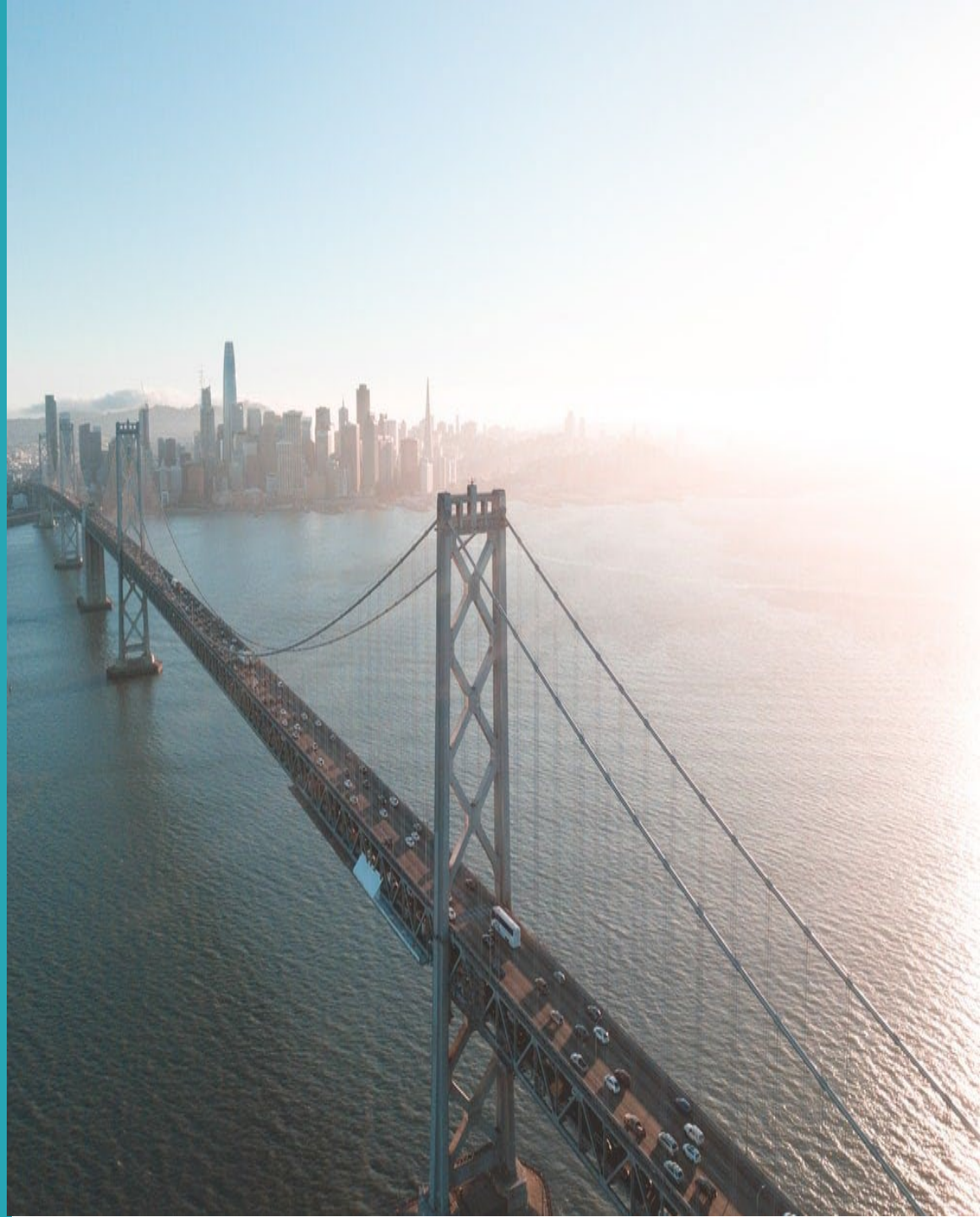


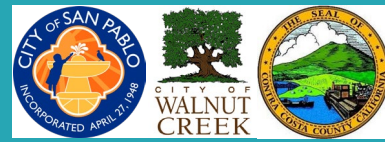


Contra Costa County Regional Alternative Compliance System Overview

Introduction



What Are the Challenges with the Existing System?



- The Municipal Regional Stormwater Permit (MRP) Provision C.3 requires low impact development (LID)/green stormwater infrastructure (GSI) to be implemented:
 - On new development and redevelopment projects
 - To retrofit a proportion of permittee impervious surfaces (C.3.j)

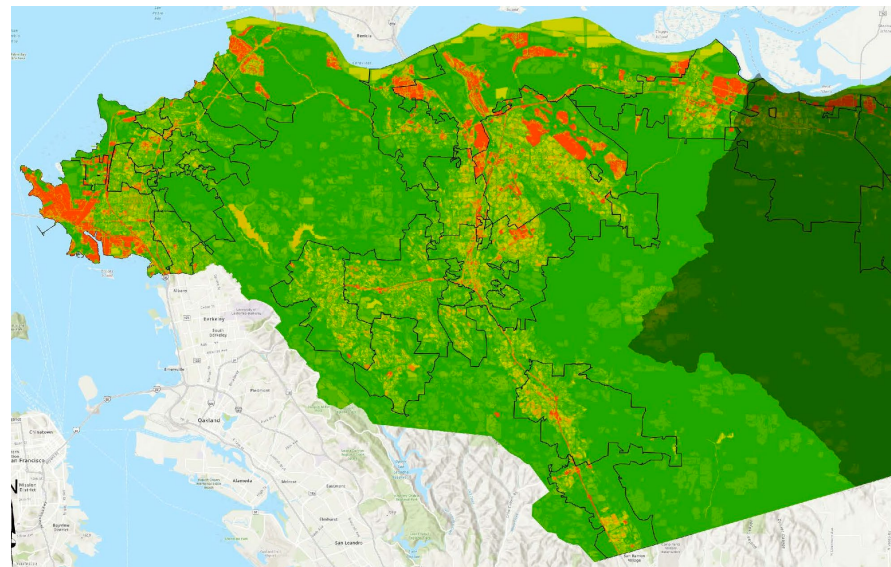


What Are the Challenges with the Existing System?



