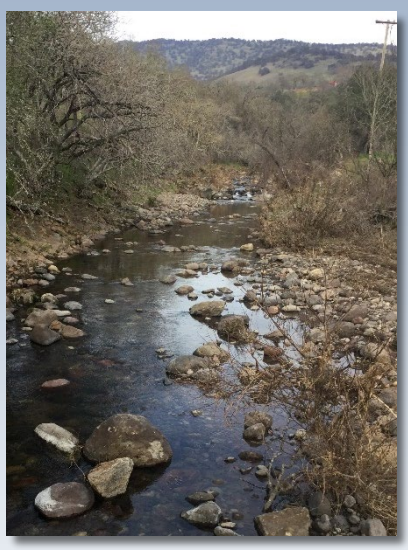
DRAFT

NAPA VALLEY SUBBASIN GROUNDWATER SUSTAINABILITY PLAN

Section 2 – Plan Area



Prepared by

Luhdorff & Scalmanini
Consulting Engineers

September 2020

SECTION 2 CONTENTS

LIST OF TABLES

LIST OF FIGURES

APPENDICES

None

2. PLAN AREA (CCR §354.8)

[Plan area executive summary: includes a description of the objectives and overall findings]

2.1. Description of Plan Area

This groundwater sustainability plan (GSP) covers the entire Napa Valley Groundwater Subbasin (**Figure 1-2**). The Napa Valley Subbasin (Subbasin) is delineated by the Department of Water Resources (DWR) Bulletin 118 as Subbasin No. 2-002.01 (DWR, 2016). The only basin adjacent to the Subbasin is the Napa-Sonoma Lowlands Subbasin, which has a SGMA basin prioritization of very low and is not subject to the requirement for management using an approved groundwater sustainability plan.

The Subbasin covers approximately 45,900 acres. Land uses are characterized by urban and developed areas, agriculture, and native vegetation (**Figure 2-1**).[1] Water use sectors are generally aligned with those land uses, with the exception of public water systems and self-supplied users that are subsets of areas typically mapped as "urban" land uses (**Table 2-1**).

Public water systems include larger community water systems and smaller non-community water systems that typically serve residential, commercial, and industrial uses. Community water systems are defined by the California Health and Safety Code (Section 116275) as systems that provide water for human consumption to more than 15 connections or to at least 25 people throughout the year. In the Subbasin, community water systems generally serve municipalities and some adjacent areas. The Plan area also includes smaller non-community public water systems. Non-community public water systems include transient and nontransient public water systems and state small water systems that serve at least five connections and supply drinking water for at least 60 days out of the year. Non-community public water systems include systems that serve drinking water for residential or commercial uses such as wineries with at least 25 full or part time, permanent employees or wineries with fewer employees that serve an average of 25 or more visitors for at least 60 days out of the year. The classification of these water systems is summarized by a decision tree classification scheme published by the California State Water Board[2]. Self-supplied water users include residential, commercial, and industrial water users that do not meet minimum requirements for designation as a public water system. A common example of self-supplied users are single family homes and some small wineries supplied by a private well or other private water source. Representative land use classes and water use sectors are summarized in **Table 2-1**.

[1] Land Uses in the Subbasin were aggregated using DWR's Land Use 2011 Draft dataset
[2] California State Water Board- Decision Tree for Classification of Water Systems. Accessible at https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/publicwatersystems/class_dec_tree.pdf

Table 2-1: Water Use Sectors and Representative Land Use Classifications

	Land Use Classifications	Water Source Type
Agriculture	Vineyard, Pasture, Grain and hay crops, Field crops, Truck, nursery and berry crops, Deciduous fruits and nuts, Citrus and subtropical, Semiagricultural and incidental to agriculture, Idle, and Barren.	Precipitation, Groundwater, Surface Water, Recycled Water
Public Water Systems	Urban, Urban residential, Urban commercial, Urban industrial	Groundwater, Surface Water, Recycled Water
Native Vegetation	Open space, Riparian forest, wetlands	Precipitation, Groundwater, Surface Water
Self-supplied Water Users	Urban/Rural residential, commercial, industrial	Groundwater, Surface Water, Recycled Water

