Stormwater Capture Master Plan

The Master Plan

June 25, 2015

LADWP Headquarters - Auditorium

TreePeople

environment LA SANITATION CITY OF LOS ANGELES

The Metropolitan Water District of Southern California

Los Angeles County Flood Control District

Geosyntec consultants

Agenda

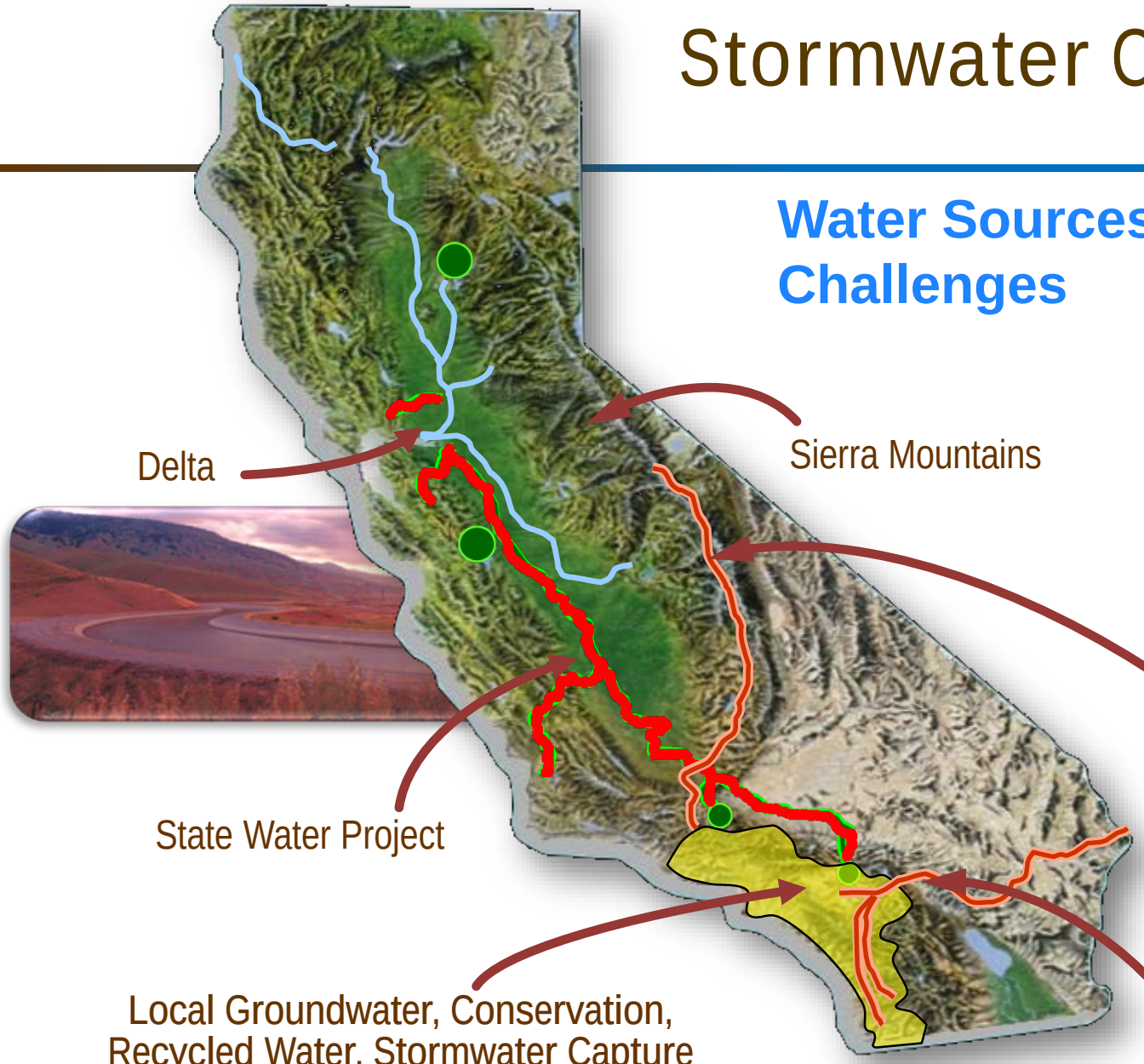
- LADWP's Mission
- Water Sources
- Water Supply and Reliability Challenges
- Comprehensive Strategy for Future Reliability
- Stormwater Capture Master Plan
  - Summary of Public Participation
  - Review Potential
  - Review Alternatives
  - Present Plan
    - Centralized Timeline, Benefits
    - Distributed Implementation Rates, Benefits
    - Funding and Implementation
    - Implementation Strategy
- Panel Q&A

LADWP Water System's Mission

To provide our customers with safe, reliable, high quality and reasonably priced water services in a transparent and environmentally responsible manner.

Stormwater Capture

Water Sources and Reliability Challenges



Los Angeles Aqueduct

Colorado River Aqueduct

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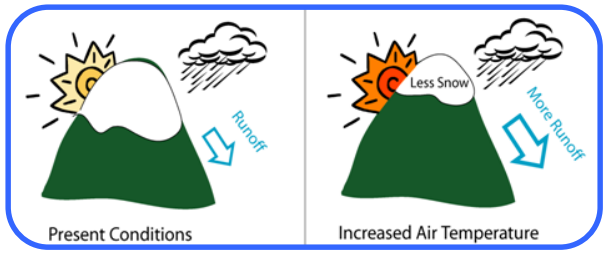
Water Supply and Reliability Challenges

Bay-Delta and Colorado River supply uncertainties due to allocations, pumping restrictions, and other threats

L.A. Aqueduct supply reduction due to Owens Lake dust mitigation

Groundwater contamination in the San Fernando Basin

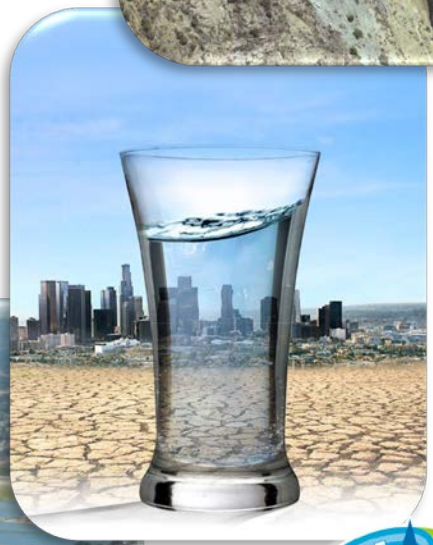


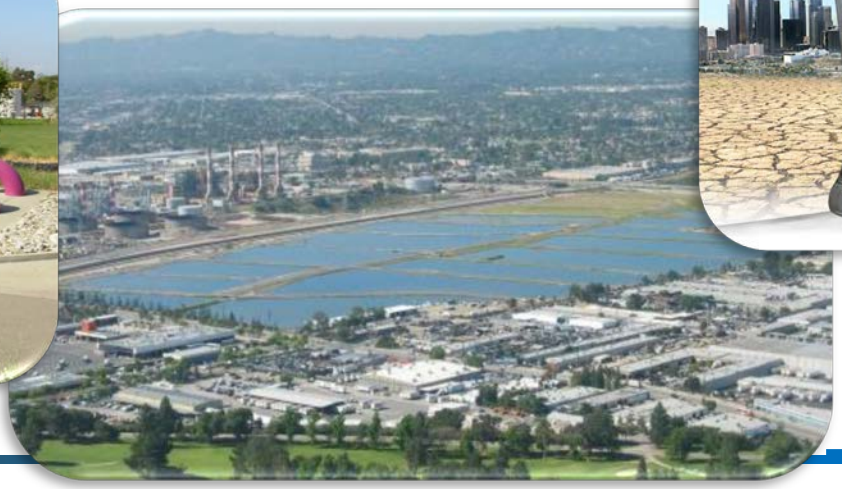
Climate change impacts, water/energy nexus, and carbon footprint

Stormwater Capture MASTER PLAN

Comprehensive Strategies

- Increase Water Conservation
- Increase Recycled Water Usage
- Clean-up the Local Groundwater Basin
- **Increase Stormwater Capture**





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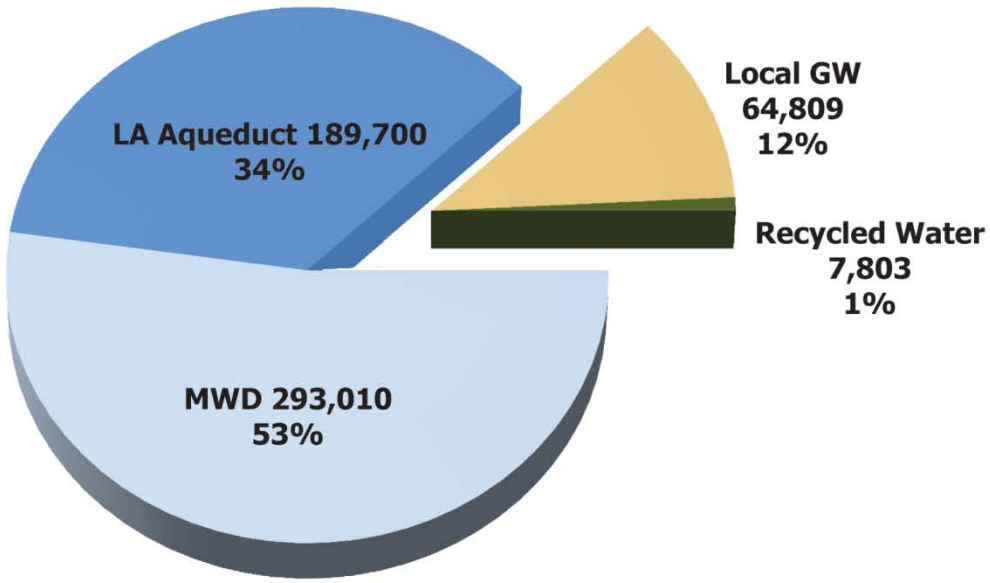
CAPTURE CONSERVE REUSE

