

# SAWPA Brine Line Reach 4D Work Plan

Commission Meeting

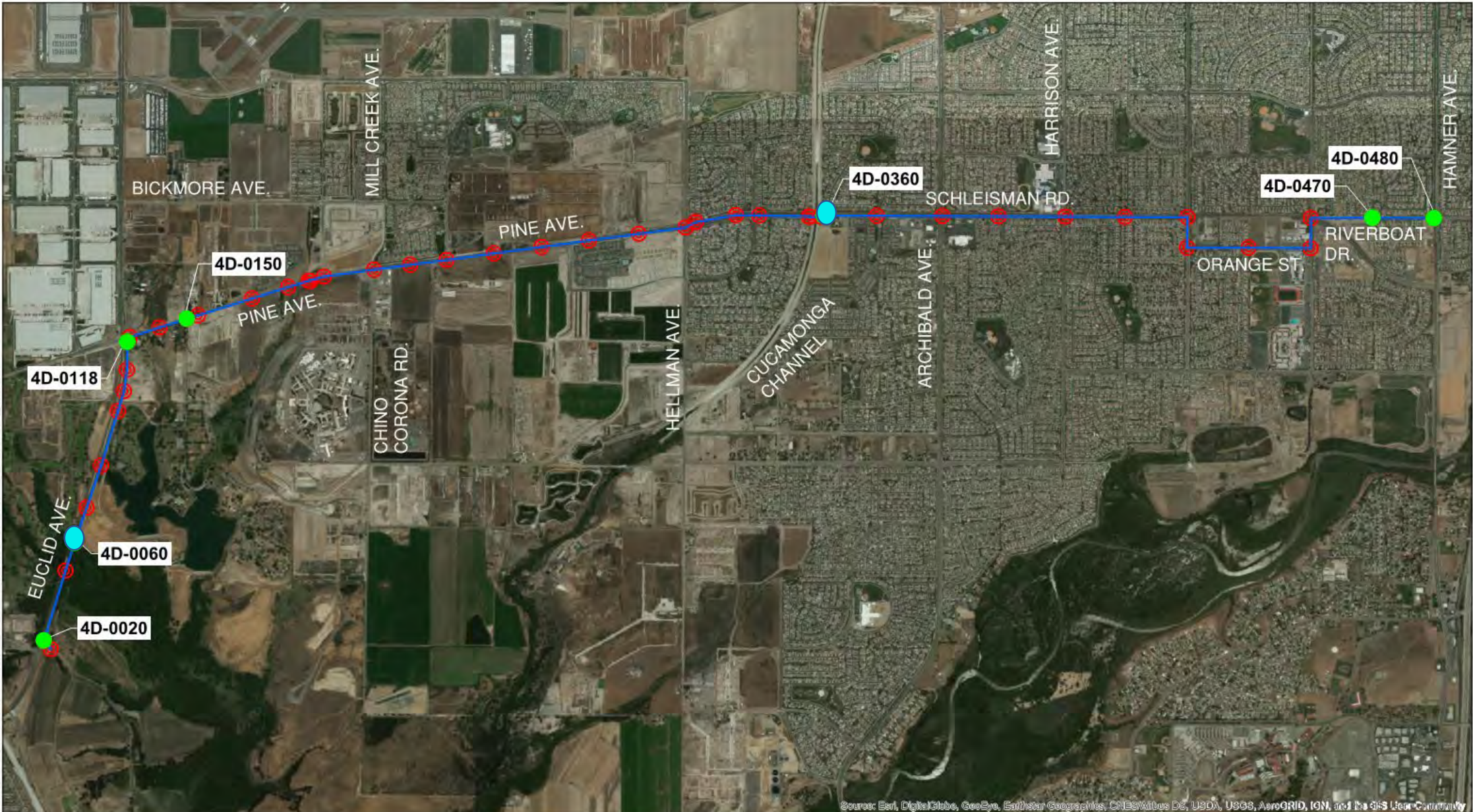
October 16, 2018



# Reach 4D Contracts 1 and 2 System Overview





- 7 Miles long
- Within cities of Chino and Eastvale.
- 42" RCP with 270 degree T-Lock
- Built in 1990





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**LEGEND**

-  MANHOLE
-  MANHOLE RECOMMENDED FOR TESTING IN FIVE YEARS
-  BRINE LINE REACH 4D PIPELINE
-  INSPECTION MANHOLE/RECOMMENDED FOR TESTING IN FIVE YEARS

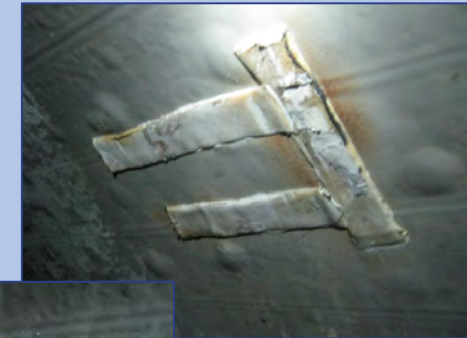
SAWPA BRINELINE REACH 4D

**INSPECTION MANHOLES/MANHOLES RECOMMENDED FOR  
MAN-ENTRY PHYSICAL TESTING IN FIVE YEARS**



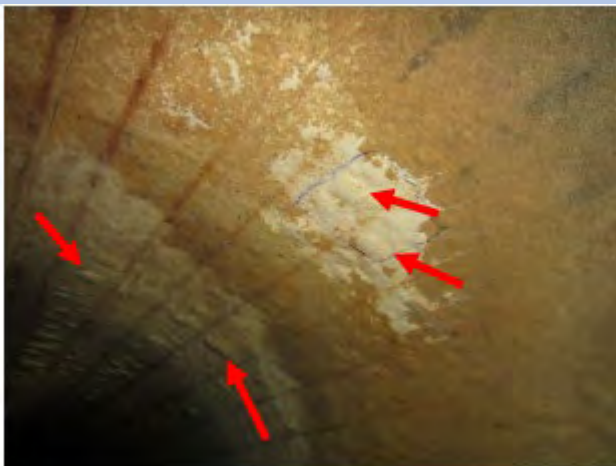
# Summary of Man-Entry Physical Inspection Tests

Man-Entry Tests	Location(s) Performed in Pipe	Location(s) Performed in MAS
<b>Tactile Testing</b>	At the concrete/liner interface.	None
<b>Visual Assessment</b>	<ul style="list-style-type: none"> <li>At the concrete/liner interface.</li> <li>Behind the liner near the crown and below the spring line.</li> </ul>	<ul style="list-style-type: none"> <li>Rim</li> <li>Cone</li> <li>Walls</li> <li>Bench</li> <li>Main pipe connection</li> <li>Lateral penetrations</li> <li>Channel</li> </ul>
<b>Concrete Sounding</b>	<ul style="list-style-type: none"> <li>At the concrete/liner interface, if above water level.</li> <li>Behind the liner near the crown and below the spring line.</li> </ul>	Unlined concrete channel, if above water level.
<b>Concrete Penetration Testing</b>	<ul style="list-style-type: none"> <li>At the concrete/liner interface, if above water level.</li> <li>Behind the liner near the crown and below the spring line.</li> </ul>	This test was not performed inside the maintenance access structures.
<b>Concrete Surface pH Testing</b>	Behind the liner near the crown and below the spring line.	This test was not performed inside the maintenance access structures.
<b>Surface Penetrating Radar</b>	Behind the liner near the crown and below the spring line.	Walls



# Summary of Man-Entry Investigation Results

MH <sup>(a)</sup>	Liner				Concrete		General	
	Blisters / Bulges	Failed Weld Strips	Termination Undermined	Termination Unembedded	Exposed Aggregate	Exposed Rebar	Slime Layer	Debris
4D-0020	X	X	X				X	
4D-0118	X	X	X		X		X	X
4D-0150	X		X	X	X		X	X
4D-0470	X		X	X	X	X	X	
4D-0480							X	



