

CHINO BASIN WATERMASTER

2020 OBMP Update

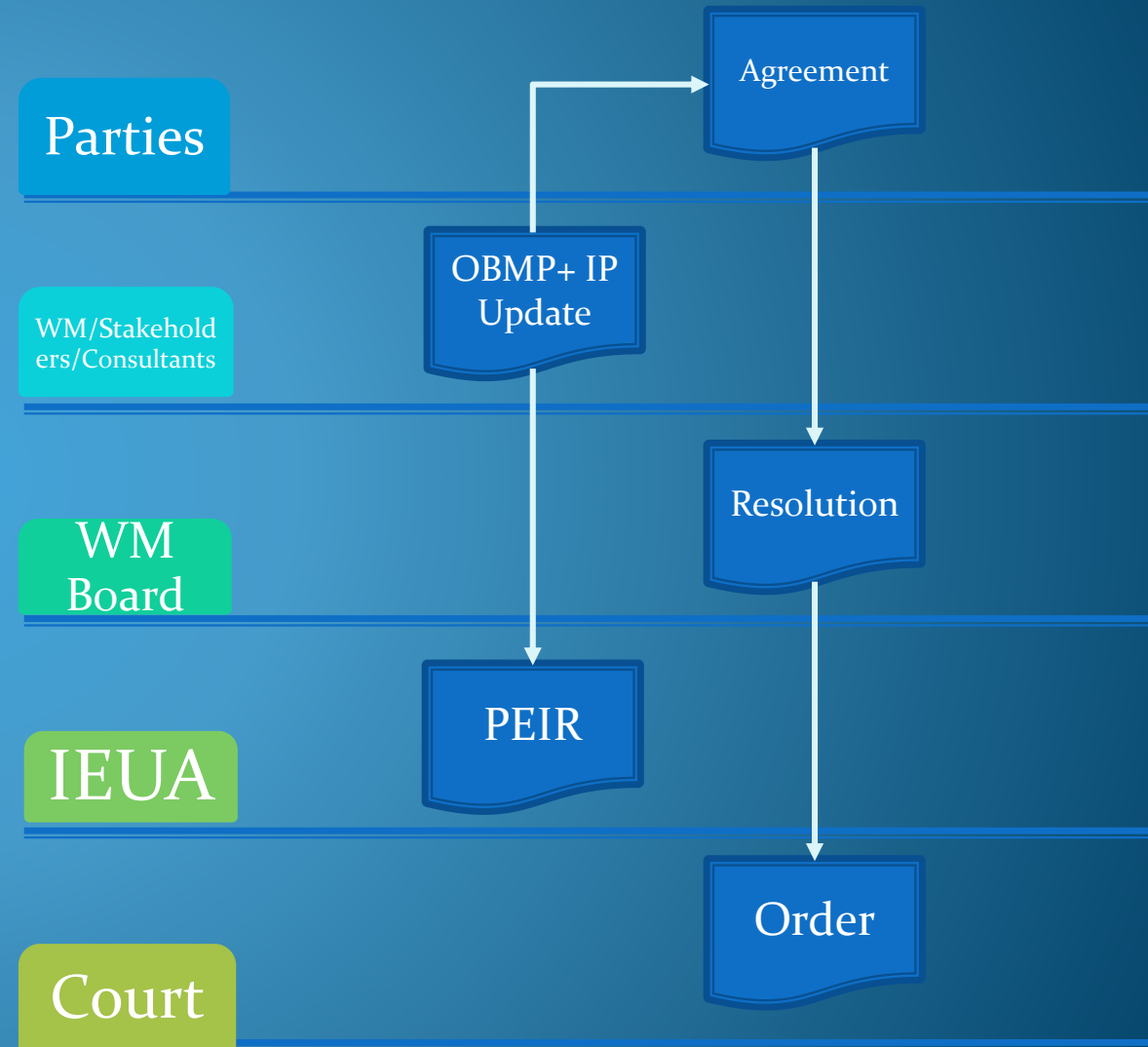
Listening Session #4
May 16, 2019





Process to date

- Listening Session 1:
 - History of the OBMP and Implementation
 - Rationale for an OBMP Update
- Listening session 2:
 - Drivers, Trends and Implications
 - Issues, Needs and Wants
- Listening Session 3:
 - 2000 OBMP Goals Recap
 - OBMP Update Goals
 - Activities of the OBMP



