Temescal Groundwater Sustainability Agency

Technical Advisory Committee

June 16, 2021

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TODD GROUNDWATER

KEARNS & WEST

Welcome and Introductions

Zoom Controls:
Mute, Start/Stop Video, and Select Best View

You are viewing Jack Hughes's screen

View Options

- ✓ Fit to Window
- 50%
- 100% (Original Size)
- 150%
- 200%
- 300%
- Request Remote Control
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- ✓ Side-by-side Mode

Gallery View

Welcome and Introductions

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Unmute | Start Video | Participants 2 | Chat | Share Screen | Record | Leave

Tips for a Productive Discussion

- Let one person speak at a time
- Help make sure everyone gets equal time to give input
- Keep your input concise so others have time to participate
- Actively listen to others and seek to understand their perspectives
- Offer ideas to address questions and concerns raised by others

Overview of Meeting Agenda

Meeting Agenda

1. Welcome and Introductions
2. Overview of Meeting Agenda
3. Temescal GSP Status
4. Water Budget Presentation
5. Draft Projects and Management Actions Presentation and Discussion
5. Public Outreach
6. Public Comment
7. Next Steps and Wrap Up

Temescal GSP Status

Where are we in the Temescal GSP process?

- Monitoring Network (7), Projects and Management Actions (8), Plan Implementation (9), and Introduction (1) chapters in review by GSA now and will be distributed to TAC for review in the next two weeks
- Water Budget (5) and Sustainability Criteria (6) chapters are in final review by the consultant team and will be distributed to the GSA later this week with TAC distribution in early July
- This represents all remaining chapters of the GSP
- After receiving comments from the GSA and TAC, the complete GSP will be compiled and prepared for public release

GSP Review and Adoption Process

- The complete GSP will be posted for public review in late July/early August
- 90-day public review period through October/November
- Revised GSP slated to be ready for GSA adoption November/December 2021
- Submittal deadline to State Department of Water Resources January 31, 2022

Technical Advisory Committee Look-Ahead

- Review chapters 1, 5, 6, 7, 8, and 9, deadline for comments will be transmitted with chapter distribution
- Spread the word about the upcoming GSP activities
  1. Public workshop July 8th
  2. Fact Sheet 3
  3. Release of the complete GSP
  4. Community leader meeting
- Future TAC meetings during GSP implementation

Temescal Basin Water Budget

What is a Water Budget?

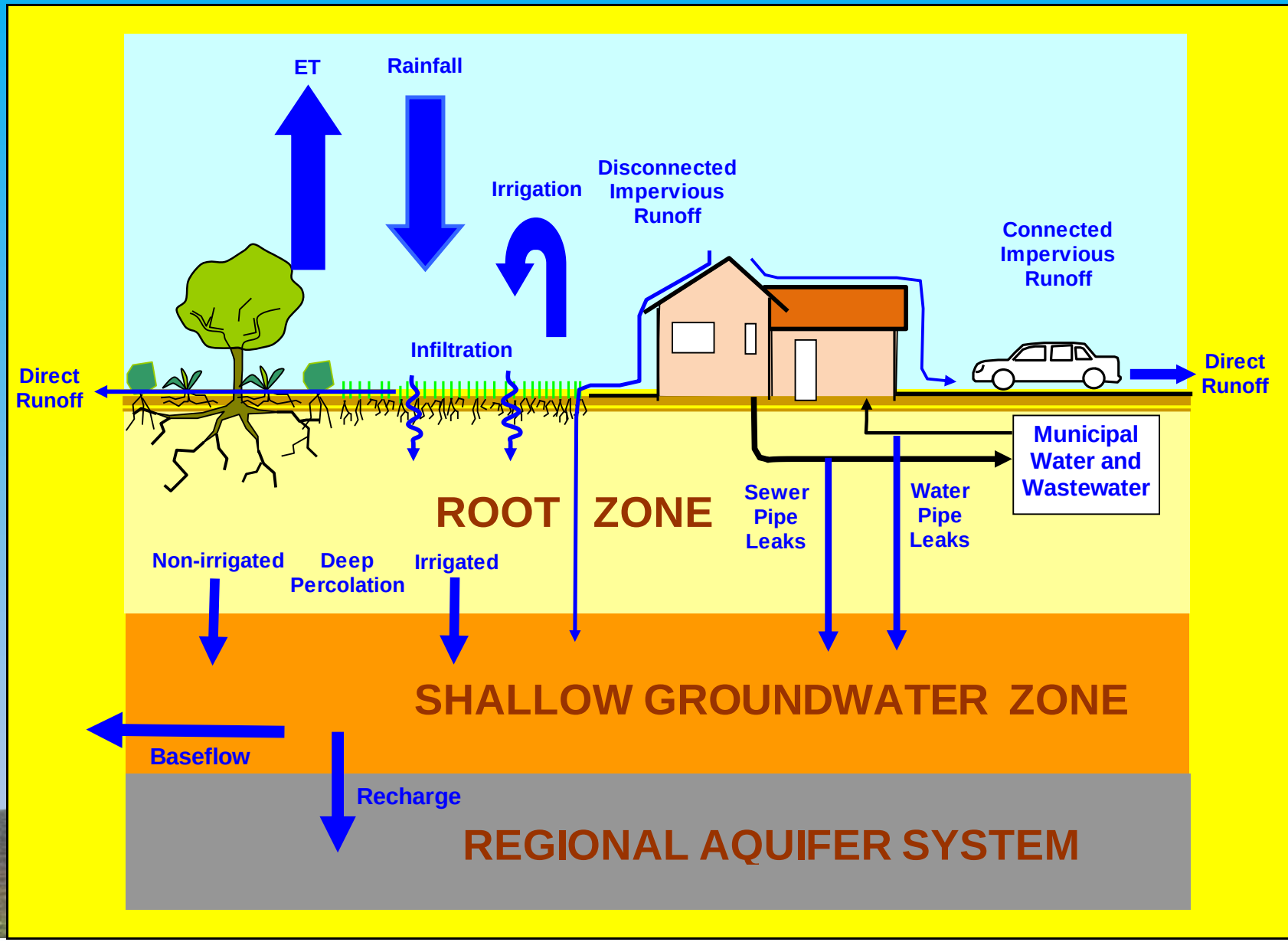
- A water budget quantifies the inflows and outflows of the Temescal Basin over time
- Both inflows and outflows vary from year to year, depending on hydrology or management
- Inflows - Outflows = Change in Storage

