SCV GSA

JULY 2020

TRACKING GROUNDWATER DEPENDENT ECOSYSTEMS

IN THE SANTA CLARA RIVER VALLEY EAST GROUNDWATER SUBBASIN

The Sustainable Groundwater Management Act requires that Groundwater Dependent Ecosystems (GDEs) be identified and considered in the development of groundwater sustainability plans. Under the law, agencies must assess whether sustainable management criteria, including minimum thresholds and measurable objectives, may cause harm to GDEs and monitor for impacts.

Groundwater Dependent Ecosystems (GDE)

WHAT ARE THEY?

GDEs are defined in the Sustainable Groundwater Management Act (SGMA) as ecological communities and species that depend on groundwater emerging from aquifers or occurring near the ground surface. Identification of these ecosystems is required as part of developing a groundwater sustainability plan (GSP), which must also consider impacts to GDEs in groundwater management decisions.

WHY ARE THEY IMPORTANT?

Not only do GDEs benefit people by purifying water, reducing flood risk, supplying water to rivers, and providing recreational opportunities, they support biodiversity as well as rare and endangered species.

Process for distinguishing potential GDEs

The Santa Clarita Valley Groundwater Sustainability Agency (SCV-GSA) is currently utilizing the following guidance from The Nature Conservancy for incorporating potential GDEs into its GSP.

STEP 1 Identify potential GDEs using data, aerial imagery and field assessments

- **1.1** Map and reclassify potential GDEs
- **1.2** Characterize potential GDEs condition

STEP 2 Determine potential effects of groundwater management on GDEs

STEP 3 Consider GDEs when establishing sustainable management criteria

STEP 4 Incorporate GDEs into the monitoring network

STEP 5 Identify projects and management actions to maintain or improve GDEs

WHERE WE ARE

Our consultant, Environmental Science Associates (ESA) has identified and mapped potential GDEs for consideration in the Santa Clara River Valley East Groundwater Subbasin GSP. The findings are detailed on the reverse side of this document.

Find more information at scvgsa.org

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To include GDEs, we must understand where they are located, how they rely on groundwater, and how they are affected by changing groundwater conditions, and include this information in the GSP.

GDE identification and mapping

Methodology

Initial review of data and aerial imaging revealed **8,459 acres** of potential GDEs in the Santa Clara River Valley East Groundwater Subbasin.

The total acreage was refined to exclude habitat types associated with manmade features such as wet meadows on the shores of Castaic Lake, planted/irrigated areas, detention basins, ponds, golf course ponds and barren channels. These limits removed **6,567 acres** from the potential GDE database and resulted in the total acreage shown below.

Findings

Potential GDEs: 1,890 acres

Primary vegetation types: Fremont cottonwood forest and coast live oak woodland

Primary location: Riparian corridors along the Santa Clara River and its tributaries

What threated or endangered species live in the Basin?

The unarmored threespine stickleback, a federally and state endangered fish, lives within segments of the Santa Clara River and one location in the upper segment of Bouquet Canyon Creek.

Other species that may be present within aquatic and riparian habitats in the watershed include the Santa Ana sucker (federally listed, threatened), arroyo toad (federally listed, endangered), least Bell's vireo (federally and state listed, endangered), southwestern willow flycatcher (federally and state listed, endangered), and the slender-horned spineflower (federally listed, endangered).

Next steps

Scientists will further refine mapping of potential GDEs in the Santa Clara River Watershed to better determine their reliance on groundwater.

Additional studies may be conducted to characterize the ecological value of each GDE area. Quality of habitat in each stretch of the river may depend on the presence of sensitive species, the season, consistency of water availability, invasive species, nuisance surface flows, urban runoff water quality, including trash, and in-stream human use, including homeless encampments.

It is likely the acreage of actual GDEs in the watershed will be reduced in the next steps.