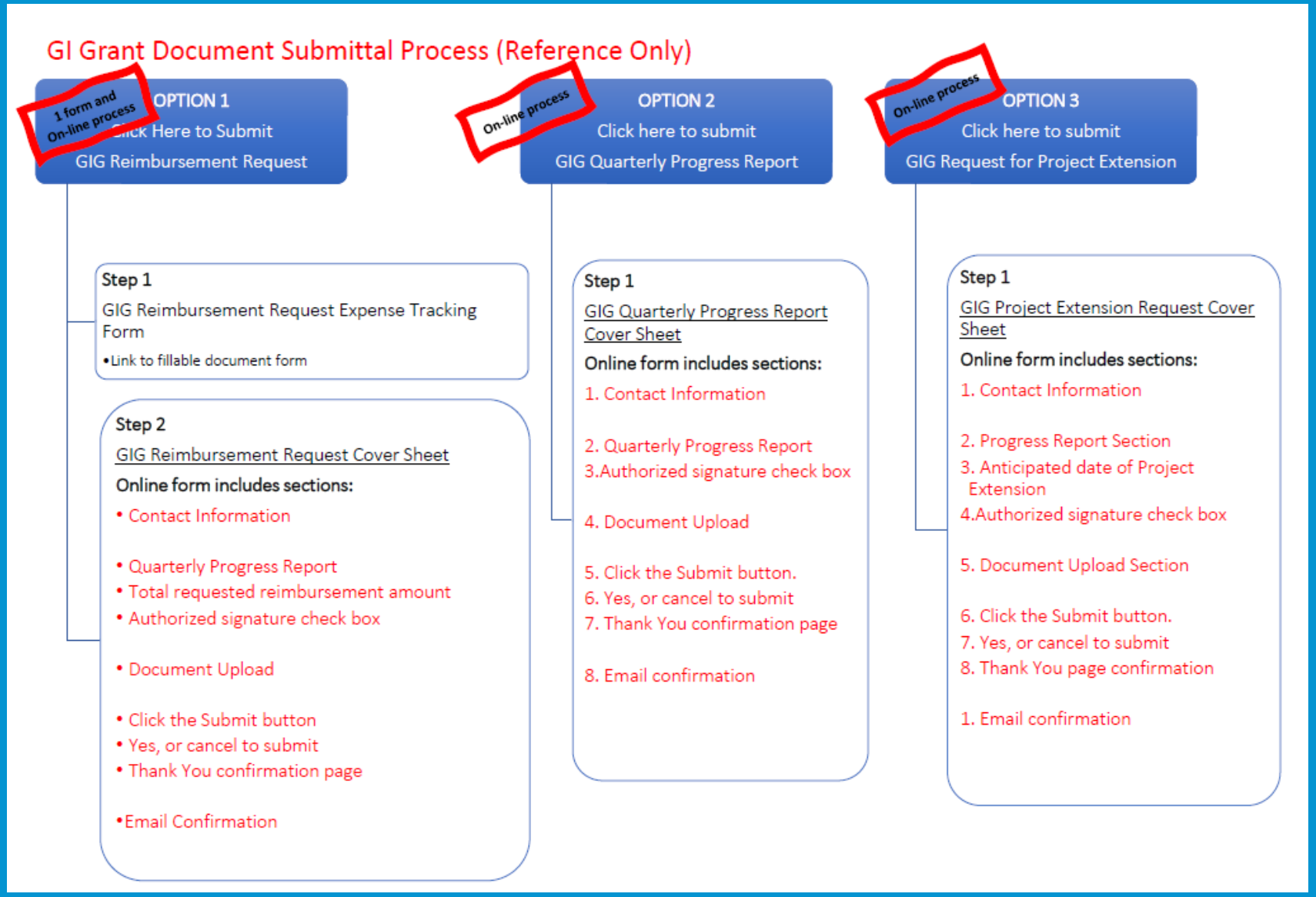
The Green Infrastructure Grant Program Project document submittal process is required – 3 options

OPTION 1
Click Here to Submit
GIG Reimbursement Request

OPTION 2
Click Here to Submit
GIG Quarterly Progress Report

OPTION 3
Click Here to Submit
GIG Project Extension Request

GI Grant Program Document Submittal Process



GI Grant Program Document Submittal Process

Let's take a look at the
NEORSD GI Grant Website

GI Grant Program Important Dates

- **RFP 2023 GI Grant Funding Round**
  - Week of June 27th (next week)
- **Pre-application Meetings (HIGHLY RECOMMENDED)**
  - July/August
  - An opportunity to meet with applicants to discuss projects prior to submission
- **Application Submission Deadline**
  - September 12, 2022
  - GI Grant Application Portal
  - https://www.grantrequest.com/Login.aspx?ReturnUrl=%2fapplication.aspx%3fSA%3dSNA%26FID%3d35014%26sid%3d5833&SA=SNA&FID=35014&sid=5833
- **Project Reviewing Period /Notifications to Applicants**
  - October and November

Questions?

- **Jessica Cotton, Grant Programs Administrator**
  - CottonJ@neorsd.org
- **Chris Hartman, Stormwater Technical Specialist**
  - HartmanC@neorsd.org
- **Katie Waag, Assistant General Counsel**
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NEORSD Green Infrastructure website

Northeast Ohio
Regional Sewer District

Thank you