Sonoma Valley Stormwater Management and Groundwater Recharge Scoping Study

Prioritization & Next Steps

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Screen and prioritize

inventory

- Project types
- Stakeholder ideas

screen

Likelihood of physical feasibility:

- Fair or better recharge geology
- Slope < 10%

Likelihood of achievement of both core objectives

prioritize

- Low likelihood of significant regulatory constraints
- Siting feasibility
- Absence of significant water quality concerns
- Expected cost/units of core objective benefit
- Magnitude of potential core benefits
- Ability to meet supporting objectives

Short list of potential project concepts (type, location)

Prioritization

prioritize

Step 1	Step 2	Step 3
Low likelihood of significant regulatory constraints	Magnitude of potential core benefits	Absence of significant water quality concerns
Siting feasibility		Ability to meet supporting objectives
Expected cost/units of core objective benefit		

Short list of potential project concepts (type, location)

Prioritization

prioritize

Step 1

- Low likelihood of significant regulatory constraints
- Siting feasibility
- Expected cost/units of core objective benefit

Post-screening project types
~~In-line detention/retention/recharge basins~~
Off-line detention/retention/recharge basin
High flow diversion/recharge
Floodplain attenuation/recharge
Above-ground or underground storage tank/recharge
Infiltration gallery/detention
Self-cleaning infiltration trench/detention
LID

Prioritization

prioritize

Step 1

- Low likelihood of significant regulatory constraints
- Siting feasibility
- Expected cost/units of core objective benefit

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~~In-line detention/retention/recharge basins~~
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Prioritization

prioritize

Step 1

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Post-screening project types
~~In-line detention/retention/recharge basins~~
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~~Above-ground or underground storage tank/recharge~~
Infiltration gallery/detention
Self-cleaning infiltration trench/detention
LID

Prioritization

Step 1

Table 3:

Project types	Locations
Off-line basin	▪ Sonoma Creek at Lawndale ▪ Sonoma Creek above Calabasas Creek ▪ Calabasas Creek at Sonoma Creek ▪ Sonoma Creek at Agua Caliente Road ▪ Sonoma Creek below Dowdall Creek ▪ Nathanson Creek at Schell Creek ▪ Fowler Creek above Rodgers Creek ▪ Arroyo Seco at Schell Creek ▪ Rodgers Creek at Fowler Creek
High flow diversion/recharge	▪ Sonoma Creek at Lawndale ▪ Nathanson Creek at Schell Creek
Infiltration gallery	*(Subbasins as listed for off-line basins)*
Self-cleaning infiltration trench	*(Subbasins as listed for off-line basins)*
LID	*(Subbasins as listed for off-line basins)*

Prioritization

prioritize

Step 2

Magnitude of potential core benefits

Post-screening project types
~~In-line detention/retention/recharge basins~~
Off-line detention/retention/recharge basin
~~High flow diversion/recharge~~
~~Floodplain attenuation/recharge~~
~~Above-ground or underground storage tank/recharge~~
Infiltration gallery/detention
~~Self-cleaning infiltration trench/detention~~
~~LID~~

