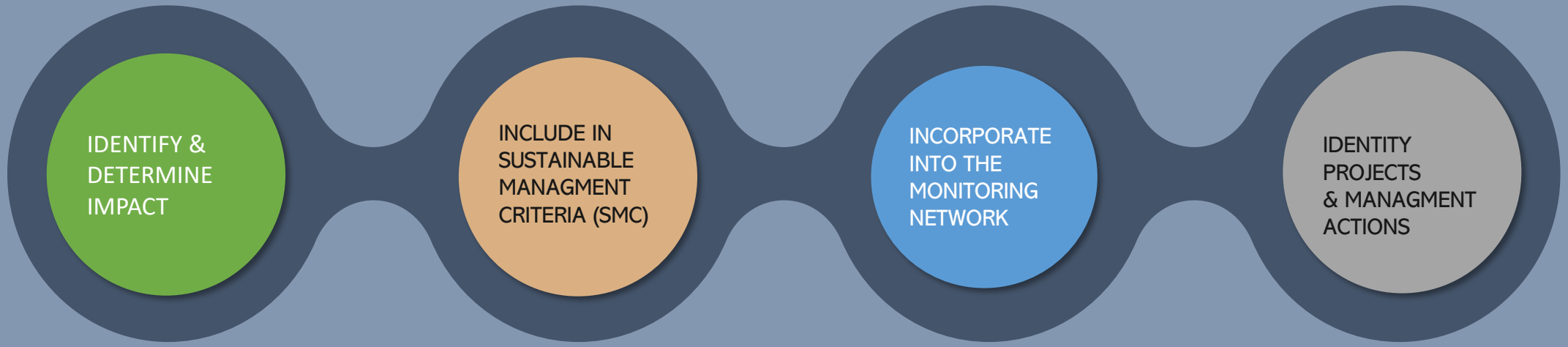
Tour of the Groundwater Resource Hub

Environmental Resources for Groundwater Sustainability Plans



Identify GDEs

Map and **Characterize** GDEs in the basin. The results from this step will be used to consider GDEs in other parts of the GSP, including establishing sustainable management criteria and assessing the monitoring network.

Determine Potential Impacts on the environment

Use hydrologic data to observe changes in groundwater conditions to help define whether potential effects on the environment are occurring or may occur.

Consider the environment when establishing the SMC

Consider GDEs when establishing sustainable management criteria for the basin. The objective in setting sustainable management criteria is to protect GDEs from adverse groundwater impacts while providing a reasonable margin of operational flexibility based on levels of uncertainty.

Incorporate the environment into the Monitoring Network

Assess and improve the hydrologic monitoring network to ensure groundwater conditions and sustainability indicators are sufficient to detect impacts to the environment.

Incorporate relevant biological data collection into the monitoring network to monitor GDE responses to changing groundwater conditions.

Identify Projects & Management Actions

Select projects and management actions that may help to maintain or improve GDEs to achieve the basin sustainability goal.

STEPS TO INCLUDE THE ENVIRONMENT IN THE MONITORING NETWORK

- ❑ Access and Improve the Monitoring Network
- ❑ Monitor Impacts to the Environment (GDEs and ISW)

RESOURCES TO INCLUDE THE ENVIRONMENT IN THE MONITORING NETWORK

DOWNLOADABLE WORKSHEET
Monitoring Data for GDEs
PDF | Word Doc

TOOLS
ICONS: ISW in the Central Valley – Interactive Web Map

CASE STUDY
Inyo County GDE Monitoring Case Study

GUIDANCE DOCUMENTS
Inyo County Vegetation Monitoring
Groundwater Thresholds for Ecosystems A Guide for Practitioners
Groundwater and Stream Interaction in California's Central Valley

KEY CONSIDERATIONS

- ✓ If current monitoring wells or sampling points for selected monitoring criteria are deemed insufficient to represent spatial and/or temporal groundwater conditions for a GDE unit, include plans to install new monitoring wells or sampling points at GDEs in the GSP. The additional monitoring can be prioritized by considering the needs of GDEs with a higher ecological value and important species and habitats (Worksheet 2).

- ✓ When susceptibility to changing groundwater conditions, ecological value, heterogeneity, and/or uncertainty are high, there may be a need to monitor site densities at or above the range of values presented in DWR's Best Management Practices document.

- ✓ For those GDEs that lack sufficient data to assess potential effects from changing groundwater conditions, identify which metrics are necessary to fill data gaps and record this information in Worksheet 6. Refer to Worksheet 3, which identifies the GDEs that are missing hydrologic and biological data, to assess potential effects on GDEs

- ✓ For ISW, the Monitoring Network should (1) characterize the spatial and temporal exchanges between surface water and groundwater, and (2) calibrate and apply the tools and methods necessary to calculate the depletions of surface water caused by groundwater extractions.

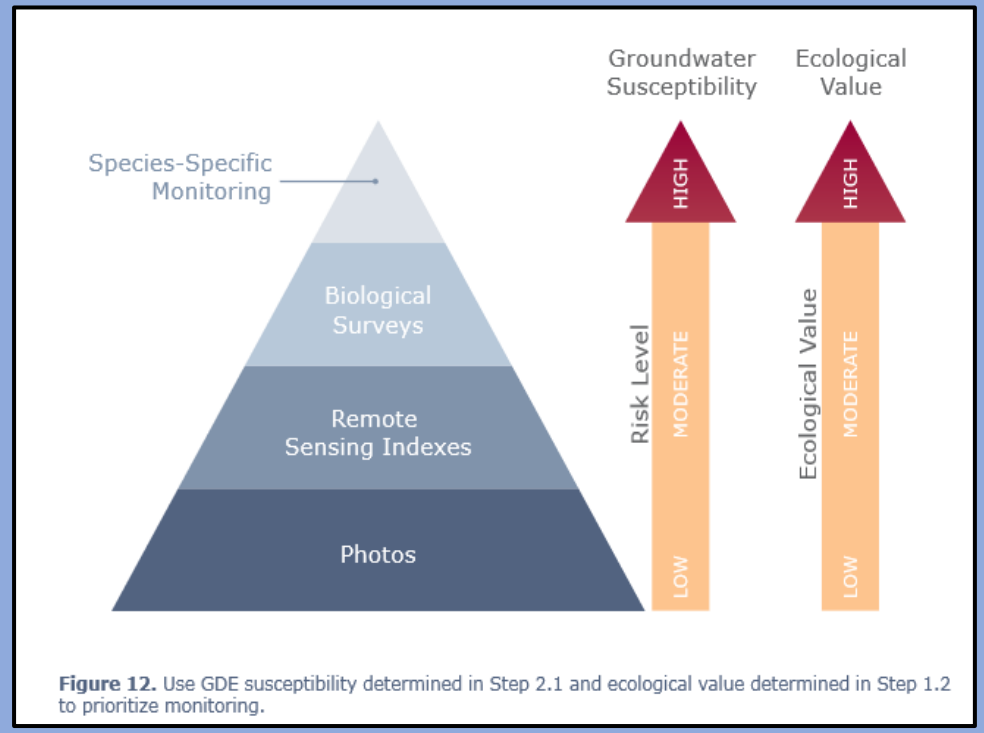


Figure 12. Use GDE susceptibility determined in Step 2.1 and ecological value determined in Step 1.2 to prioritize monitoring.