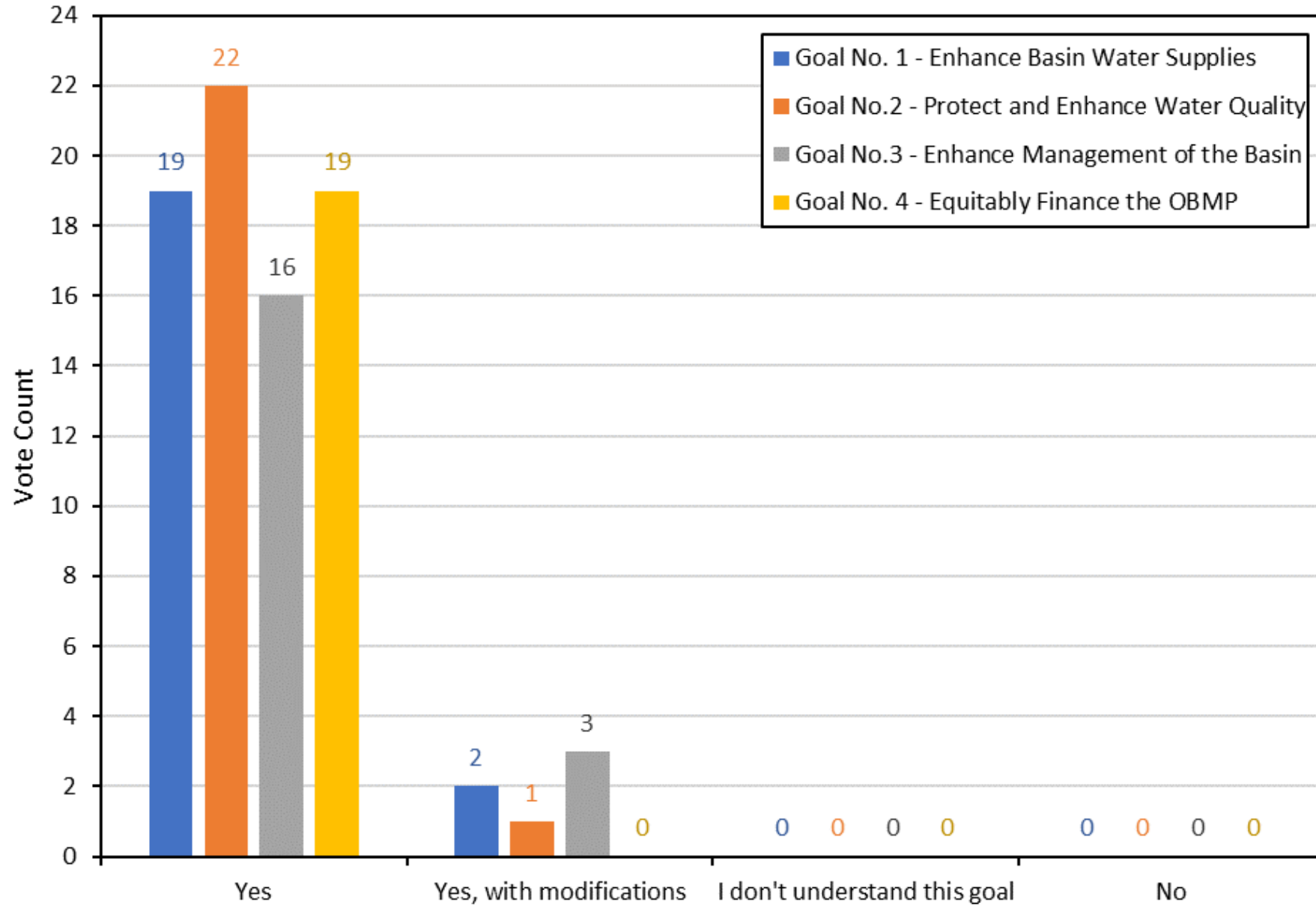


LS3 Recap and Memo Overview

- 2020 OBMP Goals
- 2020 OMBP Update Activities
 - Post LS₃ Survey Results
- Nexus between the 2020 OBMP Update goals, their impediments, and the activities recommended for consideration
- OBMP Technical Memorandums 1 & 2 Outline



Results of Goals Survey -- Do you think this goal is still relevant?





2020 OBMP Update Goals

- **Goal No. 1 - Enhance Basin Water Supplies.** The intent of this goal is to increase the water supplies available for Chino Basin parties and improve water supply reliability. This goal applies to Chino Basin groundwater and all other sources of water available for beneficial use.
- **Goal No.2 - Protect and Enhance Water Quality.** The intent of this goal is to ensure the protection of the long-term beneficial uses of Chino Basin groundwater.