# Man-Entry Investigation Results – Concrete Deterioration

MH	D-Load Design Req. (psi) <sup>(a)</sup>	Assumed Pipe Class <sup>(b)</sup>	Assumed Wall Thickness (in.) <sup>(b)</sup>	Assumed Min. Concrete Cover (in.) <sup>(b)</sup>	Assumed Min. Circumferential Rebar Spacing (in.) <sup>(b)</sup>
4D-0020	3,500	V	5.25	1.00	3.94
4D-0118	2,250	IV			
4D-0150	2,800	IV			
4D-0470	1,700	III			
4D-0480	1,700	III			



MH	Liner		Concrete	
	Termination Condition	Uplifted Liner Length (in.) <sup>(a)</sup>	Deterioration Depth (in.)	VANDA Rating
4D-0020	Embedded, yet undermined.	n/a	½	2
4D-0118	Embedded, yet undermined.	n/a	3/8	2
4D-0150	Uplifted and undermined.	1	½ – 1	3
4D-0470	Uplifted and undermined.	2	½ – 1	3
4D-0480	Embedded, yet undermined.	n/a	0	1



# Summary of CCTV Field Investigation Extents

- ~26,500 feet of 42-inch brine line inspected out of ~35,200 feet of total brine line in Reach 4D. (75%)
- Liner/pipe interface visible in ~6,500 feet of pipe.
- 19% of the total length of Reach 4D was visible during CCTV inspections.
- Reason?:
  - Major reason: Slime layer
  - Minor reason: High flows
- Detailed summary available.



# Summary of CCTV Investigation Results

- More uniformity in conditions than man-entry inspections.
- Rotated liner present in 7 reaches. Rotation varies from 1-6 inches. Corrosion not consistent at 3 O'clock and 9 O'clock positions.
- Minor concrete loss with visible aggregate (groove) along much of liner/concrete interface where visible.





# Remaining Useful Life

Based on a combination of man-entry and CCTV inspection results, the 42-inch pipe has an estimated predicated remaining useful life of 10-20 years.

## However:

- Rate of deterioration is unknown.
- Available data is from one point in time.
- Useful to compare existing data with data from a future inspection to characterize rate of deterioration and further refine remaining useful life at the five-year mark.

# Flow conditions were different in 1990

- When first installed, low flow level exposed unlined concrete to sulfuric acid causing corrosion at the interface of lined and unlined concrete.



# Preliminary Suggested Recommendations

## Near-Term:

- Man-entry inspections at MAS 4D-0060 and 4D-0360
  - MAS 4D-0060 is immediately upstream of 600 foot-long sewer siphon crossing Chino Creek on Euclid Avenue.
  - MAS 4D-0360 is immediately upstream of 400 foot-long sewer siphon crossing Cucamonga Channel on Schleisman Road.
  - Same tests as completed for recent man-entry inspections plus visual inspection of air jumpers (if they exist).
  - Provides a baseline for future inspections.
- Clean and CCTV segment of pipe between MAS 4D-0240 and 4D-0250
  - Most liner uplift observed (65% of 1,020 foot segment televised)
  - Remove slime layer
  - Provides a baseline for future inspections.

Time Frame = Within 1 Year of Work Plan

Estimated Cost = \$49,000

# Preliminary Suggested Recommendations

## Mid-Term:

- Clean entire 7 miles of pipe to remove the existing slime layer prior to inspection.
- System shut-down similar to the shut-down completed for the initial inspection (June 2018) to lower water levels in the pipeline as much as possible.
- Man-entry physical testing at the same five locations as completed in June 2018 as well as two additional locations at siphon inlet structures located at MH 4D-0060 and MH 4D-0360.
- CCTV inspection of 7 miles of pipe.
- Re-assess remaining useful life
- Define rehabilitation project boundaries (as necessary)
- Project prioritization

Time Frame = In 5 Years

Estimated Cost = \$468,000

# Preliminary Suggested Recommendations

## Long-Term:

- Rehabilitate pipeline, if required, within boundaries as identified with Mid-Term inspections.
- Assumed full 7 miles for purposes of worst case scenario.
  - Not including 360-degree PVC lined RCP installed in 2011
  - Not including the two siphons

Time Frame = 10 to 20 years (depending on results of Mid-Term Inspections)

Order of Magnitude Cost: \$40 Million +/-

(Subject to re-evaluation and ultimate rehabilitation method selected.)

# Rehabilitation Alternatives Evaluated and Criteria Used for Evaluation

## Rehabilitation Alternatives:

- Segmental Sliplining
- Continuous Sliplining
- Cured-In-Place Pipe Lining
- Spiral Wound Pipe
- Man-Entry Repairs

## Evaluation Criteria:

- Constructability/Work Area Requirements
- Impacts to Hydraulic Capacity
- Traffic Impacts/Public Disruption
- Regulatory/Permitting
- Planning Level Cost
- Risk of SSO
- Solution Longevity

QUESTIONS?

# Man-Entry Investigation Results – Manholes

MH <sup>(a)</sup>	Rim	Cone	Walls	Bench	Main Pipe Connection	Lateral Penetrations	Channel
4D-0020	Moderate corrosion	Liner in good condition	Liner in good condition	Liner unembedded, yet covering concrete	Good condition	Good condition	Slime layer. Exposed concrete aggregate.
4D-0118	Liner termination loose	Failed liner weld strips	Liner in good condition	Liner unembedded, yet covering concrete	Good condition	Encrustation	Slime layer. Exposed concrete aggregate.
4D-0150	Good condition	Liner in good condition	Minor liner blisters	Liner unembedded, yet covering concrete	Good condition	Good condition	Slime layer. Exposed concrete aggregate.
4D-0470	Good condition	Minor hole in liner	Liner blisters and bulges	Liner unembedded, yet covering concrete	Good condition	Cuts in liner due to CCTV crawler camera cable	Slime layer. Exposed rebar.
4D-0480	Good condition	Liner in good condition	Liner in good condition	Liner in good condition	Good condition	Good condition	Channel lined and in good condition



# Deterioration Rating System Used in Analysis

## Practical rating:

- Established and proven VANDA rating system

## Professional judgement based on:

- Current and future system operation
- Extent of observed damage
- Damage location

