Benefits of SWEEP for Small-Scale and Socially Disadvantaged Farmers

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UC Cooperative Extension
Fresno and Tulare Counties
Southeast Asian Farms in Fresno County

- Diversified vegetables for farmers markets and wholesale packing houses

“Oriental Vegetables” from Fresno County crop reports:

<table>
<thead>
<tr>
<th>Year</th>
<th>Acres</th>
<th>Tons</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>950</td>
<td>10300</td>
<td>$15,975,000</td>
</tr>
<tr>
<td>2016</td>
<td>1,130</td>
<td>13,700</td>
<td>$19,625,000</td>
</tr>
<tr>
<td>2017</td>
<td>1,252</td>
<td>12,620</td>
<td>$17,302,000</td>
</tr>
<tr>
<td>Average</td>
<td>1,110</td>
<td>12,206</td>
<td>$17,634,000</td>
</tr>
</tbody>
</table>
Southeast Asian Farms in Fresno County

- Hmong, Mien, Lao, Thai, Vietnamese, and Cambodian
- Small-scale: range 1 – 60 acres, median 8-10 acres
- Estimated 1300-1500 SE Asian small farms in 2007
  - About 900 Hmong
  - 2007 census data: 919 farms with Asian operators
Technical assistance for SWEEP from UCCE Fresno County

19 small-scale Hmong and Latino growers in Fresno County funded since 2016

- **Average award**: $67,750 (range $36,039 – $104,830)
- **Average acres**: 24.6 (range 3 – 40)
Repairing Old, Inefficient Pumps

Open flow pumps not set for drip irrigation with pressurized systems
Repairing Old, Inefficient Pumps

- Operating condition of pump set for drip irrigation (lower flow, pressurized)
- Spin clean or sand media filter
- Flow meter
- Check valve
Variable Frequency Drive (VFD)

• Adjusts speed of motor to match volume of water required
• Soft start with ramping up saves wear and tear on motor
• Excellent for diversified farms with changing water needs throughout the year
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Sand Media Filters

- Labor saving
- Efficient operation of drip irrigation systems
Conversion to Drip Irrigation
Conversion to Drip Irrigation

• Most farms rely entirely on groundwater (a few on city water)
  – Surface water use is rare

• During the drought, increased pumping costs to get water to the end of every row
  – Drip irrigation allows more efficient water and energy use when flow rate is low
Drip irrigation
Delivering water where the plants are reduces labor and herbicide use
Benefits of SWEEP for SGMA implementation
Benefits of SWEEP for SGMA implementation

University of California
Agriculture and Natural Resources

- Hmong and Mien Farms 2011-2017
- Other Southeast Asian Farms 2017

North Kings
Kings River East
Central Kings
Benefits of SWEEP for SGMA implementation

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Reporting Fee</td>
<td>$300</td>
<td>per well</td>
</tr>
<tr>
<td>Unmanaged Area Rate (Metered)</td>
<td>$10</td>
<td>per acre-foot</td>
</tr>
<tr>
<td>Unmanaged Area Rate (Unmetered)</td>
<td>$25</td>
<td>per acre-foot</td>
</tr>
<tr>
<td>Probationary Basin Rate (2)</td>
<td>$40</td>
<td>per acre-foot</td>
</tr>
<tr>
<td>Interim Plan Rate (2)</td>
<td>$55</td>
<td>per acre-foot</td>
</tr>
<tr>
<td>De Minimis (3)</td>
<td>$100</td>
<td>per well</td>
</tr>
<tr>
<td>Late Fee</td>
<td>25%</td>
<td>of total fee amount per month</td>
</tr>
</tbody>
</table>

2. If a subbasin is declared probationary, the SWRCB may impose "Probationary Basin" or "Interim Plan" fees depending on the level of intervention. In addition, the SWRCB may also require extractors to pay all costs associated with installing and maintaining meters. Fees are subject to change.
3. De minimis fee, $100, may be charged to domestic users if SWRCB decides extractions will be significant.
Benefits of SWEEP for SGMA implementation

Option to use flow meter instead of estimated groundwater use:

5.2 Fee Implementation and Adjustments
The agencies within the boundaries of [redacted] will help collect groundwater pumping fees from their respective landowners based on the crops, acreage, and surface water use of individual properties within their jurisdictions. If a landowner wishes to challenge the pumping estimates on his/her property using meter data from a well, then the owner must comply with the following proposed requirements:
1) Provide a meter calibration form certifying that testing was completed within the last two years.
2) Provide a copy of the manufacturer’s specifications or details regarding installation requirements.
3) Prove that the meter is installed in accordance with the manufacturer’s recommendations.
4) Prove that the meter is maintained in accordance with the manufacturer’s recommendations.
Expanding access to SWEEP for small farms

Urban and Peri-Urban Farms

Many use city water and do not have a pump for groundwater

→ How to calculate GHG emissions?
  – Calculate energy use by city to pump and pressurize water?
  – Solar to offset other energy costs (lights, cold storage, electric vehicle use, etc.)?

Fresno Freedom School
Expanding access to SWEEP for small farms

- Simplify application, invoicing and reimbursement process as much as legally possible
  - Mixed vegetable or diversified farm category for water savings calculations
Expanding access to SWEEP for small farms

• Address lack of overlap between disadvantaged communities and socially disadvantaged farmers

• SWEEP
• Healthy Soils Program
• REAP (Renewable Energy for Agriculture Program)
• DWR Planning Grant Program
• Others?

(Prop 68, Prop 1, etc.)
Expanding access to SWEEP for small farms

- One-on-one and post-award technical assistance are essential for small-scale, socially disadvantaged farmers
  - Salary for staff with bilingual and/or cross-cultural skills

GHG calculations with PG&E bills

SWEEP verification farm visit

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