Challenges:

- Some re/development sites have physical or site use constraints to implement GSI
- Distributed GSI is costly and requires considerable effort to maintain
- Legacy pollution is concentrated in certain areas of Contra Costa County



How can Regional Alternative Compliance (RAC) address these challenges?



- The RAC System allows an **off-site option** for new and redevelopment projects to meet MRP C.3 requirements
 - Other regulated stormwater dischargers may also participate (e.g. Caltrans, Phase II permittees, etc.)
- The RAC System allows for investment in regional GSI projects that:
 - Are cheaper to implement and maintain per acre treated
 - Can be located to target legacy pollution in the County
 - Could provide additional multiple benefits

AND

- The RAC System establishes designated O&M funding to ensure long-term performance of facilities



RAC System Development Process



What is the Legal Basis for Alternative Compliance?



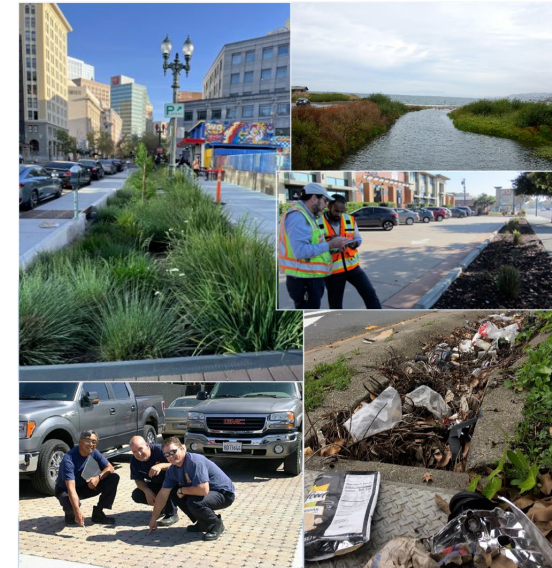
- Alternative compliance systems are legally enabled through existing rules, guidance, and plans
- Contra Costa County (CCC) RAC System was developed in input from:
 - CCC Permittees
 - Advisory Committee made from nine SF Bay Area Counties + Caltrans + Port of Oakland
 - Water Quality Control Board and EPA
 - Internal and external Legal Reviewers



- The Water Board has approved the Contra Costa County RAC System under the current MRP Provision C.3.e “alternative compliance”
- RAC System reporting will be delivered to Water Board at a specified frequency each permit term

California Regional Water Quality Control Board
San Francisco Bay Region
Municipal Regional Stormwater NPDES Permit