Stormwater Capture MASTER PLAN

Comprehensive Strategy for Future Reliability

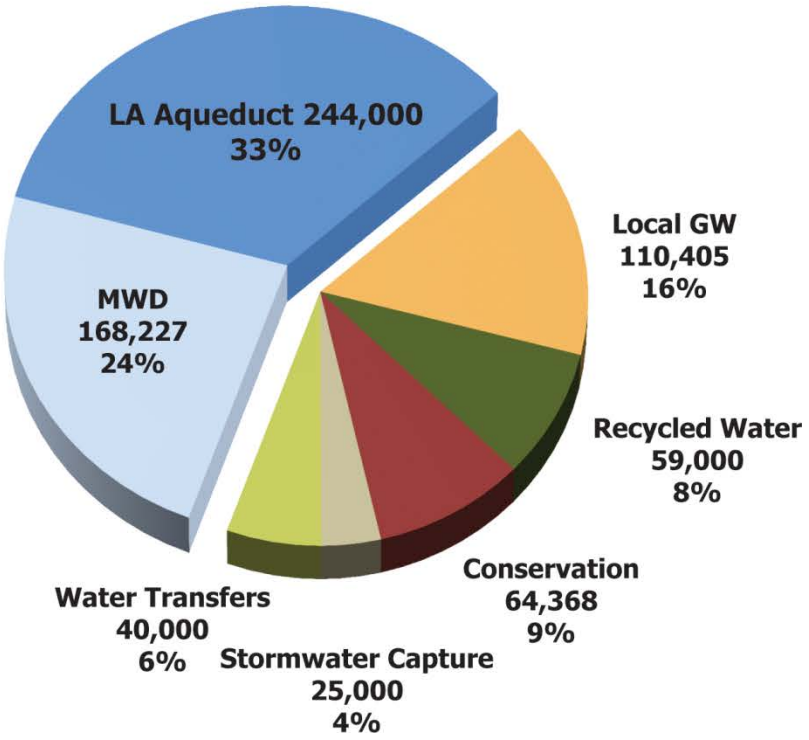
Today

FYE 2010 - 2014 Average
Total: 553,876 AFY



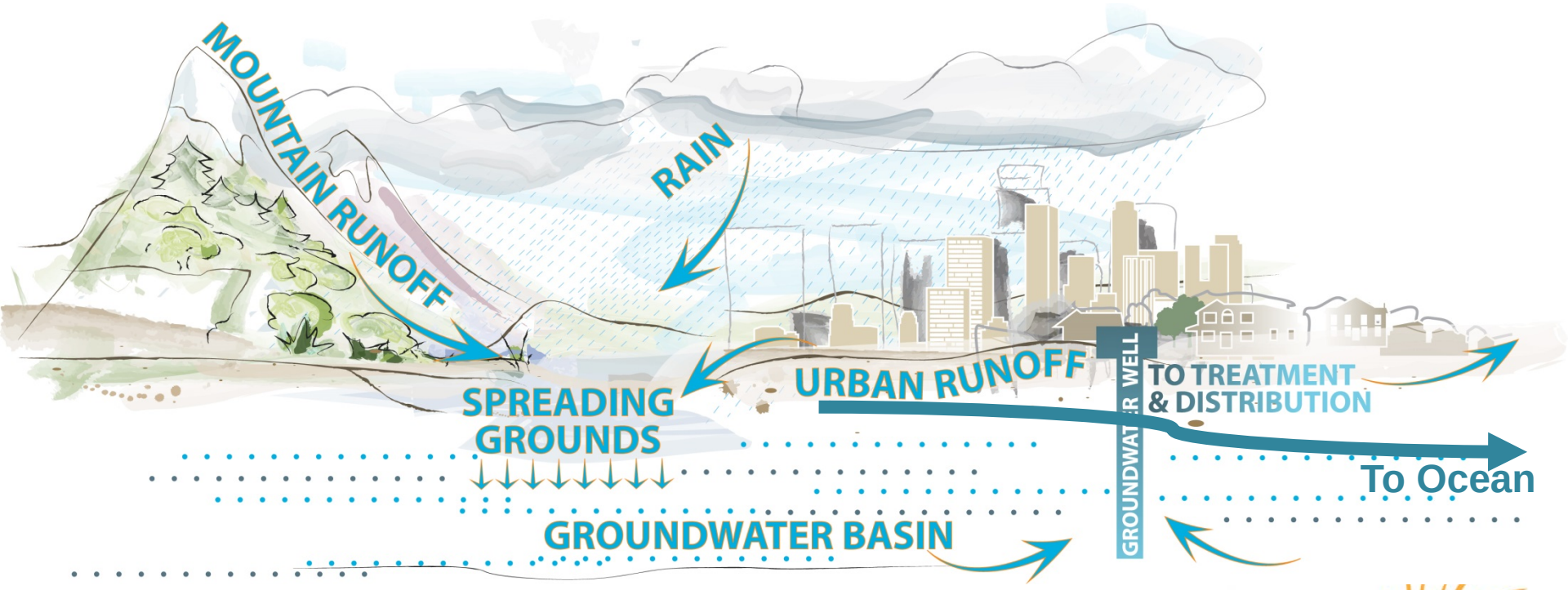
Future

Fiscal Year 2034 - 35
Total: 711,000 AFY



*** 2010 Urban Water Management Plan**

Stormwater Capture MASTER PLAN



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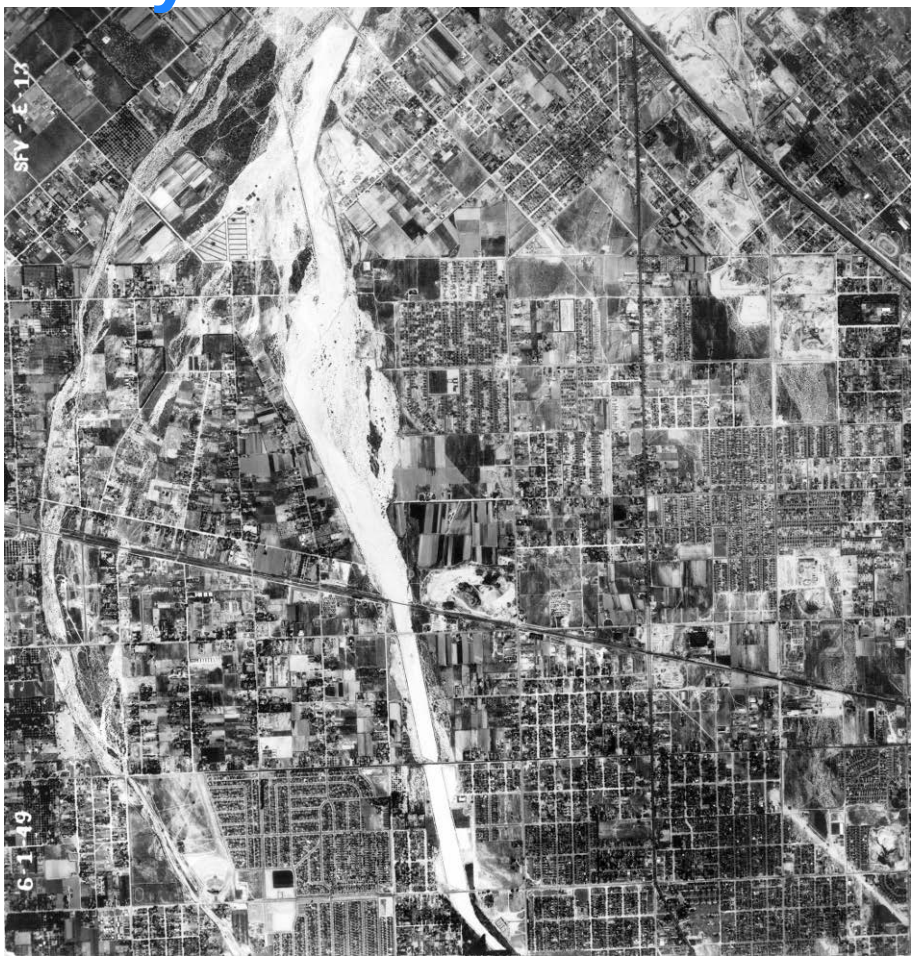
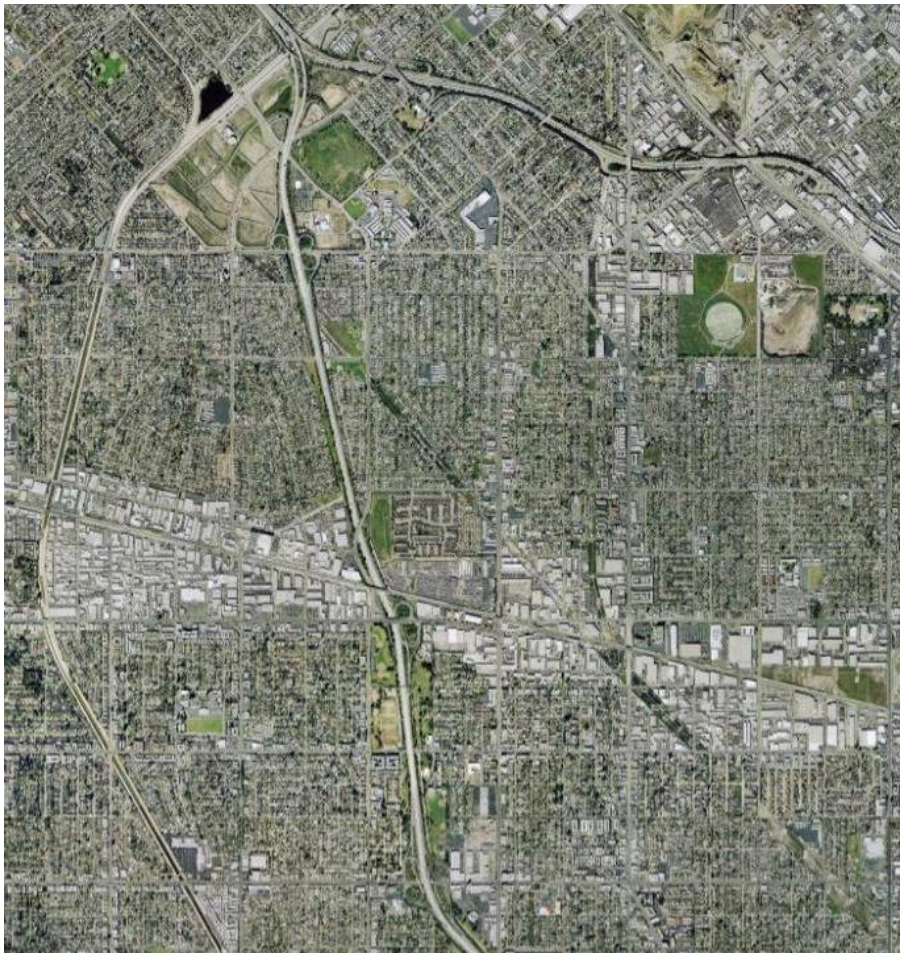
Stormwater Capture MASTER PLAN

Why we need to take action



Eastern San Fernando Valley 1949



Eastern San Fernando Valley 2008

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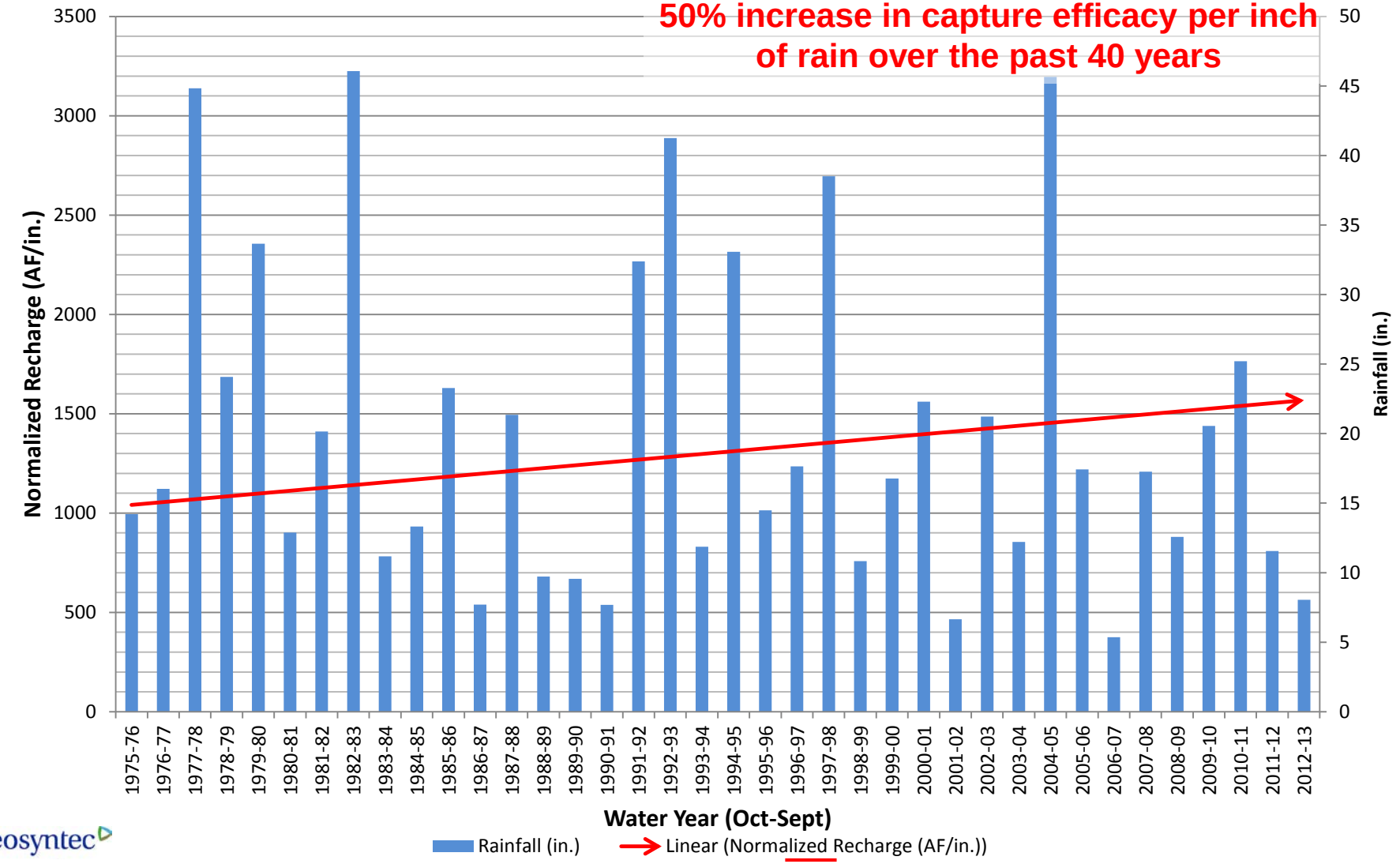
Stormwater Capture MASTER PLAN



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Stormwater Capture MASTER PLAN

Dam Improvements

Centralized

CAPTURE

Distributed

Sub-Regional

Spreading Basins

Parkway Basins

Rain Barrels

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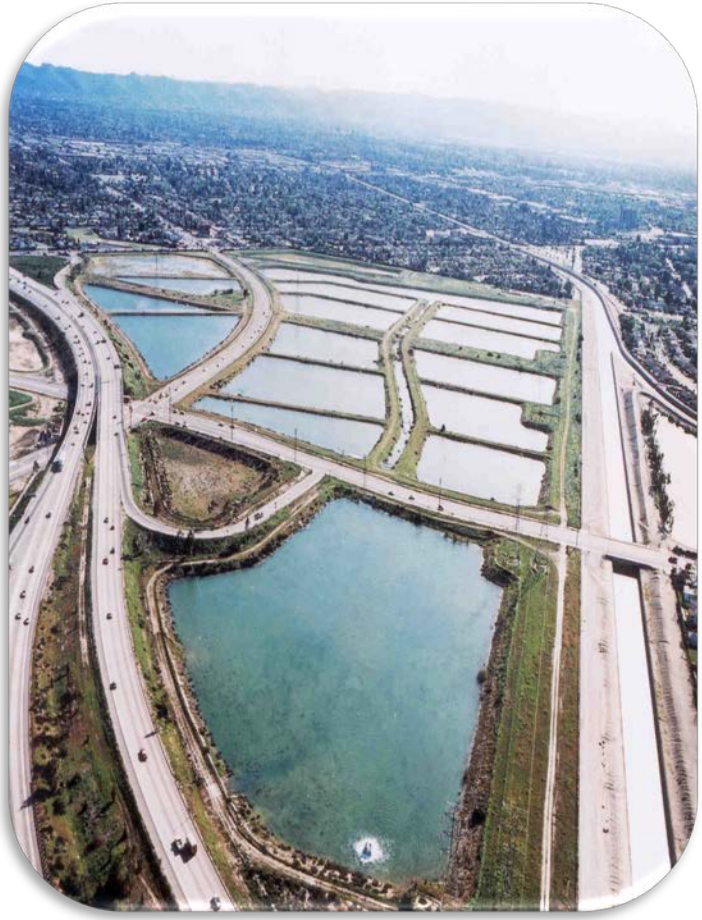
What is the Stormwater Capture Master Plan?

Document that will outline LADWP's strategies over the next 20 years to:

- Implement stormwater programs and projects in the City of LA
- Contribute to more reliable and sustainable local water supplies.

Planning document *not* programmatic document

Stormwater Capture MASTER PLAN



Goals of the Master Plan

- Quantify stormwater capture potential
- Identify new projects/programs/policies
- Prioritize based on water supply criteria
- Develop cost/benefits for proposed projects/programs/policies
- Define timing and key milestones

Partners

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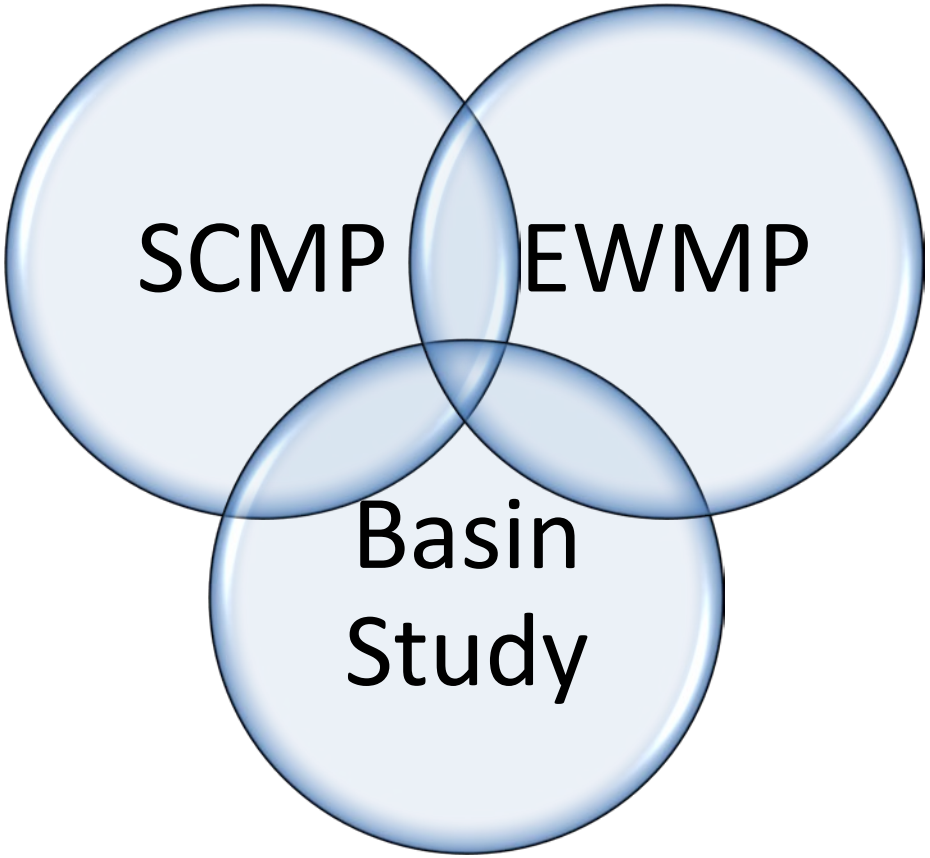
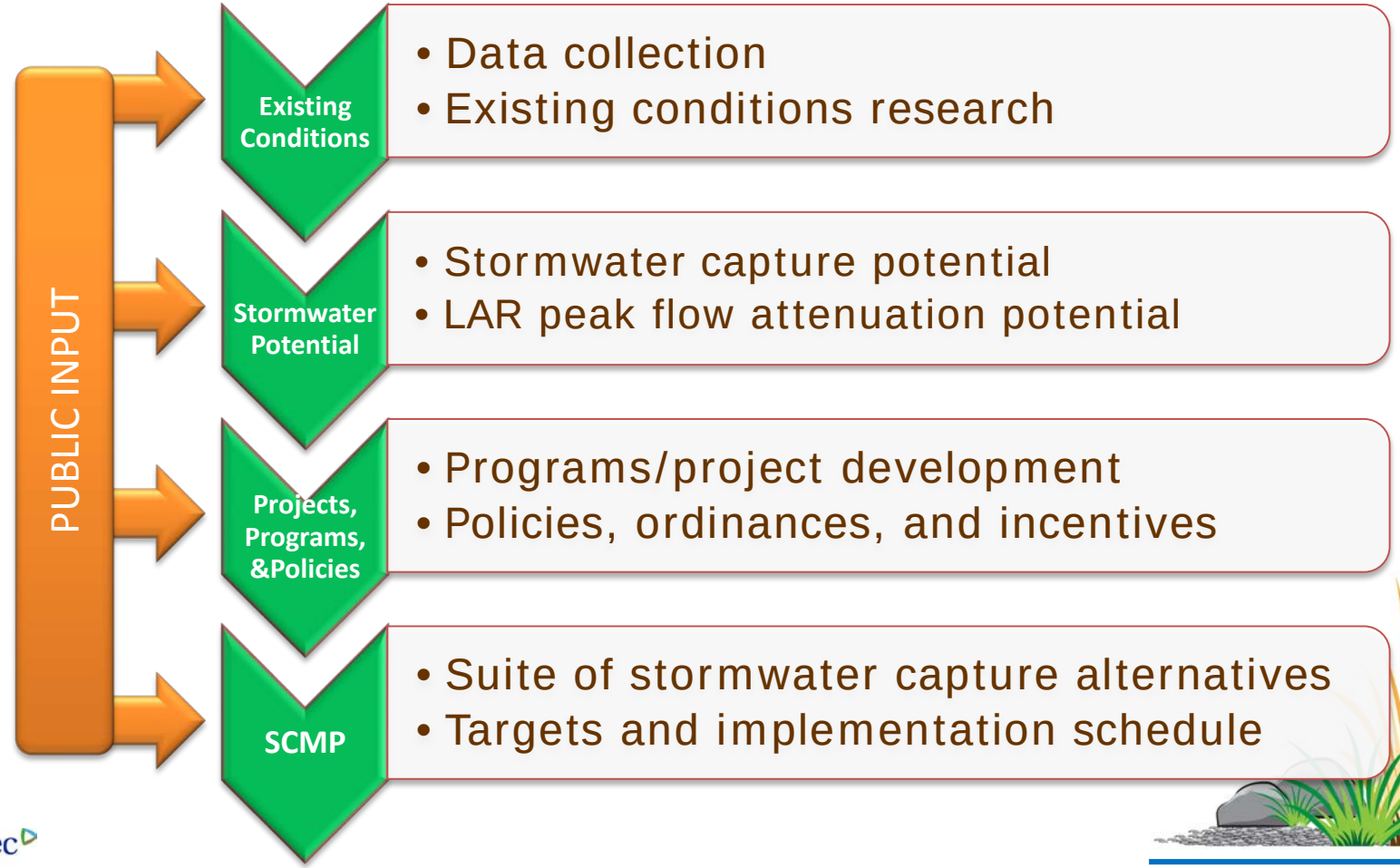
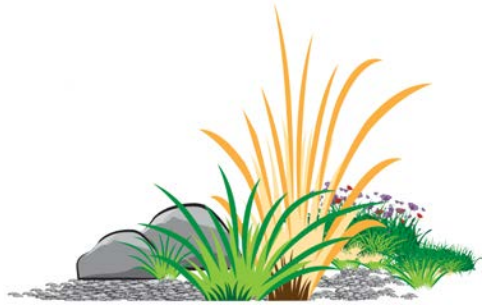
Regular Coordination



