



# Review of Provision C.3 Requirements in MRP 3.0

Jill Bicknell, P.E.

Assistant Program Manager

Santa Clara Valley Urban Runoff Pollution Prevention Program

April 29, 2025

# Presentation Overview

- Overview of MRP 3.0
- Provision C.3 New/Redevelopment
  - C.3 Basics
  - Low Impact Development (LID) Measures
  - Regulated Projects Requirements (Parcel-based and Road/Right of Way (ROW))
  - Green Stormwater Infrastructure (GSI) Requirements and Options
  - Alternative Compliance



Credit: EOA



Credit: City of San José

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# Bay Area Municipal Regional Permit (MRP)

- Regional Phase I stormwater NPDES permit for urban areas (79 permittees):
  - San Mateo, Santa Clara, Alameda, and Contra Costa Counties, Fairfield, Suisun City, and Vallejo
- “MRP 3.0” adopted in May 2022 and became effective on July 1, 2022
- New Provision C.3 (New/Redevelopment) requirements took effect on July 1, 2023
- Permit amended on October 11, 2023 to revise some C.3 requirements



# Provision C.3 Basics

- New Development and Redevelopment projects above certain impervious surface thresholds are required to manage stormwater runoff onsite using Low Impact Development (LID) measures or Green Stormwater Infrastructure (GSI).
- Permittees are also required to retrofit existing public streets and parking lots where feasible to treat runoff with LID/GSI measures



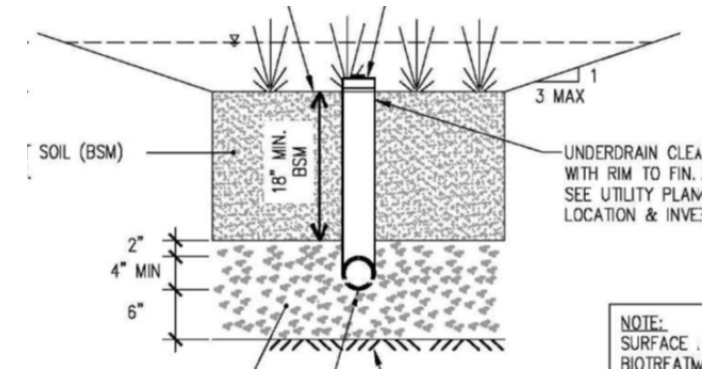
# LID Requirements for Regulated Parcel-Based Projects

- Source Controls - permanent features or practices that reduce pollutant sources
- Site Design – design features that reduce or disconnect impervious surfaces and preserve natural areas
- LID Treatment Measures – infiltration, evapotranspiration, rainwater harvesting/use, and biotreatment/bioretenion
- Hydromodification Management Measures – storage facilities to manage changes in flow patterns on the site to minimize erosion in receiving streams



# LID Sizing and Design Guidelines

- C.3.d sizing requirements
  - 80% of average annual runoff (volume-based)
  - Flow of runoff from a rain event of 0.2 inches per hour intensity (flow-based)
- Bioretention design criteria
  - 5 in/hr surface loading rate
  - Engineered biotreatment soil mix (per spec)
  - Raised underdrain for max infiltration if allowed
- Pervious pavement design criteria
  - Volume-based; follow established guidance/specs



# Provision C.3 – Unchanged Requirements

- LID approach – source control, site design, treatment
- LID sizing and design guidelines
- Hydromodification requirements
- Site design requirements for small, unregulated projects
- Operation & maintenance verification requirements
- Special Projects (except Category C criteria)
- Alternative compliance options