Order No. R2-2022-0018
NPDES Permit No. CAS612008
May 11, 2022

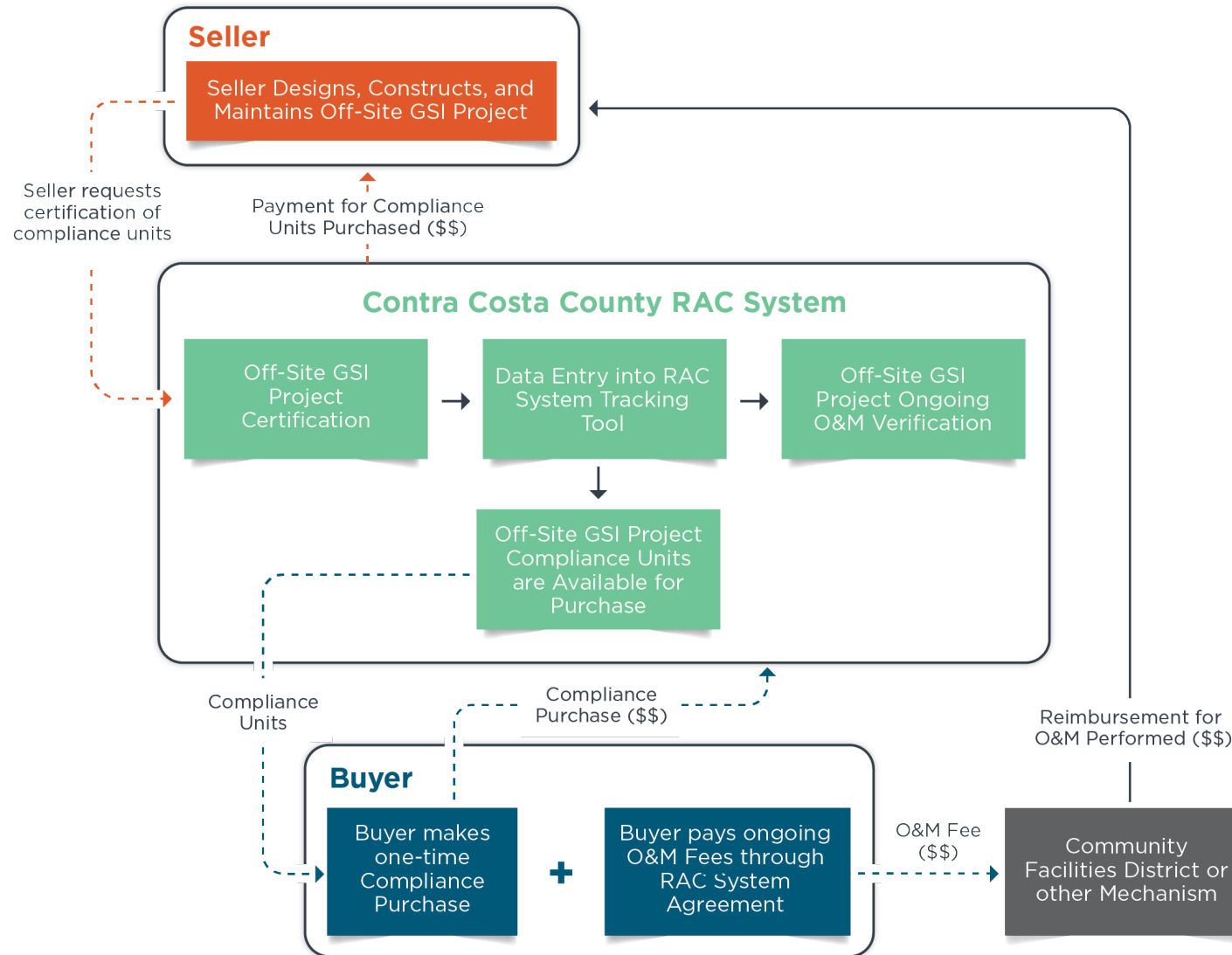


RAC System Implementation Process

System Overview and
Participant Roles



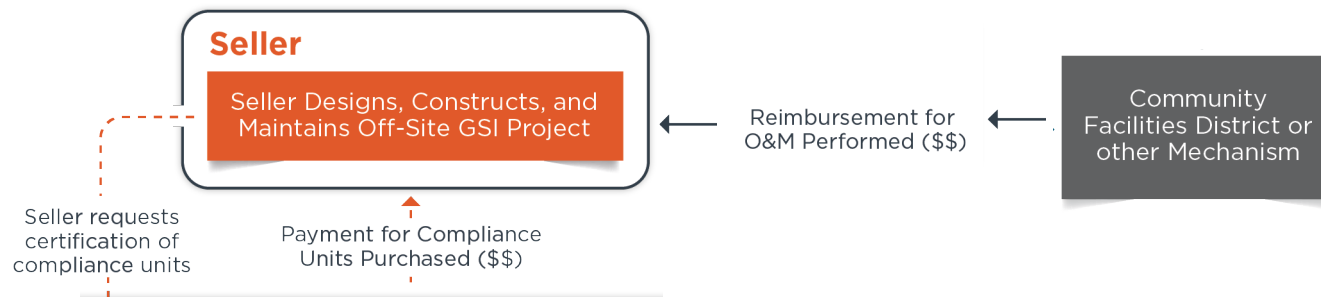
Contra Costa County RAC System



RAC System Participants - Sellers



- Design, construct, and maintain Off-Site GSI projects
- Request certification of compliance units by the RAC System
- Receive payment once compliance units are sold
- Receive reimbursement for O&M performed
- May include:
 - MRP Permittees
 - Contractors/Developers
 - Community Based Public-Private Partnerships (CBP3)



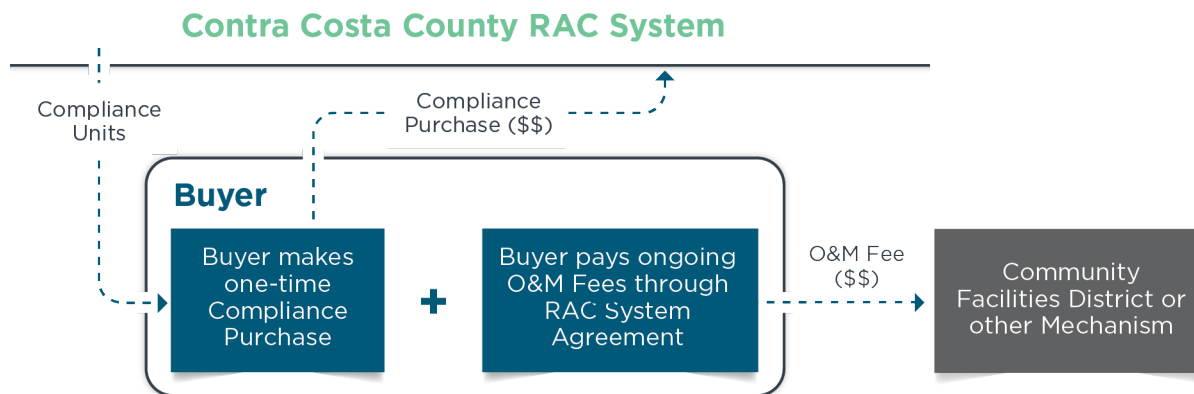
Contra Costa County RAC System



RAC System Participants - Buyers



- Purchase compliance units for their compliance purposes
- Pay an ongoing O&M Fee
- May include:
 - Developers
 - MRP Permittees
 - Other parties subject to NPDES Permits (Caltrans, Phase II permittees, etc.)



RAC System Participants – Jurisdictions/Permittees (Facilitator)

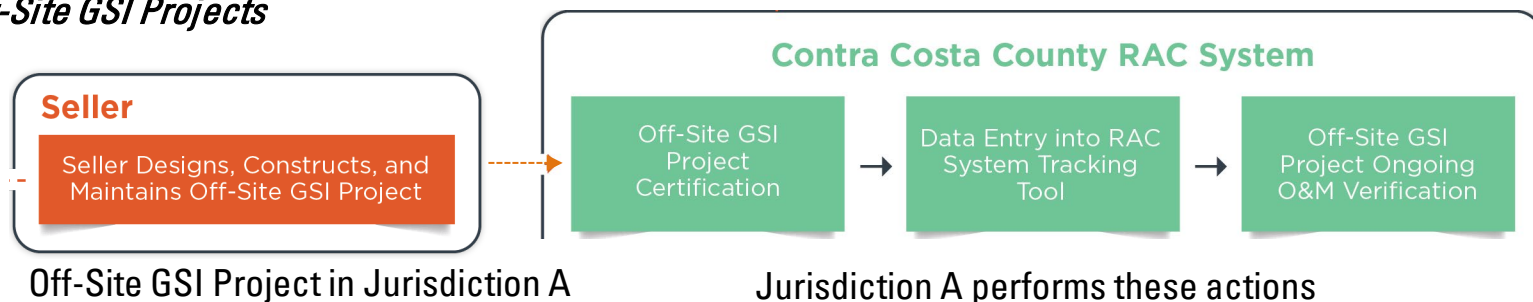


- ❖ Approve use of RAC System (i.e., City Council resolution)
- ❖ Update Stormwater Ordinance to include RAC system