Development Process

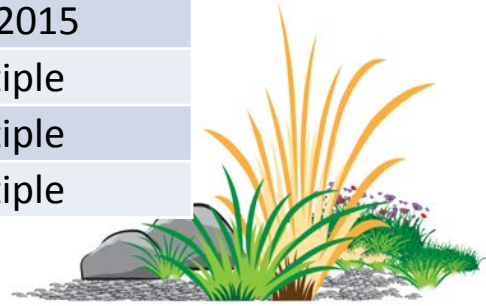


Summary of Public Outreach



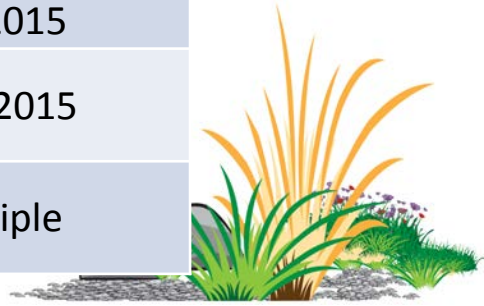
Stormwater Capture MASTER PLAN

SCMP Public Outreach Event	Date
TAT #1	9-16-2013
Key Stakeholder Mtg #1 – All Key Stakeholders	10-21-2013
TAT #2	2-24-2014
General Public #1	3-26-2014
Key Stakeholder Mtg #2 – GreenLA	3-26-2014
Key Stakeholder Mtg #3 – Prop O COAC	5-19-2014
Key Stakeholder Mtg #4 - UCLA	7-22-2014
TAT #3/Key Stakeholder Mtg #5	10-9-2014
General Public Mtg #2a	1-22-2015
General Public Mtg #2b	1-29-2015
TAT #4/Key Stakeholder Mtg #6	3-25-2015
TAT/Key Stakeholder "Office Hours"	6-1-2015 & 6-4-2015
General Public Mtg #3	6-25-2015
SCMP/EWMP Coordination Mtgs	Multiple
SCMP/Basin Study Coordination Mtgs	Multiple
Additional Coordination and Briefing Mtgs	Multiple



Stormwater Capture MASTER PLAN

Additional Outreach Events	Date
Mtg with The River Project	1-14-2014
Mtg with Arid Lands Institute	3-21-2014
Presentation at H20 Conference	5-28-2014
Presentation to Studio City Residents Association	7-8-2014
Presentation to National Research Council (NRC)	7-31-2014
Mtgs with LAUSD	10-2-2014 & 10-15-2014
Presentation at IRWMP Leadership Committee Mtg	10-22-2014
Presentation at the Westchester Rotary Club	12-17-2014
Presentation to Upper LA River Area IRWMP Group	1-21-2015
Presentation at Southern California Water Committee Mtgs	1-22-2015 & 6-25-2015
Presentation to LA Neighborhood Council Coalition	2-7-2015
Presentation at American Water Resources Association Conference	3-30-2015
Briefings with Los Angeles City Council Members, EPA Region 9 Administrator, and RWQCB and SWRCB	Multiple



Stormwater Capture MASTER PLAN

Can you tell me what geologic feature …defines the boundary of the "liquefaction potential"

"What I don't like is the fact that Los Angeles is using 30% of its energy to transport water."

"These projects are a great opportunities to create local jobs"

How will this be financed? And what will be the impact on DWP rate payers?"

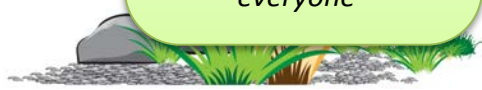
Selection of common comments

- Need to improve coordination between City Departments
- Multibenefit projects should be prioritized
- Projects should be leveraged to provide benefit for DACs
- Implementation rates are too low – risk for public policy makers to not see stormwater capture potential
- Implementation rates are too high – risk for setting plan up for failure
- SCMP is in line with visions residents have for their neighborhoods

"I'm really excited for green streets because they will look beautiful in our streets and community"

"I would encourage all regional and sub-regional projects to be carefully designed, not only addressing the technical aspects of stormwater capture but also the urban potential of the overall space that these projects create"

"[These are] good ideas but honestly none of [it] is good if it's not distributed to all communities and equally benefits everyone"



Stormwater Capture Potential

Stormwater Capture MASTER PLAN

"CONSERVATIVE" SCENARIO

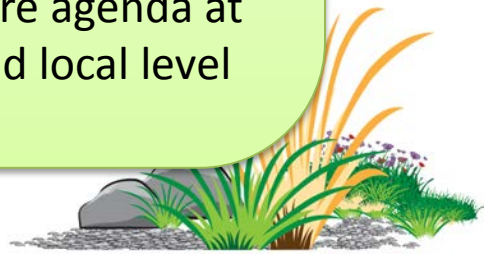
Decrease in prioritization of stormwater capture from political, financial, and social perspectives

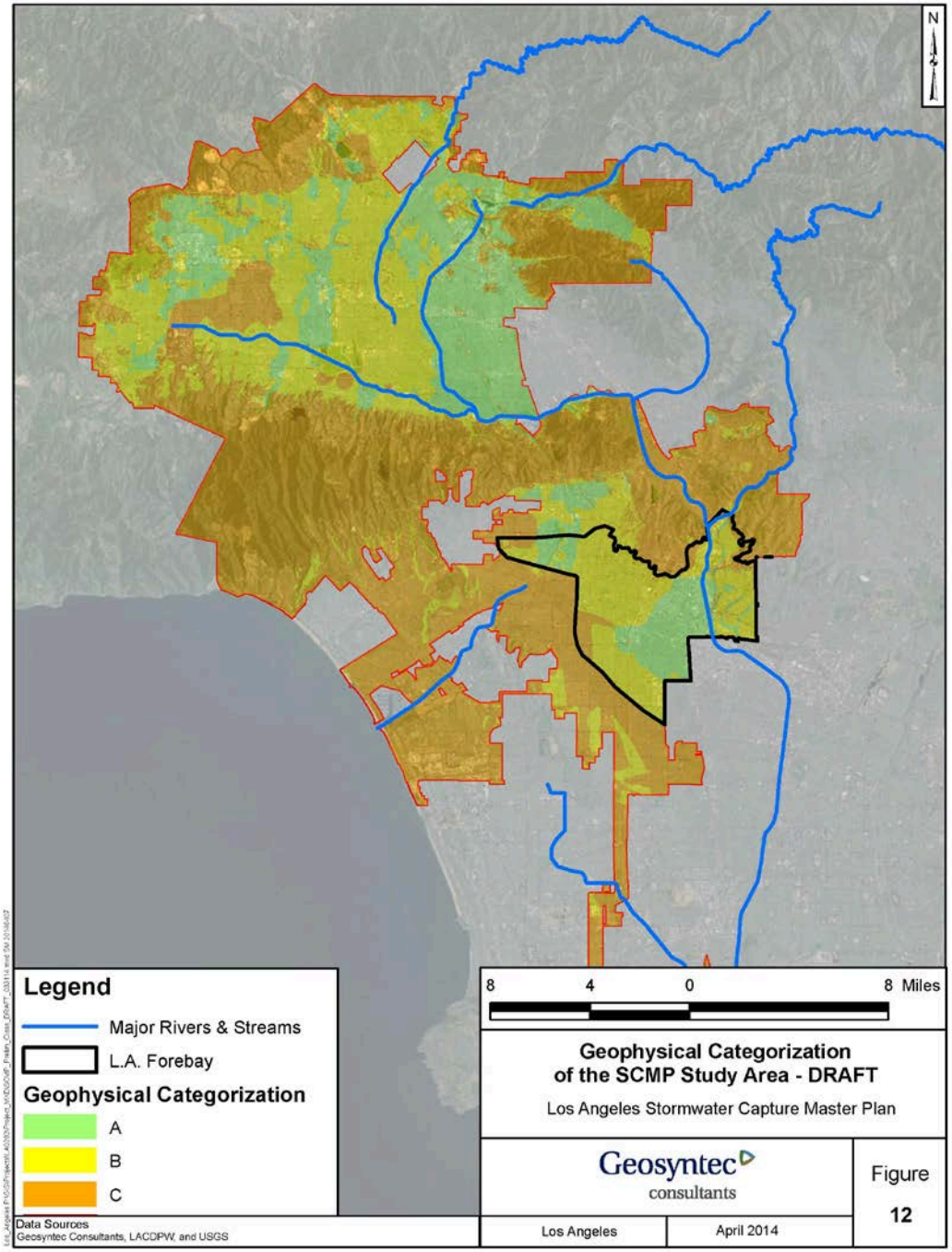
Little to no increase in:
-Availability of funding
-Public awareness of stormwater capture
-Political will to push strong stormwater capture agenda at Federal, State, and local level

"AGGRESSIVE" SCENARIO

Increase in prioritization of stormwater capture from political, financial, and social perspectives

Continued increase in:
-Availability of funding
-Public awareness of stormwater capture
-Political will to push strong stormwater capture agenda at Federal, State, and local level





CATEGORY A

- Least hydrogeologically constrained
- Highest priority aquifers
- Conducive to infiltration BMPs

CATEGORY B

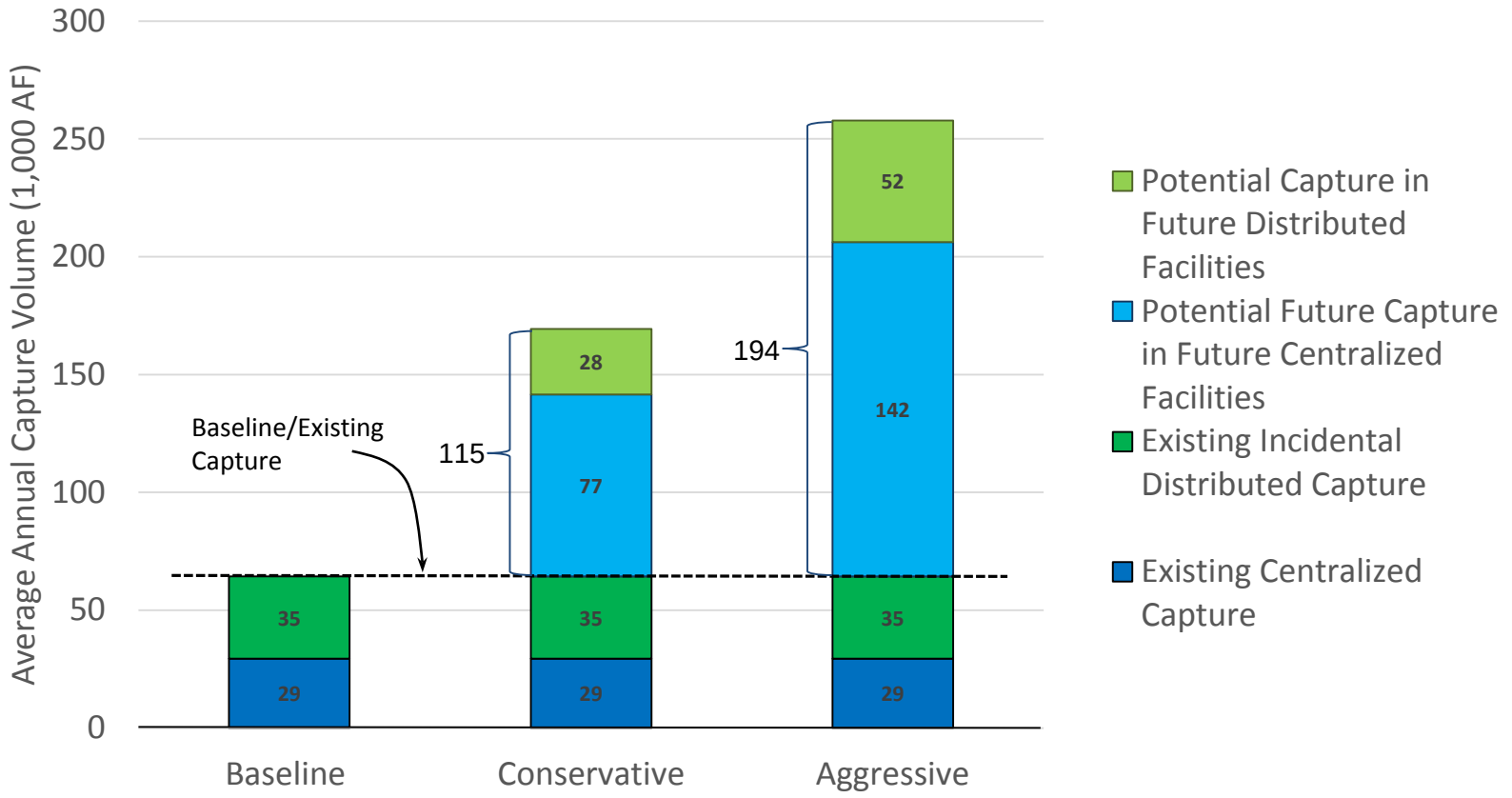
- Somewhat hydrogeologically constrained
- Mid level priority aquifers
- Conducive to infiltration BMPs

CATEGORY C

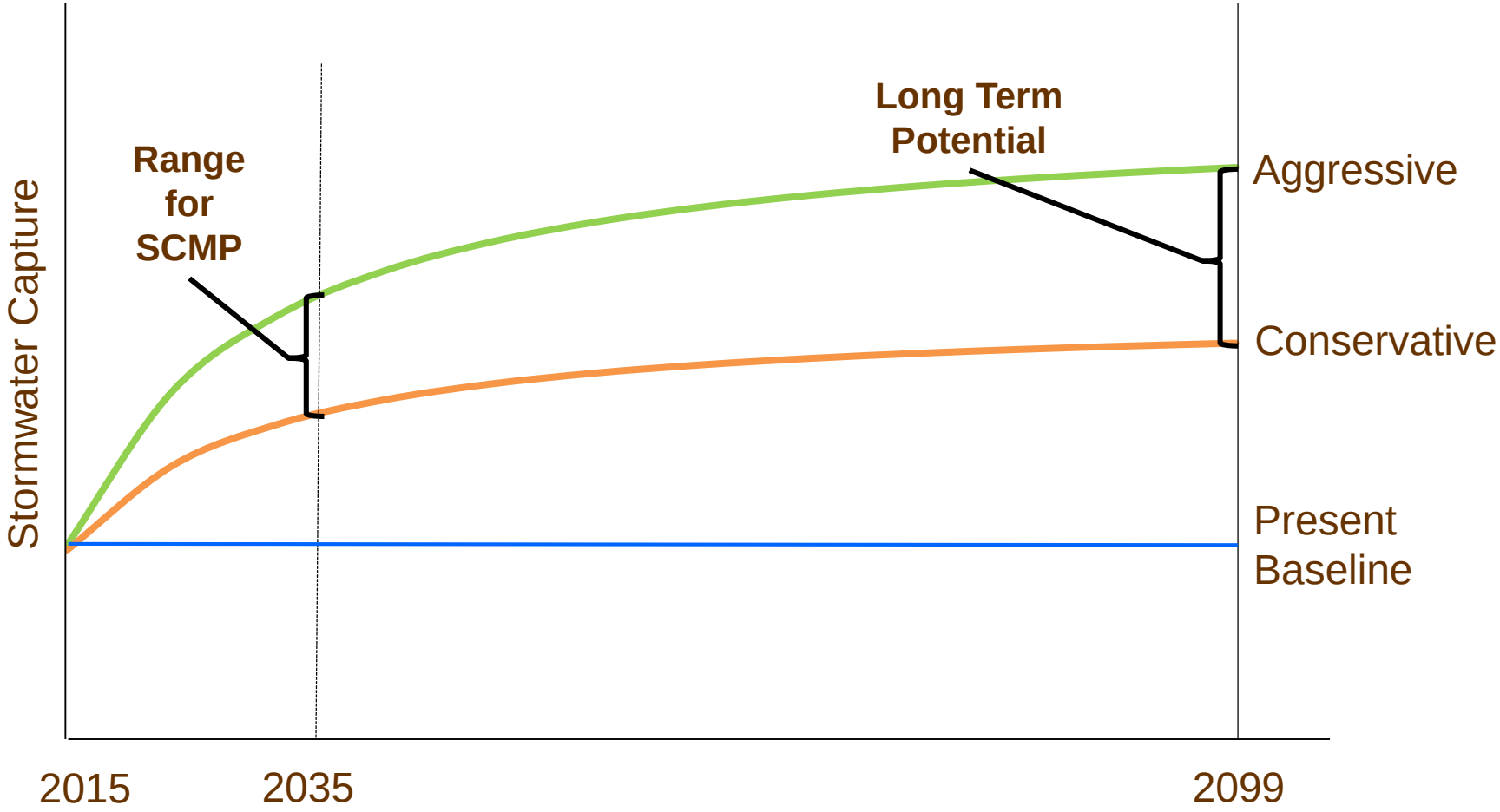
- Most hydrogeologically constrained
- Lower priority aquifers
- More advantageous for direct use BMPs

