

San Mateo Plain Groundwater Basin Assessment Stakeholder Workshop #6

**STAKEHOLDER DISCUSSION TOPIC 1: Model Scenarios & Priority**

Identify model scenarios for the future that you would like to see be modeled as part of the Phase 3 work. Think about the specifics of the scenarios and then rank these in order of importance, with 1 being of the highest importance. Note the basis for ranking values.

Priority	Potential Model Scenarios	Basis for Priority Ranking
<b>Group A</b>		
1	Stormwater recharge <ul style="list-style-type: none"> <li>- Subsurface detention basins</li> <li>- Green Street, LID</li> </ul>	Timeframe – within 5 years to inform projects and policy
2	IDR and recycled water and how it changes yield	Slightly later timeframe than 1
1'	Increased pumping <ul style="list-style-type: none"> <li>- Normal vs. dry year/emergency</li> </ul>	Same as for stormwater recharge
3	Rainfall changes <ul style="list-style-type: none"> <li>- Temporal and amount shifts</li> </ul>	Can't change rainfall itself, can only react – less planning of specific projects
5	Sea level rise	Least certainty with respect to groundwater impacts (water balance of outflows)
<b>Group B</b>		
All	Drought effects	
Top 2	Increase groundwater pumping – shallow/deep, time patterns	Widespread and shallow; localized and deep
Top 2	Climate change <ul style="list-style-type: none"> <li>- Rain intensity</li> <li>- Increase drought pumping</li> <li>- Annual rain and evapotranspiration</li> </ul>	Sea level rise; two time periods
4	Pipe leak repairs <ul style="list-style-type: none"> <li>- water</li> <li>- sewer</li> </ul>	
All	Include Palo Alto	
All	Pumping depletion of streamflow	
3	Increase stormwater recharge	
Calibration	Simulate 1950s – 1960s recovery	

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Priority	Potential Model Scenarios	Basis for Priority Ranking
<b>Group C</b>		
2a	Stormwater treatment percolation	Recharge and pumping (shallow)
1	Increased pumping <ul style="list-style-type: none"> <li>- Variable depths</li> <li>- Variable spacing</li> <li>- Levels</li> </ul>	How much and where (basin yield)
2b	Shallow recharge (RW) with shallow pumping (irrigation)	How much and where (basin yield)
3	Indirect potable use (deep agricultural recharge and pumping)	Recharge and pumping (deep)
2c	Reduced recharge from climate change (increased)	Recharge and pumping (deep)
<b>Group D</b>		
A''	Interactions between the subbasins due to changes in pumping	Sustainability determination
B'	Long-term loss of SFPUC (outages)	
B'	Sea level rise changing groundwater levels, saltwater intrusion potential	More public questions preemptively answered potential SGMA compliance
B'	Changes in balance between recharge and additional pumping	Sustainability determination
B'	Precipitation pattern changes; 50-year horizon	Bigger impact than sea level Potential SGMA compliance
C	Degradation in water quality due to increased groundwater use	
C	Impact of deep well water use increasing on the shallow aquifer	
B'	Changes to surface water/groundwater interactions	Potential SGMA compliance

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Priority	Potential Model Scenarios	Basis for Priority Ranking
<b>Group E</b>		
1?	Stormwater recharge (managed) <ul style="list-style-type: none"> <li>- focused and distributed</li> </ul>	<ul style="list-style-type: none"> <li>- Question of location</li> <li>- What about flood risk?</li> <li>- These are required/inevitable programs</li> <li>- Good model input data should be available</li> </ul>
2?	Increased groundwater pumping <ul style="list-style-type: none"> <li>- due to population growth</li> <li>- cumulative due to multiple "projects"</li> </ul>	<ul style="list-style-type: none"> <li>- Some very large projects on the horizon</li> </ul>
	Hybrid scenarios; e.g.: <ul style="list-style-type: none"> <li>- increased pumping and increased recharge</li> <li>- climate change and pumping, etc.</li> </ul>	
3?	Climate change <ul style="list-style-type: none"> <li>- change in rainfall recharge?</li> <li>- change in ET</li> <li>- change in imported water</li> <li>- sea level rise</li> <li>-</li> </ul>	Include in baseline?
	Recycled water Better "assignment" of water type to use	

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**STAKEHOLDER DISCUSSION TOPIC 2: Defining Model Scenarios**

For your group’s highest ranked scenarios, detail what factors you think should be assumed for purposes of modeling the future scenario. Please be specific as possible.

**Scenario: Stormwater Recharge**

**Key Factors that Would Deviate from Current Conditions & Basis for Selecting these Factors:**

- Infrastructure – policy and projects; private and public
- Increased recharge to groundwater and potentially outflows to bay
- Decrease flows to WWTP, decrease flooding

**How significantly might these factors deviate from Current Conditions:**

- C/CAG will model this, develop scenarios
- have an acreage estimate of private development, approximately 1,600 acres

**Time period the changes may occur:**

- 2020 – 2040 policy in place by 2019

**Location of changes in Basin (use map at right):**

- Regional capture – western areas, residential/parks (Bayfront canal, South San Francisco at Orange Memorial Park, Belmont Creek)

**Other Stakeholder notes:**

- Question – is there a negative impact? or max benefit?

**Scenario: Stormwater recharge (managed)**

**Key Factors that Would Deviate from Current Conditions & Basis for Selecting these Factors:**  
(blank)

**How significantly might these factors deviate from Current Conditions:**  
(blank)

**Time period the changes may occur:**

- to 2040 – similar to land planning interval

**Location of changes in Basin (use map at right):**  
(blank)

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**Scenario: Increased pumping**

**Key Factors that Would Deviate from Current Conditions & Basis for Selecting these Factors:**

- Well depths, spacing, and volumes

**How significantly might these factors deviate from Current Conditions:**

- a lot – population, water supply, climate, policy, use

**Time period the changes may occur:**

- decades

**Location of changes in Basin (use map at right):**

- 101 Corridor (bay side)
- treatment plants
- storm drains



**Scenario: Increased pumping**

**Key Factors that Would Deviate from Current Conditions & Basis for Selecting these Factors:**

- Increase pumping and areas of pumping
- Difference in normal year/all time pumping vs dry years only

**How significantly might these factors deviate from Current Conditions:**

- very significant potential for increase

**Time period the changes may occur:**

- next year and beyond

**Location of changes in Basin (use map at right):**

- S. area
- Where is the best area to pump?

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**Scenario: Interactions between subbasins**

**Key Factors that Would Deviate from Current Conditions & Basis for Selecting these Factors:**

- Decreased amount of water in San Francisquito Creek, decreasing recharge
- Take into account new info from adjacent basins
- Boundary condition modifications
- Change in pumping

**How significantly might these factors deviate from Current Conditions:**

- change in pumping most significant

**Time period the changes may occur:**

- 20 – 30, up to 50 years

**Location of changes in Basin (use map at right):**

- Southern Part