2020 OBMP Update Goals

- **Goal No.3 - Enhance Management of the Basin.** The intent of this goal is to encourage sustainable management of the Chino Basin to avoid material physical injury, promote local control, and improve water-supply reliability for the benefit of all Chino Basin parties.
- **Goal No. 4 - Equitably Finance the OBMP.** The intent of this goal is to identify and use efficient and equitable methods to fund OBMP implementation.



2020 OBMP Update Activities

- Breakout session:
 - Suggest modifications to the 10 activities to better address INWs, as necessary
 - Assess which INWs are addressed by activities
 - Define new activities if anything not addressed
- Table 1 – Summary of assessment of activities that address the stakeholder INWs
- 2 New Activities added by breakout groups



2020 OBMP Update Activities

- Follow-up Survey on 12 activities
- Do you think this activity should be considered for inclusion in the 2020 OBMP Update?
 - A) Yes
 - B) Yes, with modifications
 - C) No
 - D) I don't understand this activity
- 6 Survey respondents
 - All answered Yes, for all activities except “F”



2020 OBMP Update Activities

- Activity F: *Develop strategic regulatory-compliance solutions that achieve multiple benefits in managing water quality.*
- Develop solutions to comply with evolving and more stringent drinking-water quality standards. Specifically, explore regional, collaborative solutions that have the potential to address multiple water-quality and water-supply issues.



Nexus between the goals, their impediments, and activities

- Thus far through the Listening Session process, the following has been completed:
 - Defined the drivers, trends and implications for Basin management that identify the need for the 2020 OBMP Update (Exhibit 1).
 - Defined the needs and wants of the Chino Basin stakeholders, categorized by the Basin management issues derived from the drivers and trends analysis (Table 1).



Nexus between the goals, their impediments, and activities

- Thus far through the Listening Session process, the following has been completed:
 - Defined the goals of the 2020 OBMP Update, which are the same as the goals of the 2000.
 - Defined a set of activities for consideration in the 2020 OBMP Update that address the common needs and wants of the Chino Basin stakeholders.



Nexus between the goals, their impediments, and activities

- There are physical, institutional, and financial impediments to achieving the goals of the 2020 OBMP.
- The issues, needs, and wants of the stakeholders shown in Table 1 explicitly recognize these impediments to achieving the goals and the stakeholders have identified the activities that could remove these impediments to achieve the goals
- Table 3



Breakout session → Table 3

Goals, impediments, activities and outcomes

- Table 3 describes the proposed OBMP Update:
 - What we propose to do
 - Why we propose to do it
- Goals of Breakout:
 - Educate
 - Obtain feedback



Nexus between the goals, their impediments, and activities

Impediments	Activities to Remove Impediments	Potential Outcomes of Activities	Issues, Needs and Wants, as Categorized by Basin Management Issues, that are Addressed by Activities							
			Reductions in Chino Basin Safe Yield	Inability to Pump Groundwater with Existing Infrastructure	Increased Cost of Groundwater Use	Chino Basin Water Quality Degradation	Recycled Water Quality Degradation	Increased Cost of Basin Plan Compliance	Reduced Recycled Water Availability and Increased Cost	Reduced Imported Water Availability and Increased Cost
Goal 1 - Enhance Basin Water Supplies										
<p>1a • Not all of the stormwater runoff available to the Chino Basin is diverted and recharged. Failure to divert and recharge stormwater is a permanently lost opportunity.</p> <ul style="list-style-type: none"> • The existing methodology to select recharge projects for implementation is based on the cost of imported water. There are currently no known projects with a unit cost lower than the cost of imported water, hindering expansion of stormwater capture and recharge • Pumping capacity in some areas of the basin is limited due to low groundwater levels and land subsidence. 	<p>A Construct new facilities and improve existing facilities to increase the capacity to store and recharge surface water, particularly in areas of the basin that will promote the long-term balance of recharge and discharge</p>	<ul style="list-style-type: none"> • Increases recharge of high-quality stormwater that will: <ul style="list-style-type: none"> • protect/enhance the Safe Yield, • improve water quality, • reduce dependence on imported water, • increase pumping capacity in areas of low groundwater levels and areas of subsidence concern, and <ul style="list-style-type: none"> • provide new supply of blending water to support the recycled-water recharge program. • Provides additional supplemental-water recharge capacity for replenishment and implementation of storage and recovery programs. • Provides additional surface water storage capacity. 	✓	✓	✓	✓	✓	✓		✓