# Changed/New Requirements for Parcel-Based Regulated Projects

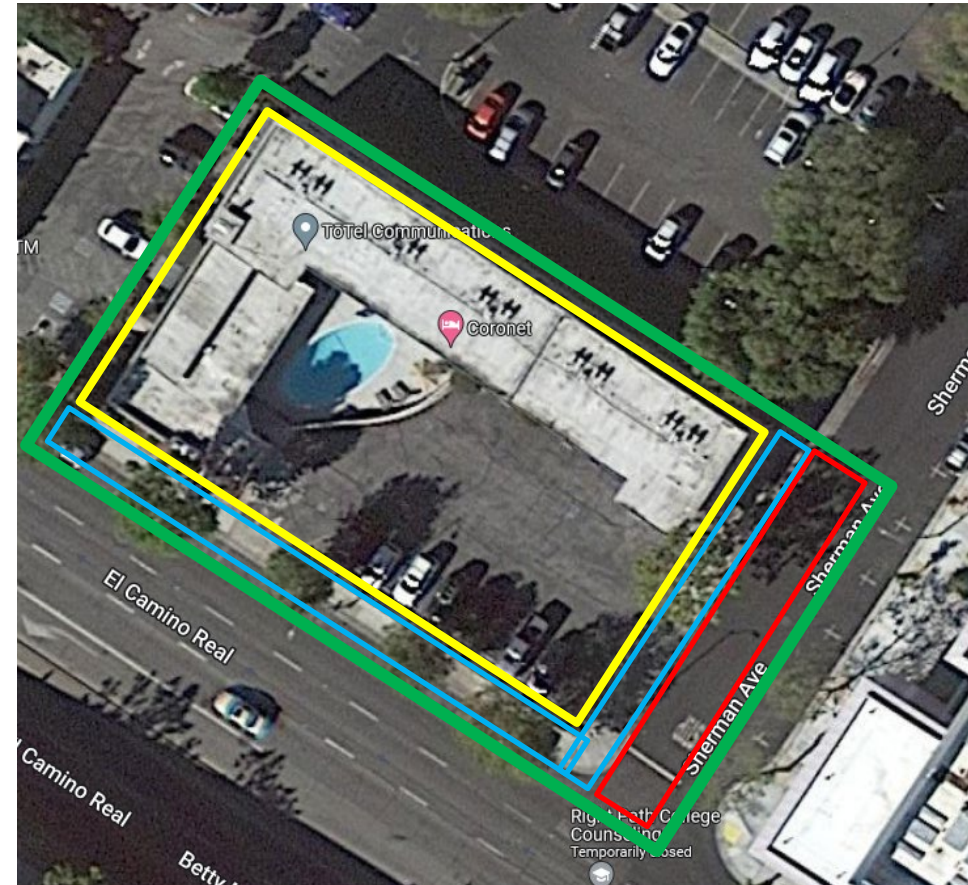
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- Change in Threshold
  - Threshold for impervious surface created and/or replaced reduced from  $\geq 10,000$  to  $\geq 5,000$  sq. ft. for most projects
  - Includes impervious surface created and/or replaced in public right-of-way (ROW) as part of project (e.g., sidewalk, street frontage)
  - Also applies to renovation of public/private parking lots and other pavement on-site (down to top of base course)
- New Regulated Project Category
  - Detached single-family home projects that create/replace  $\geq 10,000$  sq. ft. of impervious surface

# Consideration of the Project Frontage

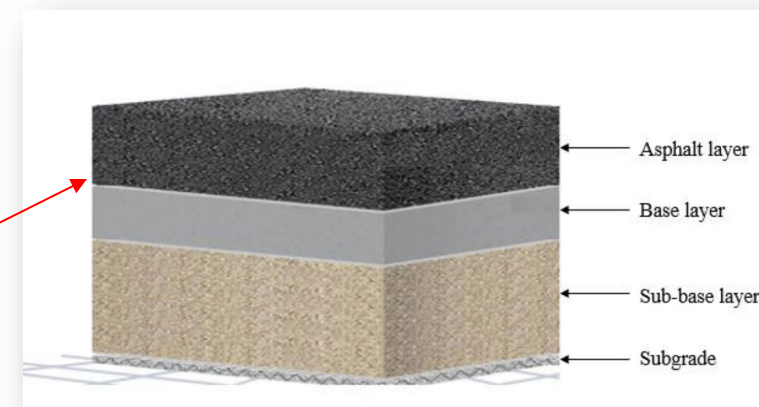
- Off-site improvements in the public ROW that are required for the development project must be included as part of the project
  - Areas count toward thresholds
  - Areas must be treated if the project is regulated
- Example redevelopment project:

