Adams County Voluntary Stewardship Plan

Presented by

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December 13, 2016

Agenda

- Recap and Follow-up from November Meeting
- Conservation practices currently implemented in the County
- Virtual Tour
  - Rex Harder
- Overview of Goals and Benchmarks
- Outreach
- Next Steps

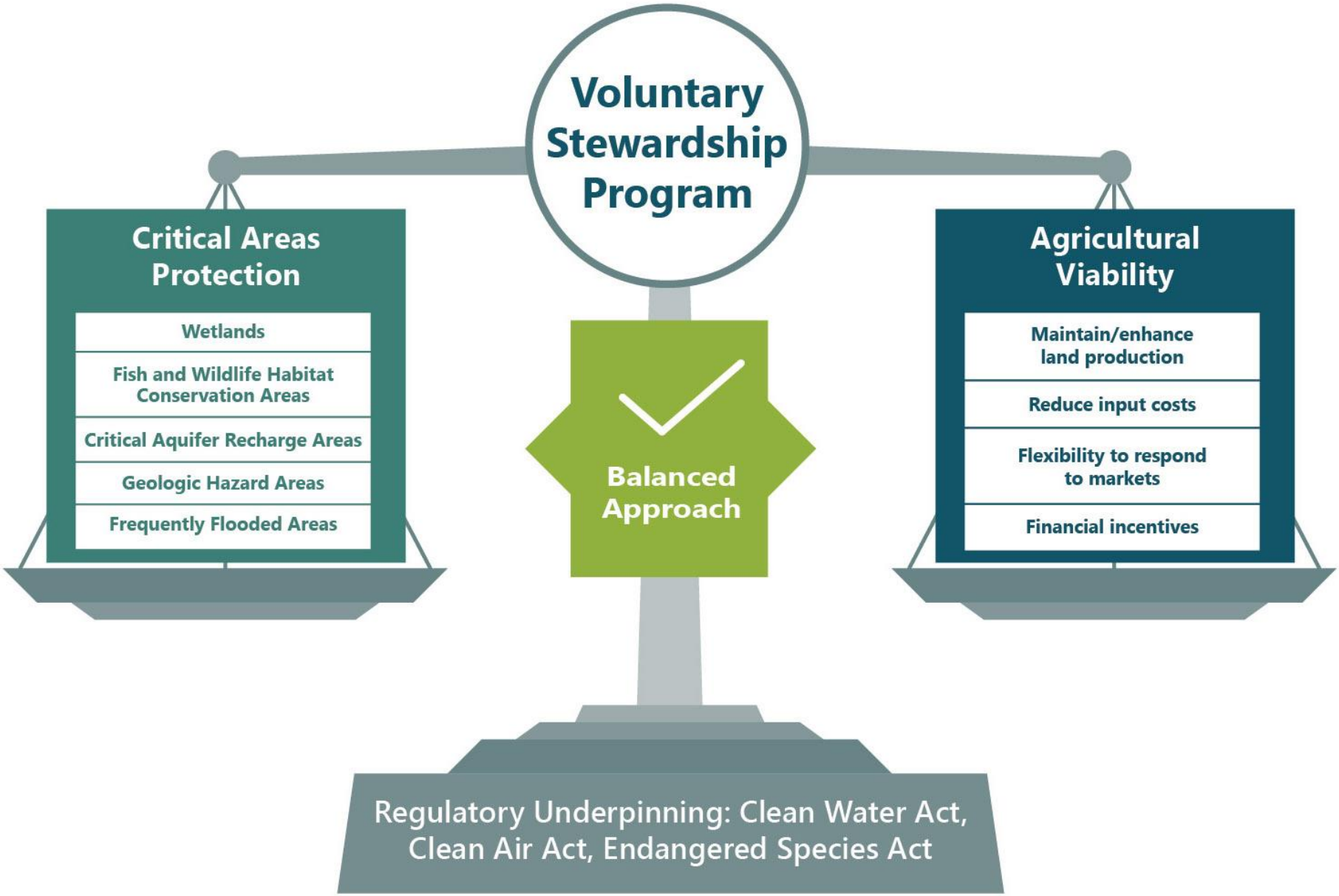
Re-cap

November Work Group Meeting

11/8 Work Group Meeting Re-cap

- Approved ground rules
- Proposed a two volume Work Plan
  - Volume one: User friendly outreach tool
  - Volume two: Technical information
- Discussed analysis units: potentially by drainage to describe baseline conditions but by ag type for implementation
- Reviewed critical areas intersection with agriculture