Breakout session → Table 3

Goals, impediments, activities and outcomes

- Table 3 is five pages:
 - 1: Goal #1 Enhance water supplies (Carolina)
 - 2: Goal #2 Protect/enhance water quality (Veva)
 - 3: Goal #3 Management → storage and recovery (Edgar)
 - 4: Goal #3 Management → infrastructure/monitoring (Andy)
 - 5: Goal #4 Equitable/efficient financing (Samantha)



Breakout session → Table 3

Goals, impediments, activities and outcomes

- Step 1: 5 min of quiet time to review table (5 min)
- Step 3: Participants choose poster of their choice (5 min)
- Step 4: Team member describes poster (5 min)
- Step 5: Groups provide feedback (35 min)
 - Rotate to other posters if you wish
- Step 6: Team member reports to whole group (20 min)



Breakout Session



2020 OBMP Tech Memo Overview

TM Section	TM ₁	TM ₂
1. Introduction	✓	✓
2. Process to Develop the 2020 OBMP Activities	✓	✓
3. Description of OBMP Update Activities	✓	✓
4. Early Implementation Plan		✓
5. Institutional Arrangements		✓
6. Summary and Conclusions		✓
Appendices	✓	✓



2020 OBMP Tech Memo

3. Description of OBMP Update Activities

a) Activity *<< repeat the below subsections for each activity >>*

a) Description of activity

b) Need and function of activity

c) Scope of work

d) Cooperative efforts with appropriate entities to implement activity

e) Implementation actions, costs, and schedule

b) Summary



Activity

- A. Construct new facilities and improve existing facilities to increase the capacity to store and recharge surface water, particularly in areas of the basin that will promote the long-term balance of recharge and discharge.



2020 OBMP Tech Memo

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Description of activity

- Construct new facilities and improve existing facilities to:
 - increase the capacity to store, divert and recharge surface water
 - promote the long-term balance of recharge and discharge
 - reduce dependence on imported water
 - improve water quality
 - provide new supply of blending water



2020 OBMP Tech Memo

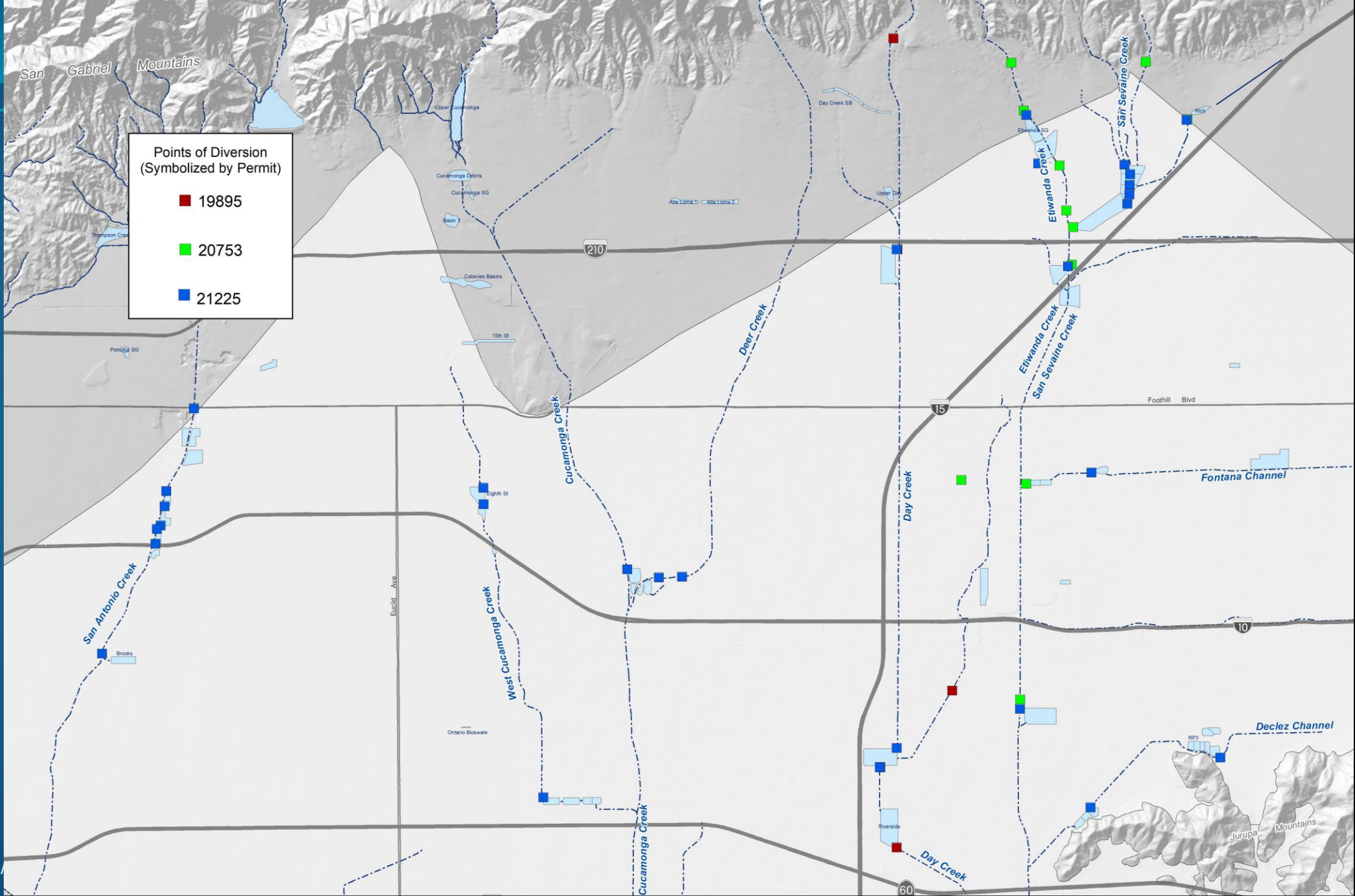
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Need and function of activity