Stormwater Capture MASTER PLAN

Existing & Long Term Potential Stormwater Capture



Stormwater Capture MASTER PLAN

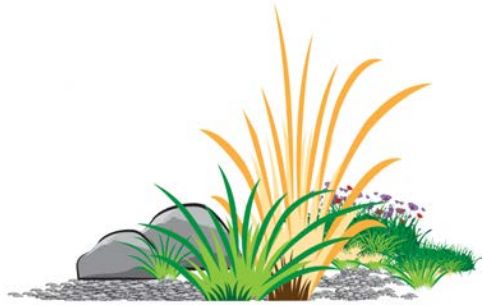


Stormwater Capture Alternatives

Stormwater Capture MASTER PLAN

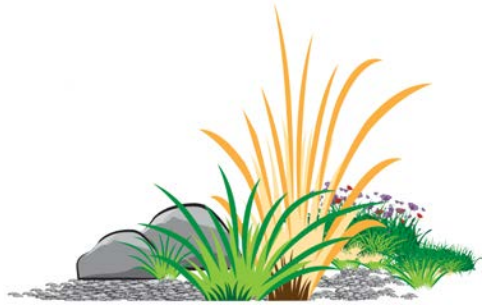
OVERVIEW

- Define Alternatives
  - Centralized Projects
  - Distributed Programs
- Evaluate Alternatives
  - Costs
  - Water supply benefits
  - Ancillary benefits
  - Opportunity areas



Stormwater Capture Alternatives

Centralized



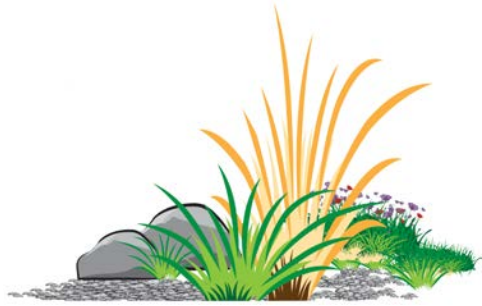
Centralized Project Alternatives

Project
Hansen Spreading Grounds Upgrade
Big Tujunga Dam Seismic Retrofit
Sheldon-Arleta Gas Management System (combined)
Arundo Donax Removal Project - Phase I
Tujunga Spreading Grounds Upgrade
Big Tujunga Dam Sediment Removal 2.3-4.4 MCY
Rory M Shaw Wetlands Park Project (Strathern)
Spreading Grounds Optimization
Valley Generating Station Stormwater Capture - I
Whitnall Hwy Power Line Easement
Branford Spreading Basin Upgrade
Bull Creek Pipeline 60" - 16,000'
Debris Basin Retrofit #1 (pilot)
Lopez Spreading Grounds Upgrade
Pacoima Dam Sediment Removal 3 MCY
Pacoima Spreading Grounds Upgrade
San Fernando Road Swales
Silver Lake Stormwater Capture Project
Van Norman Stormwater Capture - 1050'
Whiteman Airport
Storm Drain Mining (Inject)
Storm Drain Mining (treat and use)
LA Forebay Recharge System - LAR Pilot
Old Pacoima Wash
Canterbury Power Line Easement
Arundo Donax Removal Project - Phase II
Debris Basin Retrofit #2
Hansen Dam Water Conservation Project

LA Forebay Recharge System - LAR Full Scale
Lakeside Reservoir
North Hollywood Power Line Easement
Park Retrofit #2
East Valley Baseball Park (aka Strathern Park Infiltration System)
Van Nuys Airport
Whitsett Sports Fields Park Retrofit
Big T & Pacoima Dam to LA Filtration Plant
Boulevard Pit Multiuse
Debris Basin Retrofit #3
LA Forebay Recharge System - Upper Ballona
Sepulveda Basin - Hansen SG Pipe Line 54"
Cal Mat Pit
Park Retrofit #3
Sheldon Pit Multiuse
Valley Generating Station Stormwater Capture - II

Stormwater Capture Alternatives

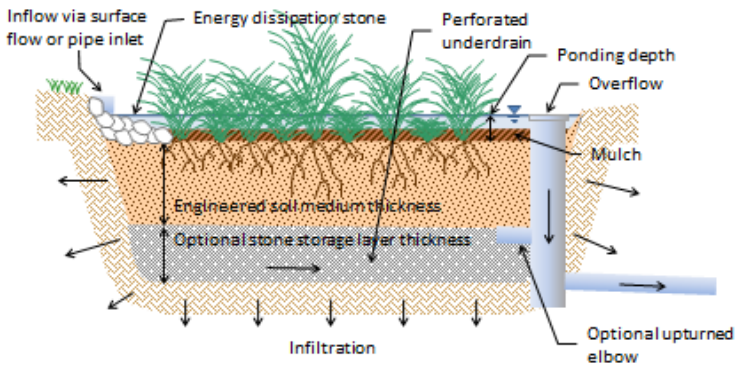
Distributed



Stormwater Capture MASTER PLAN

Distributed Program Alternatives

Program	On-site Infiltration	Green Streets	Subregional Infiltration	On-site Direct Use	Subregional Direct Use	Impervious Replacement
Examples	Residential Rain Garden Program	Commercial Green Street Program	Neighborhood Recharge Facility Program	Residential or Commercial Cistern Program	Distributed Reservoir Program	Impervious Surface Replacement Program



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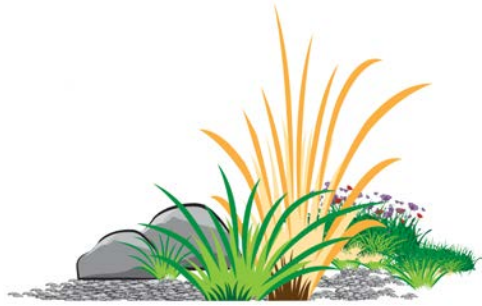
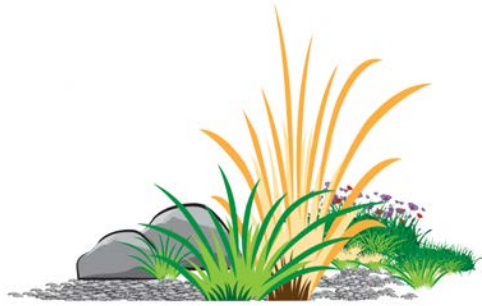
Implementation Plan



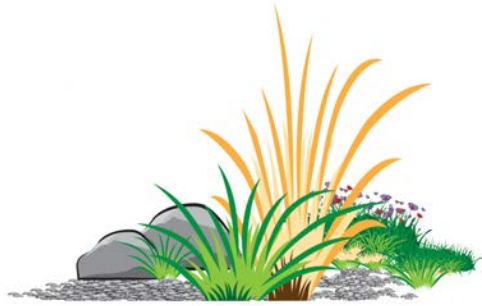
Stormwater Capture MASTER PLAN

OVERVIEW

- Two Scenarios: Conservative and Aggressive
- Project Milestones: 5, 10, 15, and 20 Years
- Projects and Programs
- Funding and Implementation
- Funding/Financing Opportunities
- Implementation Strategy



Centralized Projects



Centralized Project Timeline - CONSERVATIVE						
Project	Capture (AFY)*	Start	Complete	Accrual	Council District	Partners
Hansen Spreading Grounds Upgrade	2,100	2007	2013	2014	6	LACFCD
Big Tujunga Dam Seismic Retrofit	4,500	2009	2012	2013	Angeles NF	LACFCD
Sheldon-Arleta Gas Management System (combined)	100	2009	2016	2017	6	LASAN
Arundo Donax Removal Project - Phase I	**100**	**2015**	**2018**	**2019**	**7**	**NFF**
Tujunga Spreading Grounds Upgrade	4,200	2015	2017	2018	6, 7	LACFCD
Big Tujunga Dam Sediment Removal 2.3-4.4 MCY	500	2016	2021	2022	7	LACFCD
Rory M Shaw Wetlands Park Project (Strathern)	590	2016	2019	2020	6	LACFCD
Spreading Grounds Optimization	650	2018	2019	2020	2, 6, 7	LACFCD
Valley Generating Station Stormwater Capture - I	118	2018	2020	2021	6	
Whitnall Hwy Power Line Easement	110	2016	2018	2019	2, 4	LABOE
Branford Spreading Basin Upgrade	597	2018	2019	2020	6	LACFCD
Bull Creek Pipeline 60" - 16,000'	3,000	2018	2020	2021	12, 7	LACFCD
Debris Basin Retrofit #1 (pilot)	100	2021	2024	2025	TBD	LACFCD or LASAN
Lopez Spreading Grounds Upgrade	480	2018	2019	2020	7	LACFCD
Pacoima Dam Sediment Removal 3 MCY	700	2018	2024	2025	7	LACFCD
Pacoima Spreading Grounds Upgrade	2,000	2017	2019	2020	6, 7	LACFCD
San Fernando Road Swales	130	2018	2019	2020	6, 7	LACFCD
Silver Lake Stormwater Capture Project	117	2020	2024	2025	4	LASAN
Van Norman Stormwater Capture - 1050'	1,500	2019	2021	2022	12	LACFCD
Whiteman Airport	80	2020	2022	2023	6	LASAN
Storm Drain Mining (Inject)	750	2022	2024	2025	TBD	LASAN
Storm Drain Mining (treat and use)	750	2023	2024	2025	TBD	LASAN
LA Forebay Recharge System - LAR Pilot	1,000	2025	2029	2030	TBD	LACFCD or LASAN
Old Pacoima Wash	1,000	2020	2024	2025	7	LACFCD
Canterbury Power Line Easement	1,000	2030	2034	2035	6	LACFCD
Arundo Donax Removal Project - Phase II	1,900	2022	2024	2025	7	NFF
Debris Basin Retrofit #2	300	2025	2029	2030	TBD	LACFCD or LASAN
Hansen Dam Water Conservation Project	1,200	2022	2024	2025	7	LACFCD, ACOE
LA Forebay Recharge System - LAR Full Scale	3,000	2035	2054	2055	TBD	LACFCD or LASAN
Lakeside Reservoir	238	2030	2034	2035	7	LASAN
North Hollywood Power Line Easement	750	2022	2024	2025	2	LASAN
Park Retrofit #2	500	2030	2034	2035	TBD	LASAN
East Valley Baseball Park (fka Strathern Park Infiltration System)	750	2022	2024	2025	2	RAP, LASAN
Van Nuys Airport	300	2025	2029	2030	TBD	LASAN
Whitsett Sports Fields Park Retrofit	750	2025	2029	2030	2	LASAN
Big T & Pacoima Dam to LA Filtration Plant	5,000	2035	2054	2055	7	LACFCD
Boulevard Pit Multiuse	5,000	2025	2034	2035	6	LACFCD
Debris Basin Retrofit #3	150	2035	2054	2055	TBD	LACFCD or LASAN
LA Forebay Recharge System - Upper Ballona	600	2025	2029	2030	TBD	LACFCD or LASAN
Sepulveda Basin - Hansen SG Pipe Line 54"	3,000	2030	2034	2035	12	LASAN
Cal Mat Pit	750	2035	2054	2055	TBD	LACFCD or LASAN
Park Retrofit #3	500	2030	2034	2035	TBD	LASAN
Sheldon Pit Multiuse	1,500	2035	2054	2055	7	LACFCD
Valley Generating Station Stormwater Capture - II	700	2035	2054	2055	6	LACFCD