Note:
A public water system is defined as a system that provides water for human consumption to at least five service connections for at least 60 days out of the year, including state small water systems (per California Health and Safety Code Section 116275).
Native Vegetation can include naturalized vegetation that may not be considered native in an ecological context. Groundwater Dependent Ecosystems are a subset of Native Vegetation.
Self-supplied users are associated with non-agricultural land uses (i.e., residential, commercial, and industrial uses) in areas lacking a connection to a public water system of any size.
Source: DWR Land Use 2011 Draft dataset

2.2. Summary of Jurisdictional Areas and Other Features (CCR §354.8(a) and (b))

GSP Regulations require the identification of jurisdictional boundaries within the Subbasin GSP area, these boundaries include state and federal lands, tribal lands, cities, counties, agencies with water management responsibilities, and areas covered by relevant general plans. State and federal lands within the Subbasin include approximately 88 acres managed by the California Department of Parks and Recreation and the California Department of Fish and Wildlife (**Figure 2-2**, **Table 2-2**). Cities and towns within the Subbasin make up approximately 13,200 acres and include the Town of Yountville and the cities of Napa, St. Helena, and Calistoga, each of which has an approved General Plan (**Figure 2-3**). Napa Sanitation District provides wastewater treatment for residents of Napa (**Figure 2-3**). In addition, Napa Sanitation District supplies recycled water service to areas within and adjacent to the Subbasin. The Napa County Flood Control and Water Conservation District is another local agency with water management responsibilities, responsible for flood management, administering State Water Project water supply contracts, watershed management, and stormwater management programs throughout Napa County. The Subbasin is also within the planning area for the Napa County General Plan, which provides County goals and policies for land use and water resources management. **Table 2-2** lists the entities with jurisdictional areas located within the Subbasin and their acreage within the Subbasin. Though present in other parts of Napa County, lands managed by the federal government do not occur within the Subbasin. There are no tribal governments in Napa County which manage lands.

Table 2-2: Jurisdictional Entities Within the Napa Valley Subbasin

Entity	Type	Subbasin Acreage
California Dept. of Fish and Wildlife	State Land	65
California Dept. of Parks and Recreation	State Land	23
Town of Yountville	City and General Plan	699
City of Napa	City and General Plan	8,459
City of St. Helena	City and General Plan	2,556
City of Calistoga	City and General Plan	1,455
Napa Sanitation District	Water Management Agency	8,470
Napa County Flood Control and Water Conservation District	Water Management Agency	45,900
Napa County	County and General Plan	45,900
Note: Reported acreages are specific to areas within the Subbasin		

There are no adjudicated areas within or surrounding the Subbasin.

2.3. Existing Well Types and Density (CCR §354.8 (a))

GSP Regulation specify that a Plan must provide a map depicting the density of wells per square mile, showing the general distribution of agricultural, industrial, and domestic water supply wells within the Plan area, including de minimis extractors. Well types, well depth information, and distribution data were obtained for this GSP from Well Completion Reports (WCRs) and from the DWR WCR Map Application.[3] The WCR Map Application provides summary statistics for domestic, production, and public supply wells. The NCGSA performed an additional quality assurance review of WCRs to confirm well locations using information supplied by the well driller as part of the WCR and exclude WCRs that reported well destructions rather than new well construction.

In addition to reviewing WCRs available from DWR, the NCGSA conducted an analysis to infer well locations based on land use and water system service area mapping.[4] Through that process this Plan is able to report a count of wells that reflects both wells with a confirmed WCR and wells whose location is inferred based on available land use and water source mapping. **Table 2-3** summarizes the number of wells by type for all confirmed WCRs and inferred wells in the Subbasin. The count of wells represents wells presumed to be active. Non-production wells, such as monitoring, geothermal, and cathodic protection wells were not included in this evaluation.