Prioritization

prioritize

Step 2

Magnitude of potential core benefits

Best location for flood hazard reduction

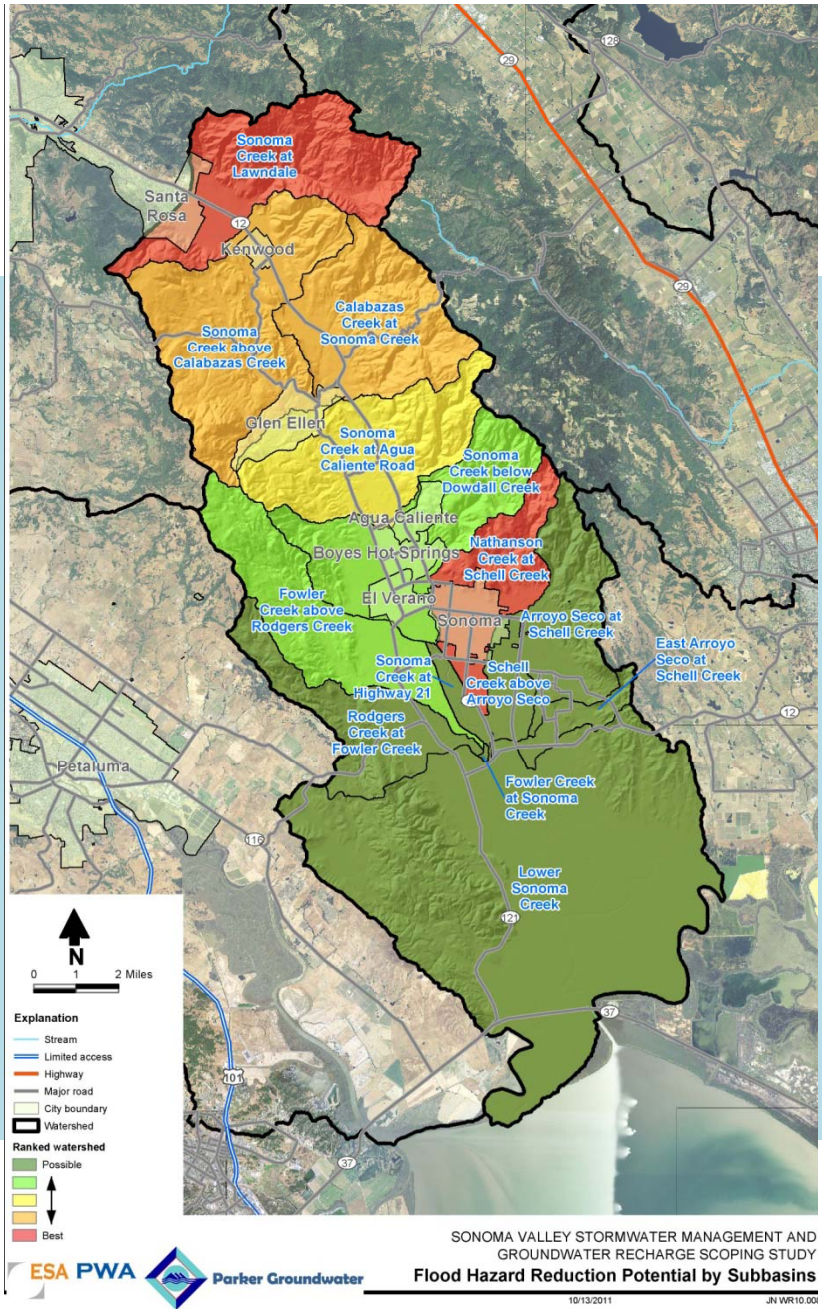
Best location for groundwater recharge

Prioritization

prioritize

Step 2

Best location for flood hazard reduction

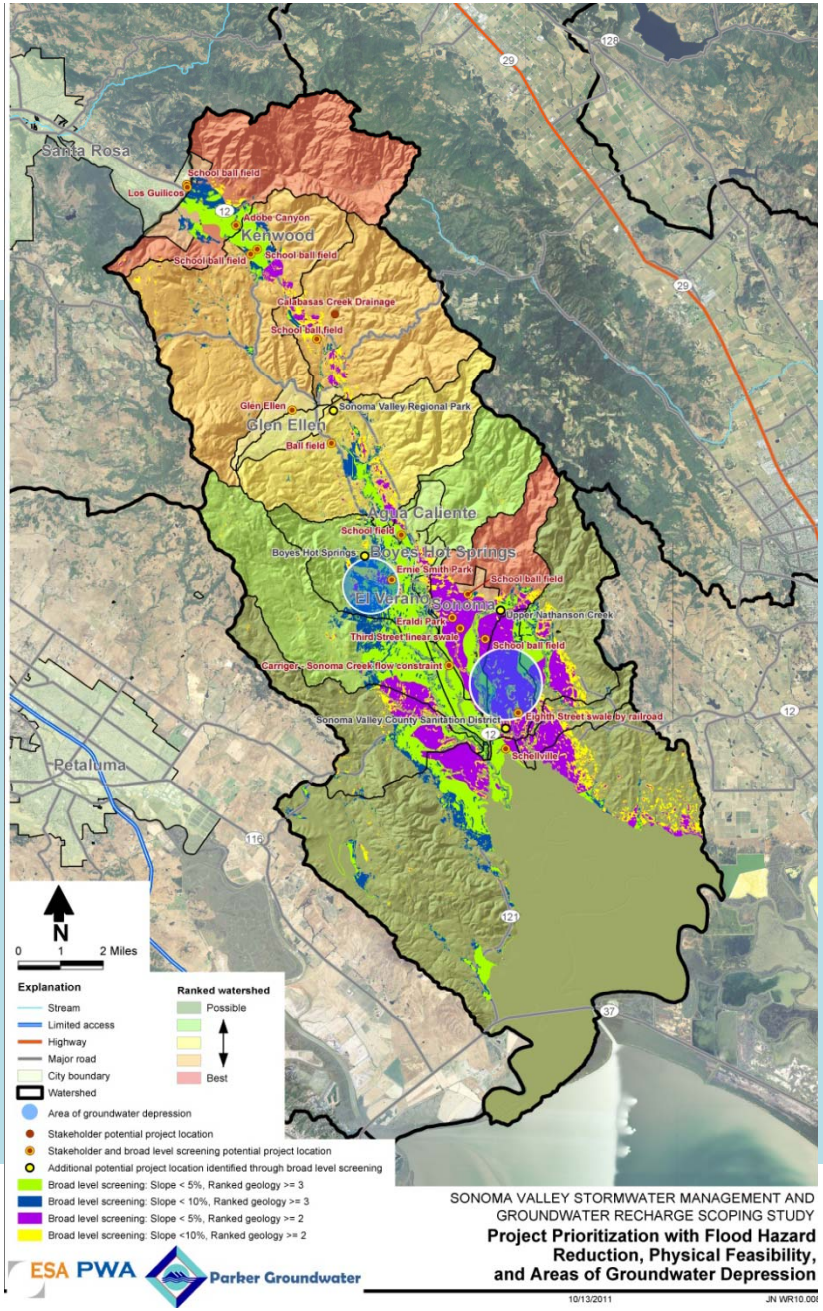


Prioritization

prioritize

Step 2

Best location for groundwater recharge



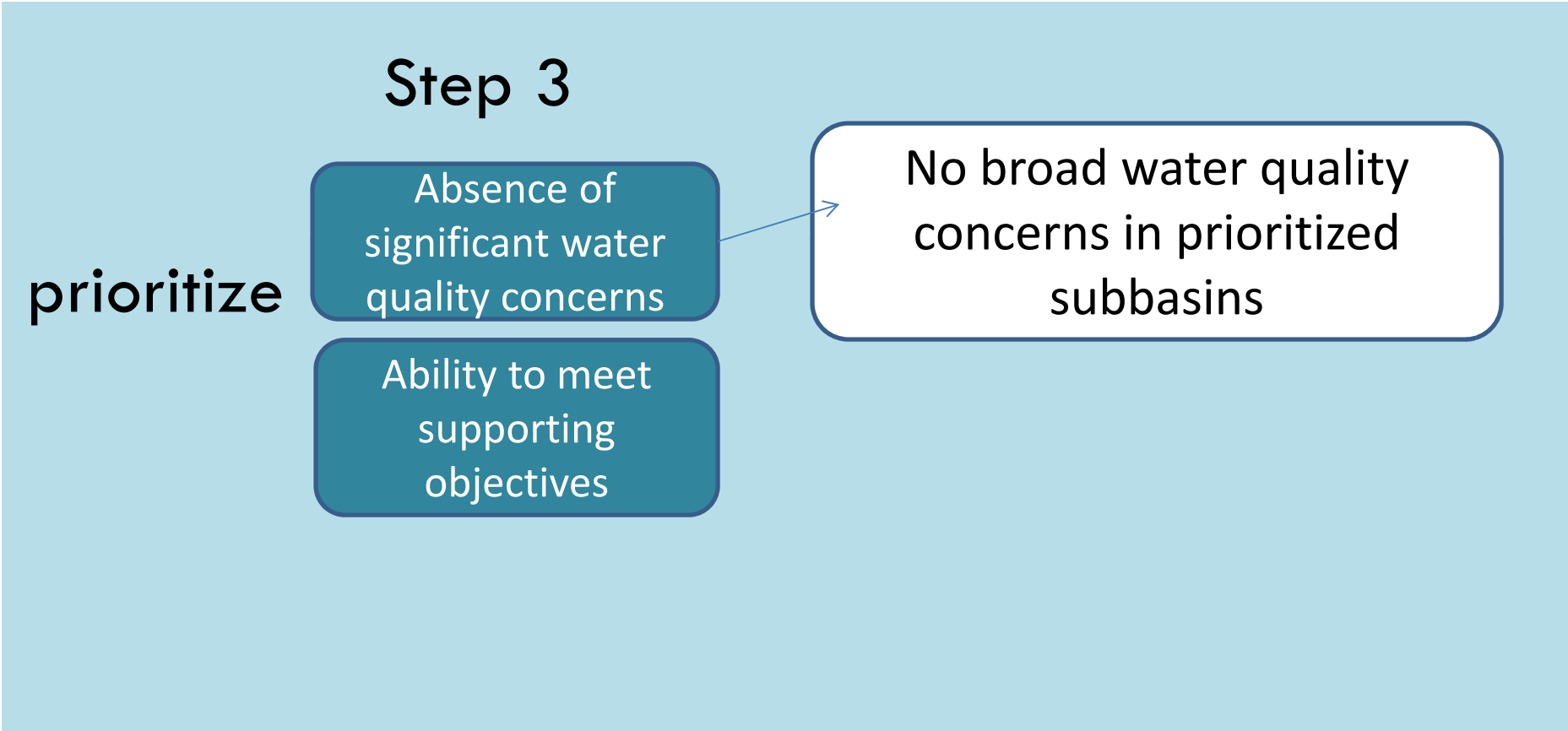
Prioritization

Step 2

Table 4:

Project types	Locations
Off-line basin	*In lower-slope, recharge-suitable portions of the following subbasins:* ▪ Sonoma Creek at Lawndale ▪ Sonoma Creek below Dowdall Creek ▪ Nathanson Creek at Schell Creek
High-flow diversion/ recharge	*Approximately along existing high-flow pathways:* ▪ Sonoma Creek at Lawndale ▪ Nathanson Creek at Schell Creek
Infiltration gallery	*(Subbasins as listed for off-line basins)*

Prioritization



Prioritization

Step 3

Ability to meet supporting objectives

	Good potential to address supporting objectives		
Supporting Objectives	**Off-line basins**	**High-flow diversions**	**Infiltration galleries**
Water Quality	X	X	X
Water Supply	X		X
System Sustainability	X	X	X
Ecosystem	X	X	
Agricultural Land	X	X	X
Open Space	X	X	
Community Benefits	X		X

Table 5:

Prioritization

Step 3

Table 6:

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Prioritization

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Short list of potential project concepts (type, location)

Prioritization

prioritize

Short list of potential project concepts (type, location)

100 – 500 acre-feet of storage

Low-gradient, high recharge potential lands

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Next Steps

Define project purpose and objectives

Review data and consider problems being addressed, strategies, and issues

We are here

Develop short list of project concepts, using screening & prioritization criteria

Scope feasibility studies and develop project implementation strategy

Next phase: investigate project concepts to identify a proposed project

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