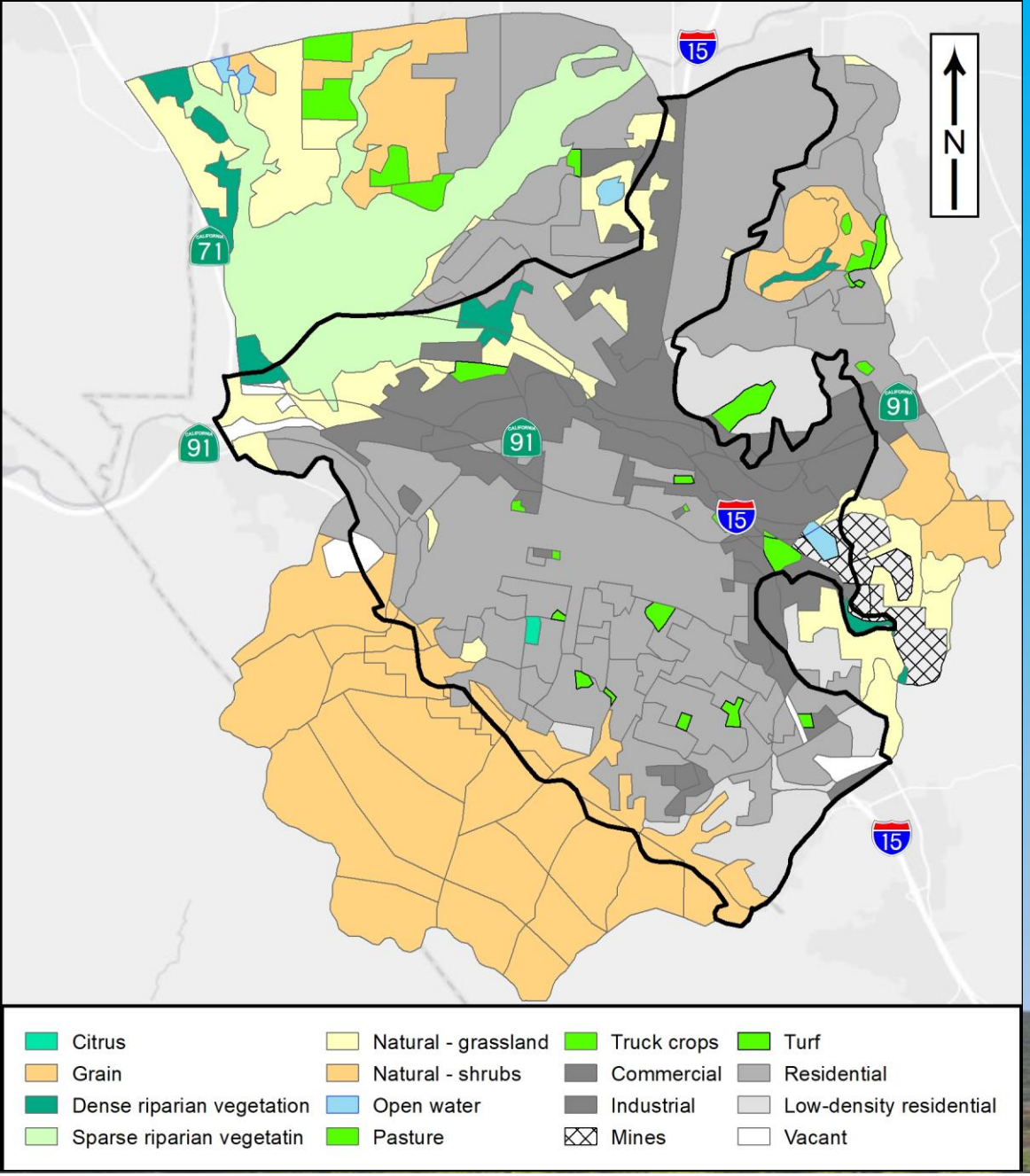
Preliminary Historical Groundwater Budgets

- Water budget items
  - Measured or calculated; input to model
    - Dispersed recharge
    - Wastewater percolation
    - Pumping
    - Surface water inflows at model boundary
  - Head-dependent; ouput from model
    - Stream percolation
    - GW discharge to streams and Prado Wetlands
    - Subsurface boundary flows
    - Storage change

Dispersed Recharge

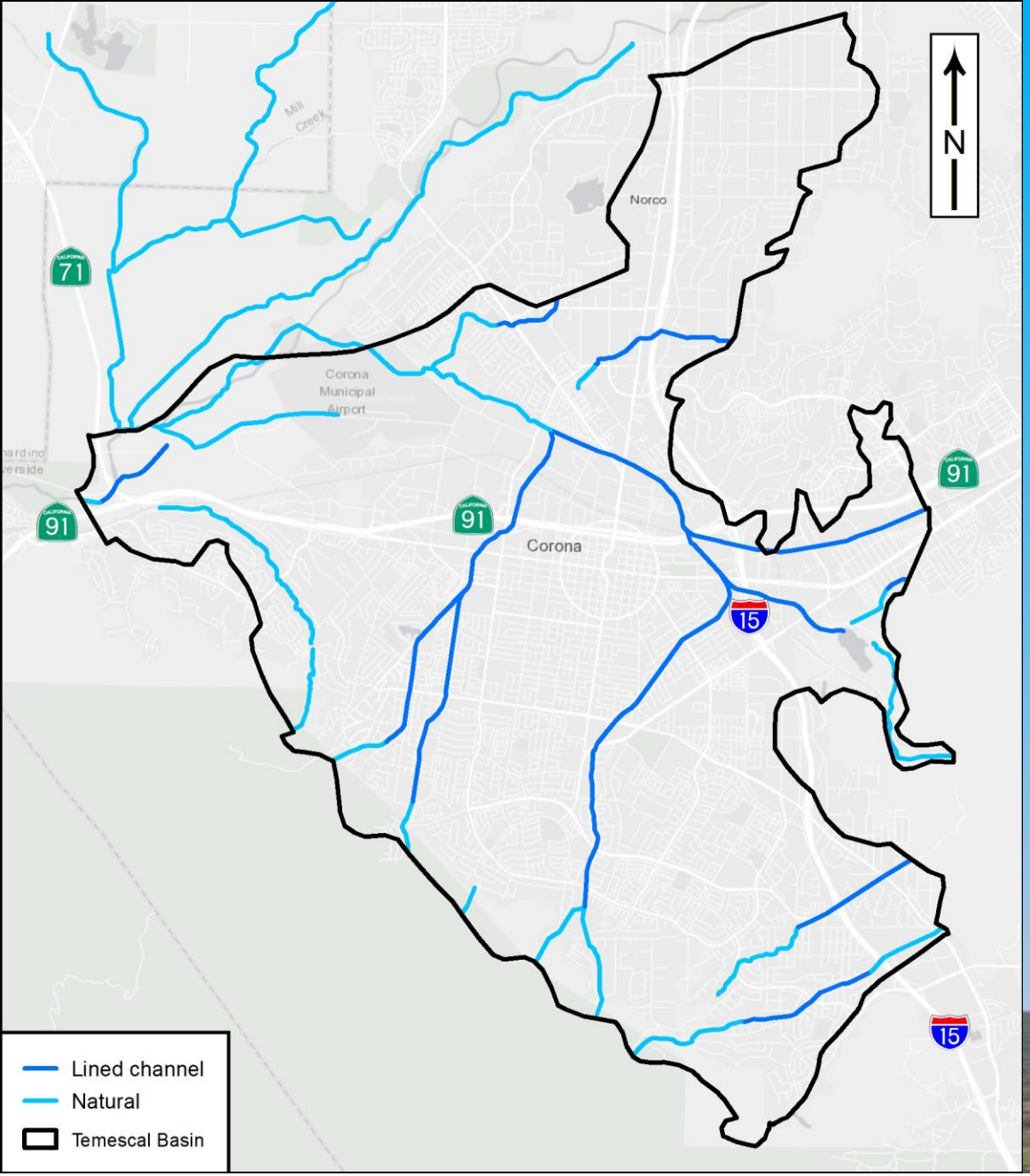
Rainfall-Runoff-Recharge Model





Recharge Polygons

- 286 polygons, which have been identified based on:
  - Areas where recharge occurs
  - Land uses that contribute to recharge
- Evolving land use
- Includes tributary watersheds
- Extends into southern Chino Basin