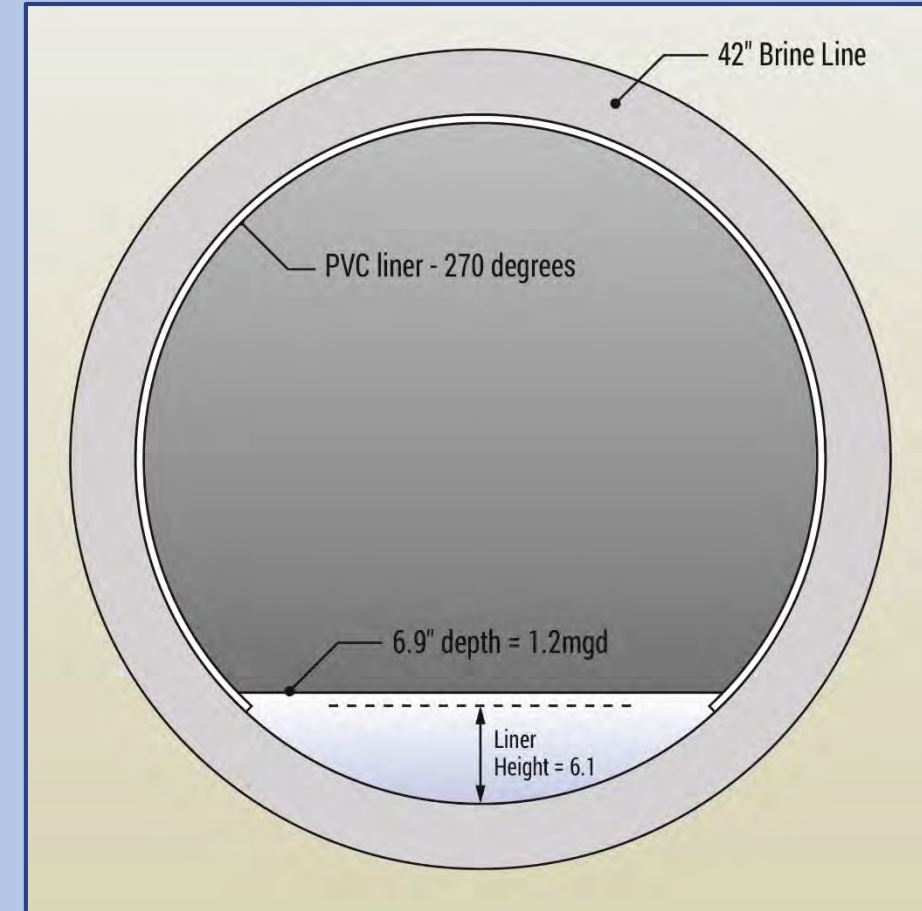
Condition Rating	Description	Representative Photograph
<b>Level 1</b>	<p><b>None/Minimal Damage to Concrete</b></p> <ul style="list-style-type: none"> <li>• Hardness: No Loss</li> <li>• Surface Profile: No Loss</li> <li>• Cracking: Shrinkage Cracks</li> <li>• Spalling: None</li> <li>• Reinforcing Steel (Rebar): Not Exposed or Damaged</li> </ul>	
<b>Level 2</b>	<p><b>Damage to Concrete Mortar</b></p> <ul style="list-style-type: none"> <li>• Hardness: Damage to Concrete Mortar</li> <li>• Surface Profile: Some Loss</li> <li>• Cracking: Thumbnail Sized Cracks of Minimal Frequency</li> <li>• Spalling: Shallow Spalling of Minimal Frequency, Related Rebar Damage</li> <li>• Reinforcing Steel (Rebar): May Be Exposed but Not Damaged</li> </ul>	
<b>Level 3</b>	<p><b>Loss of Concrete Mortar/Damage to Rebar</b></p> <ul style="list-style-type: none"> <li>• Hardness: Complete Loss</li> <li>• Surface Profile: Large Diameter Exposed Aggregate</li> <li>• Cracking: ¼-inch to ½-inch Cracks, Moderate Frequency</li> <li>• Spalling: Deep Spalling of Moderate Frequency, Related Rebar Damage</li> <li>• Reinforcing Steel (Rebar): Exposed and Damaged, Can Be Rehabilitated</li> </ul>	
<b>Level 4</b>	<p><b>Rebar Severely Corroded/Significant Damage to Structure</b></p> <ul style="list-style-type: none"> <li>• Hardness: Complete Loss</li> <li>• Surface Profile: Large Diameter Exposed Aggregate</li> <li>• Cracking: ½-inch Cracks or Greater, High Frequency</li> <li>• Spalling: Deep Spalling at High Frequency, Related Rebar Damage</li> <li>• Reinforcing Steel (Rebar): Damaged or Consumed, Loss of Structural Integrity</li> </ul>	

# Hydraulics – Conditions of Current Average Dry Weather Flow of 5.5 MGD

	Slope = 0.0010	0.0020 < Slope < 0.0040	0.0040 < Slope < 0.0060	0.0060 < Slope < 0.0080	Slope = 0.0600
<b>Water Depth (inches)</b>	14.2	10.2 – 11.3	9.15 – 9.77	8.48 – 8.85	5.13
<b>Percent Full (%)</b>	33.8	24.3 – 27.0	21.8 – 23.3	20.2 – 21.1	12.2
<b>Velocity (ft/s)</b>	2.97	4.07 – 4.70	5.01 – 5.50	5.76 – 6.13	12.7
<b>Percent of Entire Alignment<sup>(1)(2)</sup> (%)</b>	58.5	14.2	3.97	17.2	0.7

(1) Entire Reach 4D Contract 1 and 2 alignment.

(2) The sewer siphons and new pipe segments installed in 2011 with 360-degree PVC T-Lock lined RCP were not included in any of the slope categories. These segments account for approximately 5.4-percent of the entire alignment.



# Man-Entry Investigation Results – Hydraulics

MH	Main Pipe Configuration <sup>(a,b)</sup>	Effluent Slope <sup>(b)</sup>	Influent Slope <sup>(b)</sup>	Effluent – Avg. Velocity (ft/s) <sup>(e)</sup>	Influent – Avg. Velocity (ft/s) <sup>(e)</sup>	Debris <sup>(c)</sup>	Typ. Water Level <sup>(c)</sup>	No. of Laterals <sup>(c)</sup>
4D-0020	45° bend	0.0010	0.0010	1.82	1.82	None	Above liner termination for both main pipes.	1 – unknown if in use
4D-0118	Straight through	0.0010	0.0024	1.82	2.83	Large rocks / debris	Above liner termination for both main pipes.	1 – outside drop; unknown if in use
4D-0150	Straight through	0.0010	0.0600 <sup>(d)</sup>	1.82	5.51	Large rocks / debris	Above liner termination for effluent pipe. Unknown for influent pipe.	2 – one capped and one active during assessment
4D-0470	Straight through	0.0036	0.0036	3.46	3.46	None	Above liner termination for both main pipes.	1 – capped
4D-0480	45° bend	0.0036	0.0036	3.46	3.46	None	Above liner termination for both main pipes.	2 – not capped, yet unknown if in use

- (a) Plan view notes. No significant vertical drops or bends at manholes.
- (b) Per Willdan Associates, Santa Ana Regional Interceptor Reach IV-D, Contract No. 1 – 3, 1990 Record Drawings.
- (c) Per field observations.
- (d) Pipe segment with steep slope connects to manhole pipe segment (location of change in slope) is approximately 10 feet from manhole.
- (e) Based on an average daily dry weather flow of 5.5 MGD, Manning’s roughness coefficient of 0.012, average water depth of 12.6 inches for pipe slopes between 0.001 – 0.0036 ft/ft, and an average water depth of 6.1 inches for a pipe slope of 0.06 ft/ft.



Photo 3-5. Typical water level indicated by slime layer (red dashed line).



Photo 3-6. Steep slope for Manhole 4D-0150 influent pipe. Apparent typical water level indicated by red