For Off-Site Projects in their boundary:

- Assist with Off-Site GSI Project Certification
- Enter data into RAC System Tracking Tool
- Perform On-Going GSI Project Verification
- Receive payment for these duties

Off-Site GSI Projects

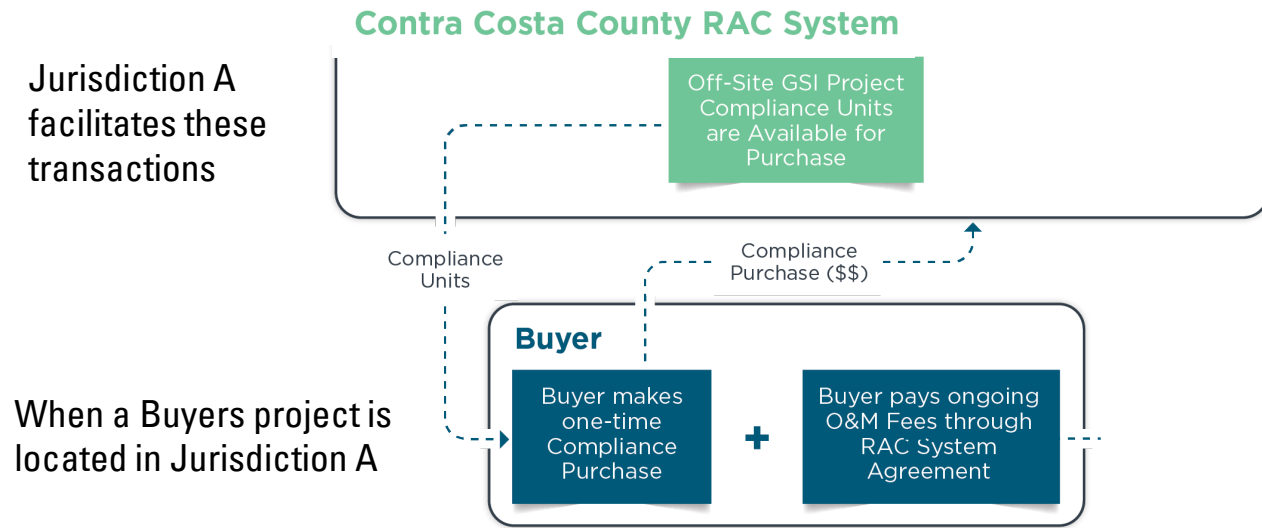


RAC System Participants – Jurisdictions/Permittees (Facilitator)



For Buyers:

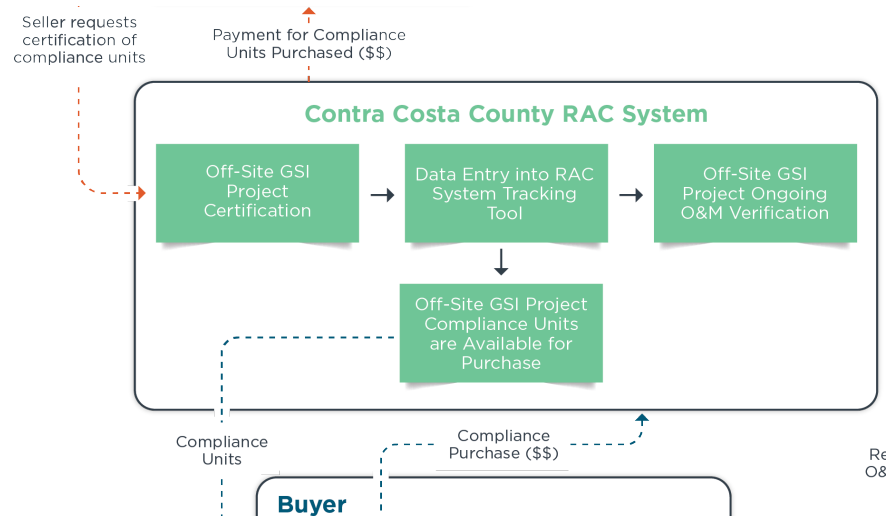
- Approve use of RAC System by Buyer
- Help identify Compliance Units available for private Buyers
- Facilitate Compliance Purchase, Agreements, and Ongoing O&M Fee for these private Buyers
- Receive payment for these RAC System duties



RAC System Participants - Administrator



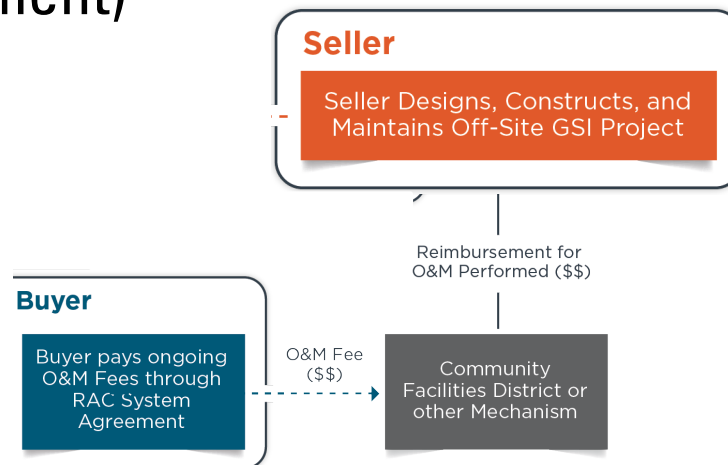
- Provides oversight for RAC System actions/transactions
- Oversight of the RAC System fund
- Manages Tracking Tool
- Manages annual reporting to Water Board
- Performs adaptive management of RAC System
- Receives administrative payments to cover these duties