Stream Recharge

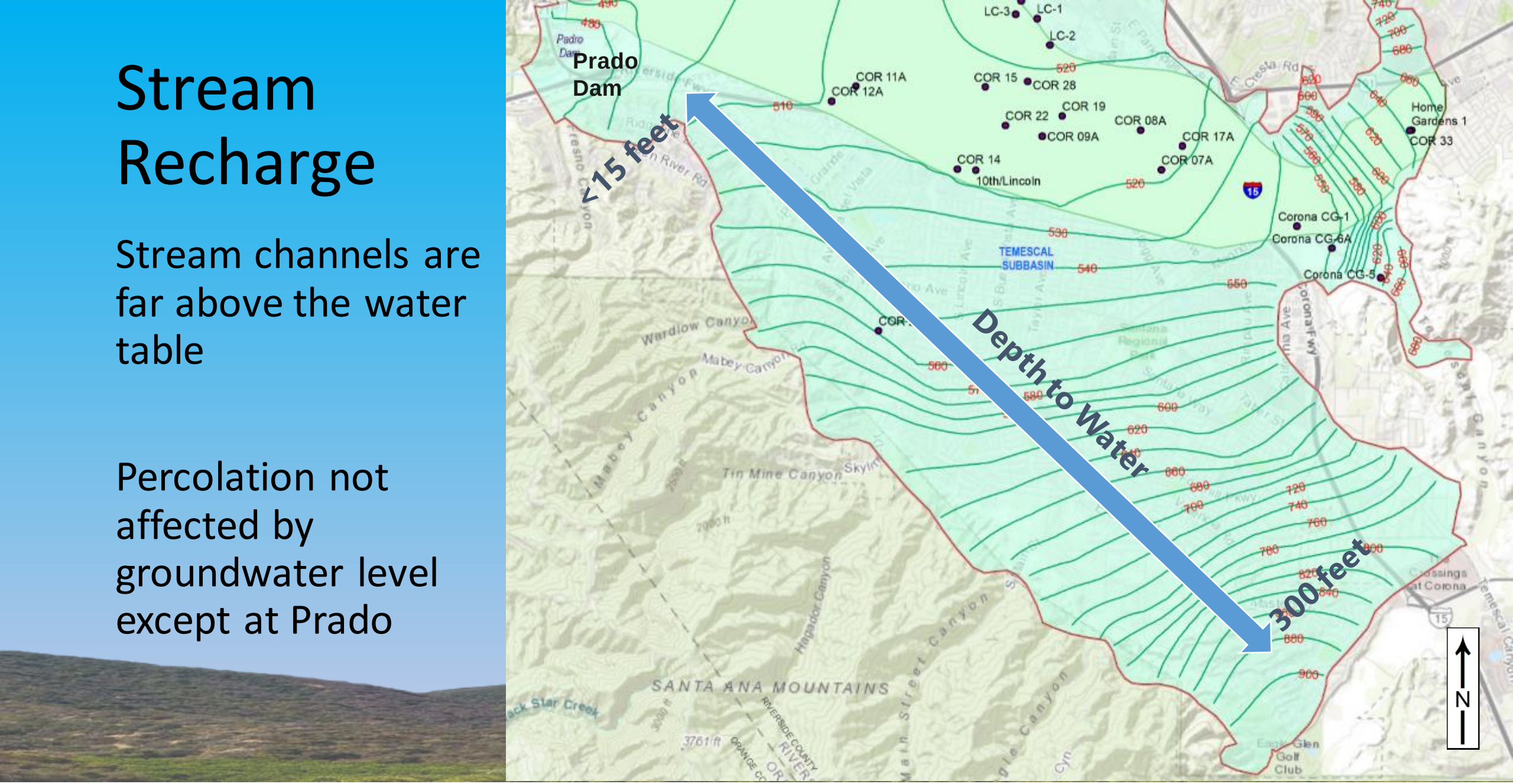
Stream Channel in Model

- Natural bed
- Cement-lined or pipeline

Stream Recharge

Stream channels are far above the water table

