

**WORKSHEET 1.** ASSESS A CONNECTION TO GROUNDWATER

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| **Use the following questions to assess whether iGDE polygons are connected to groundwater.** | **Yes** | **No** | **Insufficient Data** |
| **GENERAL QUESTIONS FOR ALL GDE TYPES** |
| Is the iGDE underlain by a shallow unconfined or perched aquifer that has been delineated as being part of a Bulletin 118 principal aquifer in the basin? |  |  |  |
| Does depth-to-groundwater data from multiple years (e.g., 10-year average (2005-2015), wet/average water year periods) under the iGDE come within 30 feet, or other appropriate max rooting depth threshold (e.g., 80 feet for valley oak)? [For more details refer to “[Identifying GDEs Under SGMA: Best Practices for using the NC Dataset](https://groundwaterresourcehub.org/public/uploads/pdfs/TNC_NCdataset_BestPracticesGuide_2019.pdf) and the [Plant Rooting Depth Database](https://groundwaterresourcehub.org/sgma-tools/gde-rooting-depths-database-for-gdes/).] |  |  |  |
| Is the iGDE located in an area known to discharge groundwater (e.g., springs/seeps)? |  |  |  |
| *If you answer* ***Yes*** *to any of the above questions, then you likely have a GDE. Stop here. If you selected* ***No*** *or* **Insufficient Data** *or cannot confidently answer any of the above questions, then answer the following questions to infer groundwater dependency.* |
| **RIVERS, STREAMS, AND ESTUARIES** |
| Is the iGDE located in a portion of a river or stream that is likely a gaining reach? |  |  |  |
| Are water temperatures around the iGDE relatively constant over time, indicating a potential for gaining conditions? |  |  |  |
| Are there stable/permanent natural flows detected by stream gauges near the iGDE, indicating a potential for gaining conditions? |  |  |  |
| Is there water or flows around the iGDE during summer months? |  |  |  |
| For iGDEs near estuaries, does the salinity drop below that of seawater in the absence of surface water inputs (e.g., surface runoff or stormwater)? |  |  |  |
| Are the isohaline contour lines of the saline wedge relatively constant under an iGDE? |  |  |  |
| **WETLANDS** |
| Is the level of water around the iGDE maintained during extended dry periods without surface water inflow or management? |  |  |  |



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| **Use the following questions to assess whether iGDE polygons are connected to groundwater.** | **Yes** | **No** | **Insufficient Data** |
| Is the location of the iGDE consistently associated with known areas of groundwater discharge (e.g., springs or seeps) in terrestrial and/or coastal environments? |  |  |  |
| **TERRESTRIAL VEGETATION** |
| Does vegetation in the iGDE remain green and physiologically active during extended dry periods of the year? |  |  |  |
| Does the iGDE have higher evapotranspiration rates in summer months compared to other nearby vegetation unlikely to be dependent on groundwater? |  |  |  |
| **SEEPS AND SPRINGS** |
| Are there breaks in the slope of the land surface or areas of stratigraphic change causing groundwater to emerge or vegetation to congregate on the surface? |  |  |  |
| Is there a presence of hydric (very wet) soils in areas with little summer precipitation, indicating persistent soil saturation throughout the year? |  |  |  |
| Are there elevated surface water temperatures from an influx of geothermal groundwater discharge? |  |  |  |
| *If you answered* ***Yes*** *to any of the questions above, then you likely have a GDE. If you answered* ***No*** *to all the questions, then you likely do not have a GDE.**If you answered* **Insufficient Data** *to all the questions, then assume you have a GDE until sufficient data is collected. Refer to Appendix IV and Step 4.* |