- Watermaster holds three permits to divert up to 110,500 afy of surface water to impoundments and to subsequently recharge the diverted water
 - Permit 19895 → limit of 15,000 af over November 1 to April 30
 - Permit 20753 → limit of 27,000 af over October 1 to May 1
 - Permit 21225 → limit of 68,500 af over January 1 to December 31



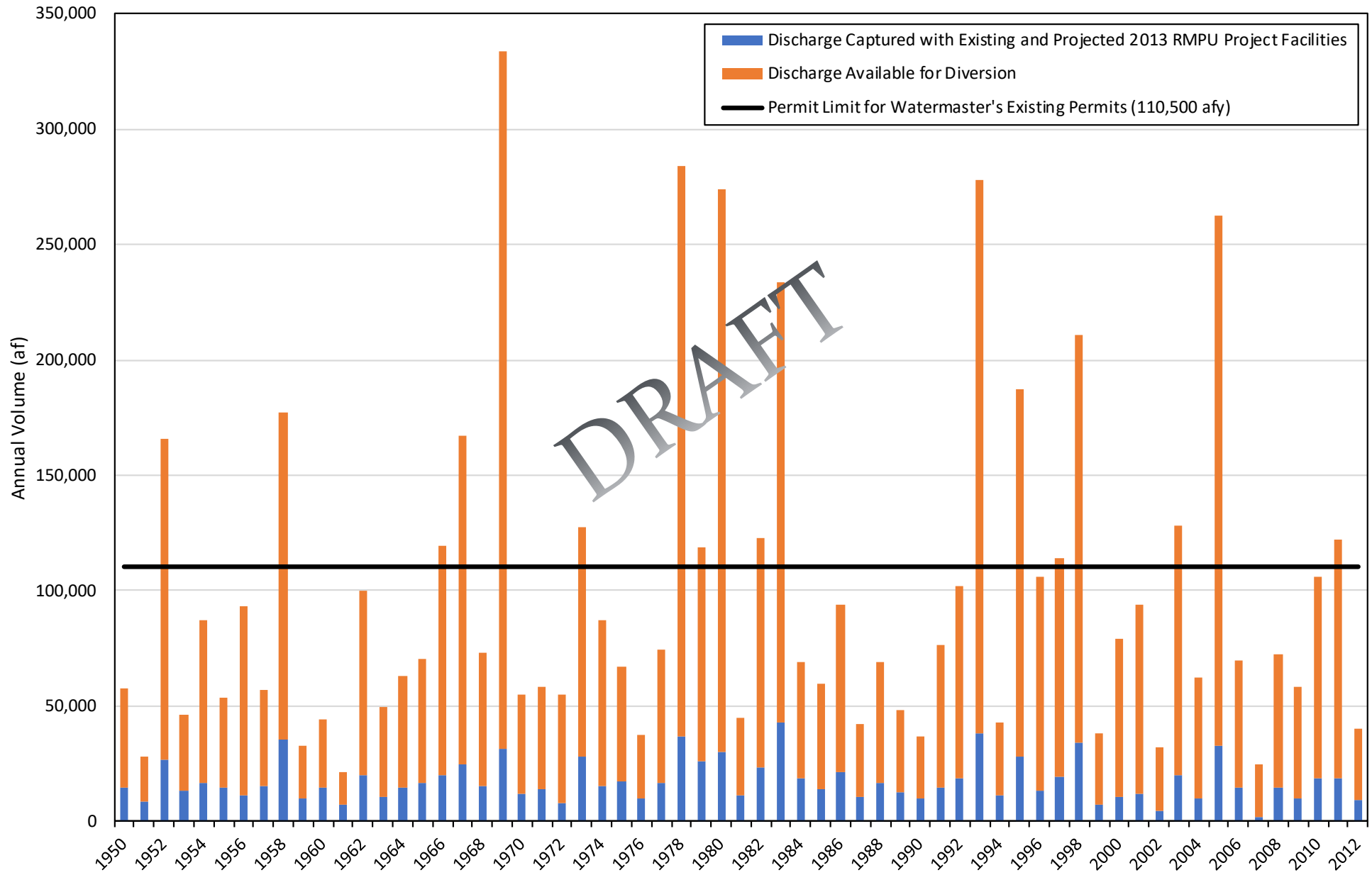


Need and function of activity

- There is significant discharge available for diversion if the storage and diversion capacity in the basin is increased:
 - Through the RMPU process, facilities have been developed and constructed to capture some of the discharge available for diversion.
 - The projected maximum diversions after the construction of the 2013 RMPU projects is about 45,000 af.