# Future Rehabilitation Alternatives

Rehab Alternative	Constructability / Work Area Requirements	Hydraulic Impacts	Bypass Needs	Traffic / Public Disruption	Regulatory / Permitting	Planning Level Cost (\$Million)
<b>Segmental Sliplining</b>	<ul style="list-style-type: none"> <li>~10 foot x 30 foot access pit required every approximately 2,000 feet or closer depending on pipe geometry.</li> <li>Cannot negotiate through bends greater than 2 degrees.</li> </ul>	<ul style="list-style-type: none"> <li>High.</li> <li>Thick pipe section.</li> <li>Annular space grouting required.</li> </ul>	<ul style="list-style-type: none"> <li>Partial shut-down or bypass necessary.</li> <li>Target: pipe 20-30% full during liner installation.</li> </ul>	<ul style="list-style-type: none"> <li>High.</li> <li>Large insertion pit excavations.</li> <li>High number of insertion pits.</li> </ul>	<ul style="list-style-type: none"> <li>Encroachment permits from City of Chino and Eastvale.</li> <li>Encroachment permit from Caltrans.</li> </ul>	\$34.2
<b>Continuous Sliplining</b>	<ul style="list-style-type: none"> <li>~8 foot x 60 foot access pit required every approximately 2,000 feet or closer depending on pipe geometry.</li> <li>Cannot negotiate through a single bend greater than 30 degrees and less if compound bends encountered</li> </ul>	<ul style="list-style-type: none"> <li>High.</li> <li>Thick pipe section.</li> <li>Annular space grouting required.</li> </ul>	<ul style="list-style-type: none"> <li>Full bypass necessary.</li> </ul>	<ul style="list-style-type: none"> <li>High.</li> <li>Large work area requirements. Pipe string layout required.</li> <li>Construction productivity slow due to time associated with joint butt fusion.</li> </ul>	<ul style="list-style-type: none"> <li>Encroachment permits from City of Chino and Eastvale.</li> <li>Encroachment permit from Caltrans.</li> </ul>	\$39.8
<b>CIPP</b>	<ul style="list-style-type: none"> <li>Small excavation needed to remove cone of the existing manholes used for liner insertion.</li> <li>Can negotiate bends up to 45 degrees unless compound bends encountered.</li> </ul>	<ul style="list-style-type: none"> <li>Low.</li> <li>Tight fit liner with no annular space.</li> </ul>	<ul style="list-style-type: none"> <li>Full bypass necessary.</li> </ul>	<ul style="list-style-type: none"> <li>Moderate.</li> <li>Small insertion excavation.</li> <li>Relatively quick insertion.</li> <li>Long cure time once liner is inserted.</li> </ul>	<ul style="list-style-type: none"> <li>Encroachment permits from City of Chino and Eastvale.</li> <li>Encroachment permit from Caltrans.</li> </ul>	\$42.1
<b>Spiral Wound Pipe</b>	<ul style="list-style-type: none"> <li>No excavation required for insertion of liner.</li> <li>Can negotiate planned bends up to 45 degrees.</li> </ul>	<ul style="list-style-type: none"> <li>Low to Moderate.</li> <li>Tight fit liner with no annular space but with a thicker wall than CIPP.</li> </ul>	<ul style="list-style-type: none"> <li>Partial shut-down or bypass necessary.</li> <li>Target: pipe 20-30% full during liner installation.</li> </ul>	<ul style="list-style-type: none"> <li>Moderate.</li> <li>No insertion excavations.</li> <li>Contractor staging for equipment/liner installation at insertion manholes.</li> </ul>	<ul style="list-style-type: none"> <li>Encroachment permits from City of Chino and Eastvale.</li> <li>Encroachment permit from Caltrans.</li> </ul>	\$36.3
<b>Man-Entry Repair</b>	<ul style="list-style-type: none"> <li>No excavation required.</li> <li>No limits on bends.</li> <li>Confined space set-ups at every manhole.</li> </ul>	<ul style="list-style-type: none"> <li>Minimal.</li> <li>Repair of existing pipe with addition of some new liner at liner/pipe interface.</li> </ul>	<ul style="list-style-type: none"> <li>Full bypass necessary.</li> </ul>	<ul style="list-style-type: none"> <li>Low.</li> <li>Traffic control associated with man-entry.</li> <li>Limited contractor staging.</li> </ul>	<ul style="list-style-type: none"> <li>Encroachment permits from City of Chino and Eastvale.</li> <li>Encroachment permit from Caltrans.</li> </ul>	\$64.2

# Rehabilitation Alternatives Weighted Criteria Ranking

	Weight	Alt 1: Segmental Sliplining	Weighted Score	Alt 2: Continuous Sliplining	Weighted Score	Alt 3: Cured- in-Place Pipe	Weighted Score	Alt 4: Spiral Wound Pipe	Weighted Score	Alt 5: Man- Entry Repair	Weighted Score
Criterion		Score		Score		Score		Score		Score	
Constructability/Work Area Requirements	1	1	1	1	1	4	4	4	4	5	5
Impacts to Hydraulic Capacity	2	1	2	1	2	4	8	3	6	5	10
Traffic/Public Disruption	1	2	2	1	1	3	3	4	4	4	4
Regulatory/Permitting	1	3	3	3	3	5	5	5	5	5	5
Planning Level Cost	1.5	5	7.5	3	6	3	4.5	4	6	1	1.5
Risk of SSO	1	2	2	2	2	4	4	3	3	5	5
Solution Longevity	1	5	5	5	5	5	5	5	5	2	2
<b>TOTAL</b>			22.5		18.5		33.5		33		32.5

- (1) A higher score for each criteria is better.
- (2) A higher weight number indicates a higher impact to evaluation of the alternatives.
- (3) A higher weighted score indicates a higher ranked alternative.
- (4) Does not include rehabilitation of siphons.

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OWOW Program  
Status Report &  
OWOW Steering  
Committee  
Response to OC  
Letter

# One Water, One Watershed

# OWOW Program Status

1

OWOW Plan  
Update 2018

2

Disadvantaged  
Communities  
Involvement  
Program

3

Proposition 1  
IRWM  
Implementation  
Grants



# OWOW Plan Update 2018



- Assembled document with formatting complete
- Final edits underway at SAWPA

# OWOW Plan Update 2018

- Chapter 1: Overview, History
- Chapter 2: How the Plan Gets Made
- Chapter 3: Watershed Setting
- Chapter 4: Vision, Goals, Objectives
- Chapter 5: Recommended Strategies
- Chapter 6: Program Review, Evaluation, Prioritization
- Chapter 7: Impacts and Benefits of Sustainable Integrated Solutions
- Chapter 8: Finance and Funding
- Chapter 9: Data Management & Plan Performance Monitoring



# OWOW Plan Update 2018

Draft / Alphabetical

- 5.1 Climate Risk and Response
- 5.2 Data Management and Monitoring
- 5.3 Disadvantaged Communities
- 5.4 Integrated Stormwater Management
- 5.5 Land Use and Water Planning
- 5.6 Natural Resources Stewardship
- 5.7 Tribal Communities
- 5.8 Water Quality
- 5.9 Water Resources Optimization
- 5.10 Water Use Efficiency

- Chapter 1: Overview, History
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# A legacy of movement

- OWOW Plan (2008): Moving towards Sustainability
- OWOW 2.0 Plan (2014): Moving into Implementation
- OWOW Plan Update 2018:
  - Moving Forward Together



# State of the Santa Ana River Watershed Conference

• **March 29, 2019**



• **University Conference Center @  
California State University  
Fullerton**

## Program Element 1

### Strengths & Needs Assessment

- Nearing completion, report due in the late fall
- Added listening sessions now being planned for the coming months

## Program Element 2

### Education / Engagement

- Many items underway (internships, Trust the Tap)
- Share results with elected leaders starting in the Spring
- On-call translation services expected soon.

## Program Element 3

### Project Development

- Technical Assistance to Communities
- TAC fully engaged, developing a system for selecting and prioritizing projects for Technical Assistance

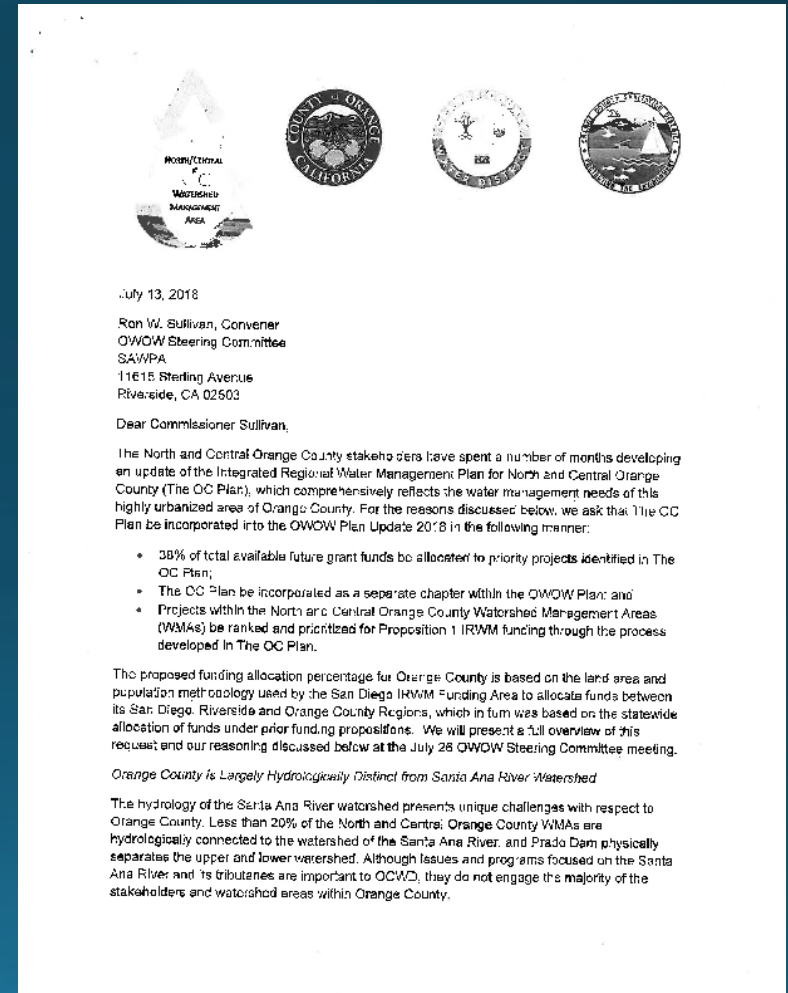
# Disadvantaged Communities Involvement Program

