Google

Water Stewardship Commitment Helps California Farmers





GROWER NAME David Carlucci



PARTNERS Landmark LimnoTech



LOCATION Dos Palos, CA



CROPS Almonds FARM SIZE 215 acres









/ Goals



Google supporting ecosystems and water-stressed communities in California as part of their Water Stewardship Strategy.



Netafim was to identify a farmer with the desire to switch from flood to drip irrigation but lacking the financial resources to do so.



Maximize on-farm outcomes and flexibility so water can be stretched in drought and recharged in deluge by flood systems remaining intact with drip system installations.

Google understands the interconnectedness of California's water conveyance systems and as part of its commitment to water stewardship, supports multiple interventions to increase water resilience in the state. Reducing agricultural water demand is one way to positively impact California's water resources. With farmers facing rising costs and lower margins, partnerships like these can help farmers who desire to switch to more efficient irrigation make the change happen sooner. Time is of the essence in improving water resilience, especially in critically overdrafted groundwater basins like many in the Central Valley.

LimnoTech helps corporate clients understand their water use and evaluate associated impacts and risks, facilitates partnerships to successfully implement impactful water stewardship actions, and quantifies the multi-benefits of those actions.

/ Opportunity

David Carlucci is familiar with drip irrigation and was interested in converting some flood irrigated alfalfa acreage to drip and was seeking cost share opportunities to help him make the switch. Fortunately, with Google's partnership, the farmer converted more acres from flood to drip than originally intended. This project is located in a disadvantaged community as defined by the state of California, and is also located in the Merced Critically Overdrafted Groundwater basin, making this an important location to reduce agricultural water demand.

With the objective to increase the adoption of drip irrigation across the West due to the number of acres under flood irrigation and Western water shortages, Netafim helped to identify a farmer that could benefit from Google's support. As a result, the partnership enabled the conversion of more acres than originally intended.

> At Google, we are collaborating with organizations to not only replenish water resources but also enhance watershed health, benefiting ecosystems and water-stressed communities. Our partnership with Netafim will conserve precious water in the San Joaquin River watershed while also supporting local



farmers.

Tara Varghese Water Stewardship Lead, Google



Precision Agriculture

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/ Solutions

- -> Implementation of a subsurface drip irrigation system.
- Conversion of 215 flood-irrigated acres to drip irrigation- an increase of 39 acres more than originally planned Google's partnership made this possible.
- → Maintenance of flood irrigation systems to maximize system flexibility to stretch resources in a drought and replenish resources in a deluge.
- → Minimization of evaporative losses and nutrient leaching to waterways through precise water and nutrient delivery for improved water quality and enhanced sequestration of greenhouse gas (GHG) emissions within the soil.
- -> Reduction of soil disturbance from flood irrigation via consistent moisture levels that enhanced microbial activity in the soil.
- Alignment with the California Water Action Collaborative (CWAC)'s Impact Areas of: increasing water supply reliability (through reduced demand), increasing climate resilience (through system flexibility), improving water quality and preventing pollution (through precise nutrient delivery), and improving data management (measuring the difference in water use between flood and drip irrigation).

/ Results

Results will be tracked annually for three years through water meters and reported to LimnoTech and Google.

When we collaborate and work together with companies like Google and Netafim, we are able to support watershed stewardship actions that can help create stronger communities and healthier environments.

Laura Weintraub Vice President, Water Stewardship & Sustainability Practice Lead, LimnoTech







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