Percolation not affected by groundwater level except at Prado



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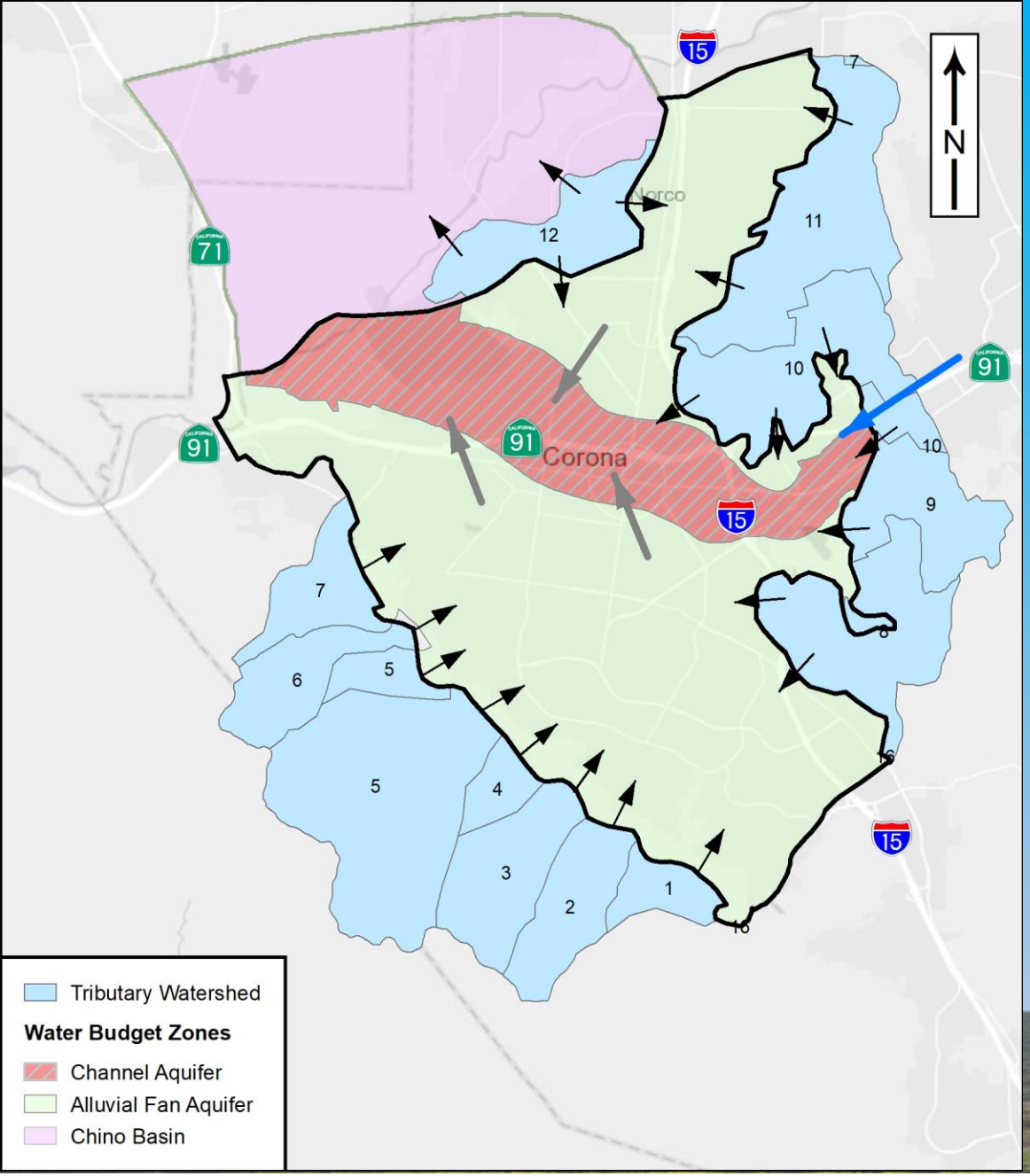
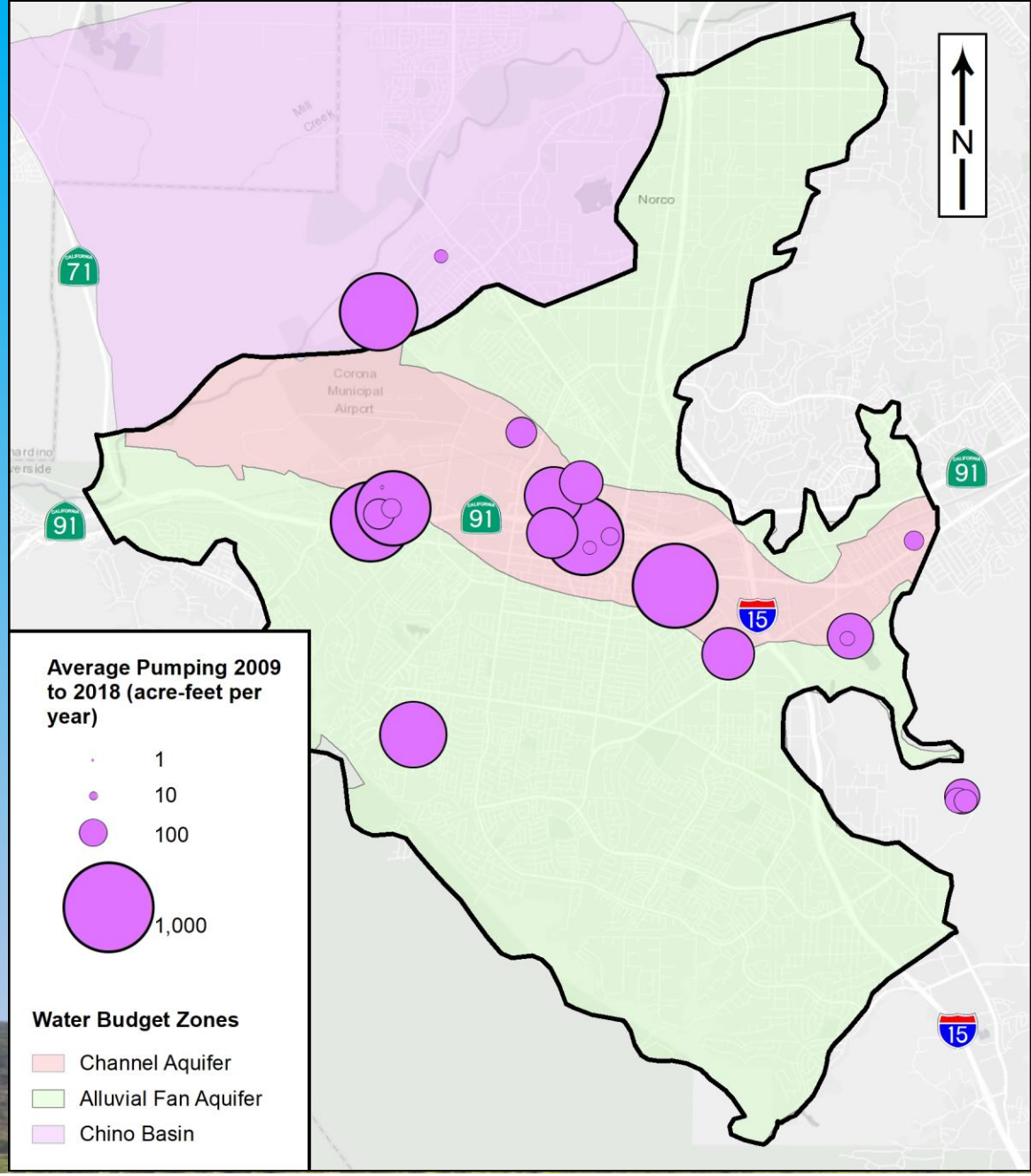
Subsurface Inflow/Outflow