RAC System Participants – Community Facilities District*



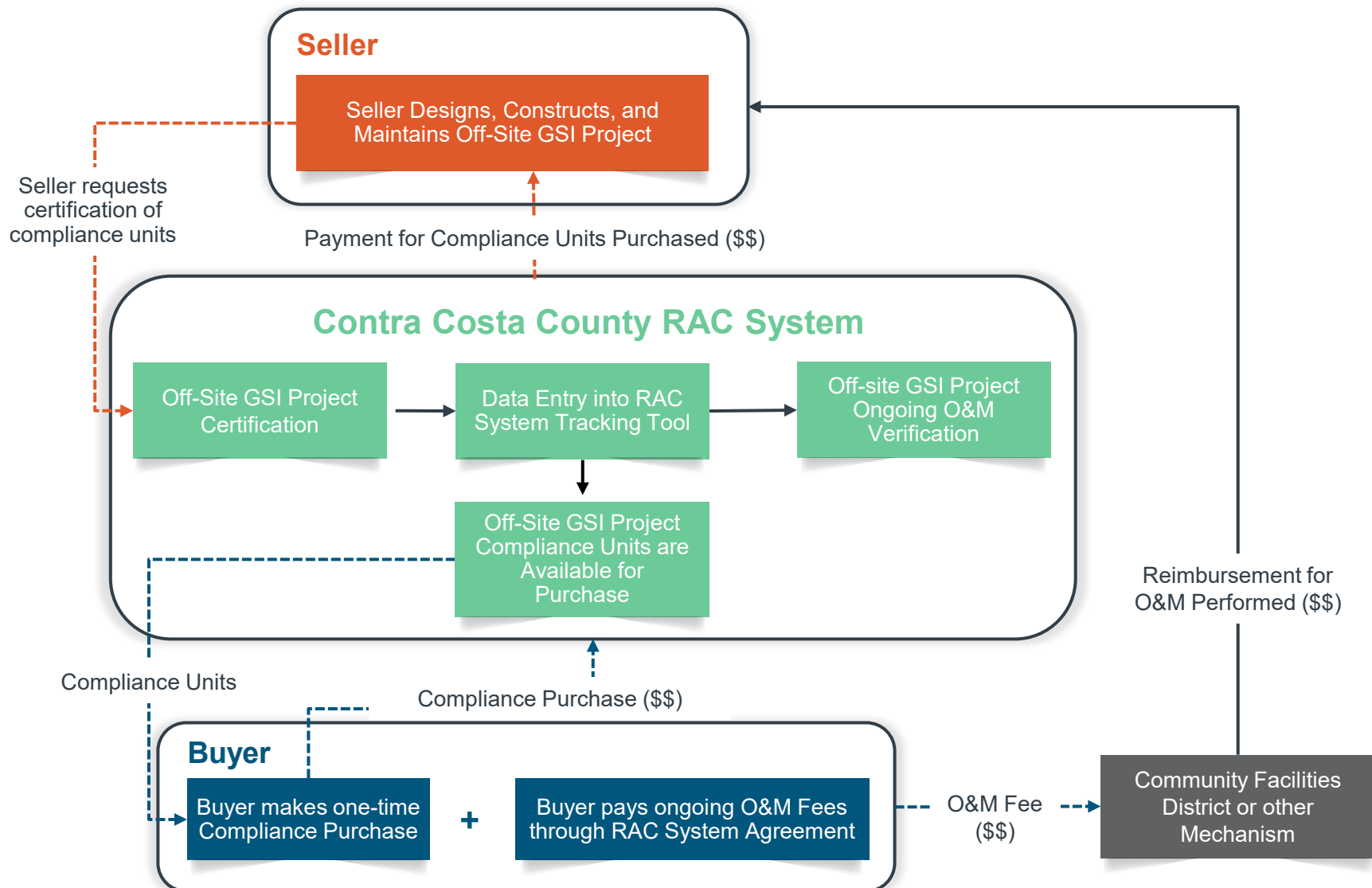
- Collects ongoing O&M Fees from Buyers
- Manages O&M Fund
- Disburses payments for O&M performed on Off-Site GSI Projects
- CFD may not apply to permittee when acting as Buyers (would use agreement)



* Or Equivalent Mechanism



Public Agency to Developer Exchange



RAC System Implementation Process

Compliance Units Costs



- Buyer purchases Equivalent Acres Greened compliance units proportional to their compliance needs