- Development site boundary
- Sidewalk replacement
- Road improvements
- Project boundary



# Pavement Maintenance vs. Reconstruction

- Surface treatment such as applying a top layer or sealant on existing impervious surface without disturbing the base course is not regulated
  - Base course = layer of material (typically aggregate) located above subbase and subgrade course, and below the surface layer
- Reconstruction (disturbing below top of base course) is regulated
- Upgrading from dirt to gravel or from dirt/gravel to chip seal, asphalt, or concrete pavement is regulated
  - Gravel is considered an impervious surface unless constructed like pervious pavement



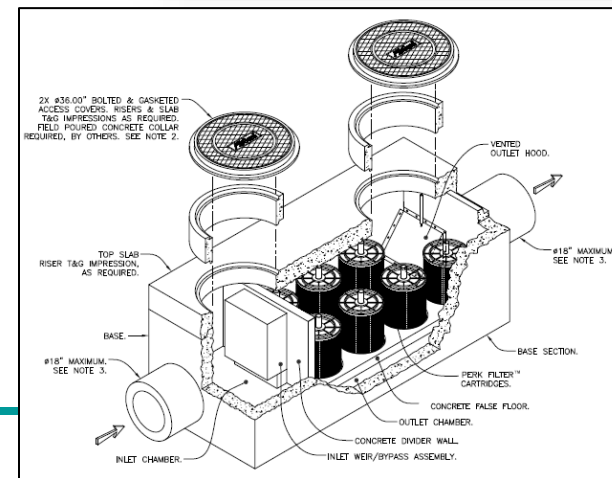
Top of base  
course

# Summary of Regulated Parcel-Based Project Requirements

Project Type/Description	Threshold Type	Impervious Surface Created and/or Replaced	
		MRP 2.0	MRP 3.0
Detached single-family home not part of larger plan of development	Cumulative	Exempt	<b>10,000 SF</b>
Public/private development (including any improvements in frontage or public ROW)	Cumulative	10,000 SF	<b>5,000 SF</b>
Public/private redevelopment (including any improvements in frontage or public ROW)	Cumulative	10,000 SF	<b>5,000 SF</b>
Renovation of existing public/private parking lots and/or other pavement onsite	Cumulative	Exempt	<b>5,000 SF</b>

# Special Projects

- Smart growth or high-density projects that may receive LID treatment reduction credit
  - Non-LID measures are limited to tree box filters and media filters
  - Required to demonstrate infeasibility of 100% LID treatment prior to receiving LID treatment reduction credits
  - Amount of credit based on size, lot coverage, location, density, surface parking and **number of affordable housing units**



# Special Projects Category A – Small Infill Projects

- Located in central business district or comparable pedestrian-oriented district.
- Built as part of objective to preserve or enhance pedestrian-oriented environment.
- No surface parking except for emergency access, ADA or loading requirements.
- At least 85% of lot covered by buildings; 15% for safety access, trash/recycling, public uses, etc.
- Creates or replaces ½ acre or less of impervious surface.
- 100% LID treatment reduction credit.
- **No change in MRP 3.0**



# Special Projects Category B – High Density Projects

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- Located in central business district or comparable pedestrian-oriented district.
- Built as part of objective to preserve or enhance pedestrian-oriented environment.
- No surface parking except for emergency access, ADA or loading requirements.
- At least 85% of lot covered by buildings; 15% for safety access, trash / recycling, public uses, etc.
- Creates or replaces  $> \frac{1}{2}$  acre, but no more than 2 acres of impervious surface.
- Graduated system of LID treatment reduction credit depending on Floor Area Ratio (FAR) or gross density (DU/Ac) - 50%, 75%, or 100%
- **No change in MRP 3.0**



# Special Projects Category C – Transit Oriented

- Project must be non-auto-related land use project
- LID treatment reduction credit is the sum of:
  - Location credit – near transit hub/Priority Development Area (PDA)
  - Density credit
  - Minimum surface parking credit
  - **Category not available after June 30, 2023**
  - **Replaced by Affordable Housing Category**