Groundwater Pumping

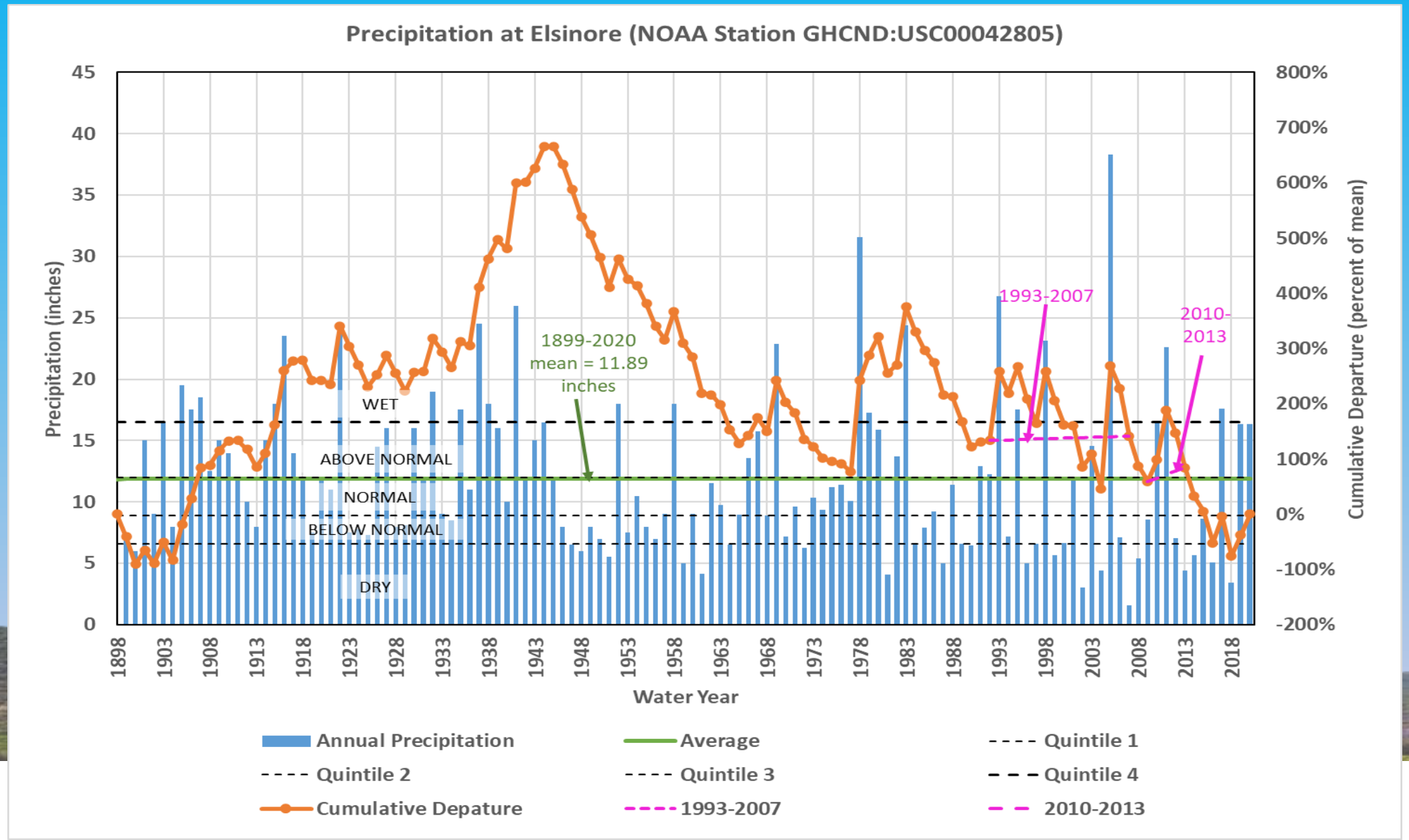
Concentrated in Channel Aquifer



Water Budget Analysis Periods

- Three periods required by SGMA:
  - “Historical” = water years 1993 to 2007
  - “Current” = 2010 to 2013
  - “Future” = 1993 to 2017 (repeated twice)

Water Budget Analysis Periods



Surface Water Budget

- Large volumes of water pass through the basin
- Inflows = outflows. No storage change.
- Creek channels mostly concrete-lined ➔ little percolation
- Creek channels mostly far above water table ➔ percolation rate not affected by groundwater level
- Prado wetlands is only area where groundwater and surface water interact

Groundwater Budget

- Quantitative results still under review
- General patterns:
  - Sources of recharge in descending order:
    - reclaimed water percolation,
    - Rain, irrigation, and pipe leaks
    - stream percolation, subsurface inflow
  - Yield of channel aquifer depends on inflow from alluvial fan aquifer area
  - Pumping is 60-75% of Basin outflow
  - Channel aquifer yield approximately current pumping. Increasing pumping will not increase yield.

Discussion / Q&A

- What do you think the future of groundwater supply and demand will look like?

Draft Projects and Management Actions

Project Management/Action Groupings

Group 1 Baseline Actions

Existing or established commitments to projects/ actions

Group 2 Planned Actions

Developed and evaluated projects/ actions

Group 3 Potential Future Actions

Potential projects/ actions to achieve sustainability goals

Group 1 Projects/ Management Actions

Description	Involved Agencies	Status
Groundwater Treatment: Treatment at the Temescal Desalter to reduce nitrates, TSS and TDS, and other contaminants of concern for the City's drinking water supply.	City of Corona	Ongoing
Water Reclamation Facility (WRF) Percolation Ponds: Discharge from City-owned WRFs to percolation ponds that recharge the Basin.	City of Corona	Ongoing
Water Level QA/QC: Activities to maintain reliability of ongoing groundwater elevation data.	City of Corona	Ongoing
Western Riverside County Regional Wastewater Authority (WRCRWA): This plant will soon produce recycled water for local irrigation use.	GSA, Jurupa CSD, and WMWD	Pending coordination with WRCRWA and partner agencies
Water Shortage Contingency Plans: Stages of water shortage and conservation response based on a City's available supply/deficit.	Cities of Corona and Norco	Ongoing
Water Conservation Programs: Response actions to reduce water use in stages of water shortage.	Cities of Corona and Norco	Ongoing
Western Municipal Water District IRWMP: Coordinated, long-range regional water quantity and quality management strategy.	10 local cities/agencies including the GSA	Ongoing
Santa Ana Watershed Involvement: Coordinated management group to protect the Santa Ana River basin and associated water resources.	GSA and Santa Ana Watershed Project Authority (SAWPA) members	Ongoing

Key

Project

Mgmt. Action

Group 2 Projects/ Management Actions

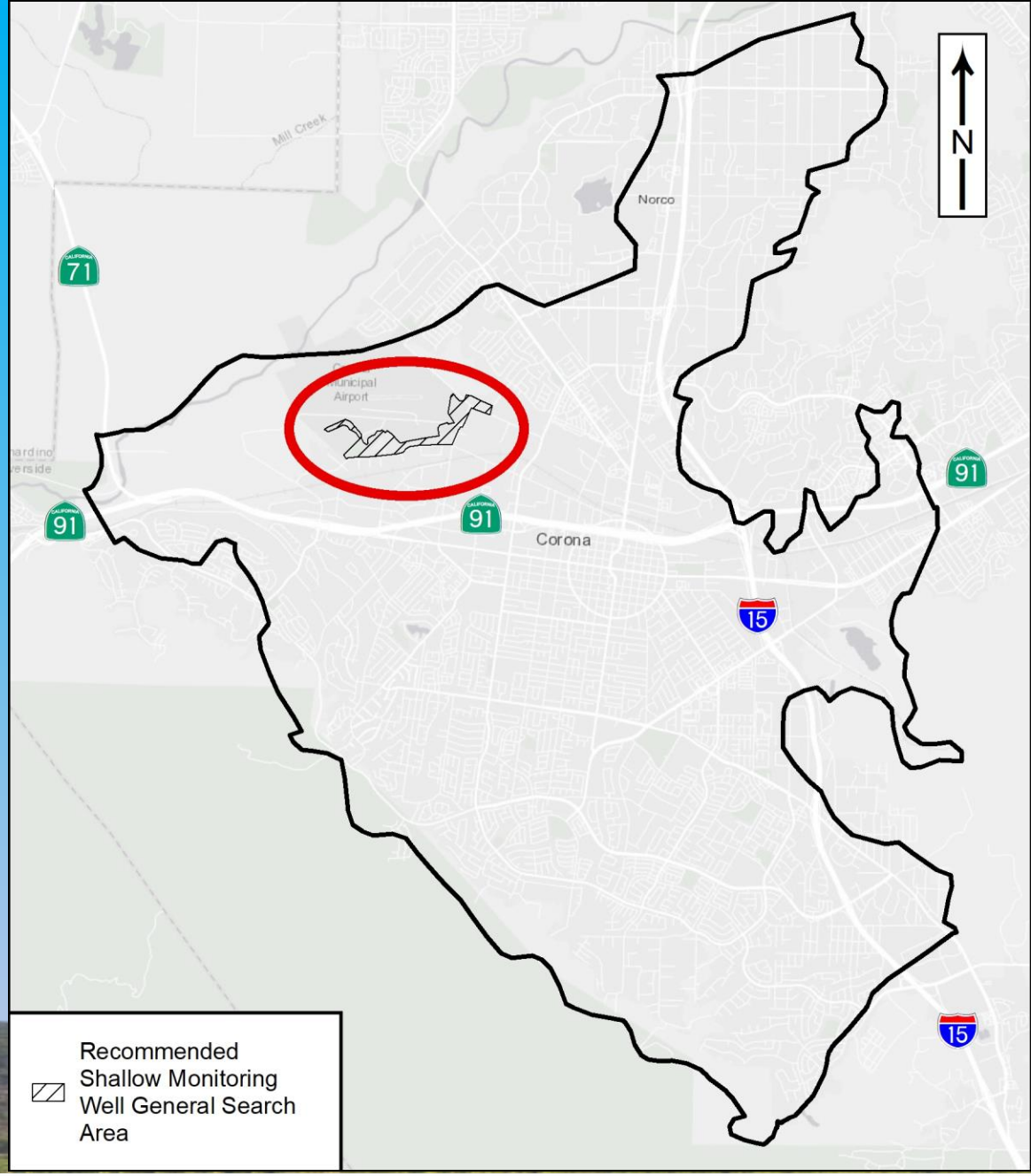
Description	Involved Agencies	Estimated Cost	Status
Potable Reuse Feasibility Study: Study to look at use potential for near to future reclaimed water supply.	GSA	$150,000 to $200,000	Study initiation within second year of GSP adoption.
Mountain Runoff Capture Investigation: Runoff during storm events is collected into existing RCFCWCD basins to mitigate flooding. This study would explore options for operational changes to allow for additional benefit of groundwater recharge.	GSA and RCFCWCD	$75,000	Study initiation within five years of GSP adoption.
Interconnected Surface Water Monitoring Wells Implementation: Three shallow monitoring wells drilled into the Prado Management Area (MA) to allow for groundwater elevation monitoring.	GSA	$40,000 to $50,000	Implementation within first year of GSP adoption.