# Prop 1 IRWM Implementation Grants - Latest from DWR

Activity	Timeline
DWR Conversations with IRWM Regions	May 2017 – August 2018
Release draft Project Solicitation Package (PSP) for 45-day public comment period	October 5, 2018
Three public comment meetings (north, central, south)	October 5 – Nov. 20, 2018
Draft PSP comment period closes	Nov. 20, 2018
Final PSP released	Fall 2018
DWR Funding Area Workshops	Winter 2018/2019
Round 1 Grants Applications due to DWR	Starting April 2019
Round 1 awards	Late 2019
Round 2 solicitation	Early 2020

# The July 13, 2018 letter

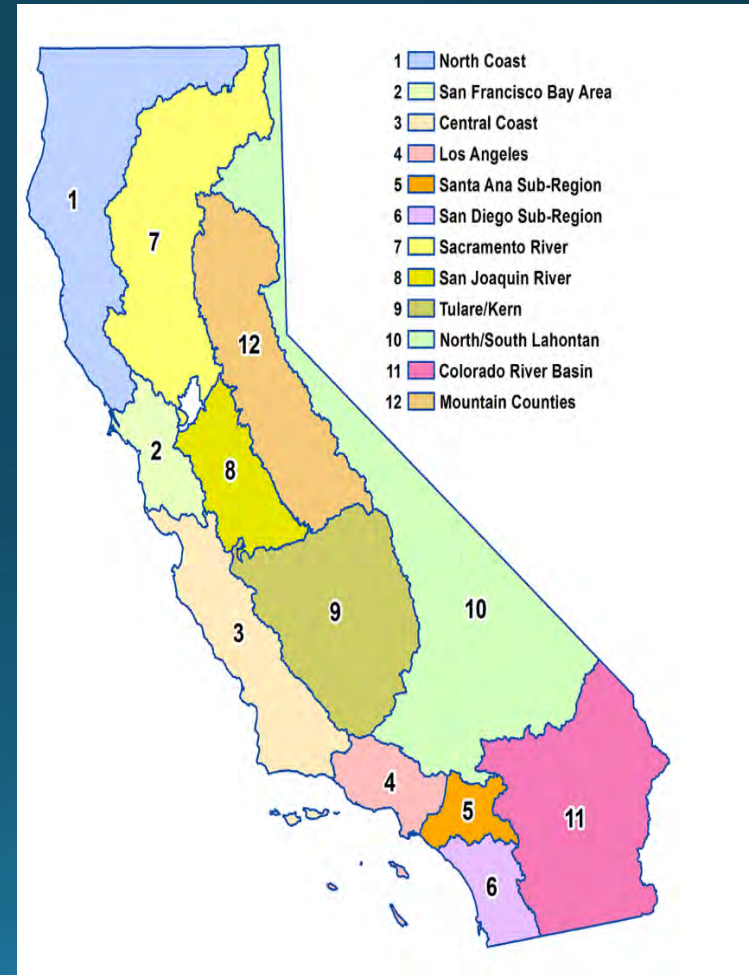
- County of Orange, Orange County Water District, and Orange County Sanitation District
- Together as the North/Central OC Watershed Management Area





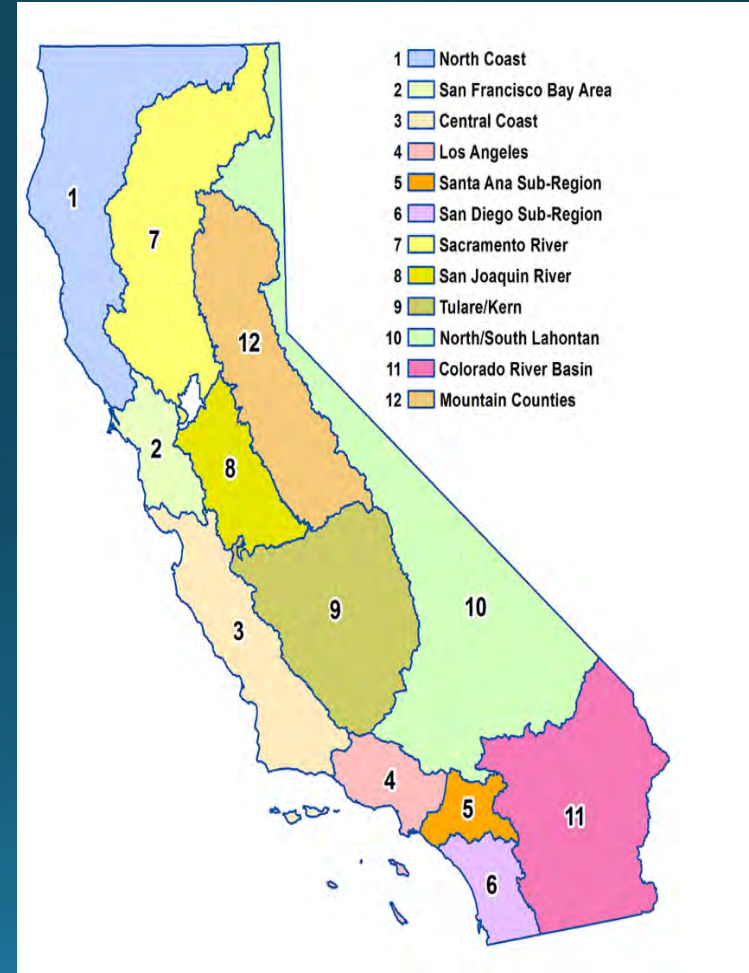
# Shared terms:

- Integrated Regional Water Management Program
  - Funding Areas
  - Regional Water Management Groups
  - IRWM Plans
- OWOW Program
  - Subregional plans
  - One Water
  - One Watershed



# IRWM elsewhere in CA

- Twelve Funding Areas
  - Designated by the Legislature
- Forty-Nine RWMG
- Three models for IRWM grant seeking:
  - Funding Areas with only one RWMG
    - Santa Ana and North Coast
  - Funding Areas with sharing agreements
    - e.g. San Diego
  - Funding areas with competitive grant proposals to DWR (this is most common)



# Orange County Stakeholders

- Have been strongly engaged and influential in OWOW Program
- Active participation in Pillar Workgroups, and therefore the OWOW Plans
- Worked with SAWPA staff to effectively import all North and Central IRWM projects into OWOW Plan for planning purposes



# OWOW Program adjusts:

- Adopted process improvements:
  - Assertion that IRWM funded-projects cause no undue harm to others
  - Direct import of project lists from other plans
  - Quantified rating & ranking system developed with stakeholder input
- About 25% of implementation grants have been awarded to OC agencies and non-profits



