

East Turlock Subbasin Groundwater Sustainability Agency

Multibenefit Land Repurposing Program

FLOODFLOW SPREADING ON NON-FLOODPLAIN LANDS

How it Works

Floodflow spreading involves modification of drainage ways or canals to promote spreading of floodflows onto repurposed agricultural lands, allowing the water to infiltrate the soil and percolate down to recharge the groundwater system. This practice takes advantage of the natural capacity of agricultural fields to absorb large volumes of water, and can help capture stormwater that would otherwise flow unused to the ocean. Planting of beneficial cover crops provides additional benefits to soils and habitat.

+ Benefits



Groundwater Recharge and Water Conservation – Enhanced aquifer replenishment by capturing and infiltrating excess stormwater that would otherwise be lost to the ocean.



Flood Risk Mitigation – Flood peak attenuation and reduced downstream flooding impacts.



Improved Soil Moisture – Increased soil moisture can allow postponement of start of seasonal irrigation.



Habitat and Biodiversity – Habitat for various wildlife species, including pollinators, birds, and small mammals; increased biodiversity in agricultural landscapes.



Additional Considerations



Land Suitability Variability – Land surface slope and soil characteristics affect suitability for floodflow spreading.



Water Quality Concerns – Diverted floodwaters may contain pollutants, sediments, or pathogens that could impact soil or underlying groundwater.



Infrastructure Requirements – New infrastructure to divert and control flood flows on fields may be needed.



Regulatory Compliance and Permitting – Complex water rights and regulatory frameworks govern water diversions, land use changes and Flood-MAR activities.



Coordination with Water Management Agencies – Align floodflow spreading with broader regional flood management strategies.



Climate Change Adaptation – Consideration for future climate change impacts, such as increased frequency or intensity of storm events.



Implementation Incentive Payment

The ETSGSA will be able to provide incentive payments to growers to implement multibenefit land repurposing using funding from a grant awarded to the GSA by the CA Department of Conservation.

East Turlock Subbasin Groundwater Sustainability Agency

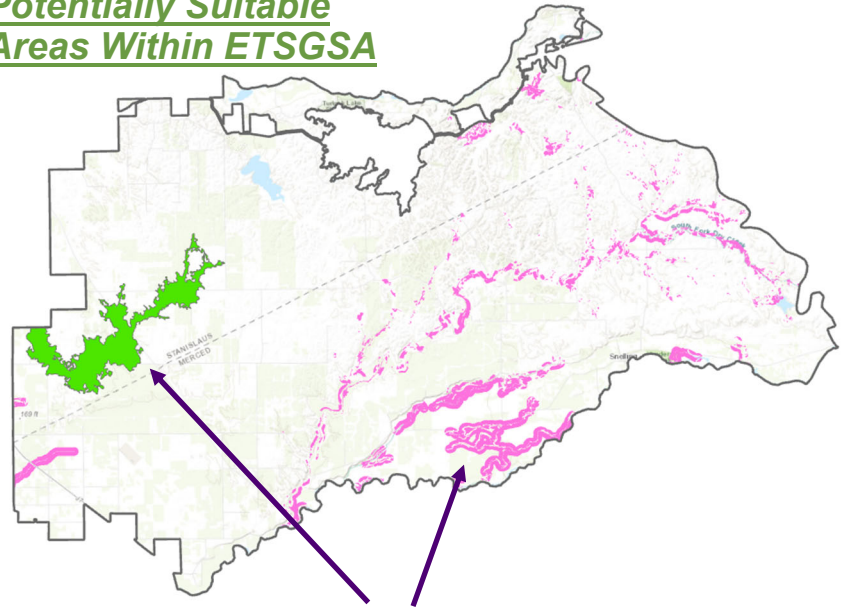
Multibenefit Land Repurposing Program

FLOODFLOW SPREADING ON NON-FLOODPLAIN LANDS

Implementation Steps

- 1) **Site Assessment and Planning** – Assess land suitability for Flood-MAR; identify stormwater sources and necessary infrastructure; conduct floodwater management planning.
- 2) **Design and Engineering** – Design necessary infrastructure (diversion channels, gates, and berms, etc.).
- 3) **Regulatory Compliance and Permitting**
- 4) **Infrastructure Construction** – Install or modify diversion structures, conveyance and water control systems, irrigation systems, etc.
- 5) **Water Monitoring** – Install systems to track water flows, infiltration and recharge rates, soil moisture levels, groundwater levels, etc.
- 6) **Crop Monitoring** – Monitor crop health regularly and adaptive management as necessary.
- 7) **Infrastructure Maintenance** – Maintain water conveyance equipment in operable condition (e.g., clear debris).

Potentially Suitable Areas Within ETSGSA

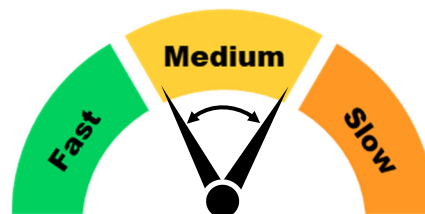


Priority Areas (8,774 acres identified): Low-lying areas prone to seasonal flooding, where there is a need to enhance groundwater recharge and improve soil health.

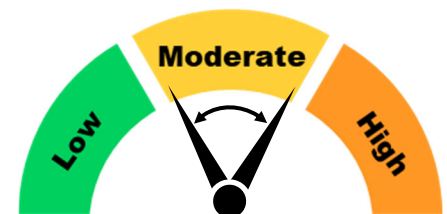
¹ Land area estimation from Formation Environmental Land Suitability Assessment. MLRP mapping is provided for preliminary planning purposes only. Project designs will need to be based on parcel-specific analysis.

Potential Permitting and CEQA Process

The general permitting and CEQA timeframe and complexity are shown below. However, permitting and CEQA requirements for specific projects may vary based on site- and project-specific conditions, and may be greater than indicated.



Permitting / CEQA
Timeframe



Permitting / CEQA
Complexity

Additional Information / Resources:

- [NRCS Conservation Practice Standard | 817 On Farm Recharge](#) (USDA)
- [National Engineering Handbook | On Farm Recharge](#) (USDA)
- [On-Farm Recharge Methods Manual and Case Studies](#) (Sustainable Conservation)



For more information on the ETSGSA Multibenefit Land Repurposing Program visit: <https://turlockgroundwater.org/multibenefit-land-repurposing>