 - A portion of this discharge is not captured at the existing facilities due to storage or diversion capacity constraints.



Projected Stormwater Recharge and Total Stormwater Discharge in the Chino Basin



DRAFT



Need and function of activity

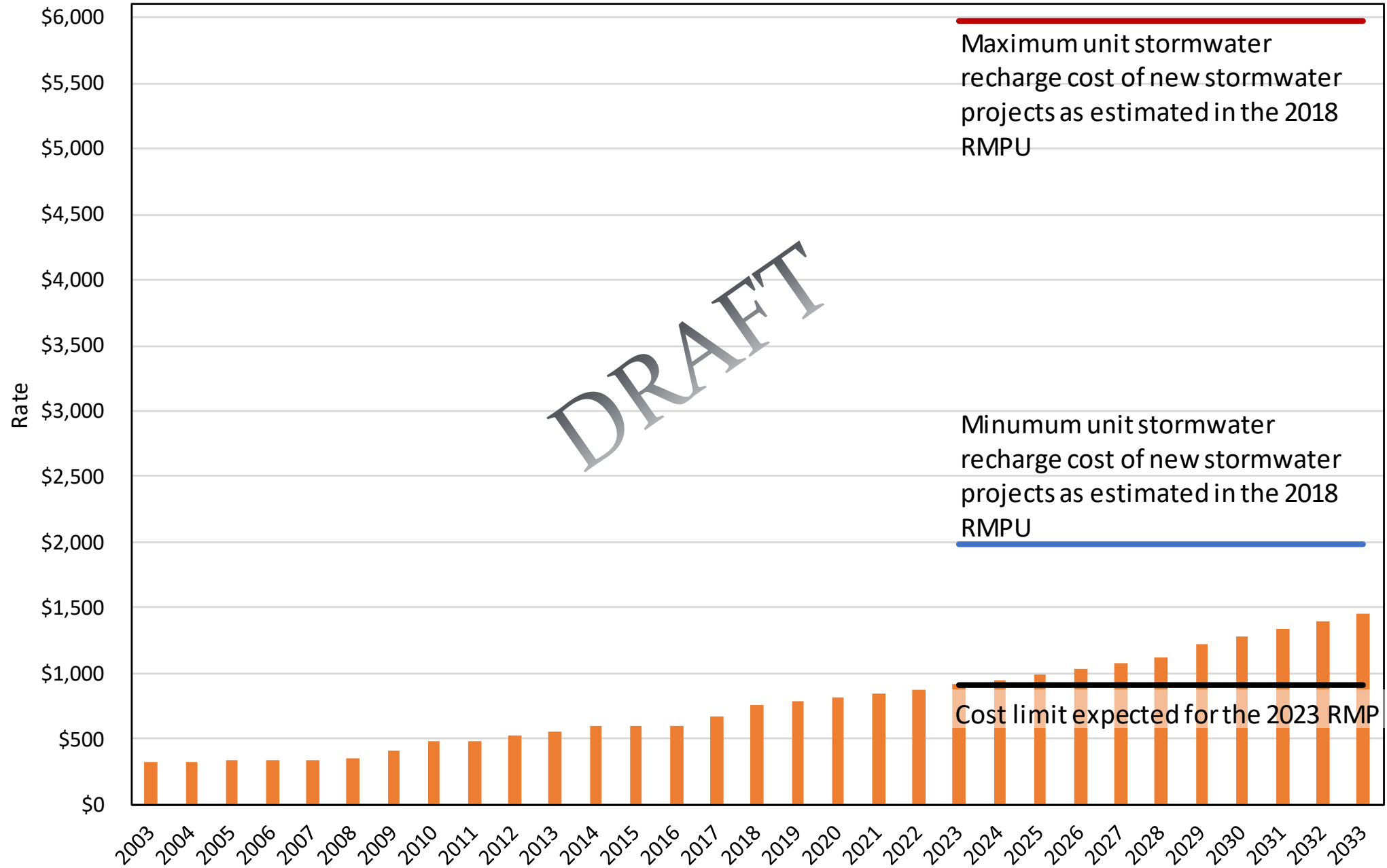
- Historically, Watermaster has selected facilities for improvements based on their economics.
 - The facilities with the lowest unit cost of new water recharge were prioritized over facilities with greater costs.
 - The combination of projects with the volume-weighted unit cost equal to the avoided cost of import water were selected for implementation.
 - As the unit cost of imported water increases in the future, more expensive projects will become economically attractive and be constructed.