Key

Project

Mgmt. Action

Group 2 – Monitoring Wells Project



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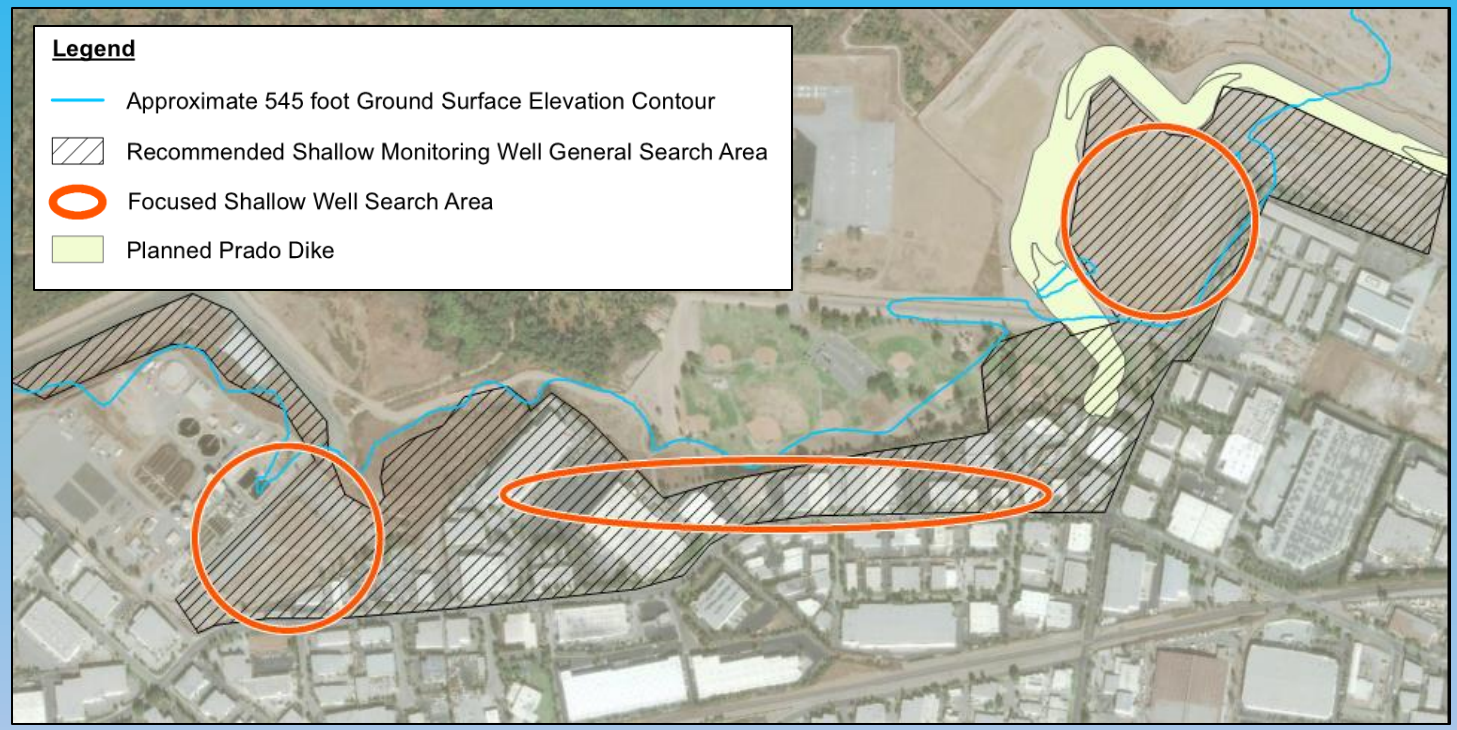
Group 2 – Monitoring Wells Project

- 3 wells, 40-60 feet deep
- Continuous groundwater elevation data collection
- Data to be incorporated in the 5-year GSP update
- Monitoring wells will inform future management actions in the Santa Ana River Watershed



Group 3 Projects/Management Actions

Description	Involved Agencies	Status
Coordination with Upstream Santa Ana River Partners: Contingent on Prado MA monitoring well installation. If groundwater levels in the MA are falling, this approach will entail coordination with upstream partners for solutions.	GSA and Santa Ana Watershed Project Authority (SAWPA) members	No current anticipated timeline.
Future Groundwater Treatment: Implementation of advanced treatment to treat for previously detected PFAS as well as TDS, nitrate, and TCP.	GSA	No current anticipated timeline.
Urban Stormwater Treatment, Capture, and Recharge: Exploration of urban stormwater harvesting to offset water supply and/or provide for groundwater recharge.	GSA	No current anticipated timeline.