Centralized Project Timeline - AGGRESSIVE						
Project	Capture (AFY)*	Start	Complete	Accrual	Council District	Partners
Hansen Spreading Grounds Upgrade	2,100	2007	2013	2014	6	LACFCD
Big Tujunga Dam Seismic Retrofit	4,500	2009	2012	2013	Angeles NF	LACFCD
Sheldon-Arleta Gas Management System (combined)	100	2009	2016	2017	6	LASAN
Arundo Donax Removal Project - Phase I	100	2015	2018	2019	7	NFF
Tujunga Spreading Grounds Upgrade	4,200	2015	2017	2018	6, 7	LACFCD
Big Tujunga Dam Sediment Removal 2.3-4.4 MCY	500	2016	2021	2022	7	LACFCD
Rory M Shaw Wetlands Park Project (Strathern)	590	2016	2019	2020	6	LACFCD
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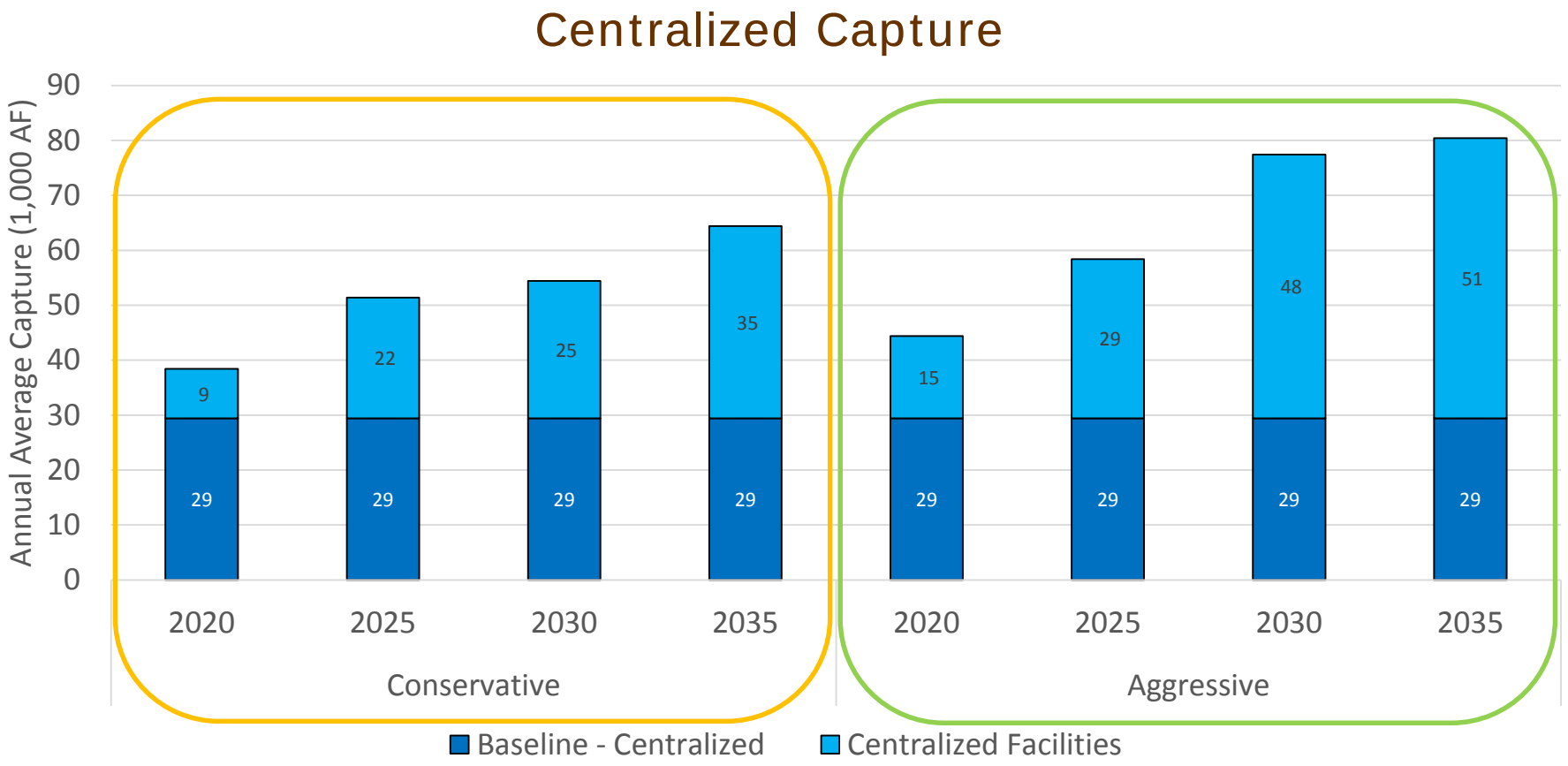
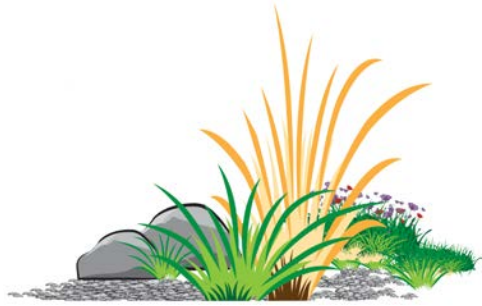
Branford Spreading Basin Upgrade	597	2017	2018	2019	6	LACFCD
Bull Creek Pipeline 60" - 16,000'	3,000	2017	2019	2020	12, 7	LACFCD
Debris Basin Retrofit #1 (pilot)	100	2017	2019	2020	TBD	LACFCD or LASAN
Lopez Spreading Grounds Upgrade	480	2017	2018	2019	7	LACFCD
Pacoima Dam Sediment Removal 3 MCY	700	2017	2022	2023	7	LACFCD
Pacoima Spreading Grounds Upgrade	2,000	2017	2019	2020	6, 7	LACFCD
San Fernando Road Swales	130	2017	2018	2019	6, 7	LACFCD
Silver Lake Stormwater Capture Project	117	2017	2019	2020	4	LASAN
Van Norman Stormwater Capture - 1050'	1,500	2017	2019	2020	12	LACFCD
Whiteman Airport	80	2017	2018	2019	6	LASAN
Storm Drain Mining (Inject)	750	2018	2019	2020	TBD	LASAN
Storm Drain Mining (treat and use)	750	2018	2020	2021	TBD	LASAN
LA Forebay Recharge System - LAR Pilot	1,000	2019	2023	2024	TBD	LACFCD or LASAN
Old Pacoima Wash	1,000	2019	2021	2022	7	LACFCD
Canterbury Power Line Easement	1,000	2020	2021	2022	6	LACFCD
Arundo Donax Removal Project - Phase II	1,900	2022	2024	2025	7	NFF
Debris Basin Retrofit #2	300	2022	2024	2025	TBD	LACFCD or LASAN
Hansen Dam Water Conservation Project	1,200	2022	2024	2025	7	LACFCD, ACOE
LA Forebay Recharge System - LAR Full Scale	3,000	2022	2024	2025	TBD	LACFCD or LASAN
Lakeside Reservoir	238	2022	2024	2025	7	LASAN
North Hollywood Power Line Easement	750	2022	2024	2025	2	LASAN
Park Retrofit #2	500	2022	2024	2025	TBD	LASAN
East Valley Baseball Park (aka Strathern Park Infiltration System)	750	2022	2024	2025	2	RAP, LASAN
Van Nuys Airport	300	2022	2024	2025	TBD	LASAN
Whitsett Sports Fields Park Retrofit	750	2022	2024	2025	2	LASAN
Big T & Pacoima Dam to LA Filtration Plant	5,000	2025	2029	2030	7	LACFCD
Boulevard Pit Multiuse	5,000	2025	2029	2030	6	LACFCD
Debris Basin Retrofit #3	150	2025	2029	2030	TBD	LACFCD or LASAN
LA Forebay Recharge System - Upper Ballona	600	2025	2029	2030	TBD	LACFCD or LASAN
Sepulveda Basin - Hansen SG Pipe Line 54"	3,000	2025	2029	2030	12	LASAN
Cal Mat Pit	750	2030	2034	2035	TBD	LACFCD or LASAN
Park Retrofit #3	500	2030	2034	2035	TBD	LASAN
Sheldon Pit Multiuse	1,500	2030	2034	2035	7	LACFCD
Valley Generating Station Stormwater Capture - II	700	2030	2034	2035	6	LACFCD

Stormwater Capture MASTER PLAN



Distributed Programs (Recharge and Direct Use)

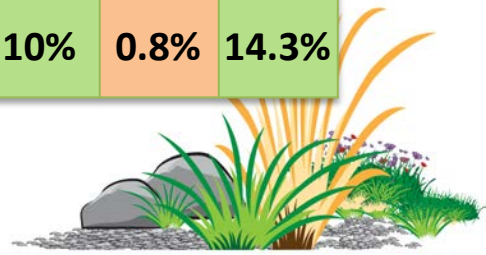


Implementation Rates

- Onsite Program
  - Regulated implementation (LID Ordinance)
  - Voluntary implementation (incentives, rebates, etc.)
- Green Streets
  - Sustainable streets ordinance
  - Implemented by LADWP and partner agencies according to available funding
- Subregional
  - Implemented by LADWP and partner agencies according to available funding

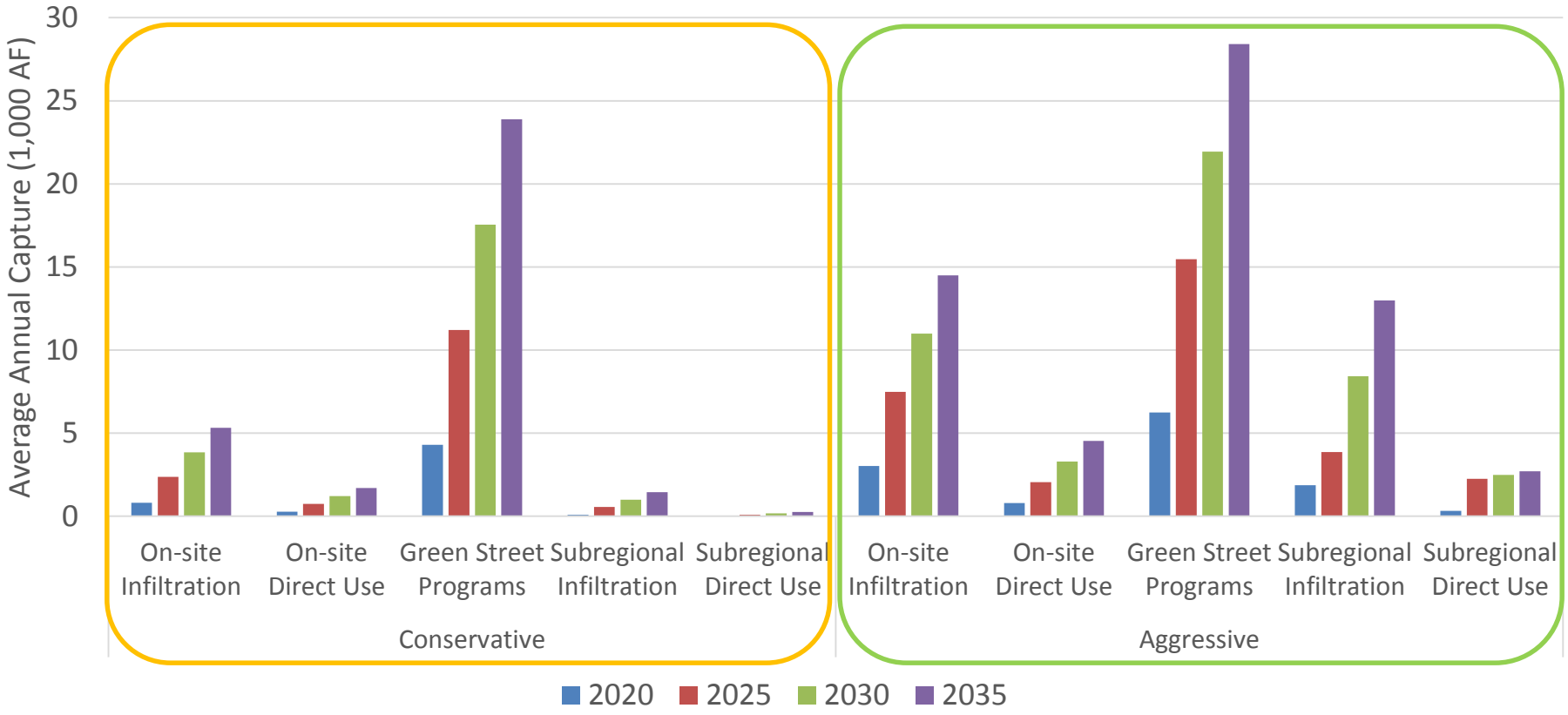
Stormwater Capture MASTER PLAN

Distributed Implementation Rates – CONSERVATIVE & AGGRESSIVE									
Program Category	Subcategory	5 year (2020)		10 year (2025)		15 Year (2030)		20 year (2035)	
		Total		Total				Total	
Onsite Infiltration (A/B) and Direct Use (C)	SF Residential	1%	5%	4%	13%	7%	21%	10%	30%
	MF Residential	1%	5%	4%	14%	7%	22%	10%	31%
	Commercial	1%	5%	4%	14%	7%	22%	10%	31%
	Industrial	2%	6%	6%	16%	8%	25%	13%	35%
	Educational	1%	5%	4%	14%	7%	22%	10%	31%
	Institutional	1%	5%	4%	14%	6%	22%	9%	31%
Green Streets (A)	Commercial	8%	12%	22%	32%	35%	52%	49%	73%
	Residential	8%	12%	22%	32%	35%	52%	49%	73%
	Rio Vistas	12%	18%	32%	49%	52%	75%	73%	100%
Subregional Infiltration (A/B), Direct Use (C)		0.05%	1.7%	0.3%	5.9%	0.5%	10%	0.8%	14.3%



Stormwater Capture MASTER PLAN

Distributed Capture By Program



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Reported capture does not include baseline

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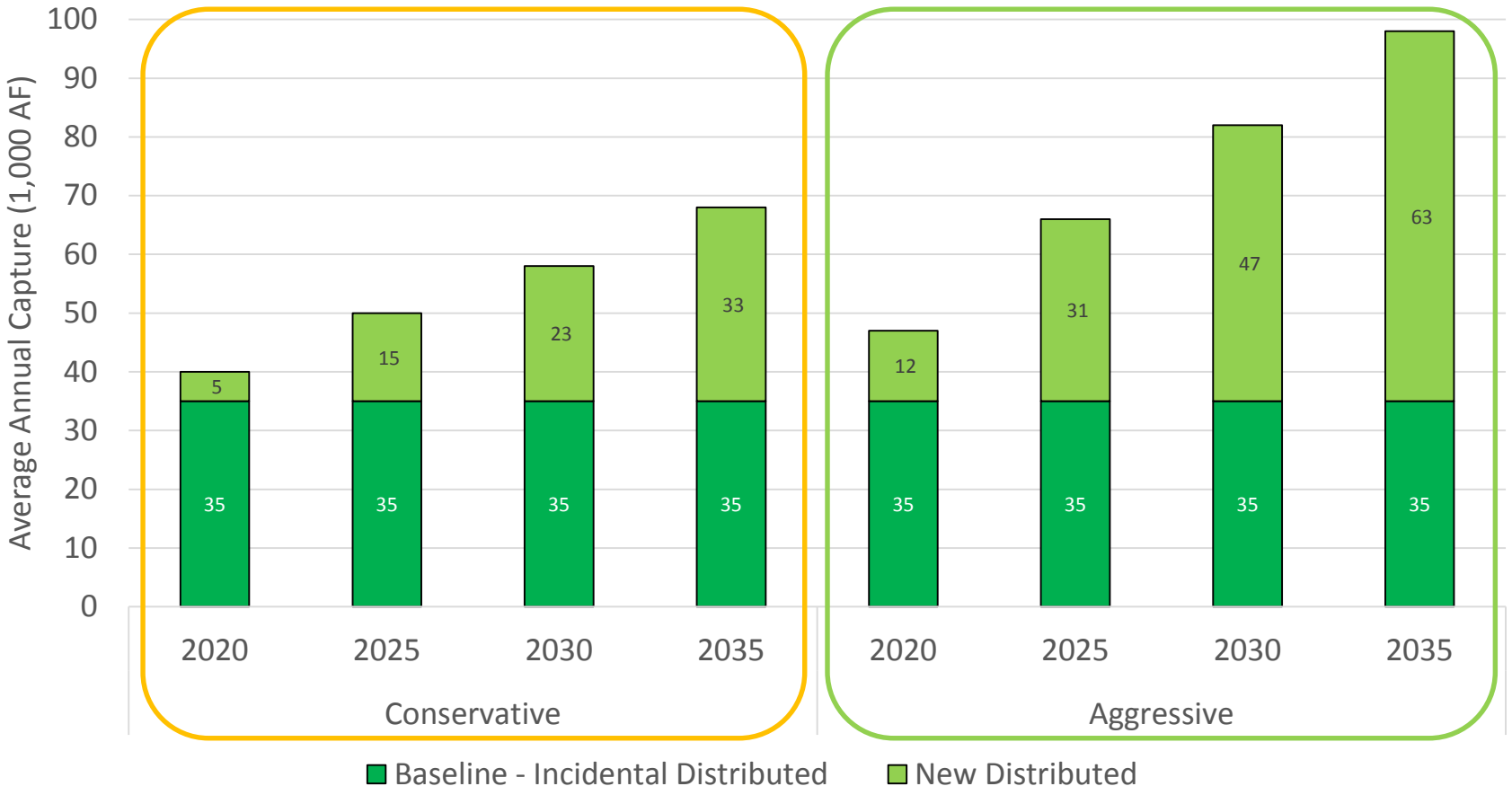
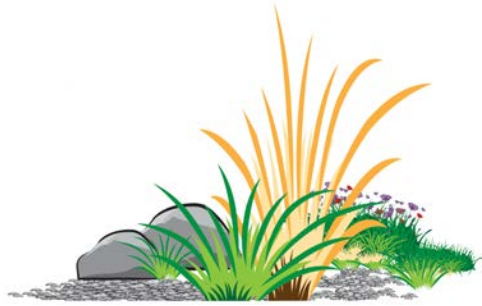
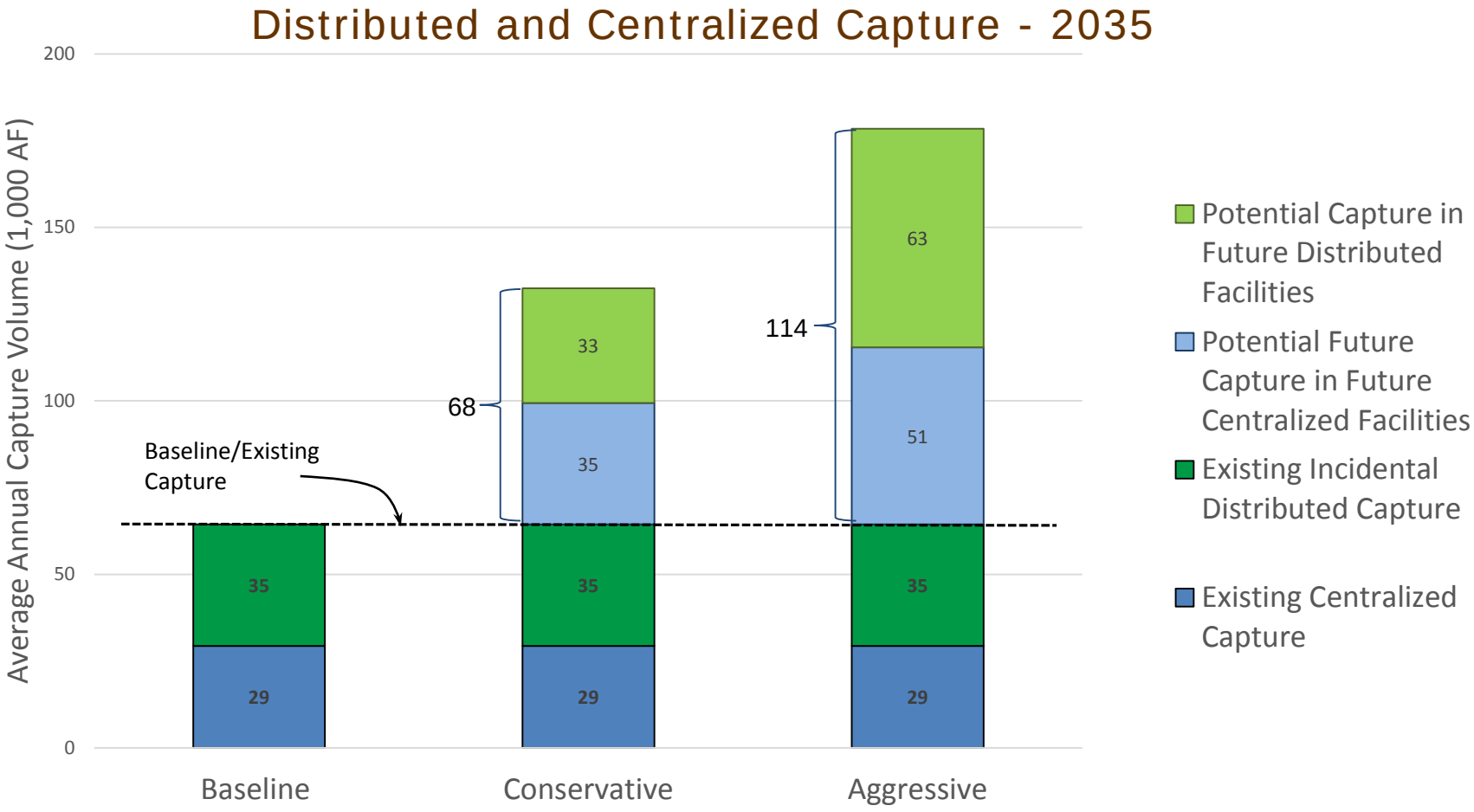
Distributed Capture Total