Need and function of activity

- As of today, the projected unit cost of new stormwater recharge projects that have been evaluated through the RMPU processes, exceeds the projected cost of water that could be supplied by Metropolitan.

PID	Project	Projected Costs in 2023	
		2018 RMPU Estimated Unit Stormwater Recharge Cost (\$/af)	2018 RMPU Estimated Capital Cost
1a	Montclair Basins - Transfer water between Montclair Basins and deepen MC 4	\$5,980	\$6,526,000
5	North West Upland Basin - Increase drainage area and basin enlargement	\$4,620	\$6,574,000
15	Ely Basin - Basin enlargement and increased drainage area	\$1,990	\$3,017,000
24	Vulcan Basin - Construct new inflow and outflow structures	\$2,560	\$33,168,000
26	Sultana Avenue - Deepen basin by 10 feet	\$5,620	\$601,000
n/a	Regional Recharge Distribution System	\$2,810	\$184 million
n/a	Vineyard Managed Aquifer Recharge	n/a	n/a
n/a	CBWCD Confluence Project ³	n/a	n/a

Metropolitan Imported Water Rates



DRAFT



Need and function of activity

- Need:
 - Ability to capture and recharge surface water
- Impediments:
 - Storage and diversion capacity limitations
 - Existing process to select projects for implementation
- Scope of work → Remove the impediments to meet the need



Scope of Work

- Determine new selection criteria for implementing recharge projects
- Conduct a call for projects to invite parties to propose projects for consideration
- Conduct reconnaissance-level study for the proposed projects that includes cost and recharge benefit estimates
- ...



2020 OBMP Tech Memo

3. Description of OBMP Update Activities

a) Activity << repeat the below subsections for each activity >>

a) Description of activity

b) Need and function of activity

c) Scope of work

d) **Cooperative efforts with appropriate entities to implement activity**

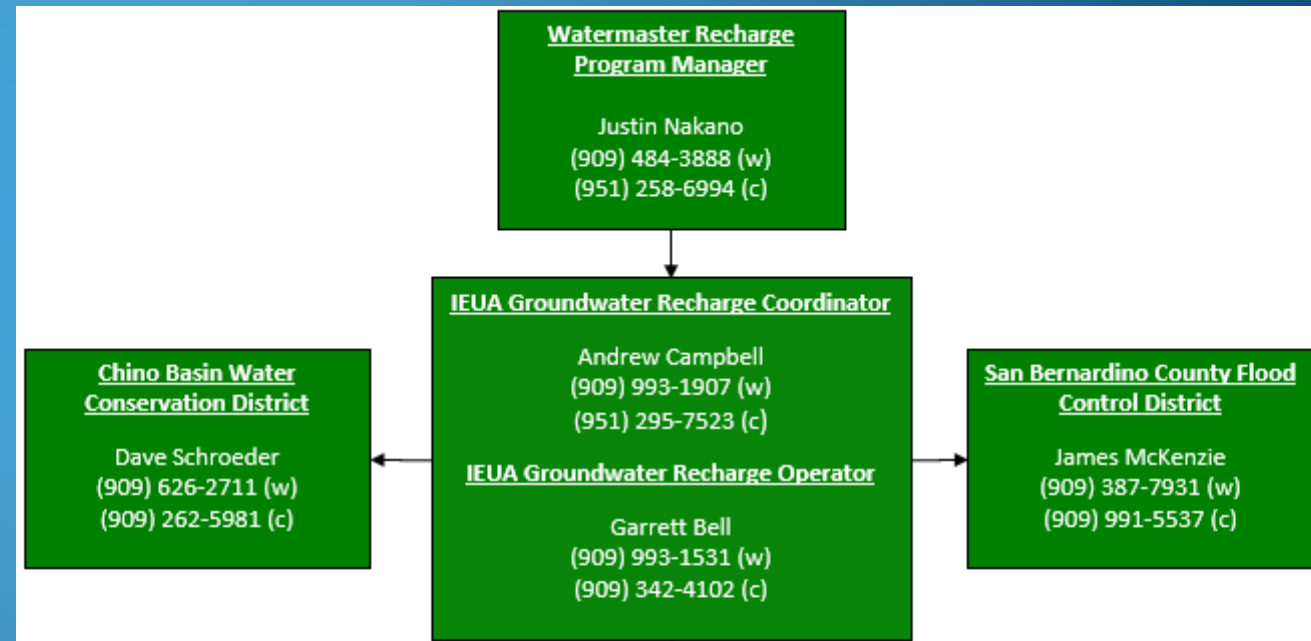
e) Implementation actions, costs, and schedule