# Special Projects Category C – Affordable Housing

- Applicable to preserved housing projects with deed restrictions running at least 55 years and rent/mortgage rates  $\leq$  30% of the adjusted area median household income (AMI) limits (see permit language)
- Primarily a residential project with minimum gross density of 40 DU/acre
- LID treatment reduction credit is the sum of credits for:
  - Percent of dwelling units in different affordability categories (times a credit multiplier and summed)\*
  - Location
  - Density
  - Surface parking



# Changes/New Requirements – Road/ROW Projects

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- Roads, sidewalks and trails
  - Threshold reduced to 5,000 SF contiguous impervious area for:
    - New roads, including sidewalks and bike lanes
    - Adding traffic lane to an existing road
    - New stand-alone trail projects  $\geq 10$  feet wide or  $\leq 50$  feet from creek bank built with impervious surface\*

\*Gravel is considered an impervious surface unless constructed like pervious pavement.

# Changes/New Requirements – Road/ROW Projects

- Public works maintenance projects
  - Projects in the public right-of-way that disturb  $\geq 5,000$  SF of contiguous impervious surface (down to top of base course)
  - Small discontinuous projects like sidewalk gap closures, sidewalk replacement, and ADA curb ramps are typically below this threshold
    - However, if these improvements are associated with a Regulated Project, the areas must be added to the cumulative impervious surface total of that project and treatment provided



# Changes/New Requirements – Road/ROW Projects

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- Road reconstruction projects – regulated at  $\geq 1$  acre of contiguous\* impervious surface
  - Reconstruction of existing public streets and roads (and adjacent sidewalks and bike lanes) down to top of base course
  - Extending the pavement edge of an existing road (e.g., paving gravel shoulders)
  - Utility trenching projects which are  $\geq 8$  feet wide on average, over the entire length of the project

\*Project areas interrupted by cross streets or intersections are considered contiguous

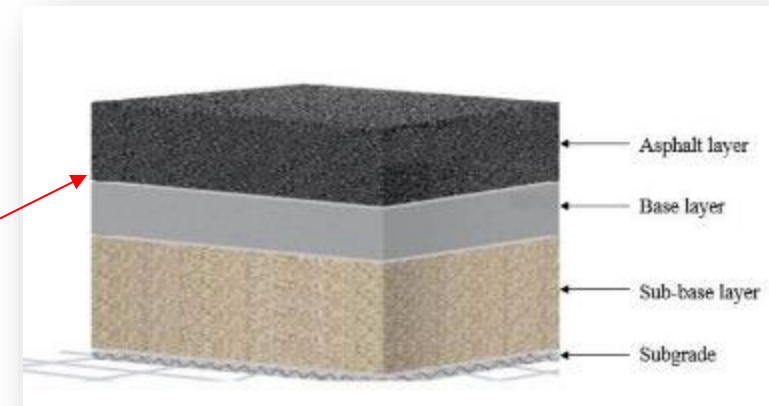
# Pavement Maintenance vs. Reconstruction

- Surface treatment such as applying a top layer or sealant on existing impervious surface without disturbing the base course is not regulated

- Base course = layer of material (typically aggregate) located above subbase and subgrade course, and below the surface layer

- Reconstruction (disturbing below top of base course) is regulated

Top of base course



- Upgrading from dirt to gravel\* or from dirt/gravel to chip seal, asphalt, or concrete pavement is regulated

\*Gravel is considered an impervious surface unless constructed like pervious pavement.

# Pavement Maintenance Requirements

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- Pavement Maintenance on Roads
  - Included practices – regulated at  $\geq 5,000$  SF (contiguous)
    - Upgrade from dirt to gravel (unless built to spec for pervious pavement)
    - Upgrade from dirt/gravel to chip seal, asphalt, or concrete pavement
    - Removing/replacing asphalt or concrete to top of base course or lower
    - Repair of pavement base (i.e., base failure repair)
    - Extending the pavement edge or paving graveled shoulders
  - If these practices are part of a Road Reconstruction Project, the threshold is 1 acre of contiguous impervious surface created/replaced.

