



Climate Change Plan

Napa Sanitation District

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Purpose of Today's Briefing

- Summarize staff interview
- Present approach to risk assessment
- Discuss next steps & schedule

Staff Interview Yielded Helpful Insights



Sea Level Rise

Would greatly affect access to the WWTP and office building; NapaSan would lose access to some biosolids application sites; inflow & infiltration of water in low-lying areas could stress the collection system



Groundwater Level Rise

Recycled water quality would be impacted as salinity is increased; pond use could be lost which would increase wet weather flow through the treatment plant



Wildfire/PSPS

Current diesel storage could be inadequate to address longer outages; understanding how to maximize system efficiency during outages would support right-sizing fuel storage; report submittal is impacted without internet



Precipitation Changes

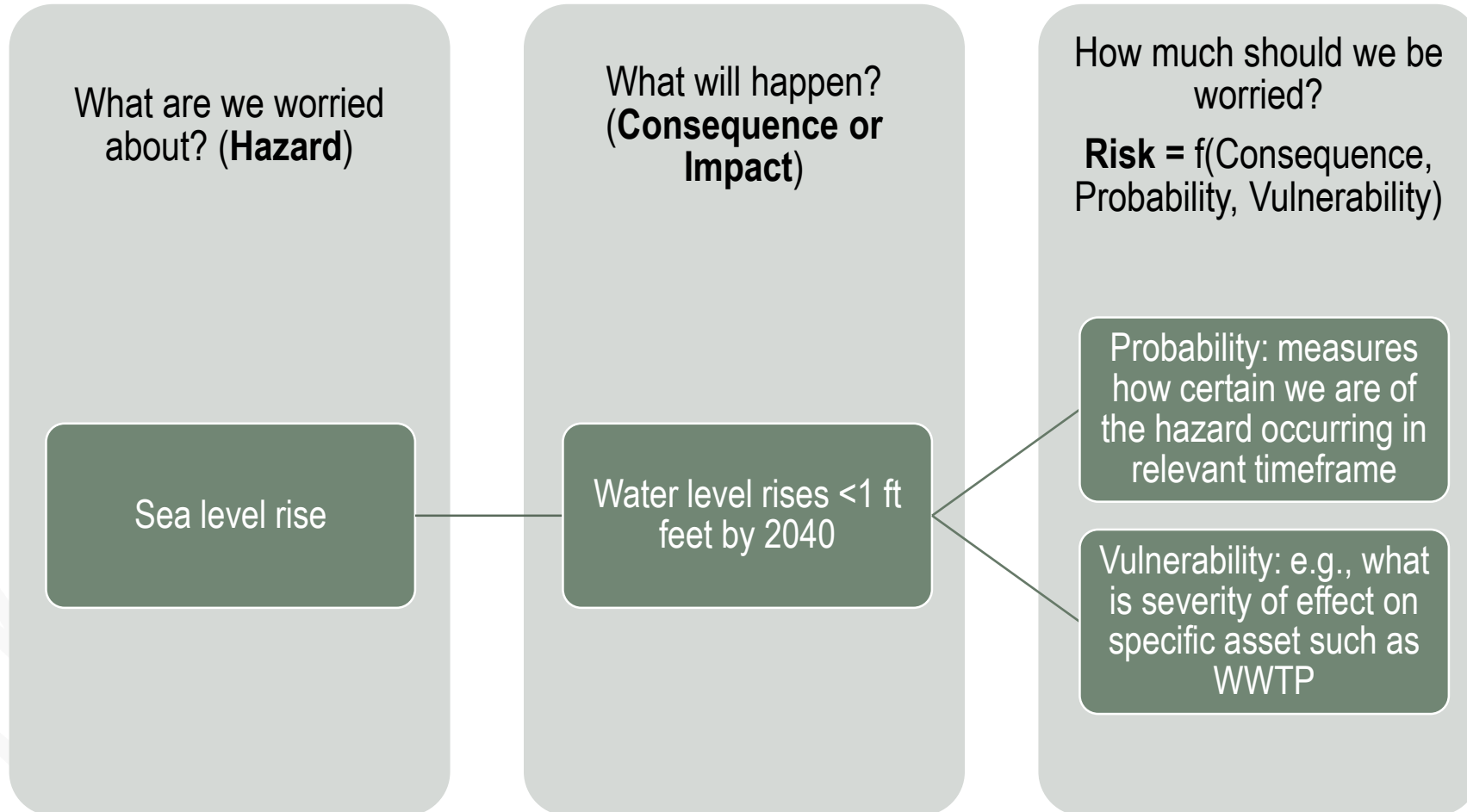
SSOs tend to happen during 5-year and greater storm events; Collection System Master Plan based on a 10-year storm event; increased precipitation could affect planning and CIP efforts