[3] DWR Well Completion Report Map Application: https://www.arcgis.com/apps/webappviewer/index.html?id=181078580a214c0986e2da28f8623b37
[4] DWR Land Use Mapping: https://water.ca.gov/Programs/Water-Use-And-Efficiency/Land-And-Water-Use/Land-Use-Surveys

Domestic wells are the most common production well type in the Subbasin. Domestic wells are distributed throughout most of the Subbasin with greatest concentrations of 70 wells per square mile in scattered sections east of Napa and northwest of Calistoga (**Figure 2-4**). Irrigation wells are the second most common well type in the Subbasin, with densities ranging from 15 to 45 wells per square mile over most of the Subbasin. Industrial wells are the least common production well type in the Subbasin and are more commonly located in the northern half of the Subbasin.

Table 2-3: Napa Valley Subbasin Production Well Count

Well Type	Water Use Sector, Typical	Well Count
Domestic	Self-supplied Water Users	1,452
Irrigation/Agricultural	Agriculture	957
Public Supply	Public Water Systems	110
Industrial	Self-supplied Water Users	108
TOTAL		2,627

Note:
Well types listed here reflect production well types listed on Well Completion Report templates developed by DWR. One well may supply more than one water use type.

As part of the 2019 Basin Prioritization, DWR identified a total of 2,073 production wells in the Subbasin. However, the evaluation by DWR only accounted for wells with WCRs available through the online WCR map application. The WCR map application reports several known issues including duplicate and missing records, as well as incorrect values. DWR was not able to address these issues for any of the basins and subbasins during the basin prioritization due to the nature and scale of that effort. Given the differences in approach and level of effort, the difference between the count of production wells in the 2019 Basin Prioritization and this Plan are not inconsistent with each other.

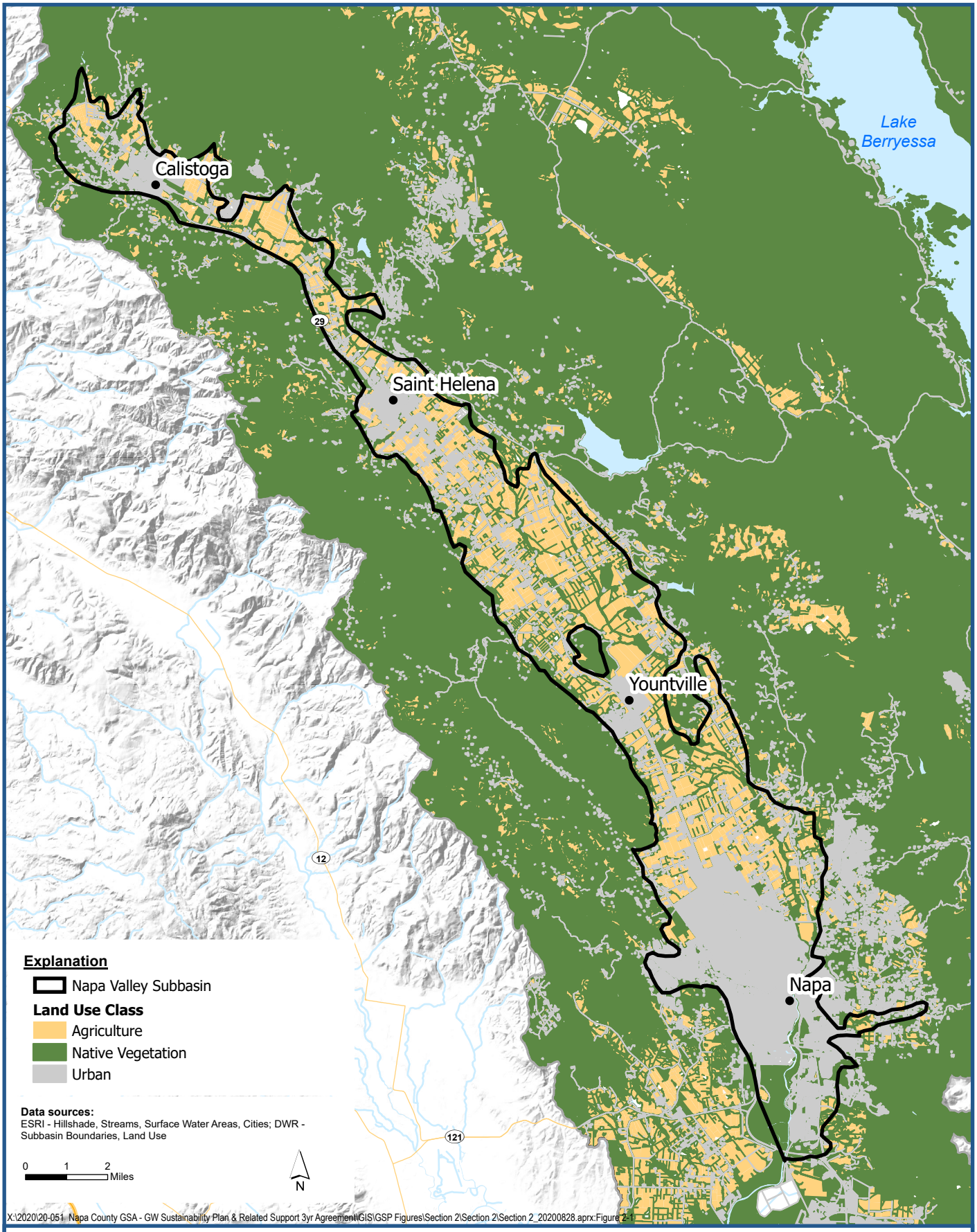
In addition to land use designations depicted in **Figure 2-1,** GSP Regulations require a map identifying the water source types within the Plan area. **Figure 2-5** shows the water sources previously identified by DWR as part of its land use mapping program. The water sources identified in **Figure 2-5** include surface water, a combination of surface water and groundwater, groundwater, and reclaimed water. Reclaimed water is also known as recycled water.