Key

Project

Mgmt. Action

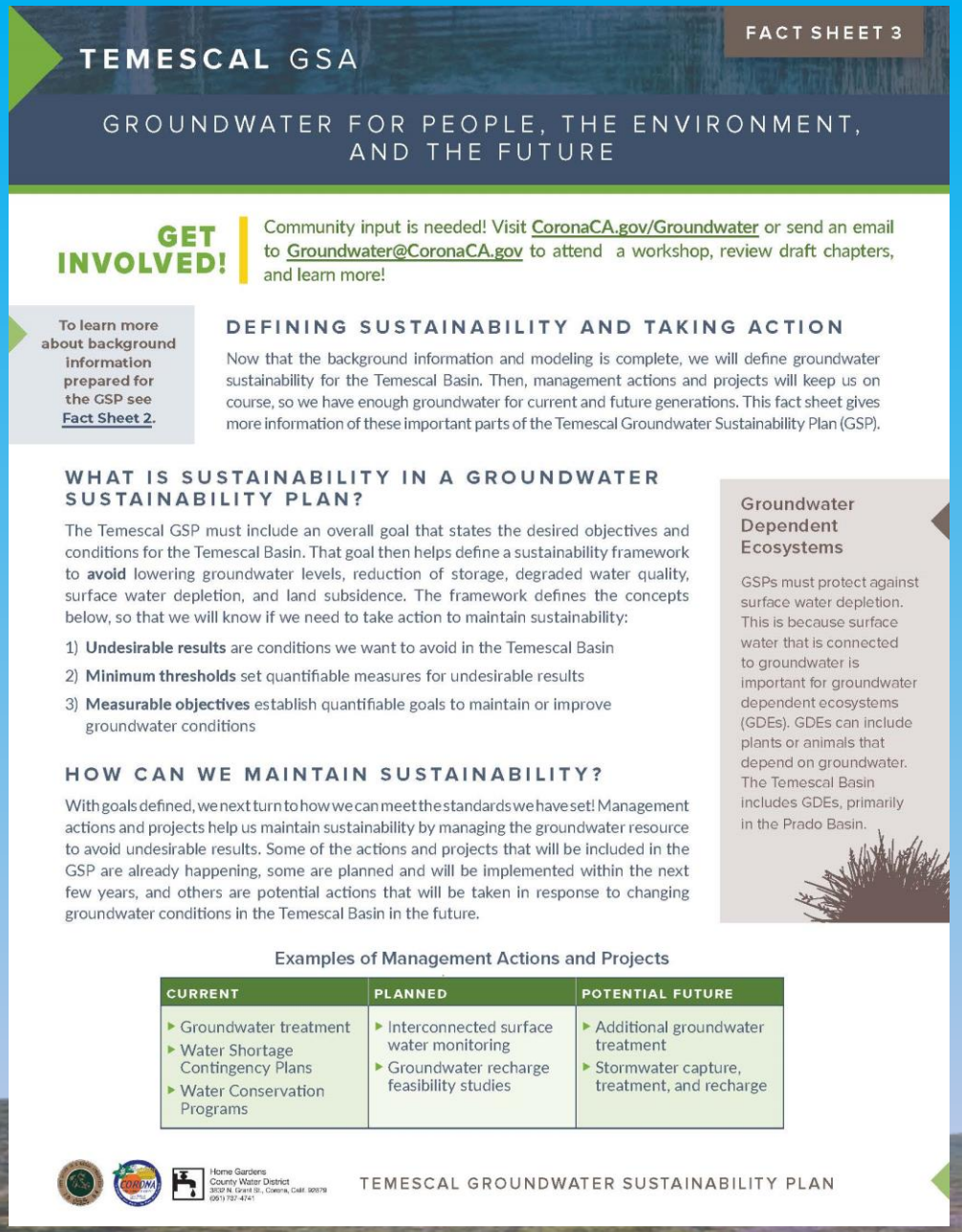
Discussion / Q&A

- Are there other potential groundwater related projects we should consider?
- Do you have ideas for how the volume of groundwater in the Basin could be increased?
- Do you have ideas for making groundwater more sustainable in the Basin?

Public Outreach

Public Workshop 3

- July 8, 2021, 4:00-6:00 PM
- Fact Sheet 3
- Please invite others!



FACT SHEET 3

TEMESCAL GSA

GROUNDWATER FOR PEOPLE, THE ENVIRONMENT, AND THE FUTURE

GET INVOLVED! Community input is needed! Visit CoronaCA.gov/Groundwater or send an email to Groundwater@CoronaCA.gov to attend a workshop, review draft chapters, and learn more!

To learn more about background information prepared for the GSP see Fact Sheet 2.

DEFINING SUSTAINABILITY AND TAKING ACTION

Now that the background information and modeling is complete, we will define groundwater sustainability for the Temescal Basin. Then, management actions and projects will keep us on course, so we have enough groundwater for current and future generations. This fact sheet gives more information of these important parts of the Temescal Groundwater Sustainability Plan (GSP).

WHAT IS SUSTAINABILITY IN A GROUNDWATER SUSTAINABILITY PLAN?

The Temescal GSP must include an overall goal that states the desired objectives and conditions for the Temescal Basin. That goal then helps define a sustainability framework to **avoid** lowering groundwater levels, reduction of storage, degraded water quality, surface water depletion, and land subsidence. The framework defines the concepts below, so that we will know if we need to take action to maintain sustainability:

1) **Undesirable results** are conditions we want to avoid in the Temescal Basin
2) **Minimum thresholds** set quantifiable measures for undesirable results
3) **Measurable objectives** establish quantifiable goals to maintain or improve groundwater conditions

Groundwater Dependent Ecosystems

GSPs must protect against surface water depletion. This is because surface water that is connected to groundwater is important for groundwater dependent ecosystems (GDEs). GDEs can include plants or animals that depend on groundwater. The Temescal Basin includes GDEs, primarily in the Prado Basin.

HOW CAN WE MAINTAIN SUSTAINABILITY?

With goals defined, we next turn to how we can meet the standards we have set! Management actions and projects help us maintain sustainability by managing the groundwater resource to avoid undesirable results. Some of the actions and projects that will be included in the GSP are already happening, some are planned and will be implemented within the next few years, and others are potential actions that will be taken in response to changing groundwater conditions in the Temescal Basin in the future.

Examples of Management Actions and Projects

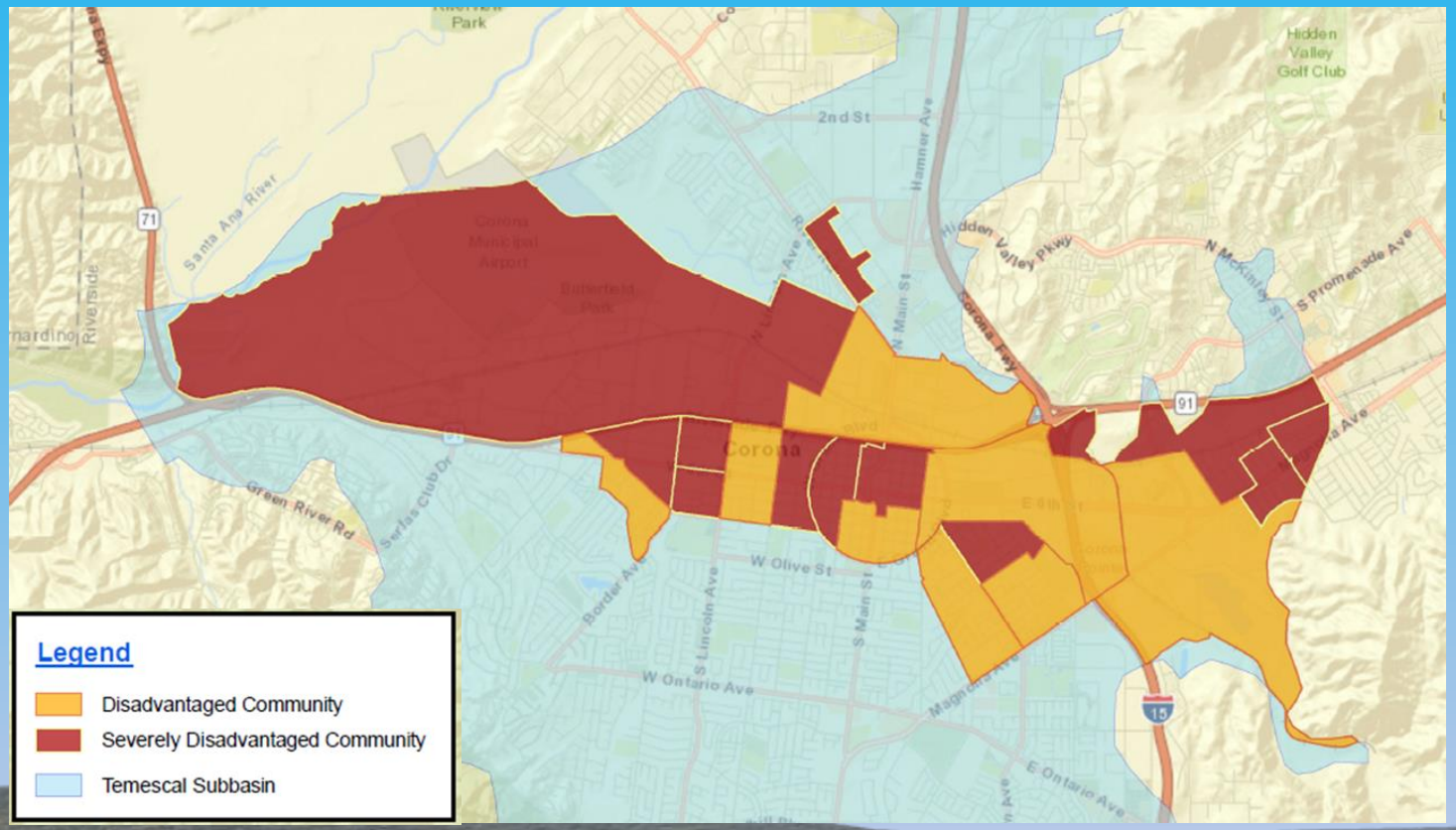
CURRENT	PLANNED	POTENTIAL FUTURE
▸ Groundwater treatment ▸ Water Shortage Contingency Plans ▸ Water Conservation Programs	▸ Interconnected surface water monitoring ▸ Groundwater recharge feasibility studies	▸ Additional groundwater treatment ▸ Stormwater capture, treatment, and recharge

