

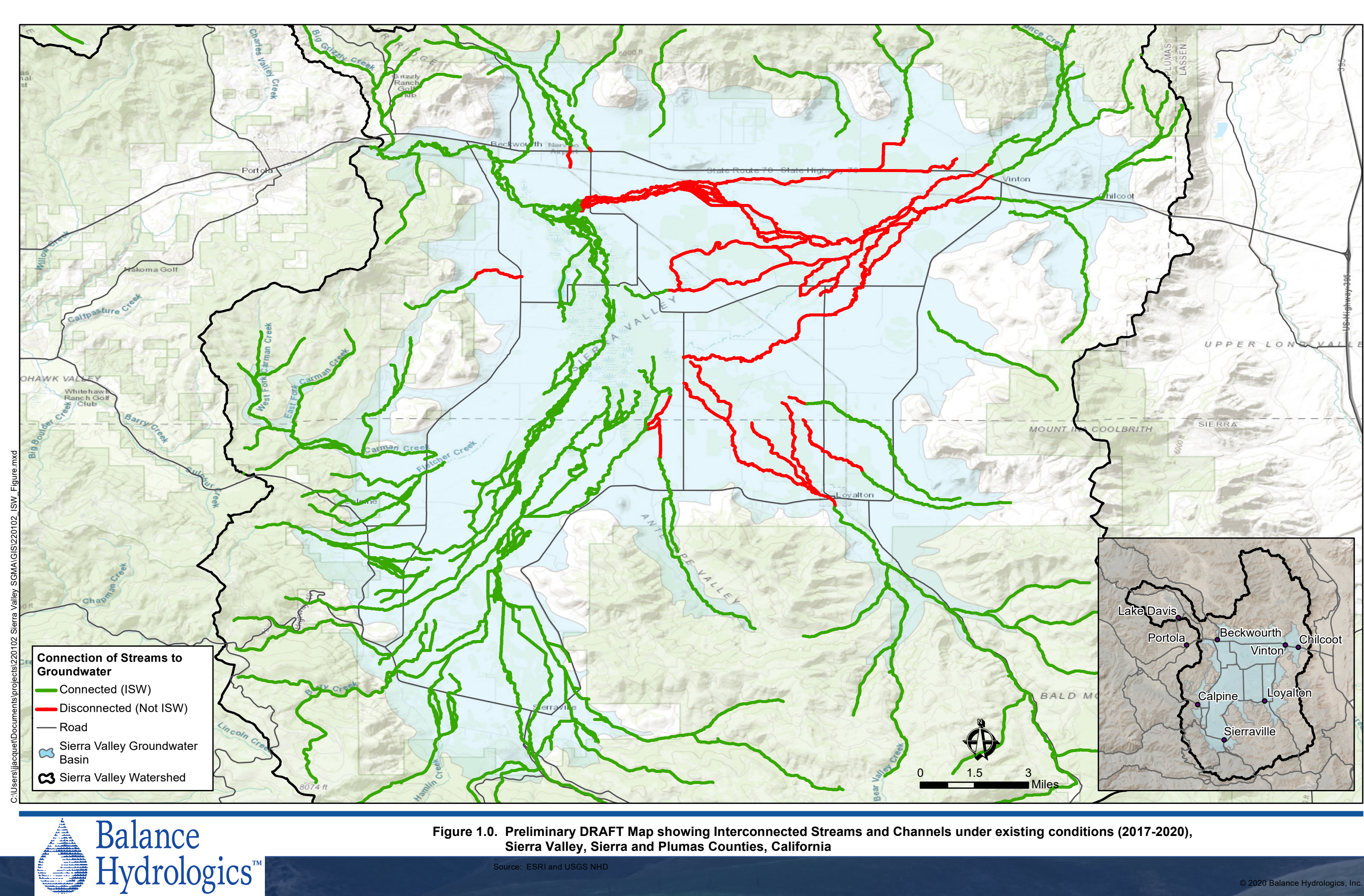
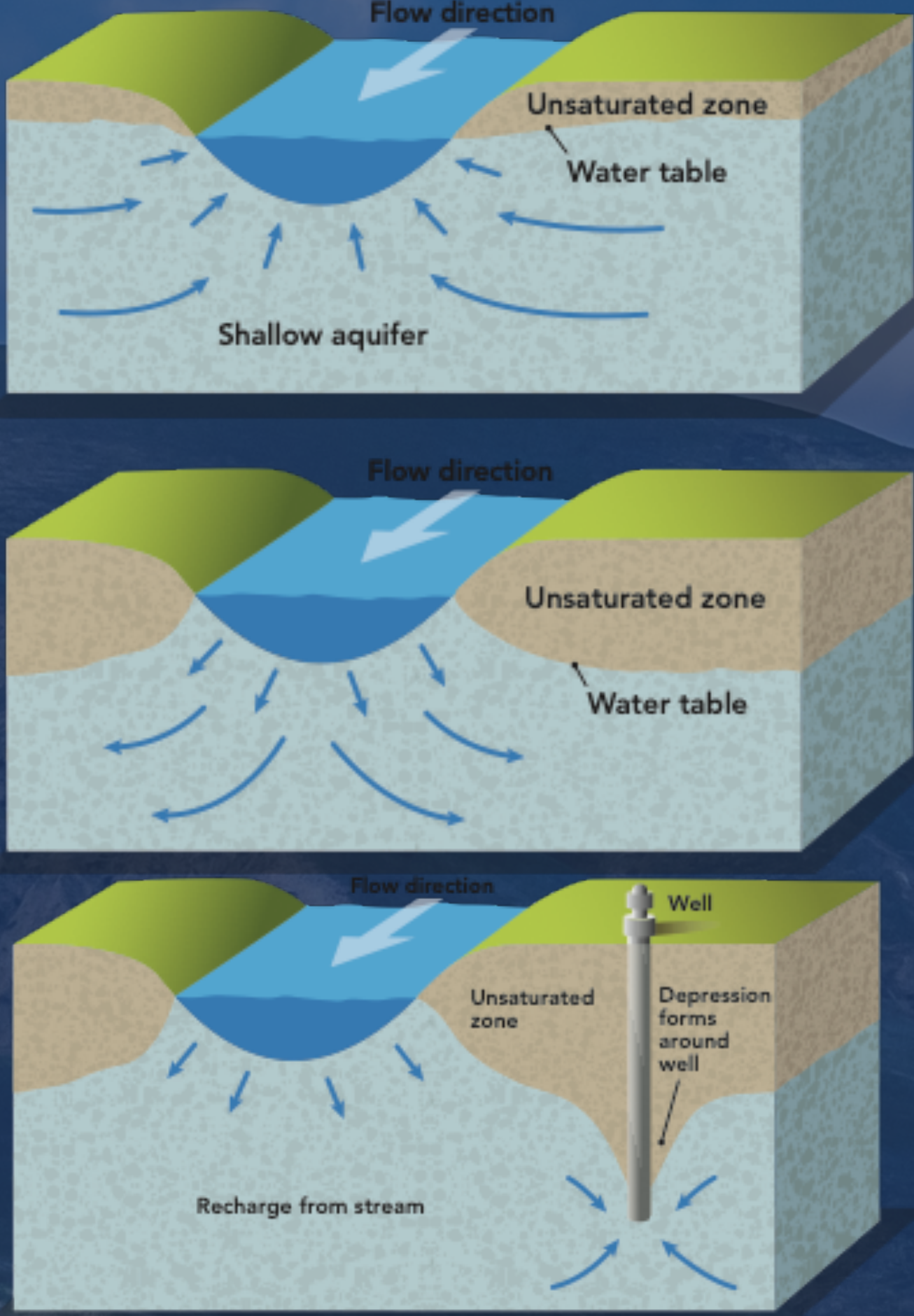
SUSTAINABILITY INDICATOR: DEPLETION OF INTERCONNECTED SURFACE WATER (ISW) AND GROUNDWATER DEPENDENT ECOSYSTEMS (GDE)