REFERENCES

California Department of Water Resources (DWR). 2016. *California's Groundwater, Working Toward Sustainability*. Bulletin 118 - Interim Update 2016. December 22, 2016. https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/B118-Interim-Update-2016_ay_19.pdf (accessed April 2020).

California Health and Safety Code § 116275 (2019).

FIGURES



Luhdorff & Scalmanini Consulting Engineers

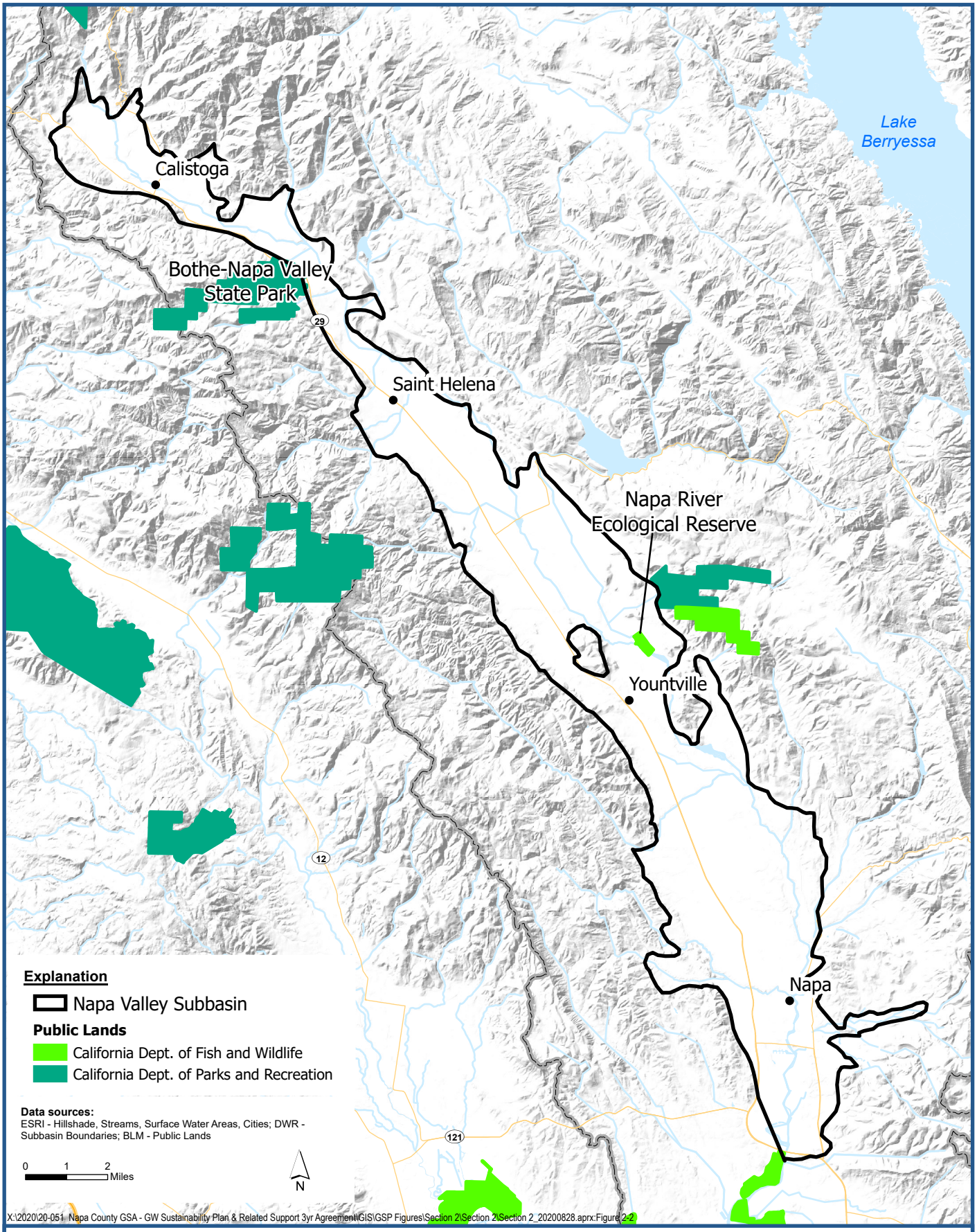
Representative Land Use Sectors

Received GSP Comment: Under review and being addressed

DRAFT

Figure 2-1

Napa Valley Subbasin Groundwater Sustainability Plan