# Statewide Water Bond Allocation for IRWM

\$20,463,000,000



\$2,300,000,000

IRWM    Not IRWM

- Props 50, 84, 1E, 1
  - About 10% for IRWM
- Prop 68 (Jun '18 passed)
  - ZERO for IRWM
- Prop 3 (Nov '18 ballot)
  - Essentially ZERO for IRWM

# OWOW Program IRWM Grants

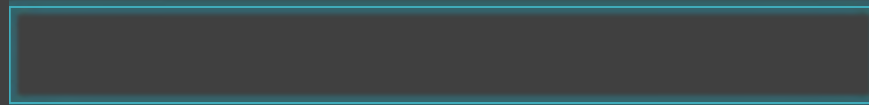
## Prop 84

Available Grants



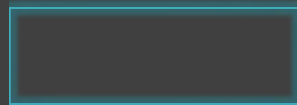
\$105,000,000

Grant Requests

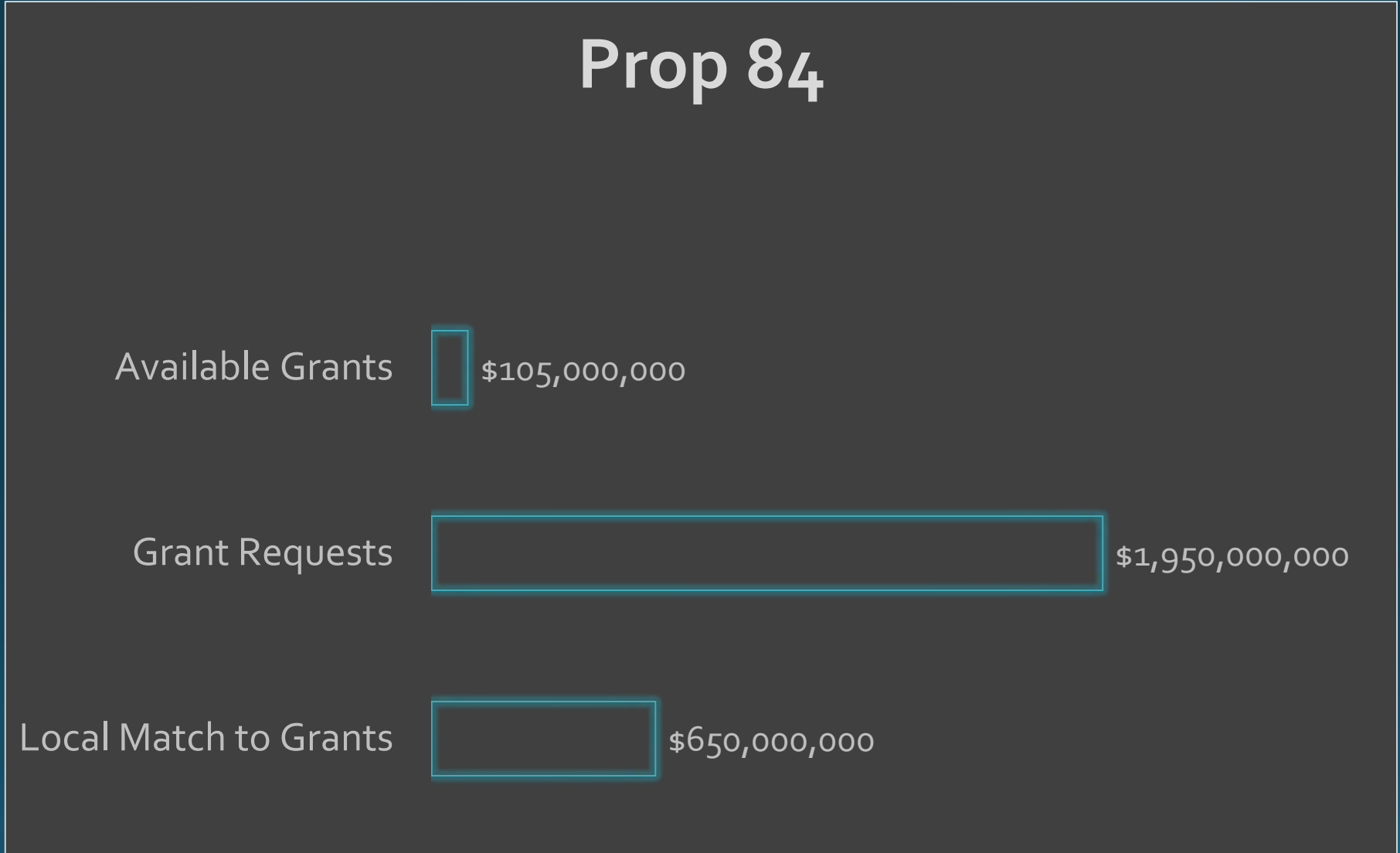


\$1,950,000,000

Local Match to Grants

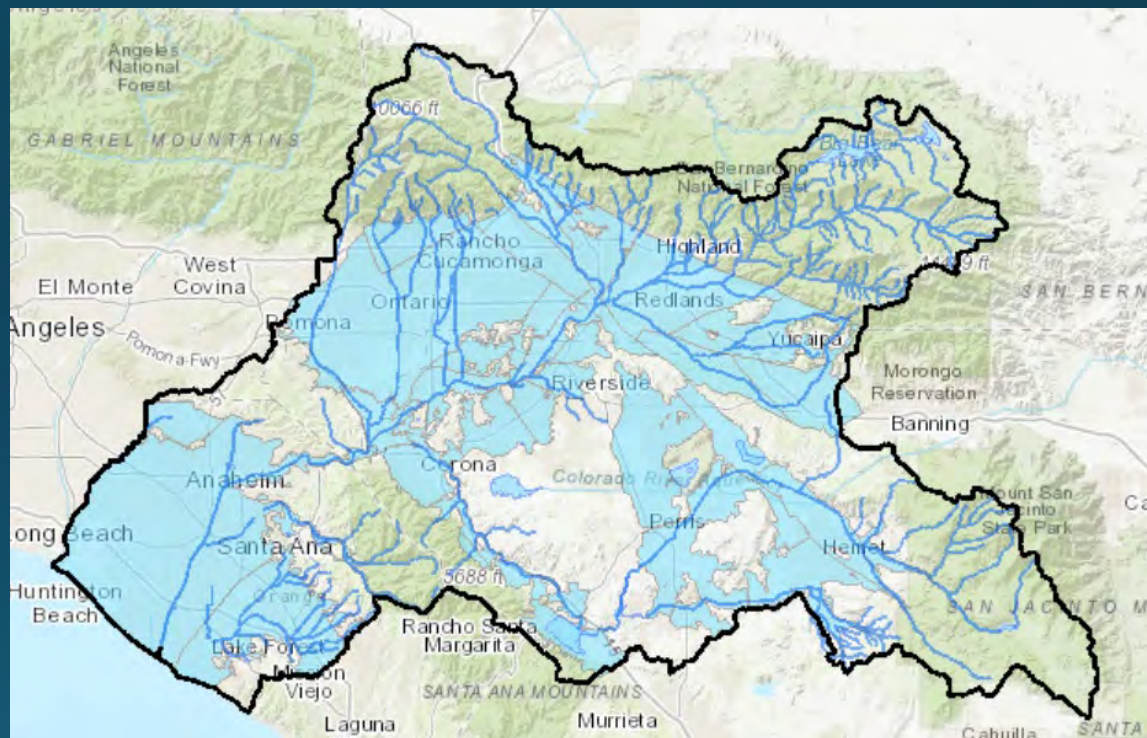


\$650,000,000



# SAWPA & Santa Ana Funding Area

- Boundaries
  - Five-member agencies
  - Santa Ana Regional Board jurisdiction
- Watershed
  - Administrative
  - Physical
  - Social
  - Historic
- IRWM Program