WHAT IT MEANS FOR SIERRA VALLEY

Undesirable Results for Depletion of Interconnected Surface Water would be experienced in the Basin when surface water depletion, as result of groundwater management actions, negatively affects the beneficial uses of the surface water. The primary potential effect of Undesirable Results caused by depletion of interconnected Surface Water include drying out of wetlands, streams and braided channels with consequences for Groundwater Dependent Ecosystems. Wetlands in Sierra Valley are critical to support migratory and local birds.

CURRENT CONDITIONS IN SIERRA VALLEY

Depletion of Interconnected Surface Water is generally correlated with Chronic Lowering of Groundwater Levels, but are also heavily affected by climate change and reduced recharge. In the Subbasin, groundwater levels are generally decreasing.



Preliminary draft map for Interconnected surface waters (ISWs): based on field-verification and modification of the National Hydrography Dataset (NHD) streams layer. Following field review and correction, ISW's were identified and based on the average depth to groundwater in the Spring from 2017 to 2020. Interconnected streams are identified where the average spring depth to groundwater is less than 5 feet. Disconnected streams are identified where the average spring depth to groundwater is greater than 5 feet.

The Interconnected Surface Water layer will be combined with Groundwater Dependent Ecosystem mapping to include interconnected wetland complexes throughout the basin.

POTENTIAL GROUNDWATER DEPENDENT ECOSYSTEMS (GDEs)

- There are 17,784 acres of likely GDEs in Sierra Valley
- Most of the GDEs include the wetlands in the eastern half of the basin
- GDE mapping is limited by relatively low- quality vegetation mapping

APPROACHES TO ADDRESSING UNDESIRABLE RESULTS

Example of a definition of undesirable results is: “Significant and unreasonable depletion of interconnected surface water in Sierra Valley occurs if groundwater pumping affects streamflow and impacts any beneficial users (including birds) beyond depletions observed in 2015.

SUSTAINABLE MANAGEMENT CRITERIA (SMC) UNDER DEVELOPMENT

Specifying the SMCs for interconnected surface waters and groundwater dependent ecosystems is an ongoing component of the GSP development.

WHAT DO YOU THINK...

Are surface waters and the ecosystems they support of concern to you?
Were any normally perennial streams dry in 2015?