Conservation Practices


Voluntary Stewardship Program
Critical Areas Protection
Wetlands
Fish and Wildlife Habitat Conservation Areas
Critical Aquifer Recharge Areas
Geologic Hazard Areas
Frequently Flooded Areas
Balanced Approach
Agricultural Viability
Maintain/enhance land production
Reduce input costs
Flexibility to respond to markets
Financial incentives
Regulatory Underpinning: Clean Water Act, Clean Air Act, Endangered Species Act

Agricultural Viability – Regional Perspective

The ability of a region to sustain agricultural economy and production over time

Concept	Detail
Stable and secure agricultural land base	Land conversion
	Stable water rights
Infrastructure and services	Utilities/irrigation
	Market access/transportation
Support for best farm management practices	Economically viable solutions
	Balanced approach
Education, training, and succession planning	Apprenticeships/training
	Interconnectivity with end users
Welcoming business environment	Stable regulatory environment
	Partnership based environmental protection
Market Trends/Viability	Falling cattle and wheat prices can effect the number of producers that support economy
	Value added measures to make products more marketable

Agricultural Viability – Farm Perspective

The ability of a farm to meet financial obligations and make profit

Concept	Detail
Reduce Input Costs	Energy (power, fuels)
	Chemicals
	Labor
Maintain/Enhance Land Production Capacity	Soil health
	Water systems and moisture management
	Nutrient management
	Promoting/adopting new technology
Flexibility to Respond to Market Conditions	Changing land in production
	Individual schedule for implementing conservation practices
	Cropping choices
Incentives	Payment for measures
	Tax breaks
Managed Farmland Conversion	Urban development (limited)
	Maintain resource lands
"No Surprises" Regulatory Environment	CWA, CAA, ESA, etc.
	County Permitting (drainage)
Protect Private Property Rights	Recognize and respect rights
Environmental Variation	Rainfall, temperature, etc.

Conservation Practices Toolkit

NRCS Conservation Practices	Agriculture Categories			Agricultural Viability					
	Irrigated	Dryland	Range	Soil Health	Prevent Soil Loss	Moisture Management	Weed/Pest Management	Pollinator/ Benefical Organisms	Increased Yield/ Fertility
AG ENERGY MANAGEMENT PLAN	X	X							
Agricultural Energy Management - Landscape CAP	X	X	X						
Agrichemical Handling				X					
Herbaceous Weed Control	X	X	X		X		X		X
Deep Tillage	X	X			X	X			X
Conservation Cover	X	X		X	X		X	X	
Conservation Crop Rotation	X	X		X	X	X	X	X	X
Residue and Tillage management, No-till/Direct seed	X	X	X	X	X	X			X
Cover Crop	X	X		X	X	X	X	X	X
Critical Area Planting			X		X		X	X	
Residue and Tillage Management, Reduced Till	X	X		X	X	X			X
Sediment Basin	X	X	X		X				
Deferred Grazing			X	X	X				X
Pond	X	X	X			X			
WINDBREAK/SHELTERBELT ESTABLISHMENT	X	X		X	X	X	X	X	X
Fence			X					X	
Field Border	X	X			X		X	X	
Riparian Herbaceous Cover	X	X	X		X	X	X	X	
Riparian Forest Buffer	X	X	X		X	X	X	X	
Filter Strip	X	X			X			X	
Stream Habitat Improvement and Management	X	X	X				X	X	
Grassed Waterway	X	X	X		X				
HEDGEROW PLANTING	X	X			X		X	X	
Irrigation Pipeline	X					X			X
Irrigation System, Micro-irrigation	X			X	X	X			X
Irrigation System, Sprinkler	X			X	X	X			X
Irrigation Water Management*	X			X	X	X			X
Anionic Polyacrylamide	X			X	X	X			
Precision Land Forming		X			X	X			
Access Control	X	X	X	X	X		X	X	X
Mulching		X		X	X	X	X		X
Tree/shrub Site Preparation	X	X	X		X	X	X	X	
Livestock Pipeline			X						X
Pond sealing or lining	X	X	X						