Napa County, California



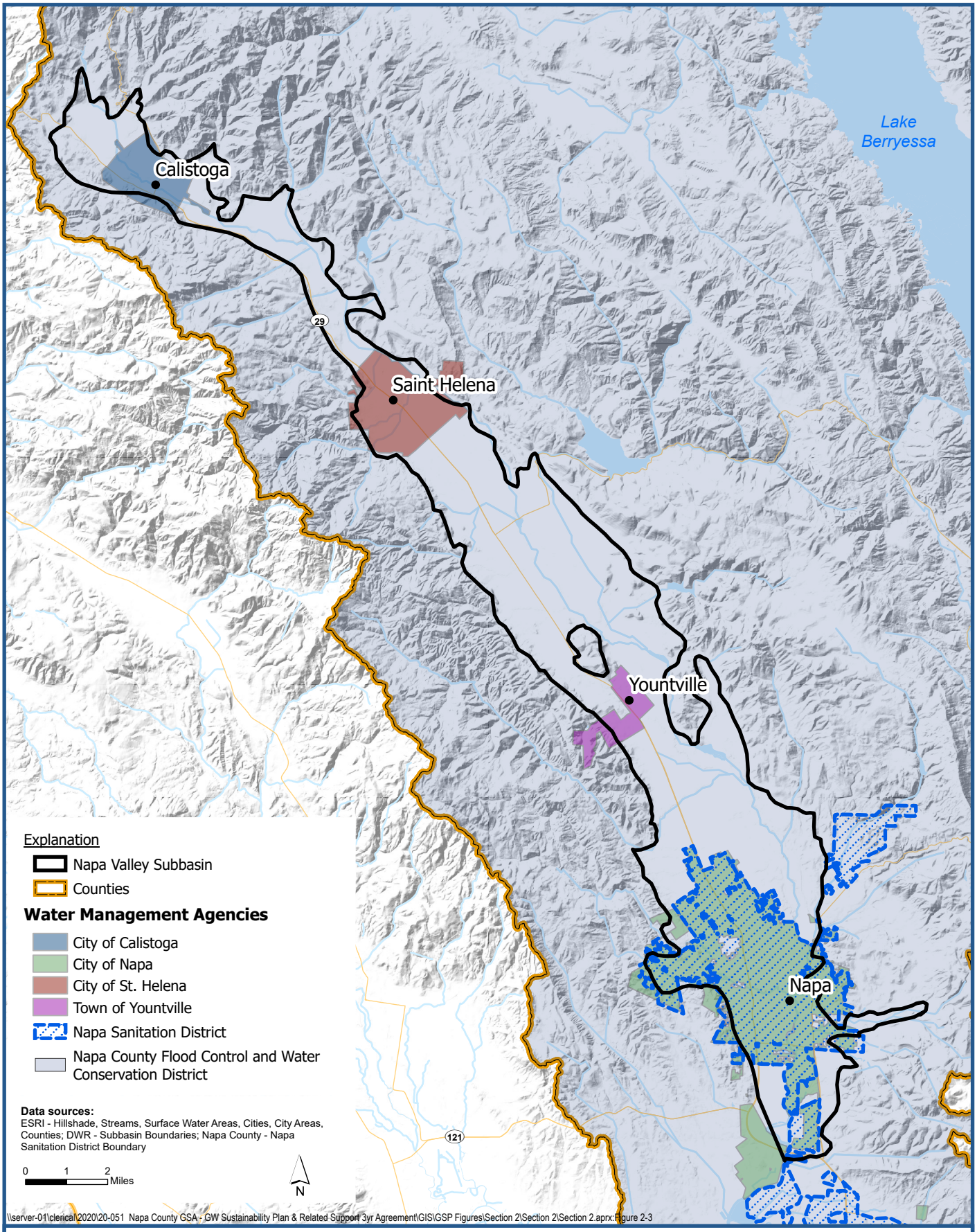
Luhdorff & Scalmanini Consulting Engineers

State and Federal Land

Napa Valley Subbasin Groundwater Sustainability Plan
Napa County, California

DRAFT

Figure 2-2



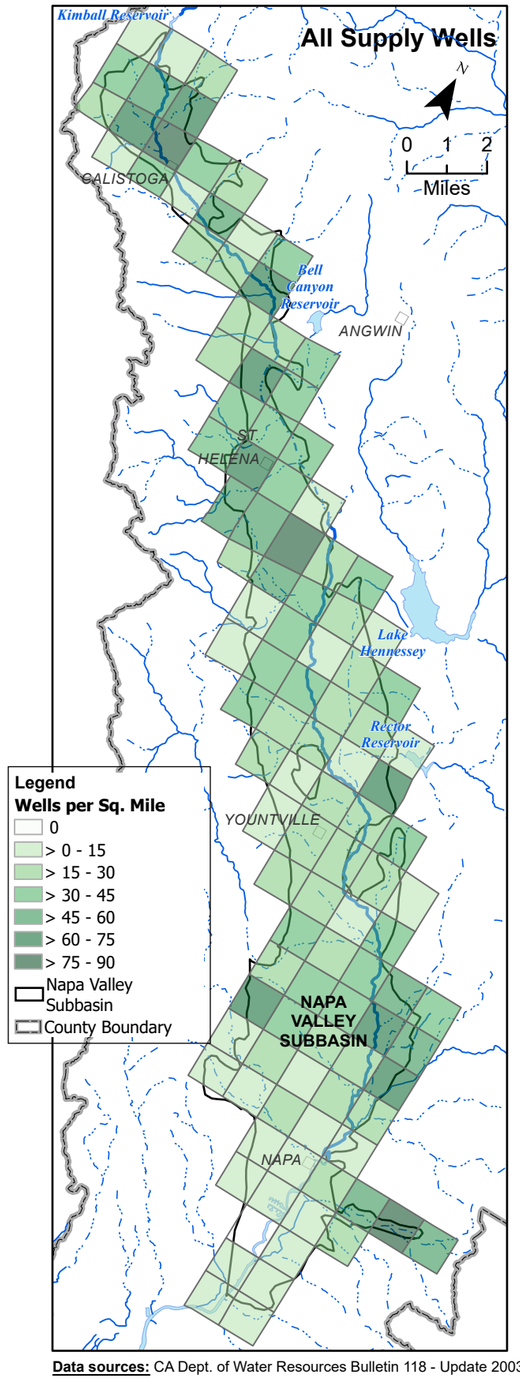
Luhdorff & Scalmanini
Consulting Engineers