Temperature Increases

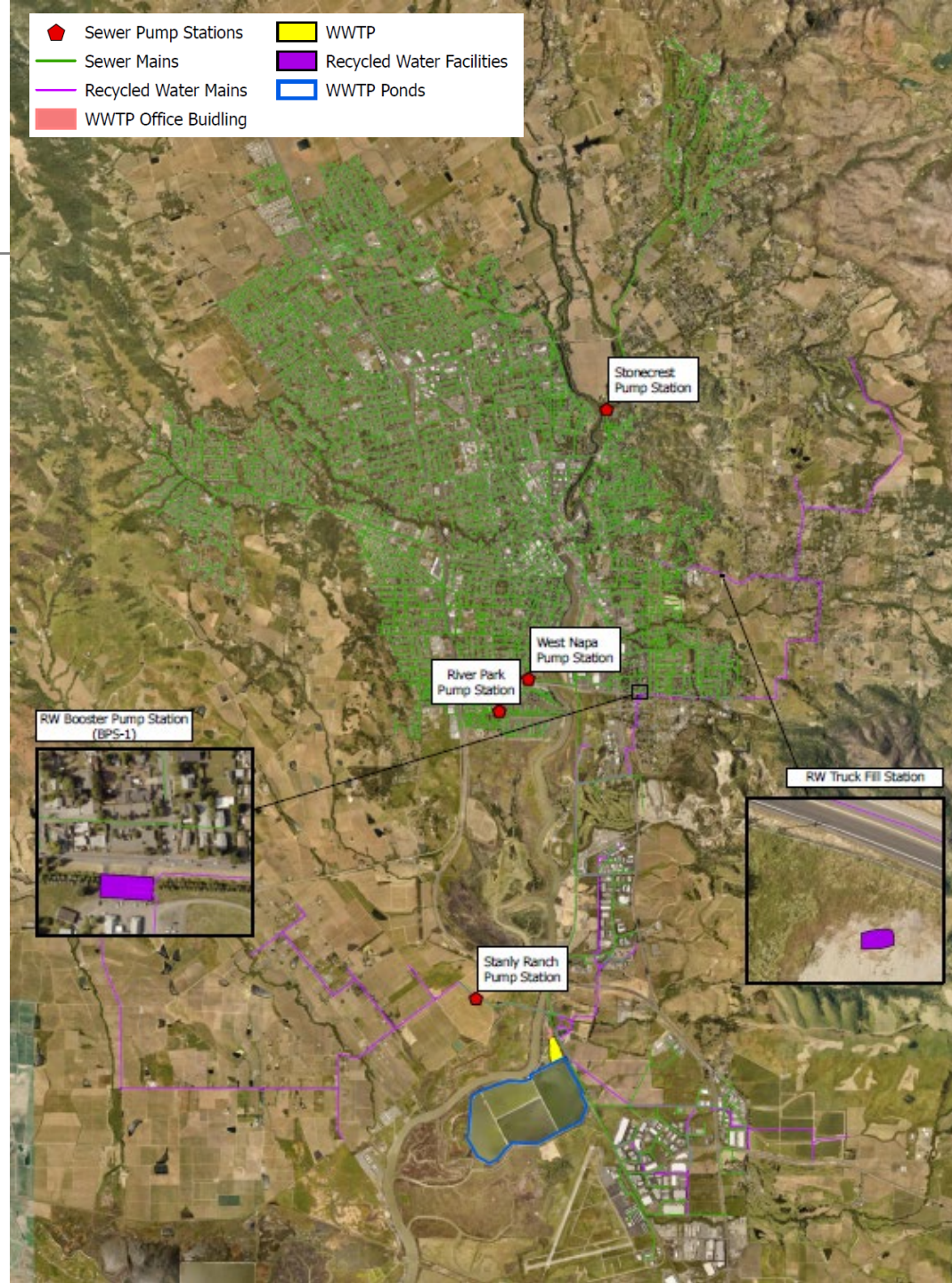
Blue-green algae production in the ponds could be exacerbated and could require treatment; increased number of extreme heat days could affect worker health and safety