Summary of Capture (Centralized and Distributed)



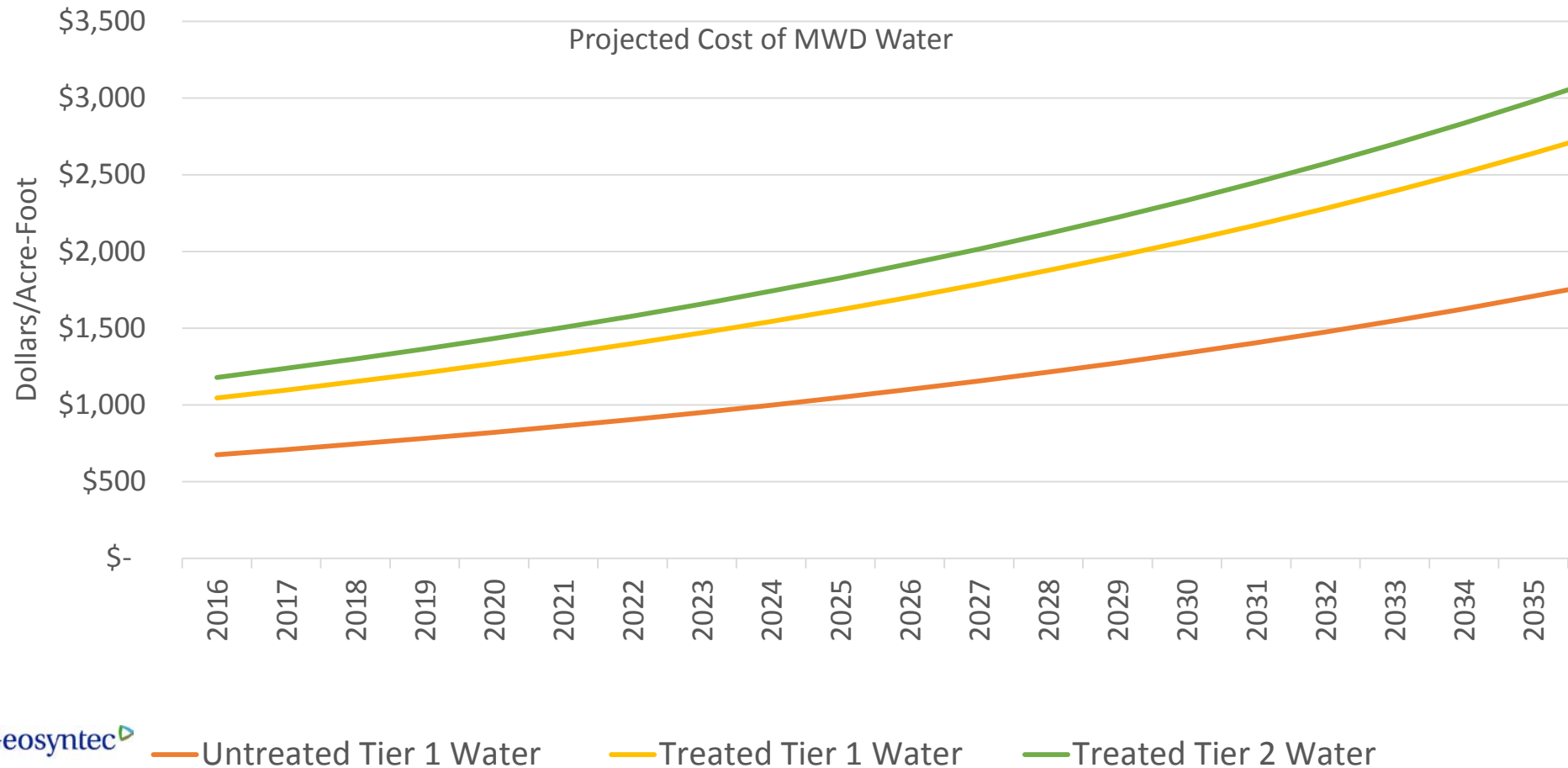
Stormwater Capture MASTER PLAN



Funding and Implementation

Stormwater Capture MASTER PLAN

Costs of Water



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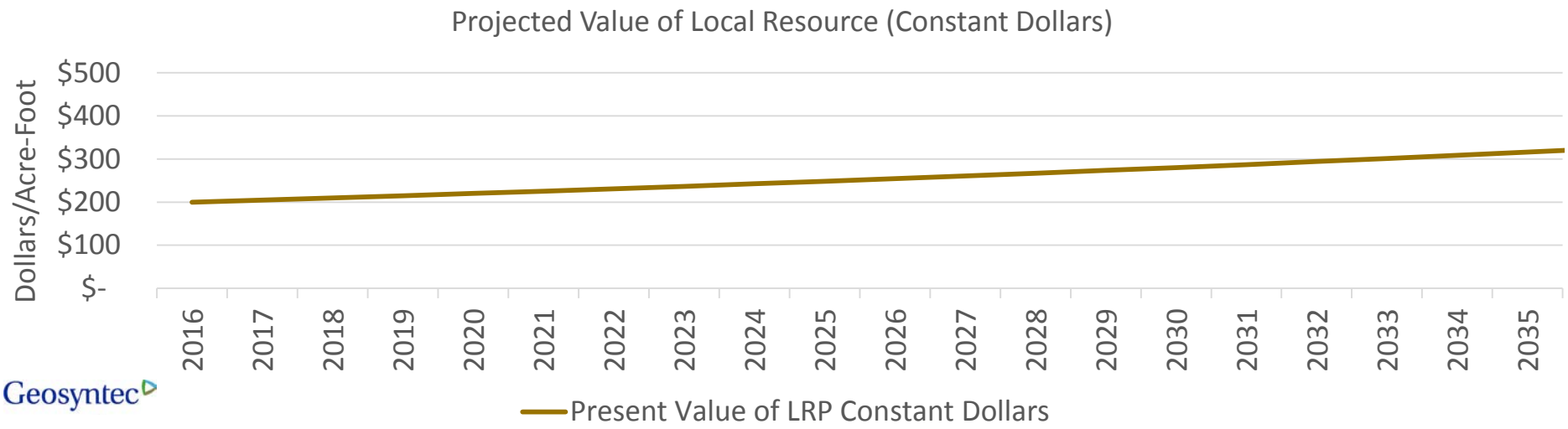
Value of Local Resource

- Due to threats to imported water supply, there is value to developing local resources
- Value difficult to monetize, but MWD's Local Resource Program (LRP) can be used as a **conservative** proxy



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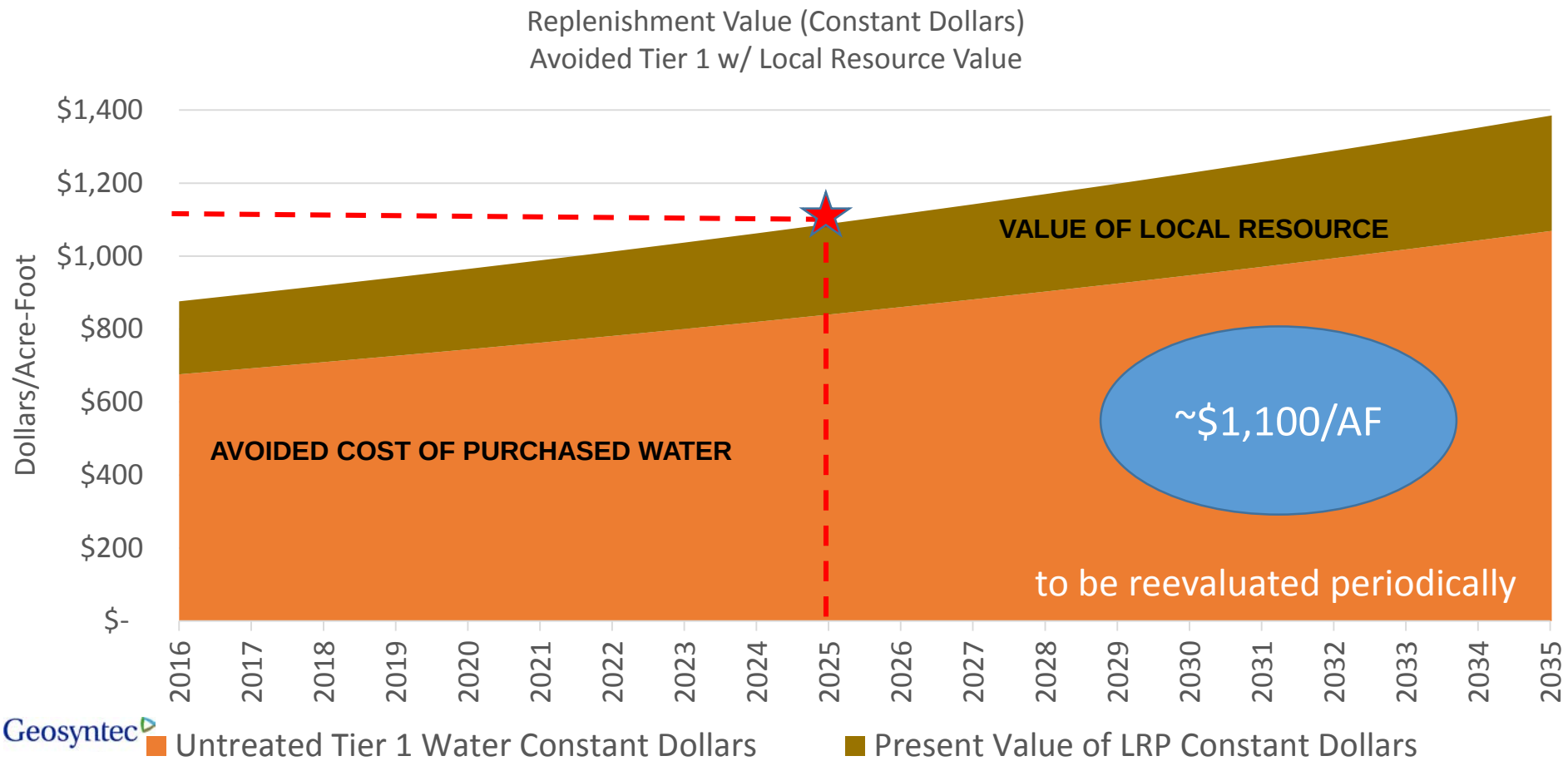
Value of recharged water



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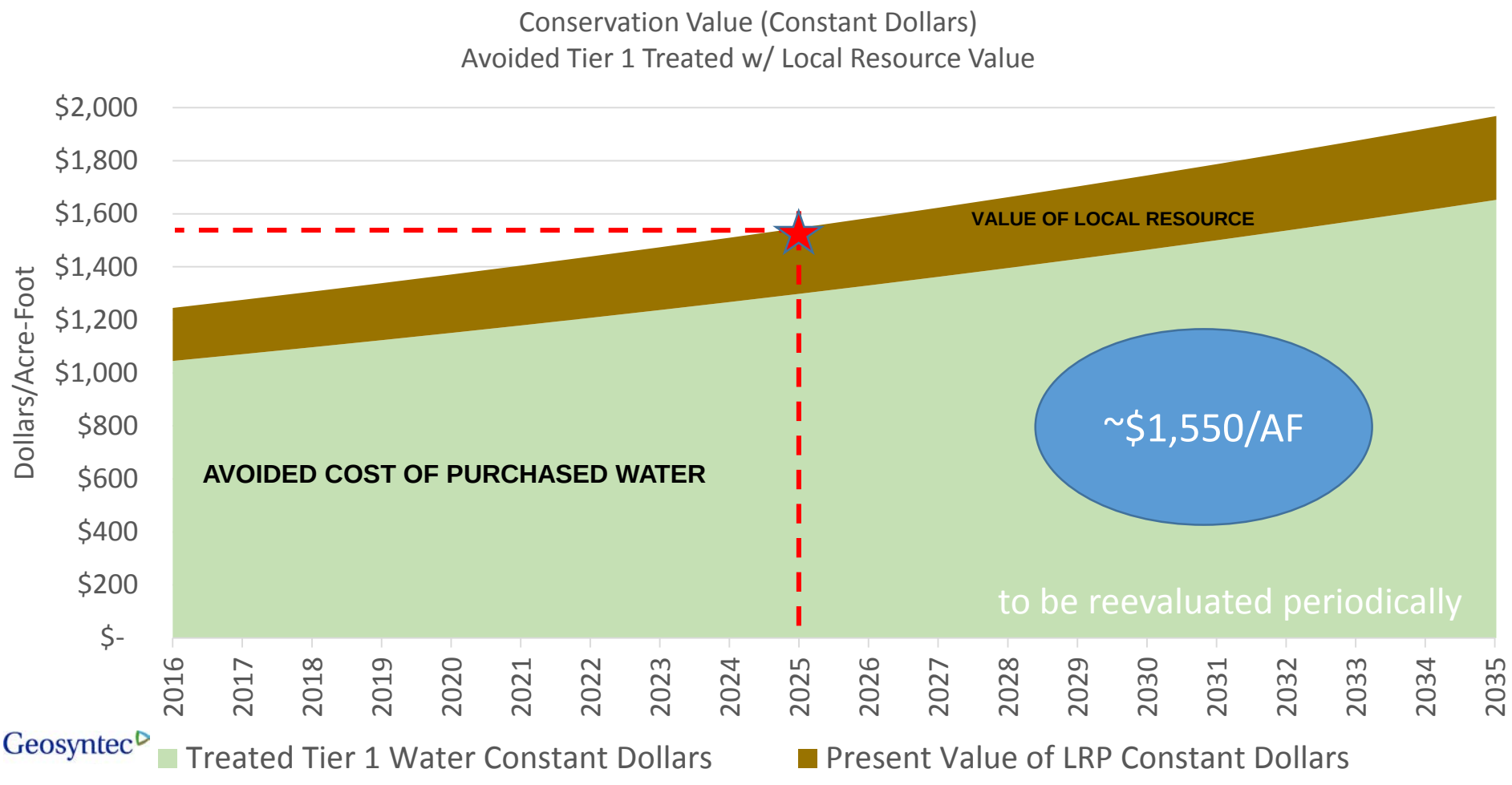
Value of direct use water



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Stormwater Capture MASTER PLAN

Infiltration Projects/Programs **$1,100/AF or less**

LADWP may implement and/or fund

Infiltration Projects/Programs **more than $1,100/AF**

LADWP may seek outside funding and partnerships to implement
OR
LADWP may fund partners to implement
OR
LADWP may consider implementing without additional funding or partners on a case by case basis
OR
Project/program may not be implemented

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to be reevaluated periodically

Stormwater Capture MASTER PLAN

Direct Use Projects/Programs **$1,550/AF or less**

LADWP may implement and/or fund

Direct Use Projects/Programs **more than $1,550/AF**

LADWP may seek outside funding and partnerships to implement
OR
LADWP may fund partners to implement
OR
LADWP may consider implementing without additional funding or partners on a case by case basis
OR
Project/program may not be implemented

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to be reevaluated periodically

Stormwater Capture MASTER PLAN

Completed – Hansen Spreading Grounds

LADWP Capital Cost	$4.19 M
Completion Date	2013
Yield (AFY)	16,000
Year of First Pay-Back	2016
Cost per Acre-Foot ($/AF)	$40
Internal Rate of Return	18.6%

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Stormwater Capture MASTER PLAN

Completed – Woodman Ave.