# Unregulated Pavement Maintenance

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- Excluded pavement maintenance practices (roads and parcels)
  - Pothole and square cut patching
  - Overlay gravel on existing gravel
  - Overlay asphalt/concrete on existing asphalt/concrete (no increase in area)
  - Apply bituminous surface treatment (e.g., “chip seal”) to existing asphalt or concrete (no increase in area)
  - Upgrade from chip seal to asphalt or concrete (no increase in area)
  - Shoulder grading
  - Reshaping/regrading drainage
  - Crack sealing and pavement preservation that does not expand road prism

# Summary of Regulated Project Requirements

Project Type/Description	Threshold Area	MRP 2.0	MRP 3.0
<b>Parcel-Based Projects</b>			
Detached single-family home not part of larger plan of development	Cumulative	Exempt	<b>10,000 SF</b>
Public/private development or redevelopment project	Cumulative	10,000 SF	<b>5,000 SF</b>
Renovation of existing public/private parking lots or other pavement onsite	Cumulative	Exempt	<b>5,000 SF</b>
<b>Roads, Sidewalks, and Trails</b>			
New roads, including sidewalks and bike lanes	Contiguous	10,000 SF	<b>5,000 SF</b>
Adding traffic lanes to an existing road	Contiguous	10,000 SF	<b>5,000 SF</b>
New stand-alone trail projects $\geq$ 10 feet wide with impervious surface	Contiguous	10,000 SF	<b>5,000 SF</b>
Sidewalk gap closures, sidewalk replacement, ADA curb ramps not associated with a parcel-based project	Contiguous	10,000 SF	<b>5,000 SF</b>
<b>Road Maintenance/Reconstruction Projects</b>			
Reconstructing existing roads, including sidewalks and bicycle lanes	Contiguous	Exempt	<b>1 acre</b>
Extending roadway edge	Contiguous	Exempt	<b>1 acre</b>
Utility trenching projects with average trench width $\geq$ 8 feet	Contiguous	Exempt	<b>1 acre</b>

# Effective Dates and Grandfathering

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- New requirements for Regulated Projects (Provision C.3.b) take effect July 1, 2023
- Until July 1, 2023, MRP 2.0 (Attachment I) requirements apply
  - A private project “in the pipeline” that is approved or entitled by June 30, 2023 must meet MRP 2.0 requirements
  - For a public project, agency should make a judgment as to what is equivalent to “approved”

# Parcel-based Projects and the “50% Rule”

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- Where a redevelopment project alters  $\geq 50\%$  of the impervious surface of a previously existing development, runoff from the entire project (i.e., all existing, new, and/or replaced impervious surfaces) must be treated.
- Where a redevelopment project alters  $< 50\%$  of the impervious surface of a previously existing development, only runoff from the new and/or replaced impervious surface of the project must be treated.
- **The calculations in the scenarios above must include portions of the public right of way (e.g., frontage) that are developed or redeveloped as part of the Regulated Project.**
  - Tip: Define project boundary to include parcel boundary plus just the offsite impervious surface that is being altered.

# Road Reconstruction and the “50% Rule”

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- Where a reconstruction project disturbs  $\geq 50\%$  of the existing impervious surface of the road, the entire road surface must be included in the treatment system design.
- Where a reconstruction project disturbs  $< 50\%$  of the existing impervious surface of the road, only the new and/or replaced impervious surface of the road project must be included in the treatment system design.
  - However, if the runoff from that portion of the road cannot be separated from runoff from the rest of the road, the runoff from the entire surface draining onto the reconstructed portion must be treated.
  - This may also be an issue with regulated utility trenching projects that disturb a portion of the road but need to treat runoff from larger drainage areas
  - Can consider alternative compliance options to minimize the treatment area

# GSI - Programmatic Implementation

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- Permittees developed GSI Plans during MRP 2.0
- Must continue to implement and update as needed
  - Complete updates to related municipal plans
  - Develop funding and funding mechanisms
  - Update GSI guidance, details and specifications
  - Implement tools to track and map completed projects
  - Adopt/amend policies, ordinances, and legal mechanisms
  - Conduct outreach, education, and training
- Look for opportunities to integrate GSI into public projects
  - “No Missed Opportunities”