Assessment Framework – Overall Approach



NapaSan Assets Considered

- WWTP
- Ponds
- RW Booster Pump Station
- RW Truck Fill Station
- Office building
- Pump Stations (4)
- RW Distribution Pipelines
- Collection System Pipelines
- Biosolids Application Areas



Criteria Helps Us Determine The Risk

- Likelihood of the hazard occurring over the planning horizon
 - Can account for *different points in the planning horizon* (<1 ft of SLR by 2040, 3 ft by 2100, etc.)
 - Range from rare to almost certain






- Severity of impact (consequence/magnitude)
 - Can account for the *vulnerability of the asset*
 - Range from none to extreme






Risk Rating Scale Helps Us Rank The Severity Of The Impact

Rank	Operations	Access	Infrastructure Damage	Financial Impact
None	No potential for loss of operations or changes in operations	No potential to lose access to asset	No expected damage to equipment	No potential for loss of revenue/operating income
Low	Minimal loss of operations or changes in operations	Minimal potential to lose access to asset	Minimal damage to equipment	Minimal potential for loss of revenue/operating income
Medium	Short-term loss of operations or minor changes in operations	Minor and short-term loss of access to asset	Minor damage to equipment	Minor and short-term reductions in expected revenue/operating income
High	Seasonal or episodic loss of operations or changes in operations	Seasonal or episodic loss of access to asset	Significant damage to equipment	Seasonal or episodic compromise of expected revenue/operating income
Extreme	Long-term or significant loss of operations or permanent changes in operations	Total loss of access to asset	Total loss of asset	Long-term or significant loss of expected revenue/operating income

Risk Map Shows Us Where We Might Want To Focus Our Efforts






EXAMPLE (2040) for Treatment Plant






-  Sea level rise
-  GW level rise
-  Wildfire/PSPS
-  Precipitation changes
-  Temperature increase

Certainty (probability, likelihood)	Almost certain			 		
	Likely					
	Possible					
	Unlikely					
	Rare					
		None	Low	Medium	High	Extreme
		Severity (consequence, magnitude)				

Risk Map Shows Us Where We Might Want To Focus Our Efforts... And May Change Over Time

EXAMPLE (2100) for Treatment Plant

-  Sea level rise
-  GW level rise
-  Wildfire/PSPS
-  Precipitation changes
-  Temperature increase

Certainty (probability, likelihood)	Almost certain					
	Likely					
	Possible					
	Unlikely					
	Rare					
		None	Low	Medium	High	Extreme
		Severity (consequence, magnitude)				

Next Steps

- Hold periodic Board updates (March 2022 & June 2022)
- Conduct risk assessment
- Identify list of potential adaptation measures
- Cost out final list of adaptation measures
- Prepare report summarizing findings

Project complete by end of Fiscal Year

Thank you! Questions?

