



**CONSERVATION ENHANCEMENT ACTIVITY**

**E328H**

**CONSERVATION STEWARDSHIP PROGRAM**

**Conservation crop rotation to reduce the concentration of salts**

**Conservation Practice 328: Conservation Crop Rotation**

**APPLICABLE LAND USE: Crop (Annual & Mixed)**

**RESOURCE CONCERN: Soil**

**ENHANCEMENT LIFE SPAN: 1 Year**

**Enhancement Description**

Implement a crop rotation to reduce the concentration of salts and other chemicals from saline seeps. The rotation should include at least 3 crops and/or cover crops grown in a sequence in the recharge areas of saline seeps that have rooting depths and water requirements adequate to fully utilize all available soil water. Do not use summer fallow. Use an approved water balance procedure to determine crop selection and sequence. Select crops with a tolerance to salinity levels that match the salinity of the discharge area. (See state lists)

**Criteria**

- Crops shall be grown in a planned sequence as outlined in plan. The crop rotation must include a minimum of three different crops. For purposes of these criteria a cover crop is considered a different crop.
- Where applicable, plan suitable crop substitutions when the planned crop cannot be planted due to weather, soil conditions, or other local situations.
- Select crops to be grown in the recharge area of saline seeps that have rooting depths and water requirements adequate to fully utilize all available soil water.

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- Do not use summer fallow.
- Use an approved water balance procedure to determine crop selection and sequence.
- If excess subsoil moisture exists below the rooting depth of crops commonly grown in the recharge area, establish deep-rooted perennial crops for the number of years needed to dry the soil profile.
- Select crops with a tolerance to salinity levels that match the salinity of the discharge area. **(See State list of salt tolerant crops with rooting depths and water requirements adequate to use all available soil water.)**



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## Documentation and Implementation Requirements

### Participant will:

- Prior to implementation, complete the following table and use an approved water balance procedure to determine crop selection and sequence.

### Planned Management Rotation (Do not use summer fallow):

Field	Planned Crops (in sequence)	Planting Date	Harvest or Termination Date	Crop Rooting Depth (inches)	Crop Water Requirements

- During implementation, notify NRCS of any planned changes in crops, crop rotation, or field operations to verify the planned system meets the enhancement criteria.
- After implementation, if changes to the rotation were made, complete the table above to document the applied crop rotation for the contract period and provide to NRCS.

### NRCS will:

- As needed, provide technical assistance using an approved water balance procedure in selecting crop rotations or substitute crops that would meet the criteria of the enhancement.
- Prior to implementation, verify that the crop rotation includes at least three different crops in rotation.
- Prior to implementation, verify the crop rotation has a water balance to verify crops selected and sequence is adequate.
- During implementation, evaluate planned changes to verify the planned system meets the enhancement criteria.
- After implementation, if the applied crop rotation is different than the planned crop rotation, verify the implemented rotation meets the enhancement criteria.



**NRCS Documentation Review:**

I have reviewed all required participant documentation and have determined the participant has implemented the enhancement and met all criteria and requirements.

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Participant Name \_\_\_\_\_ Contract Number \_\_\_\_\_

Total Amount Applied \_\_\_\_\_ Fiscal Year Completed \_\_\_\_\_

\_\_\_\_\_  
NRCS Technical Adequacy Signature

\_\_\_\_\_  
Date





# WASHINGTON SUPPLEMENT TO CONSERVATION ENHANCEMENT

# CONSERVATION STEWARDSHIP PROGRAM

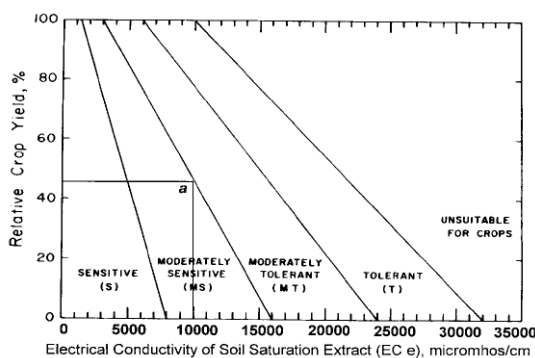
## ACTIVITY E328H

### Additional Criteria for Washington

In addition to the criteria specified in the National job sheet E328 the following additional criteria apply in Washington:

- Due to the complexity and variability of soil, Washington’s climatic regions, and various crop rotations and management strategies, not all crops are appropriate in all cropping systems. Use the below information as a guide to aid in salt tolerant crops to achieve the criteria in the enhancement. All Resource Conserving Crop Rotations for the intended Enhancement and associated Resource Concern must be approved by the Area Agronomist or State Agronomist.

Relative crop yield compared to the salinity of the soil solution.



2) Depths to which the roots of mature crops will extract available soil water from a deep, uniform, well drained soil under average unrestricted conditions (depths shown are for 80% of the roots).

Common name	Rating <sup>1</sup>	Rooting Depth <sup>2</sup> (in.)	Crop Water Need (mm/total growing period, estimates)
Asparagus	T	4-5	350-500
Barley (forage)	MT	4	450-650
Barley	T	4	450-650
Bean, lima	MT	2-3	300-500
Brome, mountain	MT	3-4	350-500
Canola or rapeseed	T	3-5	450-650
Clover, Hubam	MT	2-3	450-650
Clover, sweet	MT	2-3	450-650
Cowpea	MT	2-3	350-500
Fescue, tall	MT	3-4	350-500
Oats	T	3	450-650
Oats (forage)	T	3	450-650
Rape (forage)	MT	2-3	450-650
Ryegrass, perennial	MT	4	450-650
Safflower	MT	5	600-1200
Sorghum	MT	4	450-650
Squash, zucchini	MT	3-4	350-500
Sudangrass	MT	3-4	450-650
Sunflower	MT	4-5	600-1000
Trefoil, narrowleaf birdsfoot	MT	1-2	600-1000
Triticale	T	3-4	450-650
Turnip (greens)	MS MT	2-3	450-500
Wheat	MT	4	450-650
Wheat (forage)	MT	4	450-650
Wheat (semi-dwarf)	T	4	450-650
Wheat, Durum	T	4	450-650
Wheat, Durum (forage)	MT	4	450-650
Wheatgrass, fairway crested	T	3-4	350-500
Wheatgrass, slender	MT	3-4	350-500
Wheatgrass, standard crested	MT	3-4	350-500