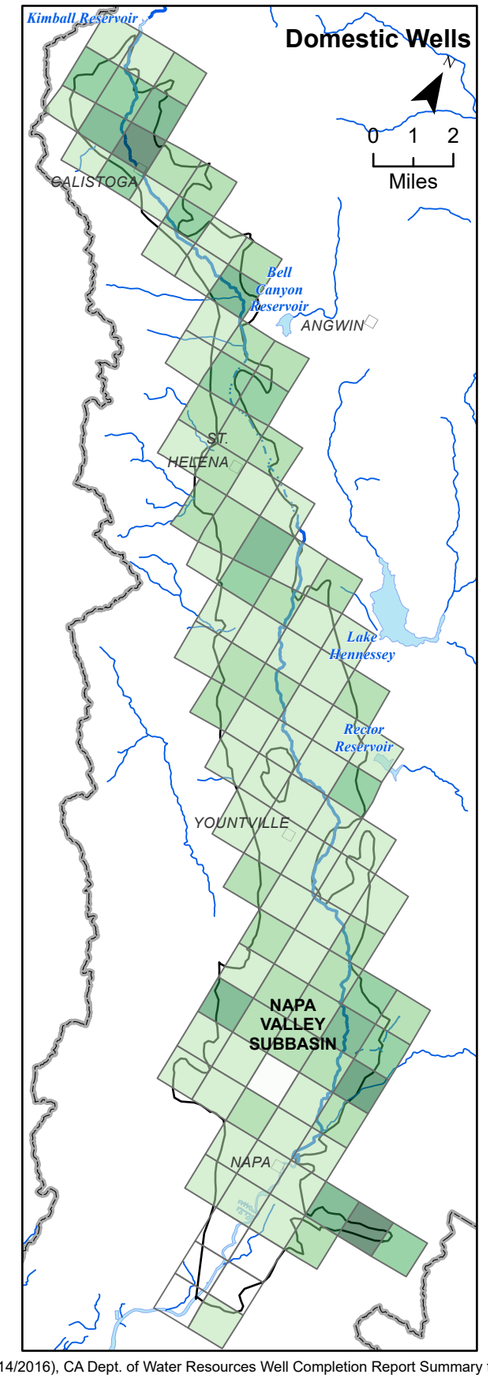
Plan Area Agencies with Water Management Responsibilities

