

Grower: Christine and Erich Gemperle

Crop: Almonds

Location: Ceres, Stanislaus County



Site Conditions



- Acreage = 36.5 acres for recharge in a 40-acre field
- Crop type = Almonds
- 20 acres, crop age = 5 years
- 20 acres, crop age = 21 years
- Land IQ rating = Moderately good
- Soil Agricultural Groundwater Banking Index rating = Excellent

Water Supply

- Gravity flow water was supplied free of charge from Turlock Irrigation District (TID) as part of their flood risk reduction efforts. TID notifies grower when water is available for delivery.

Soil Health

- Cover cropping for 10 years, mix of clover and broadleaf mustards.

On-Farm Recharge Logistics

Labor needed:

- One person to monitor recharge events day and night. No tractor work was involved.
- 4 days at 18 hours per day = 72 hours
- \$20/hour labor = \$1,440

Field infrastructure:

- Fields are set up with 1 turnout per 5 acres for gravity flood irrigation.
- TID installed Rubicon Flume meters to measure water use

Field preparation and management:

- Very little preparation was needed because the farm maintained the flood irrigation system even after converting to dripline and micro sprinkler irrigation.
- Gate valves require lubrication.

Recharge Events

Total applied water:

Water applied January 12-15, 2023.

- 27.5 acre-feet over 36.5 acres, about 0.8 foot per acre

Water applied February 1, 2023.

- 16.5 acre-feet over 36.5 acres, about 0.5 foot per acre

Total water recharged:

- 43.9 acre-feet over 36.5 acres, about 1.2 foot per acre

For more information, contact: Rogell Rogers, Agronomist, Sustainable Conservation, at rrogers@suscon.org or 209-576-7729 x346.