LADWP Capital Cost	$1.2 M
Completion Date	2014
Yield (AFY)	55
Year of First Pay-Back	2036
Cost per Acre-Foot ($/AF)	$727
Internal Rate of Return	2.9%

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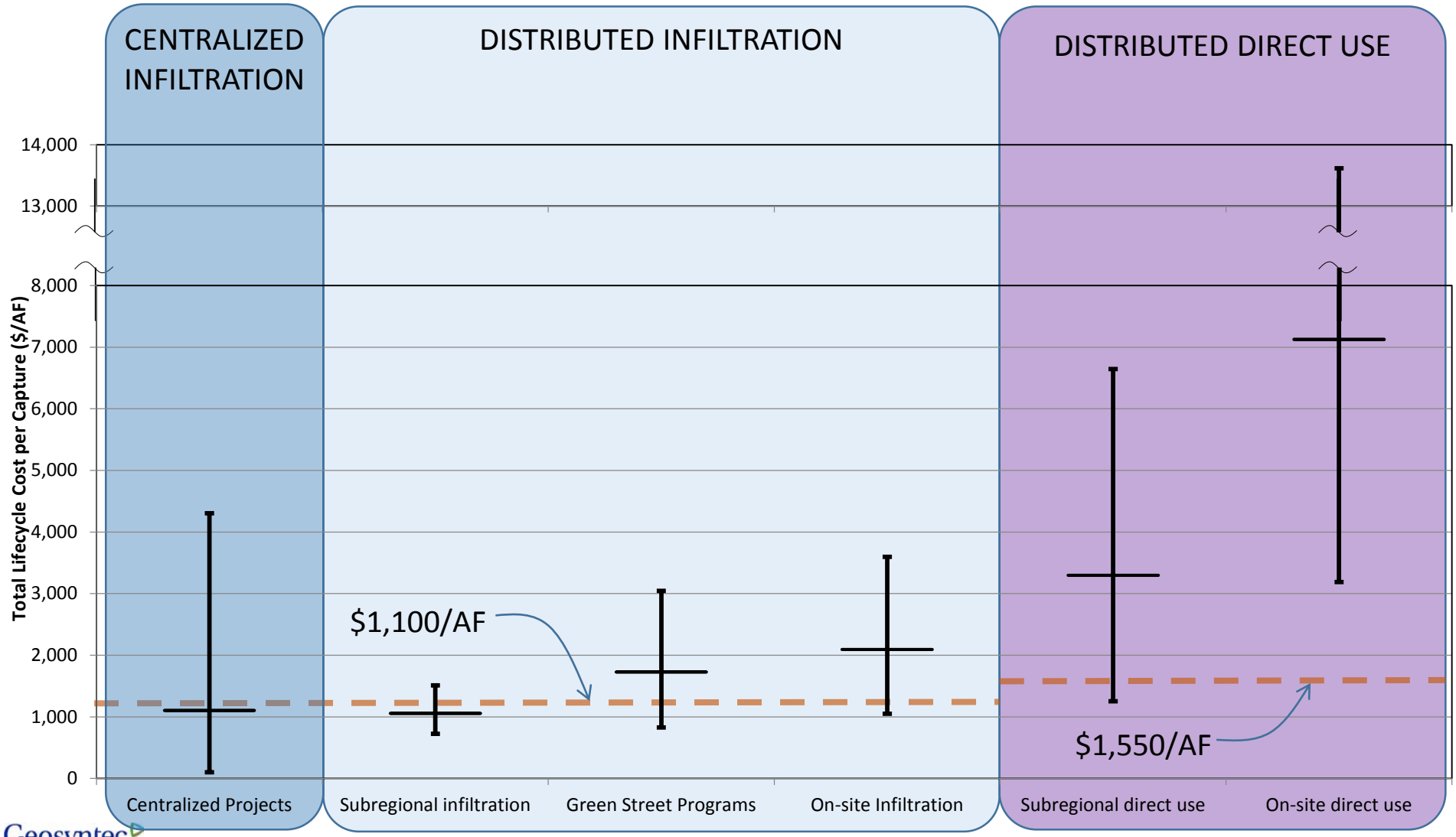
Stormwater Capture MASTER PLAN



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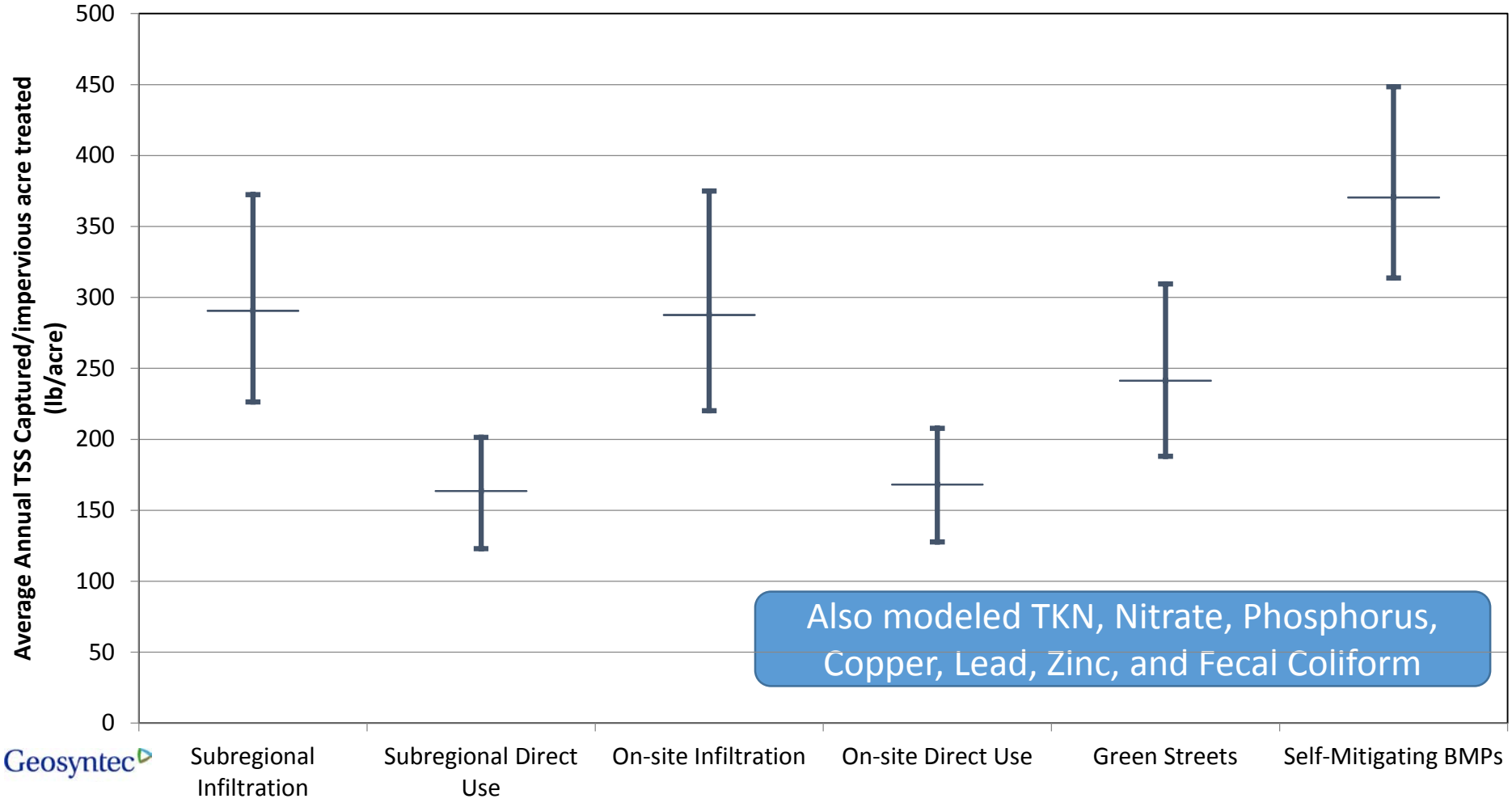
Stormwater Capture MASTER PLAN

Pollutant Reduction-TSS



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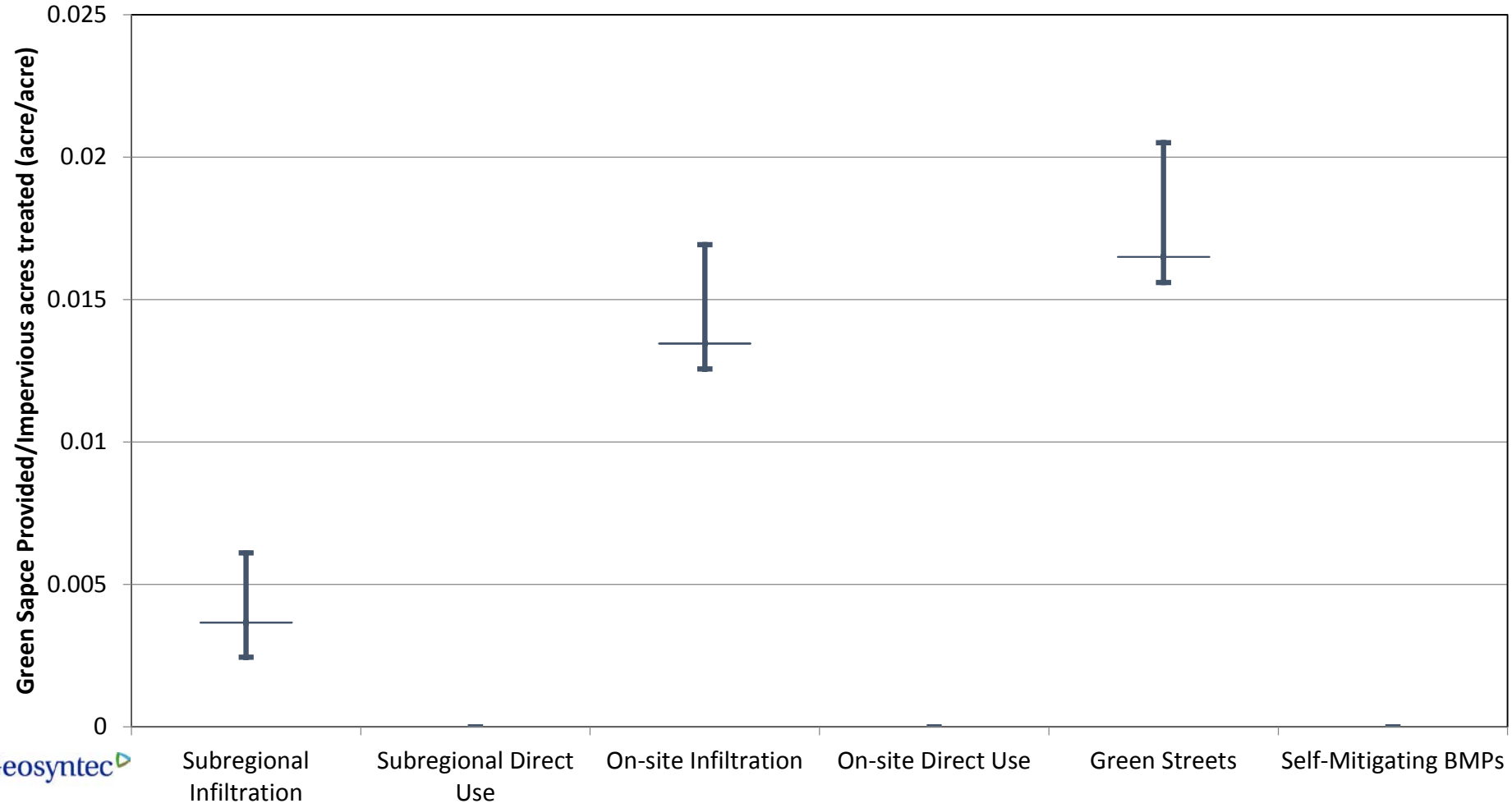
Green Space