Conservation Practices Toolkit

NRCS Conservation Practices	Agriculture Categories			Agricultural Viability					
	Irrigated	Dryland	Range	Soil Health	Prevent Soil Loss	Moisture Management	Weed/Pest Management	Pollinator/ Benefical Organisms	Increased Yield/ Fertility
Prescribed Grazing	X		X		X				X
Pumping Plant	X				X	X			X
Range Planting			X	X	X		X	X	X
Access Road	X	X	X		X				
Heavy Use Area Protection			X		X				
Spring Development			X						X
Trails and Walkways	X	X	X		X		X		
Stream Crossing	X	X	X		X				X
Streambank and Shoreline Protection	X	X	X		X			X	
Channel Bed Stabilization	X	X	X				X		
Strip Cropping		X		X	X	X			
Structure for Water Control	X					X			X
Cross Wind Ridges		X		X	X	X			
Nutrient Management	X	X		X					X
Integrated Pest Management	X	X	X	X			X	X	
Vegetative Barrier	X	X			X			X	
Tree/shrub establishment	X	X			X			X	
Watering Facility			X						X
Waste Utilization/Recycling	X		X						
Water Well	X		X			X			X
Restoration and Management of Rare and Declining Habitats	X	X	X						
Wetland Wildlife Habitat Management	X	X	X						
Upland Wildlife Management	X	X	X					X	
Early Successional Habitat Development/Management			X				X	X	
Wildlife Watering Facility		X	X						
Fish and Wildlife Structure	X	X	X						
Wetland Enhancement	X	X	X	X			X	X	
Others?									

Top 10 NRCS Practices Applied by projects and acres (2011 – 2016)

- These practices are indicators to main concerns in County
  - Water quality, soil conservation, and soil health
- These practices will be highlighted in the VSP Work Plan

Conservation Practice	Count	Acres	Land use		
Programs - EQIP - WHIP			Dryland	Irrigated	Range
Mulch Till	109	60,211	X	X	
Landscape Agricultural Energy Mgmt	28	53,150	X	X	X
Pest Management	78	38,784	X	X	X
Nutrient Management	60	29,025	X	X	
No-Till/ Strip Till/ Direct Seed	54	20,881	X	X	
Watering Facility	25	15,000			X
Irrigation Pipeline	51	7,560		X	
Pumping Plant	52	6,723			X
Irrigation Water Management	25	6,723		X	
Prescribed Grazing	6	6,519		X	X

Practices Implemented under CSP (2011 – 2016)

- Conservation Stewardship Program (CSP) provides support for maintaining and enhancing practices that have been implemented

Conservation Practice	Count	Acres	Land use		
CSP			Dryland	Irrigated	Range
Cropland Annual Payment	103	20,591	X	X	
Pasture Annual Payment	13	3,042		X	
Rangeland Annual Payment	25	8,226			X

Mulch Till Example

Description: Managing the amount, orientation and distribution of crop residue on the soil while limiting soil-disturbing activities where the field surface is tilled prior to planting.

- 109 practices/projects in place (2011-2016)
- 60,211 acres

Applicability	Ag Viability Protection	Critical Area Functions Protection
Irrigated, Dryland	• Soil Health • Prevention of soil loss • Moisture management • Yield and fertility	• Hydrology • Habitat • Water quality • Soil conservation

Nutrient Management Example

Description: Managing the amount, source, and application of nutrients to minimize risk to surface and groundwater.

- 60 practices/projects in place (2011-2016)
- 29,025 acres

Applicability	Ag Viability Protection	Critical Area Functions Protection
Irrigated, Dryland	• Soil Health • Yield and fertility	Water quality

Prescribed Grazing Example

Description: This practice includes using grazing or browsing animals to manage vegetation for weed or pest control and drought management.