b) Summary



Cooperative efforts with appropriate entities to implement activity

- Watermaster is currently required to update the Recharge Master Plan at least every 5 years. Partners in the RMP process:
 - IEUA
 - Chino Basin Water Conservation District
 - San Bernardino Country Flood Control





2020 OBMP Tech Memo

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Implementation actions, costs, and schedule

	Fiscal 2014/15	Fiscal 2015/16	Fiscal 2016/17	Fiscal 2017/18	Fiscal 2018/19
Watermaster	\$ 100,000 ³⁷	\$ 668,000	\$ 668,000	\$ 3,213,000	\$ 3,213,000
IEUA	\$ -	\$ 44,000	\$ 44,000	\$ 211,000	\$ 211,000
Total	\$ 100,000	\$ 712,000	\$ 712,000	\$ 3,424,000	\$ 3,424,000

- TM₁ Discussions:
 - Should this activity be incorporated into the RMP process?
 - Should Watermaster accelerate the RMP schedule to complete this activity before FY 2022/2023?



Next Steps

- TM1 Draft for review- June 2019
- LS 5 – July 2019
- SMP Draft for review- June 7, 2019
- SMP Workshop 1 – June 20, 2019

Task 1 Project Management and Meetings



Task 2 Develop Scope of OBMP Update



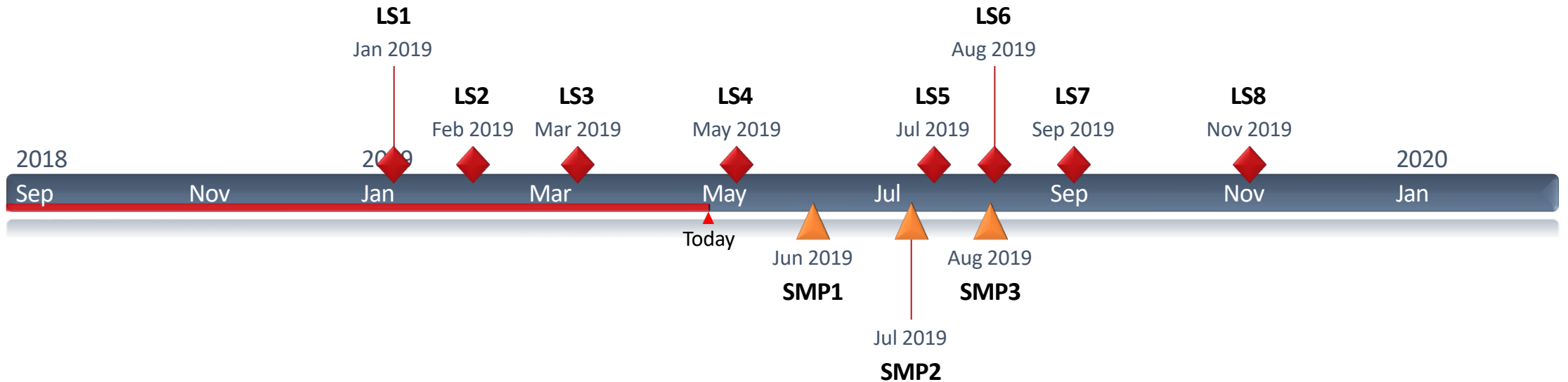
Prepare TM 1



Task 3 Develop OBMP Implementation Plan



Prepare TM 2



Prepare Draft Storage Management Plan



Prepare Final Storage Management Plan