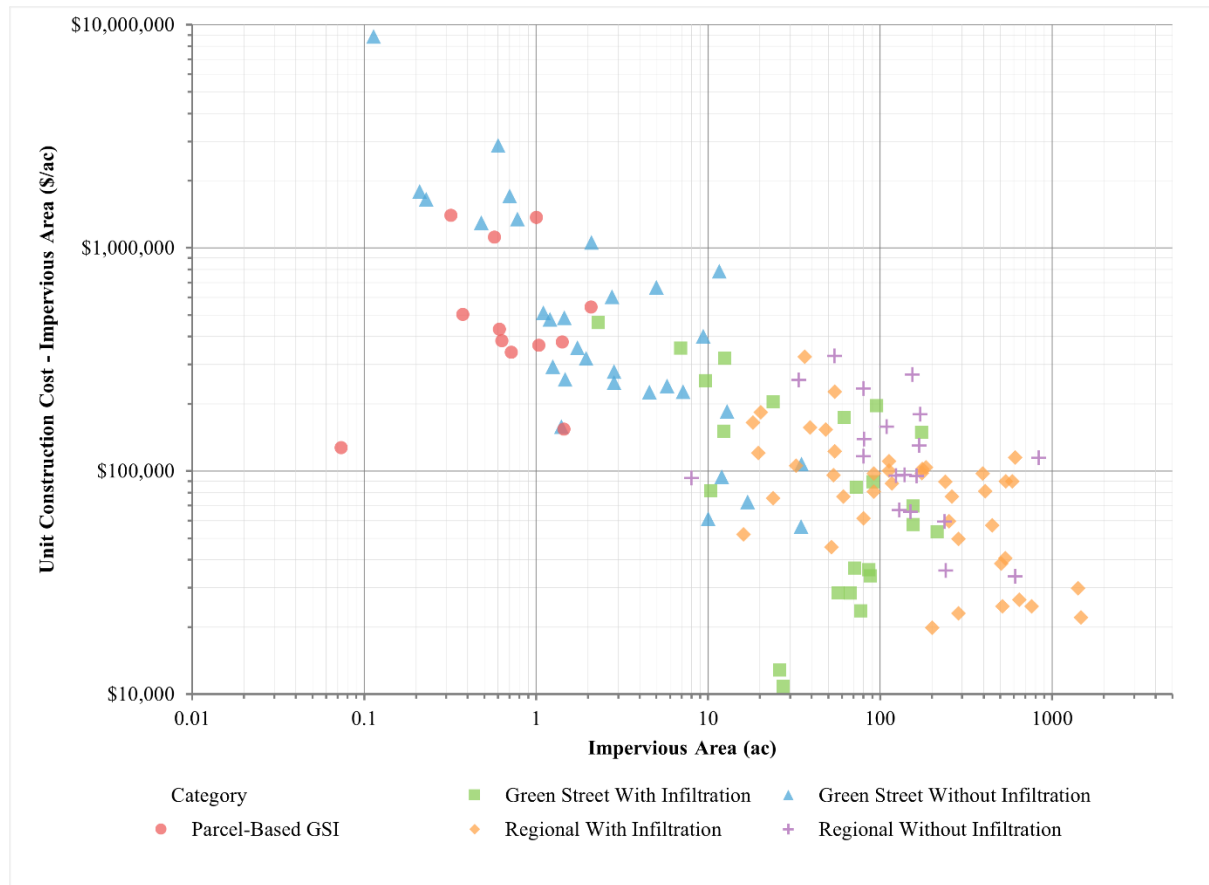
$$Purchase_{Compliance} = (Equivalent\ Acres\ Greened \times NEB\ Ratio) \times Cost_{EAG} + Payment_{Administrative}$$

- The compliance purchase amount is determined by:
 - The cost per equivalent acre greened for the units purchased
 - An administrative payment

Equivalent Acres Greened Cost Basis: Capital Cost



- How much do we expect compliance units to cost?



Equivalent Acres Greened Cost Basis: Capital Cost



- How much do we expect Equivalent Acres Greened compliance units to cost? Based on a cost study, not including administrative fees, for non-infiltrating facilities:
 - Regional Off-Site GSI Projects - estimated **\$120,000** per compliance unit
 - Regional Off-Site GSI Projects (for drainage area less than 100 acres): **\$235,000** per compliance unit
 - Green Street/LID Off-Site GSI Projects - estimated **\$460,000 - \$500,000+** per compliance unit
- A cost study will determine the administrative fees
 - These are expected to be \$2,000 - \$6,000 per project and may vary by jurisdiction. These are preliminary estimates that need to be verified.



Equivalent Acres Greened Cost Basis: Ongoing O&M Fee



- The Rate & Method Apportionment (RMA) would determine the ongoing O&M fee amount.
 - Based on the estimated O&M cost for the units purchased
 - O&M costs would be collected via property taxes process for private properties
 - O&M costs would be collected by agreement for permittees



Next Steps for Implementation



Contra Costa County RAC System Roll-Out



Phase 1: Initial pilot
exchange within
Contra Costa County
2024

Phase 2: 3-year
initial roll-out across
Contra Costa County
2026 - 2029

Phase 3+: Fully
operational
2029/2030+



KIESER & ASSOCIATES
ENVIRONMENTAL SCIENCE & ENGINEERING



Geosyntec
consultants

RAC System Implementation Process

Off-Site GSI Project
Verification &
Buyer Approval



Off-Site Project Certification/Verification



- Off-Site GSI Project design and installation must be “certified” through inspection by local jurisdiction using current certification practices
- Off-Site GSI Projects generate compliance units based on the area treated by the Off-Site GSI Project
 - Must be “GSI” per the MRP (infiltration, capture and use, or bioretention)
 - Must meet MRP Provision C.3.d (i.e., 80% capture)



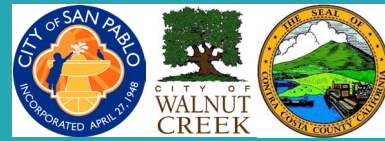
Off-Site Project Certification/Verification



