In what ways does your work involve or intersect with Groundwater Dependent Ecosystems?

I research GDEs

I work on conservation of GDEs

marsh and river restoration; forest restoration

I administer 319(h) Nonpoint Source Grants which may support projects that improve function of GDES.

wildlife habitats

As our industry transforms to renewable sources of energy, the development and installation of these technologies must consider all impacts of the surrounding environment, including groundwater.

I work for the National Park Service and we have several GDEs related to several of our parks which can be impacted from groundwater pumping.

The majority of my work involves GDEs with an emphasis on inventories and land management.

Groundwater planning for SGMA compliance requires planners to account for GDEs and be sure that planned activities won't result in degradation



In what ways does your work involve or intersect with Groundwater Dependent Ecosystems?

We identify, design, and implement watershed restoration projects in the headwaters. Many of our projects are potentially impacted by groundwater management systems.

water rights impact water available to GDE's

Souce water protection; watershed restoration

I serve as an advocate for farmers and ranchers and many farmers and ranchers own groundwater rights as vital assets for their business operations. My job is to protect those water rights from those who are seeking to take them away

Certification of work within waters of the US; wetlands review; oversight of projects improving nonpoint source pollution

Planning for surface and groundwater

I serve as plan manager for the South Tahoe Public Utility
District's Groundwater Management Plan. Consideration of
water use for GDE's is a plan requirement.

monitoring drought impacts

Leading and implementing Nevada's Wetland Program



In what ways does your work involve or intersect with Groundwater Dependent Ecosystems?

Through providing input to potential impacts to wildlife resources through impacts to GDEs in the NEPA process for projects across the landscape.

I work on protecting GDEs under sustainable groundwater management law in California.

River restoration

I am interested in carbon storage potential of GDEs in Nevada.

meadow restoration work in the lake tahoe basin and on other forests

Project manager for Spring Stewardship and Restoration Project in Southern Nevada.

How water uses impact GDE

GDE's are key to watershed planning on forests.

Estimating groundwater use by GDE's, monitoring GDE's, and evaluating GDE trends/vigor



In what ways does your work involve or intersect with Groundwater Dependent Ecosystems?

CWSD is a regional entity for the Carson River Watershed.
We intersect with Groundwater Dependent Ecosystems
through work on Water Supply, Invasive Species, Floodplain
Protection and Management, Water Quality,
riparian/riverbank rehabilitation.

Soils are important to health GDE's

Conducting and participating in groundwater-related resource studies at all scales.



What aspects of the system/GW regime do you think are most important for supporting GDEs & which do you anticipate are/have changed in regional GDEs?







How might this project be helpful to you? What questions do you hope we will be able to answer by the end of this project?

Planning for groundwater management to minimize impacts on GDEs

Anticipating the sensitivity of GDEs to development during the planning process

Understanding physical processes underlying restoration projects and how those might change in the future

Potential for better assessing how anthropogenic actions influence GDEs

How land use relates to impacts associated with groundwater dependent areas?

As we do the hydrologic modeling to design a restoration project, we can use this tool to improve conditions for target species

An understanding of how plants adapt to declining groundwater levels. For example, how does a plant root zone change with declining groundwater levels.

Quantifying GDE water requirements

Help in calculating the water balance for the basin.





How might this project be helpful to you? What questions do you hope we will be able to answer by the end of this project?

Understanding extinction depths. Salt grass vs greasewood have different max potential root zone depths. Quantify or provide range of extinction ranges, such as 5 FT for salt grass or 30 FT for greasewood

Where thresholds are identified and at what point does the condition change to a point of something not being a water dependent area?

How much drawdown can occur before you have a short term and long term impact to the vegetation? What are the indicators for negative impact to GDE? I am interested in how changing climate conditions will affect groundwater quantity and GDEs.

Identifying GDE in the Carson River Watershed, their quality, the risks they face, and prioritizing areas for protection or projects.

What are the common characteristics of GDEs that are most likely to be highly impacted or sensitive to climate change?

Benefits: potential quantification of GDE water needs; planning; id of data gaps.; Will study be able to show seasonal changes and identify critical periods when gw is needed most by GDEs?

Information generated from the riparian meadow and wet meadow models could be very useful to the Park Service related to similar settings in our eastern Nevada park.

tool to help assess how planning & management can be adjusted to have less impact on GDEs





How might this project be helpful to you? What questions do you hope we will be able to answer by the end of this project?

predicting ecological impacts of manageable gw declines

Understanding potential for restoration to affect GW levels

