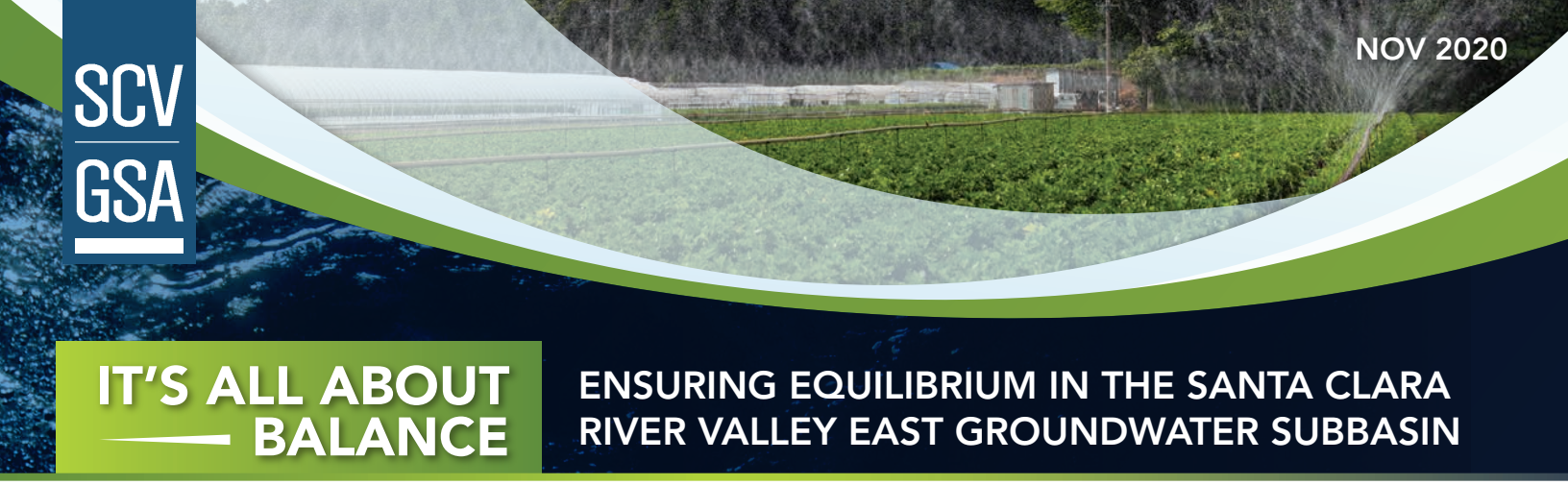


NOV 2020

SCV GSA

IT'S ALL ABOUT BALANCE

ENSURING EQUILIBRIUM IN THE SANTA CLARA RIVER VALLEY EAST GROUNDWATER SUBBASIN

Water Budget

Defines the sources and uses of water in an area and ensures they are in balance.

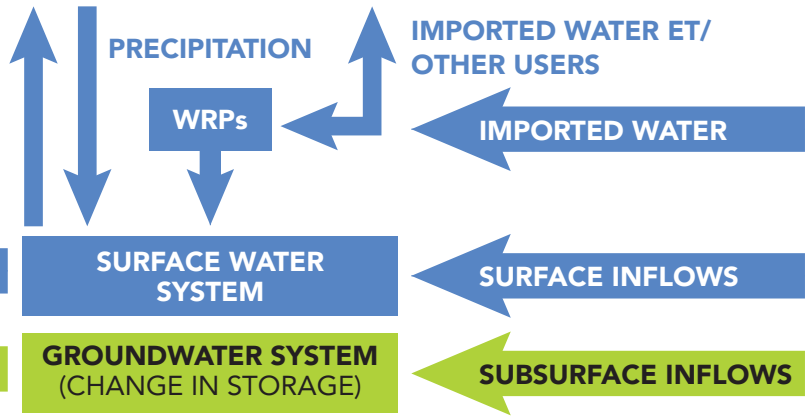
A water budget takes into account:

- Supplies (groundwater, imported, recycled)
- Demands (municipal, institutional, industrial, agricultural consumption)
- Changes in storage over time
- Population growth
- Land use (urban, agricultural)

- Hydrologic conditions (rainfall, streamflow, groundwater levels)
- Climate change

Basin Water Balance Components

ET: Evapotranspiration
WRPs: Water Reclamation Plants



WHY IS A WATER BUDGET IMPORTANT?

The Sustainable Groundwater Management Act (SGMA) requires agencies to develop a water budget for future management of the local groundwater basin. The water budget is intended to prevent continual lowering of groundwater levels over time. This condition, known as overdraft, eventually makes the basin unusable.

East Groundwater Subbasin

Water flowing in

Surface water comes from precipitation, streamflows, imported water runoff, and discharges into streams from sources such as water reclamation plants.

The groundwater system is fed by rainfall and streamflows, with smaller amounts from irrigation and adjoining watershed areas.

Imported water enters the groundwater system primarily through percolation of irrigation water and septic systems, and occasionally from Castaic Lake.

Water flowing out

Outflow from the basin includes subsurface and surface flows at the county line and evapotranspiration from plants along the river and its tributaries, as well as agricultural, municipal, institutional and industrial uses of pumped groundwater.

Find more information at scvgsa.org

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ENSURING EQUILIBRIUM IN THE SANTA CLARA RIVER VALLEY EAST GROUNDWATER SUBBASIN

Building the future water budget

Historical Water Budget (1925 to 2019)

Covers the largely agricultural uses in the Santa Clarita Valley that were supported by groundwater pumping through the 1960s, when urban development began in earnest.

State Water Project imports began in 1979 to augment groundwater and support the expanding population.

Current Water Budget

Takes into account the historic pattern of hydrologic conditions and utilizes current pumping and development patterns to demonstrate how current operation of the basin interacts with the surface water system under historical droughts and wet periods.

Evaluates whether overdraft conditions would possibly occur if the current levels of groundwater pumping and overlying water uses were to continue for many decades.

Future

Includes simulations under a variety of conditions with full build-out (expected by 2050) and water demands. Future basin pumping is in accordance with the basin operating plan.

Three alternative future water budgets – no climate change, 2030 climate change, and 2070 climate change – are presented to use for evaluating basin sustainability under SGMA.

Next steps

As part of the GSP development process, the SCV-GSA also must consider if other undesirable results, besides overdraft, have occurred or are likely to occur in the East Subbasin. These include:

- Degradation of water quality
- Subsidence
- Surface water depletion
- Seawater intrusion
- Impacts to groundwater dependent ecosystems (GDEs)

If these effects are likely, the GSP will include sustainable management criteria – projects and management actions – to reach sustainability over 20 years.