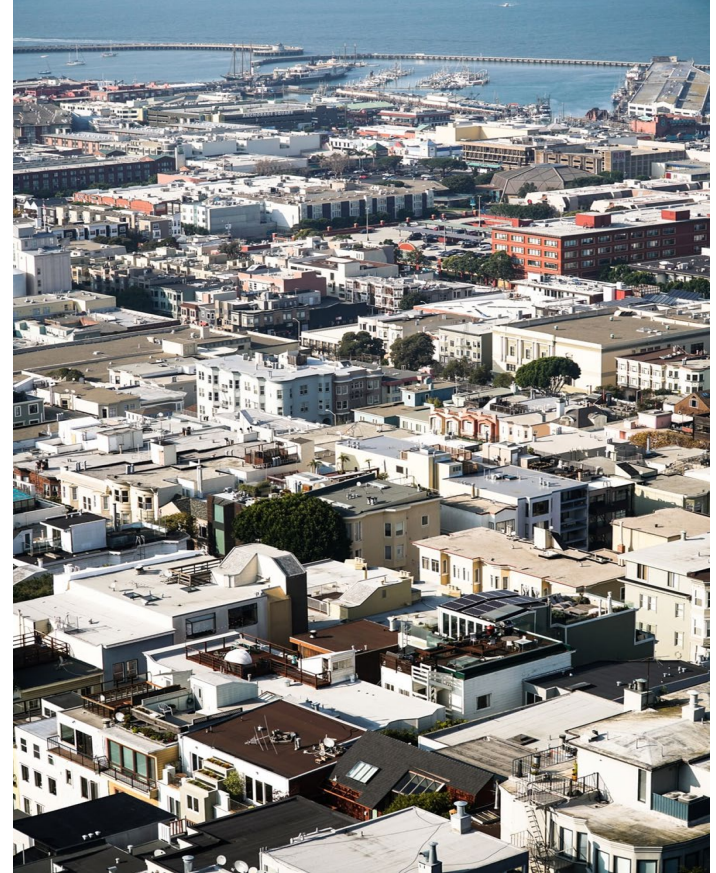
- Off-Site GSI Project must undergo ongoing recurring verification to confirm it is performing as expected over time
 - Local jurisdiction would perform verification using current verification practices
 - Local jurisdiction would receive payment for these actions



Buyer Project Approval



- Developers/C.3 Regulated Projects that want to purchase compliance units will need to get approval from the relevant jurisdiction
 - This will be done through the development approval process
- Developers can use the system to address compliance for small portions of a C.3 regulated project



RAC System Implementation Process

Ongoing O&M



- A RAC JPA will adopt a CFD
 - Resolution of Intention
 - Public Hearing Process
- Election: Each property that will use the RAC System for compliance will be required to “elect” to be part of the CFD
- Special tax is levied by ordinance adoption by the relevant legislative body

- Roles and responsibilities for O&M
 - Off-Site facilities will be required to maintain their facility in accordance with the Site's O&M Agreement
 - Off-Site facilities will be inspected to verify O&M compliance
- Funding
 - Once a facility is confirmed to meet their O&M requirement the Off-Site facility will submit O&M certification to RAC System
 - The O&M payment will be issued to the Off-Site facility