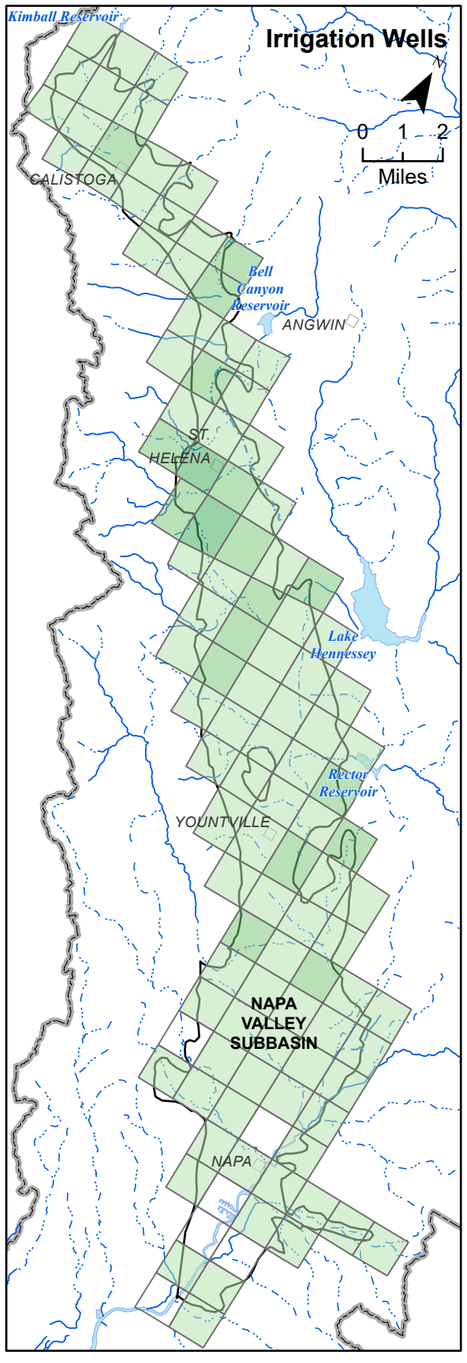
Napa Valley Subbasin Groundwater Sustainability Plan
Napa County, California

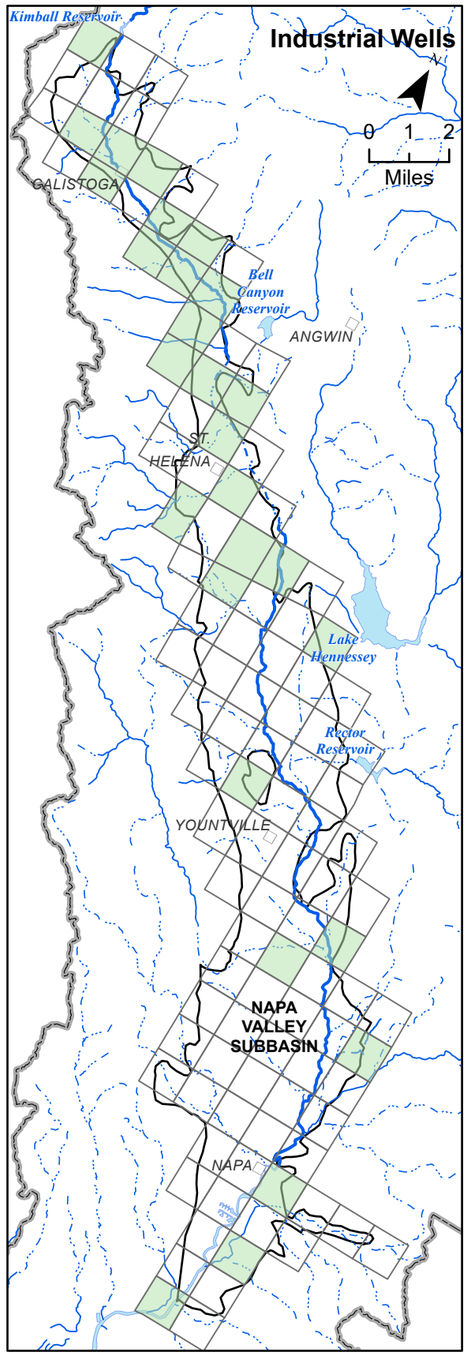
DRAFT

Figure 2-3









Data sources: CA Dept. of Water Resources Bulletin 118 - Update 2003 downloaded 01/14/2016), CA Dept. of Water Resources Well Completion Report Summary for Napa County

X:\2019\19-053 Napa County - Napa County 2019-2020 GW Services\GIS\Annual Report\MXDs\WY2019.apx

Luhdorff & Scalmanini
Consulting Engineers

Groundwater Well Density in Napa Valley Subbasin

Received GSP Comment: Under review and being addressed

Napa Valley Subbasin Groundwater Sustainability Plan
Napa County, California

DRAFT

Figure 2-4