Groundwater Management Zones, Streams & Water Bodies

# OWOW Steering Committee

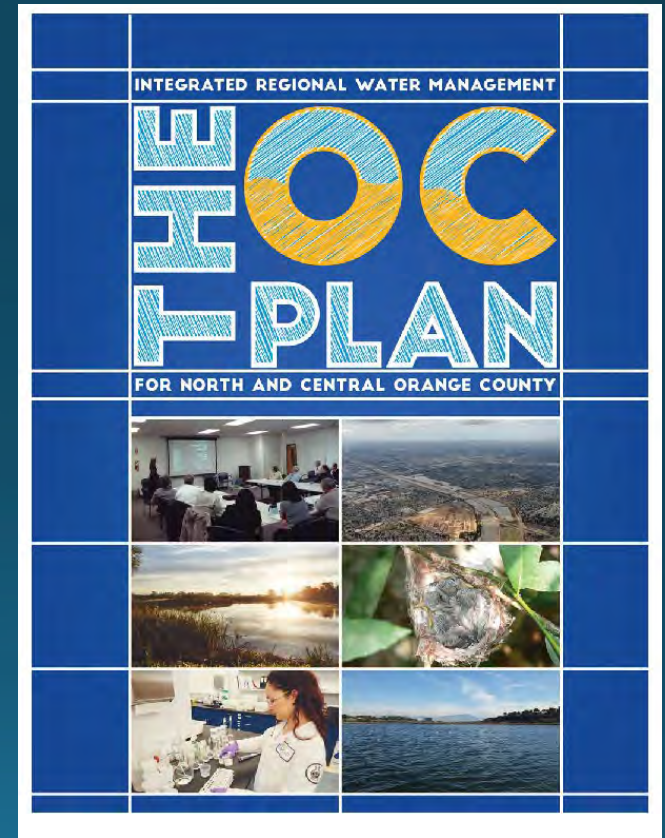
Orange County Supervisor	Riverside County Supervisor
San Bernardino County Supervisor	Orange County City elected
Riverside County City elected	San Bernardino County City elected
2 SAWPA Commissioners	Environmental Advocacy Representative
Appointed member of Santa Ana Regional Water Quality Control Board	Business Community Representative

- SAWPA Commission = RWMG
  - Accepted through Regional Acceptance Process with DWR
- OWOW SC holds delegated advisory authority to:
  - Manage the updating of the IRWM Plan (OWOW Plans)
  - Develop a suite of projects when needed for IRWM Program grants



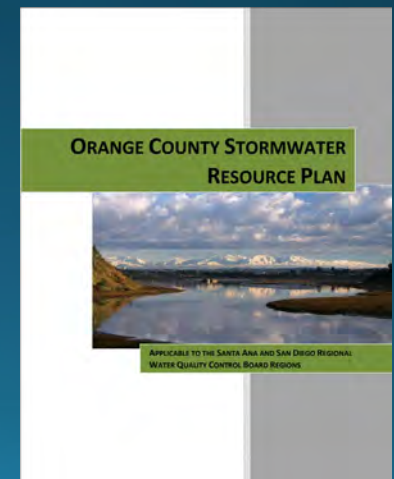
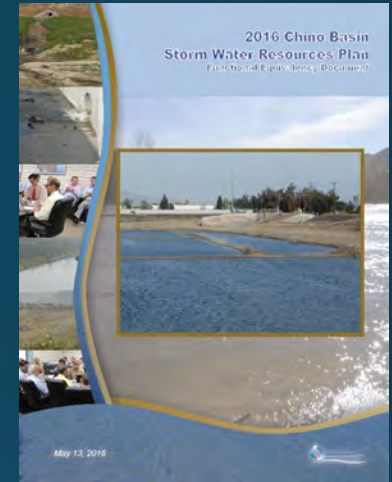
# New OC requested changes to OWOW Program

- To the OWOW Plan Update 2018:
  1. Subregional plan as a chapter of the OWOW Plan.
    - The OC Plan – 273 pages
    - OWOW Plan Update 2018 (current draft) - ~350 pages



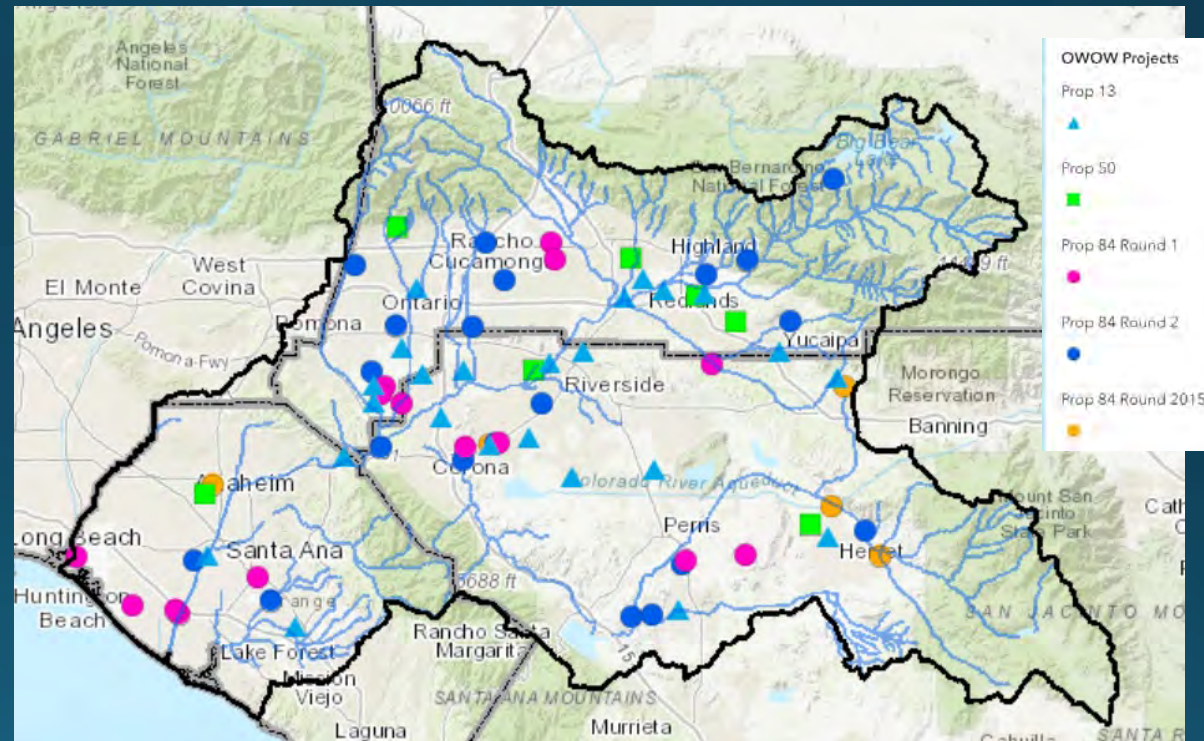
# Inclusion of subregional plans

- Only required for Stormwater Resources Management Plans, two have been included:
  - Chino Basin Stormwater Resources Management Plan
  - North/Central OC Stormwater Resources Management Plan
- In a collaborative mode, invitations sent to:
  - Friends of Harbors, Beaches and Parks
    - The Newport Bay Idea Book (2015)
  - OC Public Works
    - The OC Plan (2018)
  - California Coastal Conservancy
    - Santa Ana River Parkway and Open Space Plan (2018)