RAC System Implementation Process

Compliance Unit
Calculation

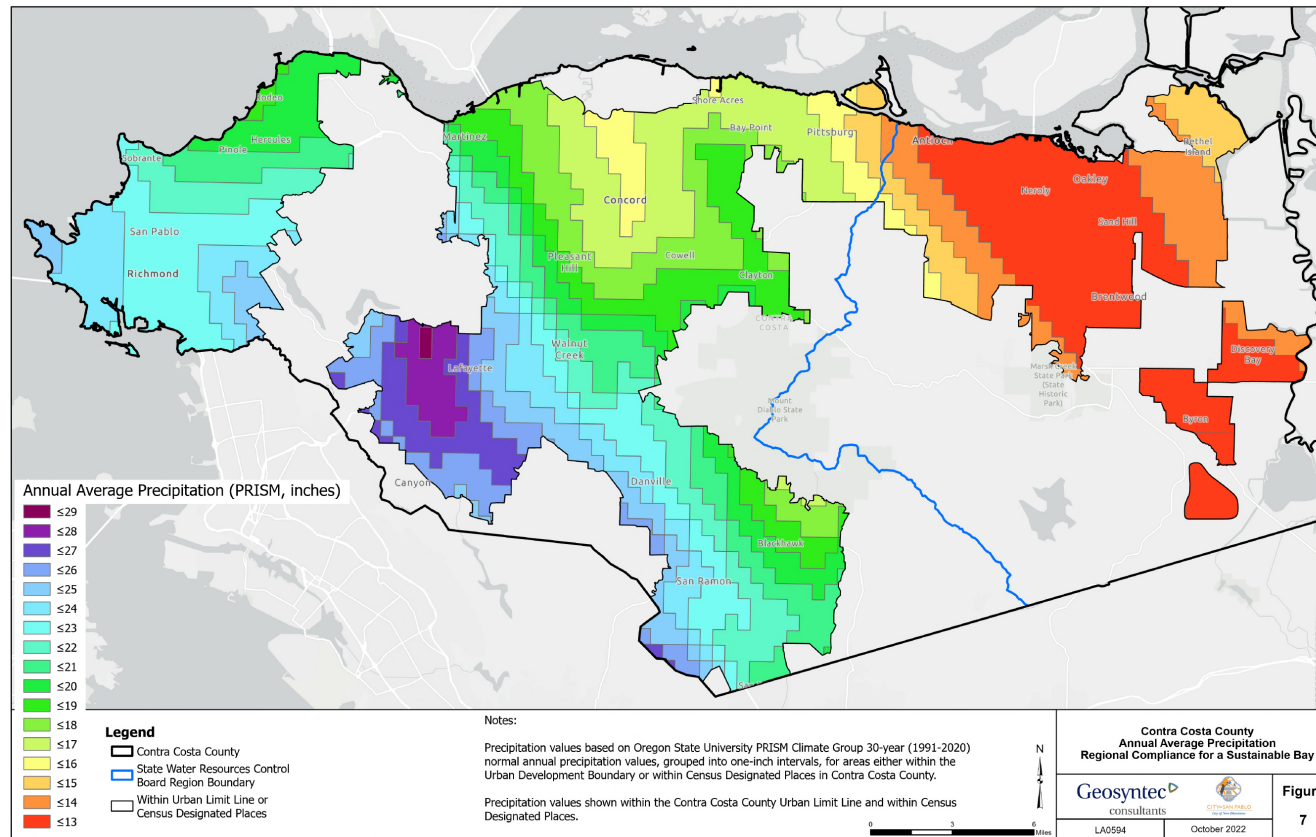


- “Equivalent Acres Greened” compliance units
 - Calculated based on pollutant generating **area**
 - 100% impervious + 10% pervious area
 - Rainfall zone and land use associated with each unit
- For MRP C.3 Regulated Projects:
 - To meet “equivalency” and “Net Environmental Benefit” requirements of Provision C.3.e., there are three additional factors used to calculate total “Equivalent Acres Greened”
 1. Rainfall Ratio
 2. Pollutant Ratio
 3. Net Environmental Benefit (NEB) Ratio
 - These factors not required for permittee C.3.j retrofit compliance units

Compliance Unit Generation: Rainfall Zone



- Used PRISM data to map the County's Rainfall Zones
- Maps and tables were developed to represent the Rainfall Zones and calculate Rainfall Ratios



Compliance Unit Generation: Rainfall Zone



Exchange Ratio Matrix		Equivalent Acres Greened Annual Average Rainfall Zone ¹ (inches)																				
		≤13	≤14	≤15	≤16	≤17	≤18	≤19	≤20	≤21	≤22	≤23	≤24	≤25	≤26	≤27	≤28	≤29	≤30	≤31	≤32	≤33
Regulated Project Annual Average Rainfall Zone (inches)	≤13	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
	≤14	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
	≤15	1.2	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
	≤16	1.2	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
	≤17	1.3	1.2	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
	≤18	1.4	1.3	1.2	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
	≤19	1.5	1.4	1.3	1.2	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
	≤20	1.5	1.4	1.3	1.3	1.2	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
	≤21	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
	≤22	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
	≤23	1.8	1.6	1.5	1.4	1.4	1.3	1.2	1.2	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
	≤24	1.8	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
	≤25	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
	≤26	2.0	1.9	1.7	1.6	1.5	1.4	1.4	1.3	1.2	1.2	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
	≤27	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.4	1.3	1.2	1.2	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
	≤28	2.2	2.0	1.9	1.8	1.6	1.6	1.5	1.4	1.3	1.3	1.2	1.2	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	
	≤29	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.5	1.4	1.3	1.3	1.2	1.2	1.1	1.1	1.0	1.0	1.0	1.0	1.0	
	≤30	2.3	2.1	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.4	1.3	1.3	1.2	1.2	1.1	1.1	1.0	1.0	1.0	1.0	
	≤31	2.4	2.2	2.1	1.9	1.8	1.7	1.6	1.6	1.5	1.4	1.3	1.3	1.2	1.2	1.1	1.1	1.1	1.0	1.0	1.0	
	≤32	2.5	2.3	2.1	2.0	1.9	1.8	1.7	1.6	1.5	1.5	1.4	1.3	1.3	1.2	1.2	1.1	1.1	1.1	1.0	1.0	
	≤33	2.5	2.4	2.2	2.1	1.9	1.8	1.7	1.7	1.6	1.5	1.4	1.4	1.3	1.3	1.2	1.2	1.1	1.1	1.1	1.0	

Compliance Unit Generation: Land Use Area



- Extensive analysis completed to develop ratios to represent the difference in urban pollutant loading between land uses

Exchange Ratio Matrix		Off-Site Project Land Use Category			
		Residential, Commercial, or Institutional ¹	Transportation ²	New Industrial	Old Industrial and Source Areas
Regulated Project Land Use Category	Residential, Commercial, or Institutional ¹	1.0	1.0	1.0	1.0 ³
	Transportation ²	1.3	1.0	1.0	1.0 ³
	Industrial	1.8	1.4	1.0	1.0 ³

¹ Includes adjacent collector and local roadways.

² Transportation includes interstate highways, freeways, multilane highways, and principal arterials.

³ Net environmental benefit discount applied to purchase, see RAC System Summary Report, section 4.3.

Compliance Unit Generation: Net Environmental Benefit



- The CCC RAC System has defined the standard Regulated Project NEB as a ratio of **1.1:1** (i.e., requiring purchase of 10% additional Equivalent Acres Greened)

Project Type	Compliance Unit Land Use	NEB Ratio
C.3.d Regulated Project	Residential, Commercial, Institutional or Transportation	Standard - 1.1:1
C.3.d Regulated Project	Old Industrial	Discounted - 1:1
C.3.j Retrofit Requirement	<i>N/A</i>	<i>NEB not required</i>



- Detailed calculations on the compliance unit are provided in the System Summary Report
- Equivalent Acres Greened generated for Off-site GSI Projects and required purchase amount for Regulated Projects will be calculated through the RAC System Tracking Tool

RAC System Tracking Tool



Overview of Tracking Tool



- Tracks compliance units generated and certified
- Tracks seller and buyer information
- Tracks exchanges, including number of compliance units purchased and total purchase amount
- Includes a ledger to track the compliance units sold and available for sale for each Off-Site GSI project
- Tracks O&M performed and reimbursements for O&M
- Tracks ongoing verification of compliance units
- Acts as a repository for documentation for all of the above





CONTRA COSTA
CLEAN WATER
PROGRAM



Thank You!



KIESER & ASSOCIATES
ENVIRONMENTAL SCIENCE & ENGINEERING



Geosyntec
consultants