Home Gardens County Water District

TEMESCAL GROUNDWATER SUSTAINABILITY PLAN

Community Leader Meeting

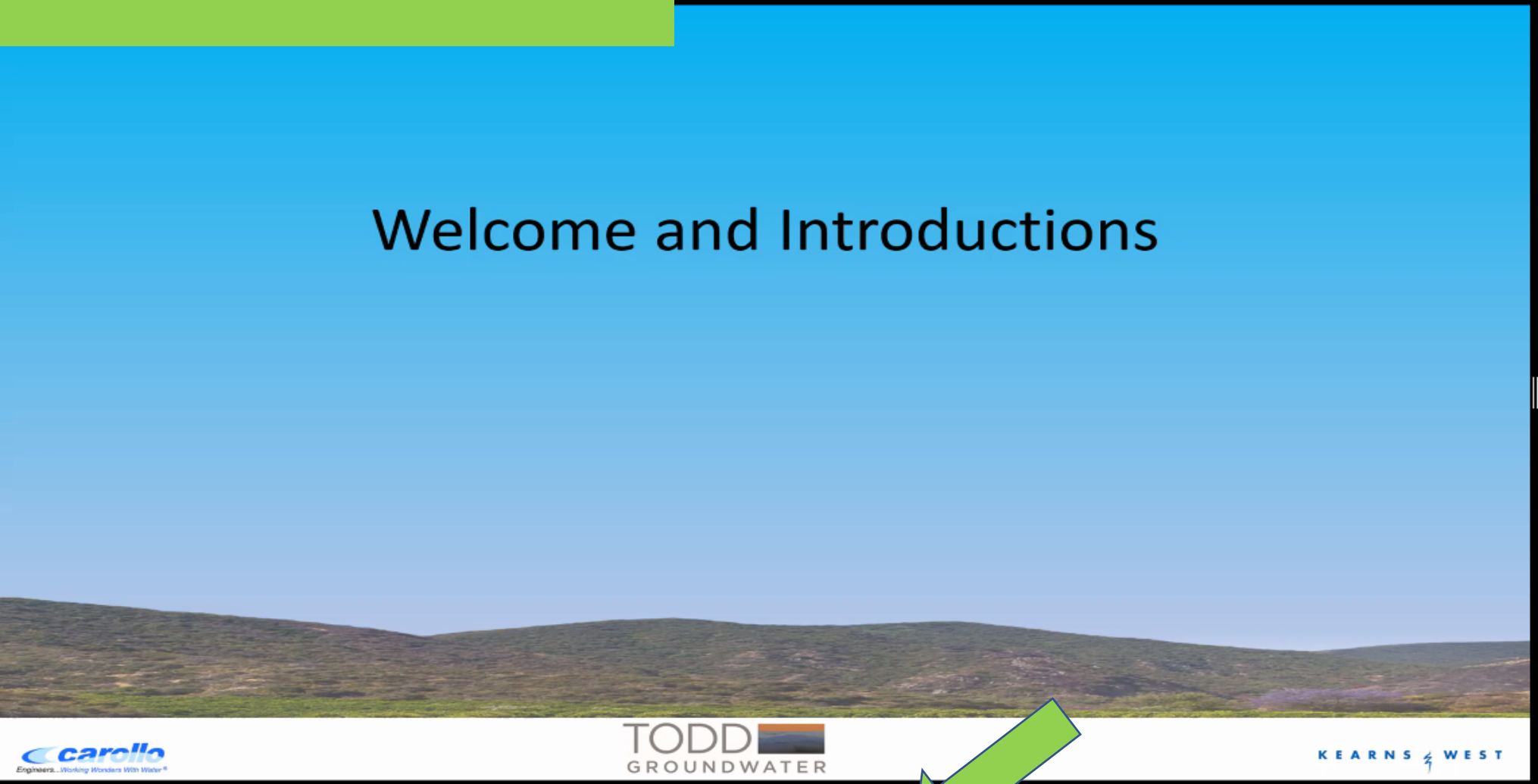
- Provide information on local water supply and learn about needs and perspectives in vulnerable communities



Discussion / Q&A

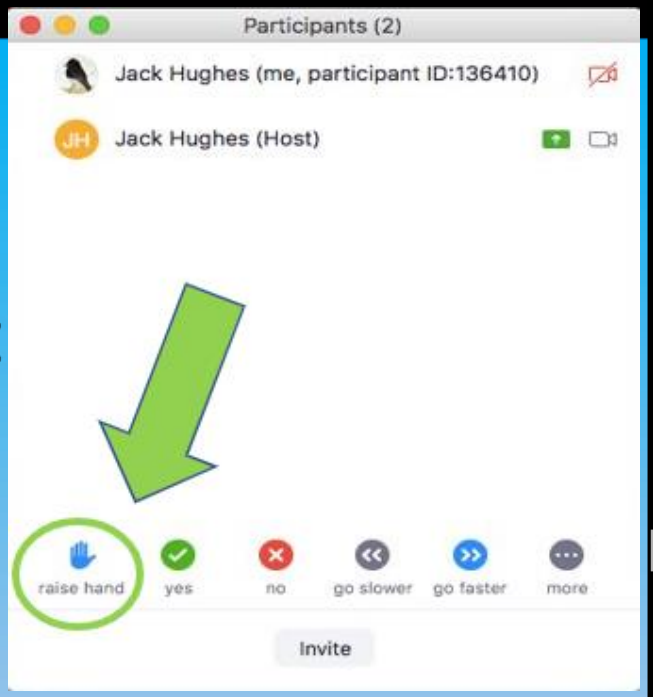
Public Comment

How to Raise Your Hand– Step 1



How to Raise Your Hand – Step 2

Welcome and Introduct



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Next Steps and Wrap Up

Next Steps

- Revise Chapters 1, 5, 6, 7, 8, and 9 based on GSA and TAC comments
- Compile complete GSP for public release
- Prepare for and hold Public Workshop 3 (July 8, 2021)
  - Zoom Link : https://zoom.us/j/93530179115
- Prepare for GSP finalization, adoption, and submittal to DWR
- Questions or comments to groundwater@coronaca.gov

Thank You!