# Inclusion of subregional plans

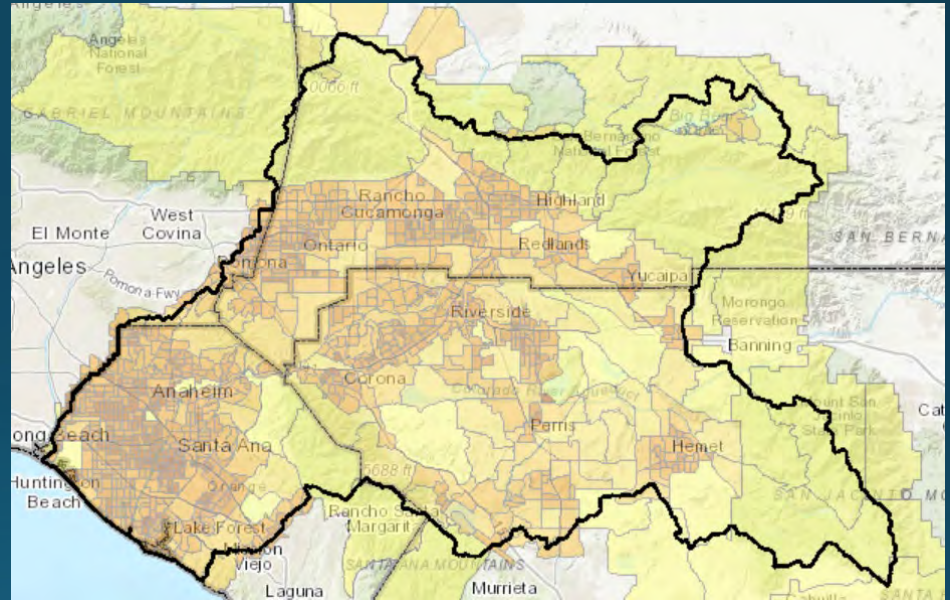
- Including other plans as chapters dis-integrates the OWOW Program.
- Management Scales
  - Geography
  - Topic



OWOW Funded Projects

# New OC requested changes to OWOW Program

- To the OWOW Program policy for responding to grant opportunities:
  2. Designate 38% of available funding for projects in / by Orange County agencies
  3. Let The OC Plan *rating & ranking* and *eligibility criteria* be used to distribute those grant dollars.



Population Density Map w/ County Boundaries

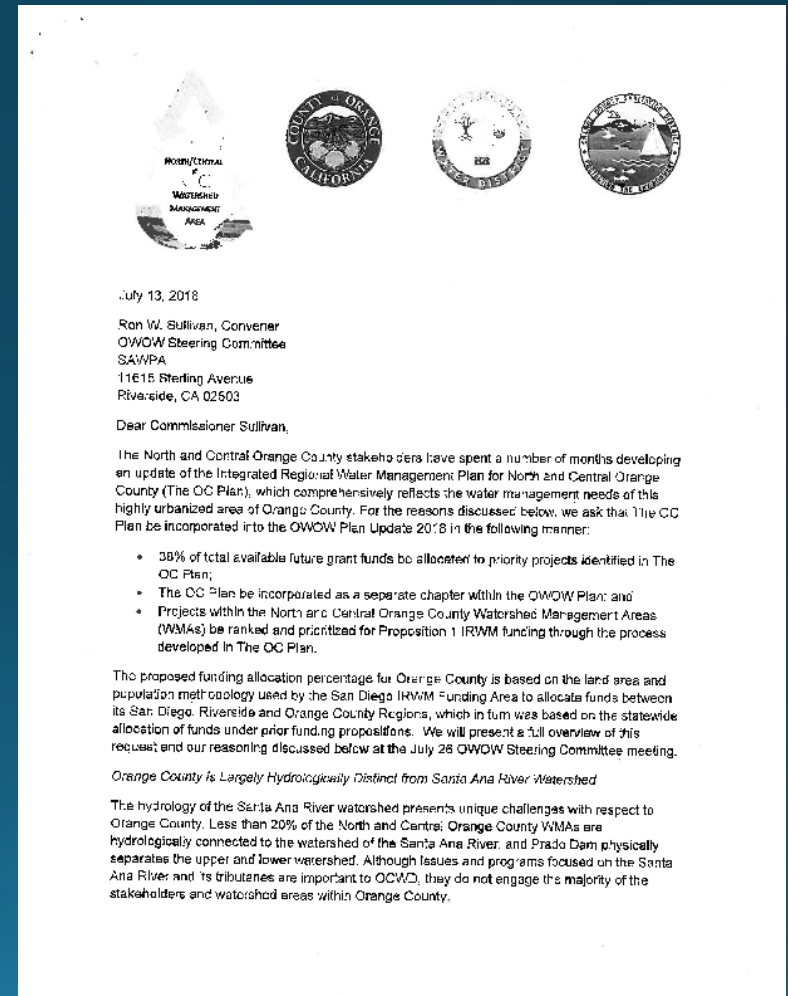
# “Competitive”



- General Obligation Bond grants must be distributed competitively.
- DWR takes this responsibility seriously.
  - Funding Areas with multiple RWMG “compete” for the funding
  - In the past, our proposals have been “scored” in a competition with proposals *in other Funding Areas*.
- The watershed has made sustained effort to encourage DWR to consider our internal competition sufficient to this Legislative mandate.

# Stakeholder discussion and response

- Stakeholder Integration Meeting
- OWOW Pillar Chairs Meeting
  - Both meetings focused quickly on underlying issues.



# OWOW Stakeholder Feedback about letter

- Voices shared (paraphrased):
  - OWOW encourages collaboration, upstream and downstream, and this proposal is the opposite of that.
  - Ensuring funding supports the projects most needed, and the people who judge what is most needed should be local.
  - In the past, the ranking system was a problem, because the stakeholders were not part of the discussion, it was outside experts.
  - An option, if the differences cannot be resolved, will be to request becoming a region.
  - A good point that lower watershed or area not connected to the Santa Ana River have a hard time describing their watershed benefit.
  - Ensuring local control of “competitiveness” is important, not “roll the dice” at DWR.
  - Wouldn't good OC projects be competitive in the whole watershed?

# OWOW Pillar Chair Meeting

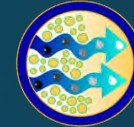
- Focus of discussion:
  - Changing from a watershed benefit understood as flowing with water to a watershed benefit described with resilience.
  - A compromise system for ensuring geographic distribution of available grant dollars.
- This led to a proposed change to the Eligibility Policy:
  - Because we are interdependent, resilience anywhere is resilience everywhere.
  - “Strive to ensure” each of the three county areas receive no less than 25% of the available grant dollars in each opportunity
- This suggested change was not accepted by OC Letter parties prior to OWOW Steering Committee meeting



Water Use Efficiency



Disadvantaged Communities & Tribal Communities



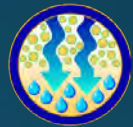
Water Quality



Natural Resource Stewardship



Water & Land Use Planning



Water Resource Optimization



Integrated Stormwater Management



Climate Risk & Response



Data Management & Monitoring



Recycled Water



# OWOW Program, today



- Recognized in CA as leader in regional integrated water management.
- An adaptive management effort, learning, and constantly evolving to the regional needs.
- All stakeholders have been significant to its development and refinement, but many important features came from dedicated and invested OC stakeholders.
- Maintaining the planning and management partnerships across the watershed is important to stakeholders.
- IRWM Implementation grants are a small specialized source of funding intended to be used in specialized ways.

# OWOW Steering Committee Actions – Sept. 27, 2018



1. Hold off on responding to OC letter at this time
2. Gather more info about how OC 38% funding allocation request was derived and determine how funding allocation among Counties changes using future population projections.
3. Support future negotiations among OC Letter parties and OWOW Pillar Chairs and OWOW Stakeholders about Prop 1 IRWM Implementation Grant Project Eligibility, rating and ranking and weighting of benefits.

# OWOW Pillar Chair Meeting



- Meeting is scheduled for October 18<sup>th</sup> 1 pm – 3 pm at OC Public Works
- Meeting will be among OC Letter reps, OC stakeholders, OWOW Pillar Chairs, OWOW interested stakeholders, SAWPA staff
  - Focus of meeting to ensure OC stakeholders input is received and accounted for in OWOW Prop 1 IRWM Implementation Grant program, rating and ranking process and weighting of benefits
  - Impacts of new DWR Prop 1 IRWM Implementation Proposal Solicitation Package will be shared and discussed