# GSI - Numeric Retrofit Targets (C.3.j)

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- Each Permittee has a short-term numeric retrofit target (during the 5-year MRP term)
  - 3 acres treated per 50,000 population (up to 5 acres)
  - Can be met on countywide basis (46 acres for SC County)
  - Each permittee must implement or contribute to at least one project (minimum 0.2 ac. treated)
  - Projects constructed or planned/funded by end of permit term, including road reconstruction projects, count toward target

# GSI - Numeric Implementation Options

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- Can count GSI projects constructed since January 1, 2021
  - Retrofit existing street or public parking lot with GSI
  - Coordinate with planned capital project (“no missed opportunities”)
- Can count the impervious area treated for Regulated Road Reconstruction Projects
- Can count impervious area treated by non-Regulated Projects
- Can count impervious area treated by Regulated Projects that go “above and beyond”
- Can “contribute substantially” to GSI project(s) outside of a Permittee’s jurisdiction (within its County)

# Options for GSI in Public Rights of Way

Stormwater Curb Extension



Credit: EOA, Inc.

Stormwater Planter



Credit: EOA, Inc.

Planter with Trench Drains



Credit: EOA, Inc.

# Options for GSI in Public Rights of Way



*Credit: EOA, Inc.*

Two-way, raised, separated bikeway with stormwater planter (Emeryville, CA)



*Credit: SMCWPPP*

Stormwater curb extension in Safe Routes to School improvements (San Mateo, CA)

# Options for GSI in Public Rights of Way

Tree Well Filter



*Credit: DeepRoot Green Infrastructure*

Suspended Pavement System with Silva Cells under Pervious Pavement (Palo Alto, CA)

Tree Well Filter



*Credit: DeepRoot Green Infrastructure*

Suspended Pavement System with Silva Cells under Pervious Pavement (Seattle, WA)

Bioretention with Trees



*Credit: EOA, Inc.*

Adjacent sidewalk has suspended pavement system with structural soil (Emeryville, CA)

# Options for GSI in Public Rights of Way

## Pervious Pavement



*Credit: EOA, Inc.*

**Pervious Asphalt Parking Lot  
(Los Gatos, CA)**



*Credit: EOA, Inc.*

**Pervious Concrete Parking Stalls  
(San Jose, CA)**

# Options for GSI in Public Rights of Way

## Pervious Pavement



*Credit: EOA, Inc.*



*Credit: EOA, Inc.*

## Stormcrete Pre-cast Pervious Concrete Slabs (Berkeley, CA)

# Alternative Compliance

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- Alternative Compliance (AC) is an option in Provision C.3.e that allows flexibility in meeting C.3 requirements for regulated projects
- The options for AC include:
  - LID treatment of equivalent impervious surface in another location off-site
  - Payment of in-lieu fee for off-site or regional project treatment
- AC projects must be in same watershed (defined broadly) and achieve a net water quality benefit (not defined)
- AC projects must be completed within 3 years of regulated project completion (up to 5 years with Water Board approval)

# Locations/Types of Alternative Compliance (AC)

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- AC for municipal projects within the permittee's jurisdictional boundaries (e.g., capital improvement projects, roads etc.)
- AC for private projects within the permittee's jurisdictional boundaries (e.g., regulated parcel-based projects)
- AC through a regional trading system where treatment could occur outside of the jurisdiction

# AC for Public Projects Within the Jurisdiction

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- Treat an equivalent amount of impervious surface (plus 10% extra for “net benefit”) in another location
- Build a voluntary GSI project in the public ROW, park, campus, etc., and use “greened acres” for public projects needing AC
- Use existing GSI projects to provide “greened acres” for alternative compliance if:
  - The project wasn’t used for a Regulated Project
  - The project complies with C.3.d sizing and other metrics
- Note that “greened acres” cannot be used for both AC and meeting GSI numeric targets

# Questions?

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Jill Bicknell, P.E.

SCVURPPP

[jcbicknell@eoainc.com](mailto:jcbicknell@eoainc.com)



*Credit: EOA, Inc.*