Purpose of Presentation

- This presentation outlines the potential practices that can be used to address resource concerns on agricultural land in Santa Cruz County.
- It does not include all potential practices, but lists many that would be feasible.
- Future presentations will include information of funding by various groups to assist with the practices.
Conservation planning is the fundamental starting point for maintaining and improving the natural resources that support productive and profitable agricultural operations.

Conservation planning is also intended to help farmers and ranchers comply with a variety of environmental regulations:

- Clean Water Act
- Clean Air Act
- Endangered Species Act
- State laws
- Tribal laws
Technical References

- Plants Database
- Web Soil Survey
- Water Supply Forecasts
- Publications
- Coordination with local, state and federal agencies
- Assistance to Tribal Entities
- Soil Health

Resource Concerns

NRCS addresses resource concerns by SWAPA + H + E

- Soil
- Water
- Air
- Plants
- Animals
- Human
- Energy
Major Resource Concerns in Arizona

- **INSUFFICIENT WATER** - Inefficient use of irrigation water
- **LIVESTOCK PRODUCTION LIMITATION** - Inadequate livestock water
- **WATER QUALITY DEGRADATION** - Excess nutrients in surface and ground waters
- **DEGRADED PLANT CONDITION** - Undesirable plant productivity and health
- **AIR QUALITY IMPACTS** - Emissions of Particulate Matter (PM) and PM Precursors
- **WATER QUALITY DEGRADATION** - Excessive sediment in surface waters
- **INEFFICIENT ENERGY USE** - Equipment and facilities

Resource Concerns (cont)

- **SOIL QUALITY DEGRADATION** - Concentration of salts or other chemicals
- **INADEQUATE HABITAT FOR FISH AND WILDLIFE** - Habitat degradation
- **Soil Erosion** - Sheet, rill & wind erosion
- **Soil Quality Degradation** - Organic matter depletion
- **Inefficient Water** - Inefficient moisture management
- **Air Quality Impacts** - Objectionable odors
- **LIVESTOCK PRODUCTION LIMITATION** - Inadequate feed and forage
Typical Resource Concerns that can be addressed with practices

- Rangeland – plant productivity, erosion, water quantity
- Cropland (including vineyard) – water quantity and quality, irrigation induced erosion, air quality
- Irrigate Pasture – plant productivity, water quantity, soil compaction

Brush Management – Mechanical (314)
Brush Management – Mechanical (314)

Brush Management – Chemical (314)
Brush Management - Mesquite grubbing (314)

Brush Management - Weed Control - Back pack spraying (315)
Brush Treatments
Livestock Pipeline - PVC (516)

Livestock Pipeline - PE(516)
Watering Facility – storage, steel (614)

Watering Facility – storage, polyethylene (614)
Watering Facility – tire trough (614)

Watering Facility – cement trough (614)
Watering Facility – steel trough with wildlife escape ramp (614)

Pumping Plant - Windmill (533)
Pumping Plant – Solar replacing old windmill (533)

System – well, solar pump, storage (642, 533, 614)
Well (642)

Pond (378)
Pond Sealing (521A)

Spring Development (574)
Prescribed Fire (338)

Fence – rough country (382)
Fence – smooth country
(382)

Cattle guard – part of fence, we consider it separate
Range Seeding (550)

Mulching (484)
Mulch on Range Seeding (550 and 484)

Irrigation – Sprinkler (442)
Irrigation – Pivot (442)

Sprinkler on wheat
Irrigation System - Alfalfa Valve (443)

Irrigation System – big gun (442)
Field Border – pollinator habitat (386)

Cover crop (327)
Ditch with outlets (428)

Ditch Lining (428)
Irrigation gate for flood (587)

Pumping plant – irrigation (533)
Microirrigation – drip on vineyard (441)

Drip on individual vine
Drip with high tunnel (325)

Land Levelling - survey (464)
Land Leveling (464)

Irrigation Reservoir (436)
Irrigation Water Management (449)

Field Border (386)
Integrated Pest Management (595)

Residue Management (345)
Nutrient Management (590)

Confined Animal Feeding Operation - roof runoff – specific program if funded
SC County – Roof Runoff

Storage for Roof Runoff
Wildlife – Pollinator Habitat
Various Wildlife Structures - Brush piles - (649)

Fish barrier (649)
Raptor pole (649)

Bat House (649)
Shrub planting (612)
Old Catchment – past lifespan (636)

Grade Stabilization Structure for Erosion Control (410)
Erosion Control (410)

Obstruction Removal (500)
Obstruction Removal (500) EWP

Wetland Enhancement (644)
Dike (356)

Mulching after disturbance (484)
Pole Planting (580)

Numerous practices – sprinkler, prescribed grazing, nutrient management
Terraces - a practice on our national list but not Arizona

Totals for Santa Cruz County since 1997

<table>
<thead>
<tr>
<th>Practice/Management</th>
<th>Amounts</th>
<th>Units</th>
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<tbody>
<tr>
<td>Brush/Herbaceous Control</td>
<td>4,222.0</td>
<td>acres</td>
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<tr>
<td>Livestock Management/Plan</td>
<td>121,262</td>
<td>ft</td>
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<tr>
<td>Fence</td>
<td>216,824</td>
<td>ft</td>
</tr>
<tr>
<td>Pond Sealing or Lining</td>
<td>100,000</td>
<td>sq ft</td>
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<tr>
<td>Range/Herbaceous Control</td>
<td>190,817</td>
<td>acres</td>
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<td>Range/Herbaceous Control</td>
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<tr>
<td>Range Planting</td>
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<tr>
<td>Soil Sealing or Lining</td>
<td>36</td>
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<td>Water Harvest Catchment</td>
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<td>Water Harvest Catchment</td>
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<tr>
<td>Water Management</td>
<td>1,270</td>
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<td>Nutrient Management</td>
<td>1,681.1</td>
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<tr>
<td>Pasture and Hayland Planting</td>
<td>75</td>
<td>acres</td>
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<td>Upland Wildlife Habitat</td>
<td>17,126</td>
<td>acres</td>
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<td>Seasonal High Tunnel for Crops</td>
<td>3</td>
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<tr>
<td>Water Harvest Catchment</td>
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<tr>
<td>Water Harvest Catchment</td>
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<td>items</td>
</tr>
<tr>
<td>Nutrient Management</td>
<td>40</td>
<td>items</td>
</tr>
</tbody>
</table>

Note: Some units are estimated and may not be accurately quantified.
Trends in Santa Cruz County

- Most applications continue to be for water development and fencing
- Brush management and erosion have very few applicants
- Vineyards - we can’t retrofit existing drip or add new acres but can replace old systems
- Initiatives are announced every year; for example, high tunnel, air quality, energy
- Other programs like rcpp and csp are available as well, more information at the next workshop.

Payment Schedules for NRCS

- Handout of 2016 payment schedules
- 2017 is not available yet
- The actual list is several pages, this is just the main headings
- Each practice can have several types such as brush management that we described, various types of fences, erosion control structures, etc
- Special Initiatives have their own schedule (high tunnel, air quality, rcpp)
- The next workshop will cover funding from NRCS and others for practices to address your resource concerns
FOR FURTHER INFORMATION

- All programs of the NRCS can be accessed at our website www.nrcs.usda.gov
- USDA is an equal opportunity provider and employer. To file a complaint of discrimination, write: USDA, Office of the Assistant Secretary for Civil Rights, Office of Adjudication, 1400 Independence Ave., SW, Washington, DC 20250-9410 or call (866) 632-9992 (Toll-free Customer Service), (800) 877-8339 (Local or Federal relay), (866) 377-8642 (Relay voice users).