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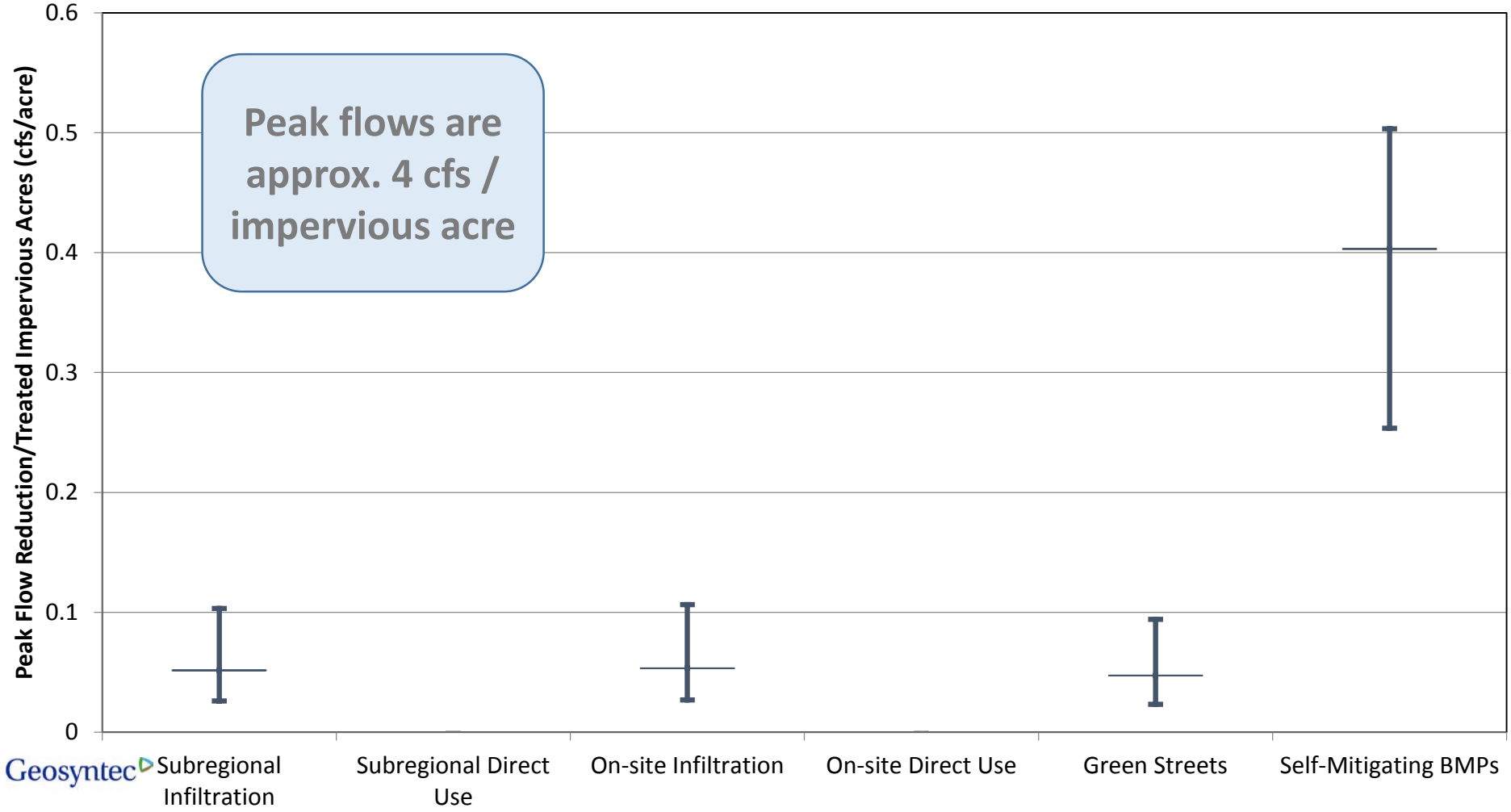
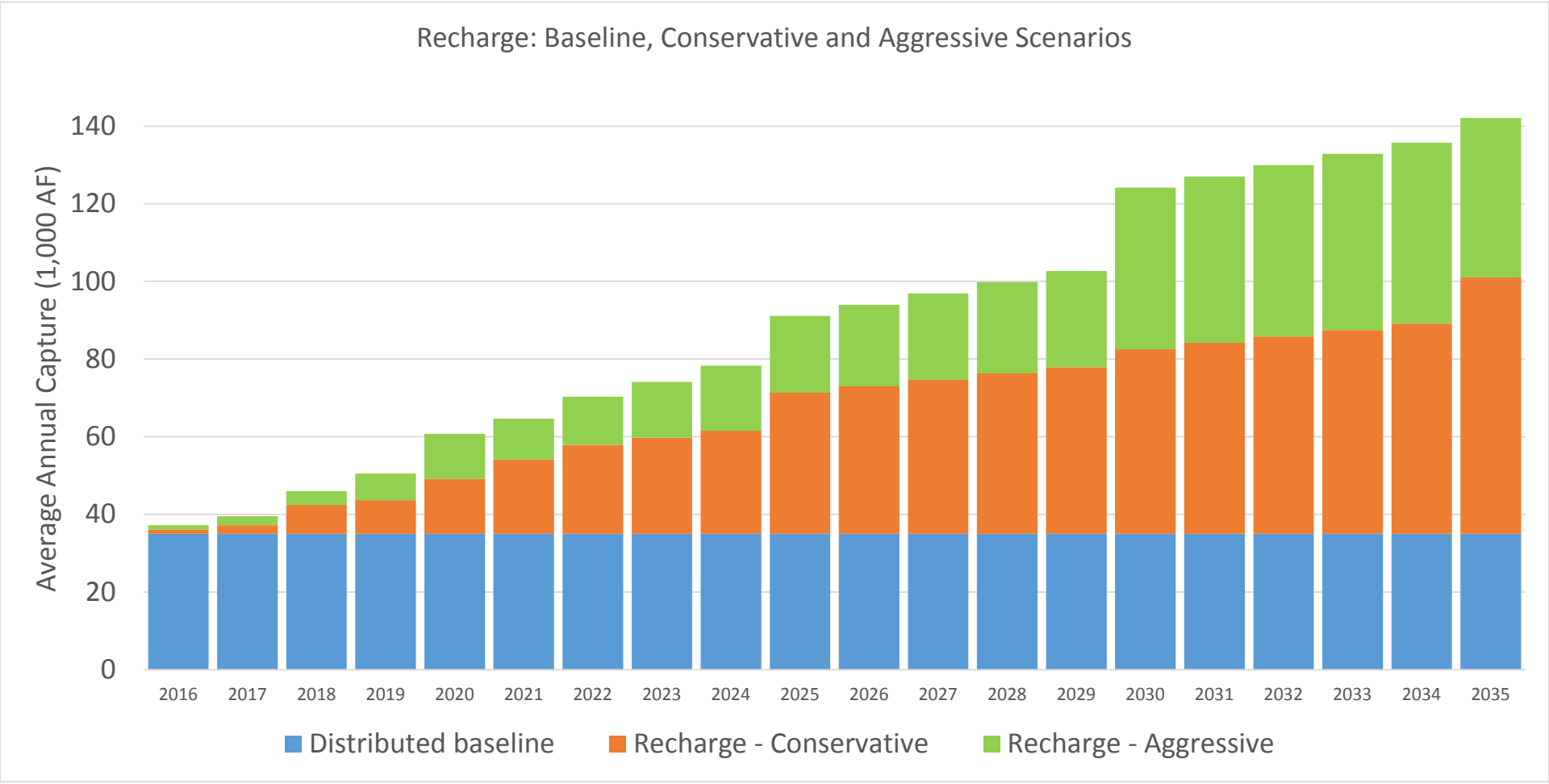
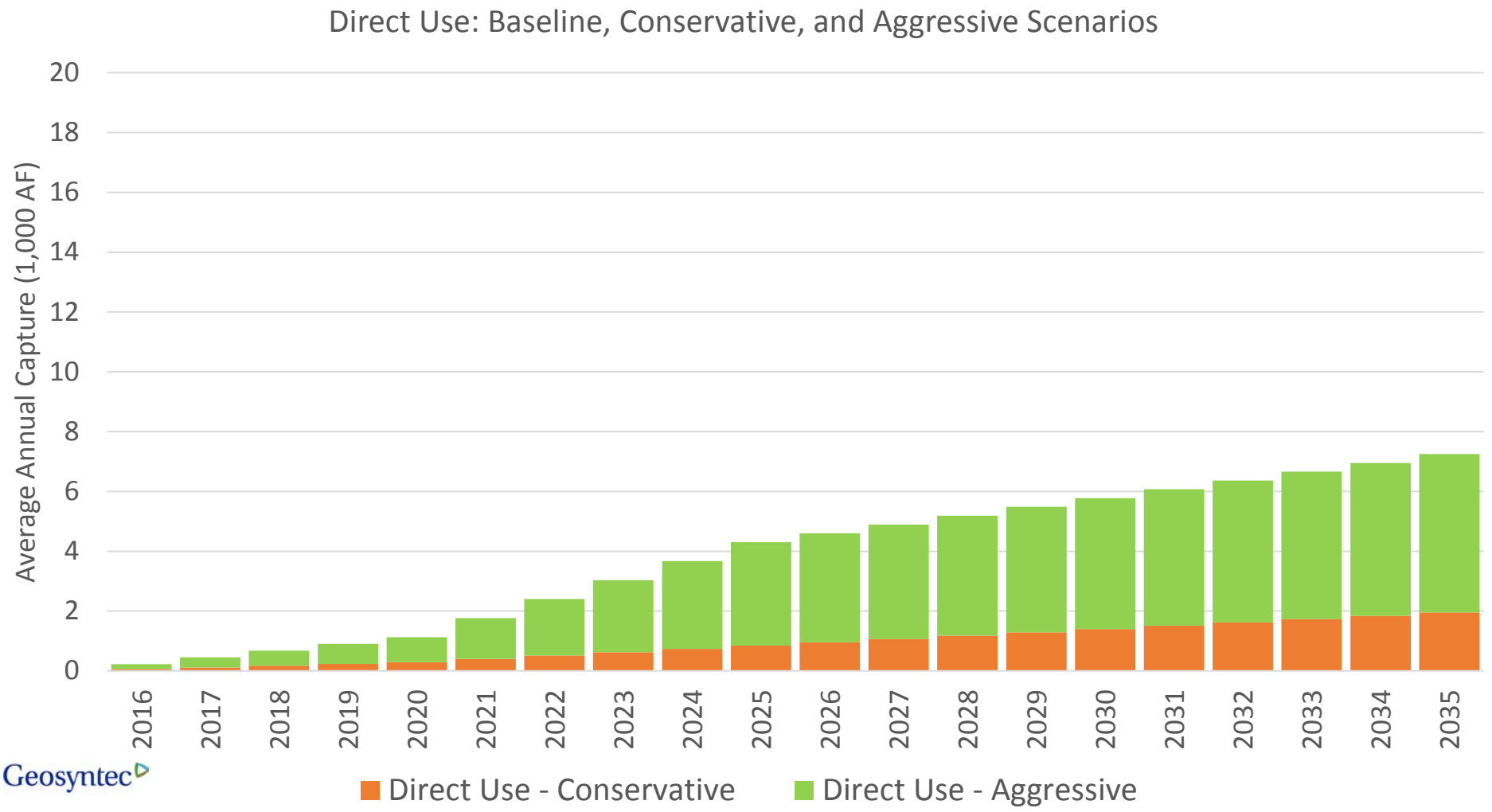
Peak Flow Reduction



Stormwater Capture MASTER PLAN



Stormwater Capture MASTER PLAN



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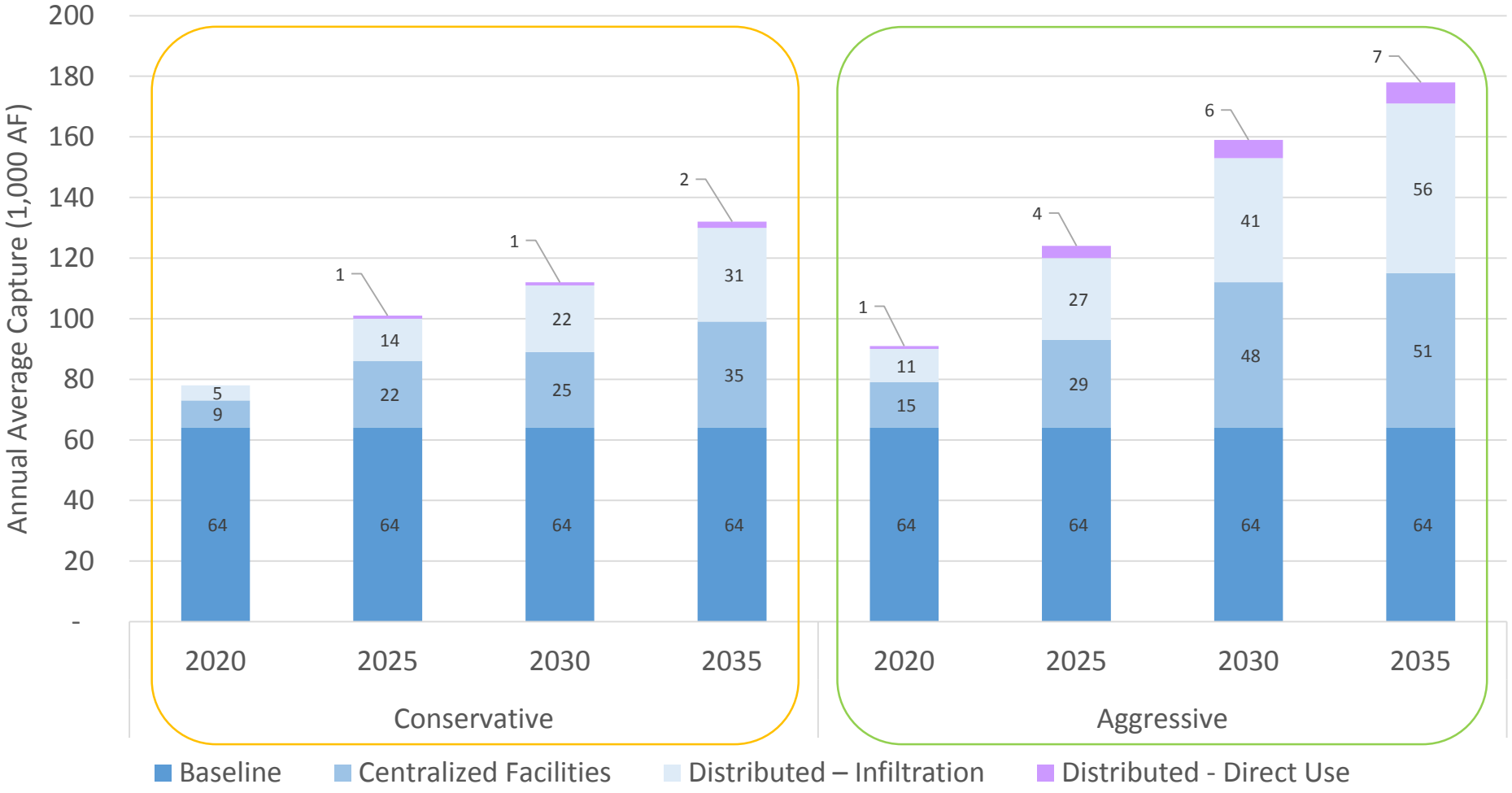
Stormwater Capture MASTER PLAN

There is potential for stormwater to augment local groundwater and also assist with conservation efforts

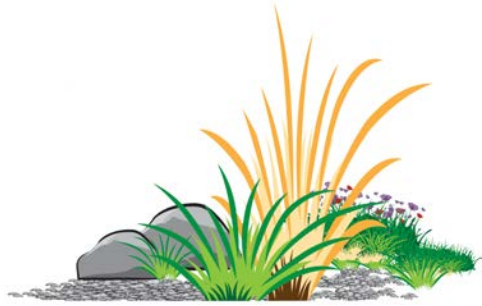
Acre Feet Per Year

	5 YR		10 YR		15 YR		20 YR	
Alternatives	***Conservative***	***Aggressive***	***Conservative***	***Aggressive***	***Conservative***	***Aggressive***	***Conservative***	***Aggressive***
Centralized Facilities Water Supply	9,000	15,000	22,000	29,000	25,000	48,000	35,000	51,000
Distributed – Infiltration Water Supply	5,200	11,000	14,000	27,000	22,000	41,000	31,000	56,000
Distributed - Direct Use Water Conservation	300	1,000	800	4,000	1,400	6,000	2,000	7,000

Stormwater Capture MASTER PLAN

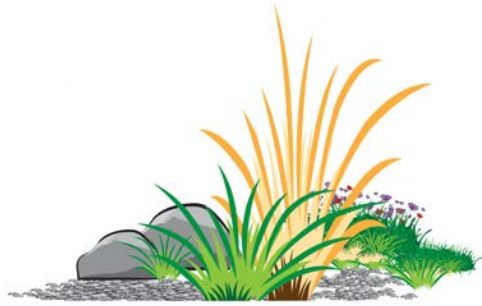


Funding/Financing Opportunities

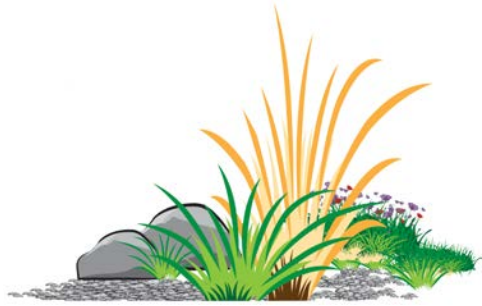


Stormwater Capture MASTER PLAN

- Financing
  - Local Bonds
  - State Revolving Funds
- Funding
  - Grant opportunities
  - Project Partnerships
- Financing for Private Property Owners
  - On-bill financing
  - PACE like program
  - Credits
  - Rebates

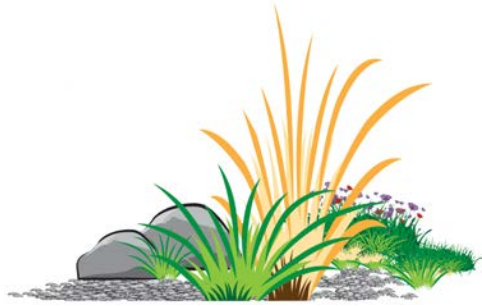


Implementation Strategy



Guiding Principles of Implementation

- Sound Planning
- Appropriate Investment/Cost Effective
- Reliable and Resilient Water Supply and Service
- Multi-benefit
- Transparent and Collaborative



Stormwater Capture MASTER PLAN

Recommended Actions

- Facilitate Stormwater Capture
  - Improve coordination between local and regional agencies
    - Coordinate with EWMP implementation
    - Coordinate with LA County and the USBR
  - Reduce impediments
  - Pursue funding opportunities
- Implement Cost Effective Centralized Projects
  - Pursue partners and funding for multiple benefits
- Implement Cost Effective Distributed Programs
  - Pursue partners and funding for multiple benefits
- Increase Efficiency of Implementation

Contact Us for More Information!

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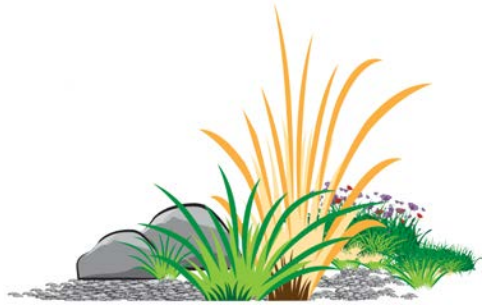

Stormwater Capture MASTER PLAN

For more information

www.ladwp.com/stormwater
www.ladwp.com/scmp