- 6 practices/projects in place (2011-2016)
- 6,519 acres

Applicability	Ag Viability Protection	Critical Area Functions Protection
Rangelands	• Prevention of soil loss • Weed management • Yield and fertility	• Habitat • Water quality • Soil conservation

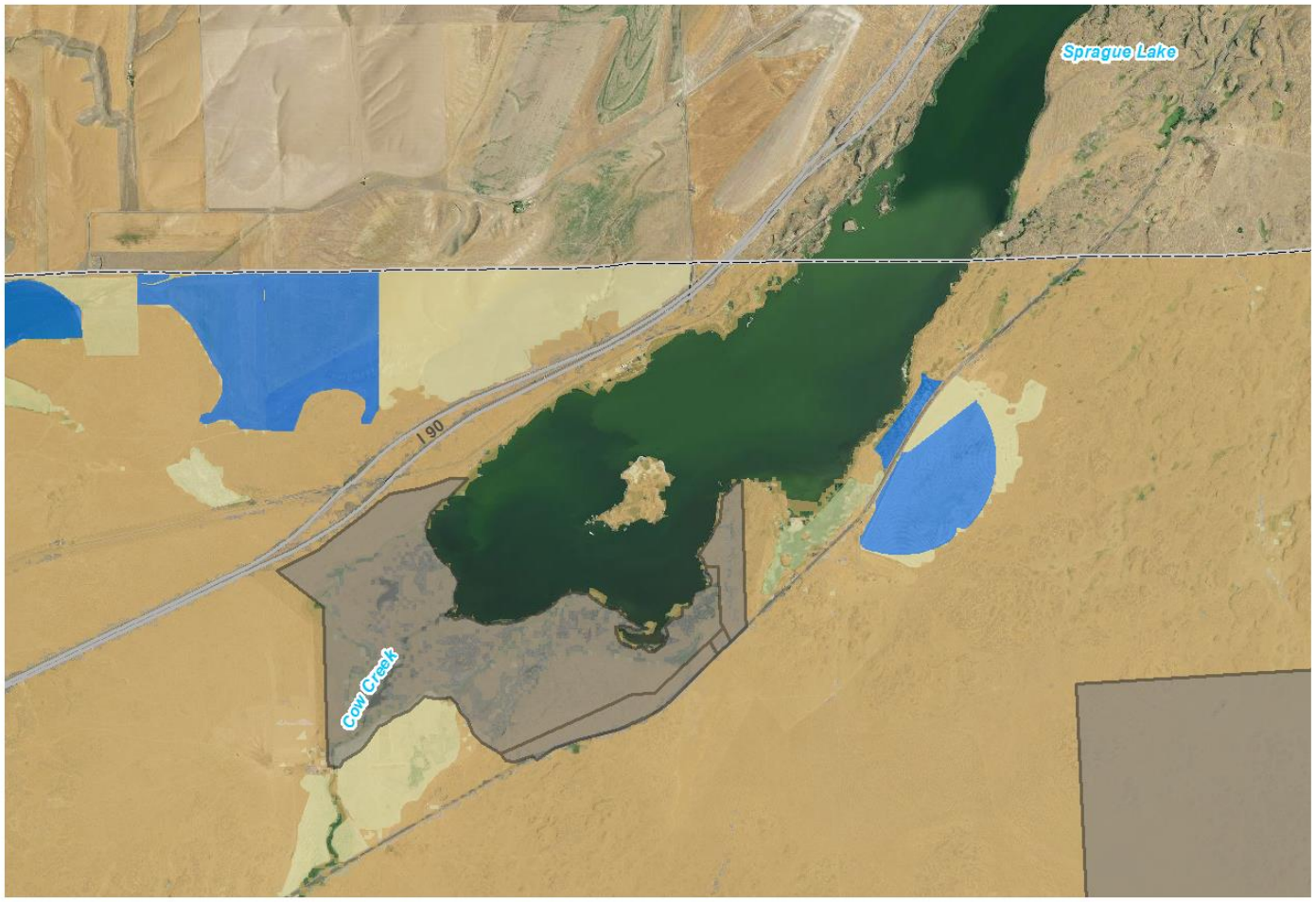
Rex Harder Property

Virtual Tour

Rangelands – Harder Property

Sprague Lake (looking southwest)

Agricultural Lands Around Sprague Lake



Public Land

Agricultural Landcover

Dryland – Crops

Irrigated – Crops

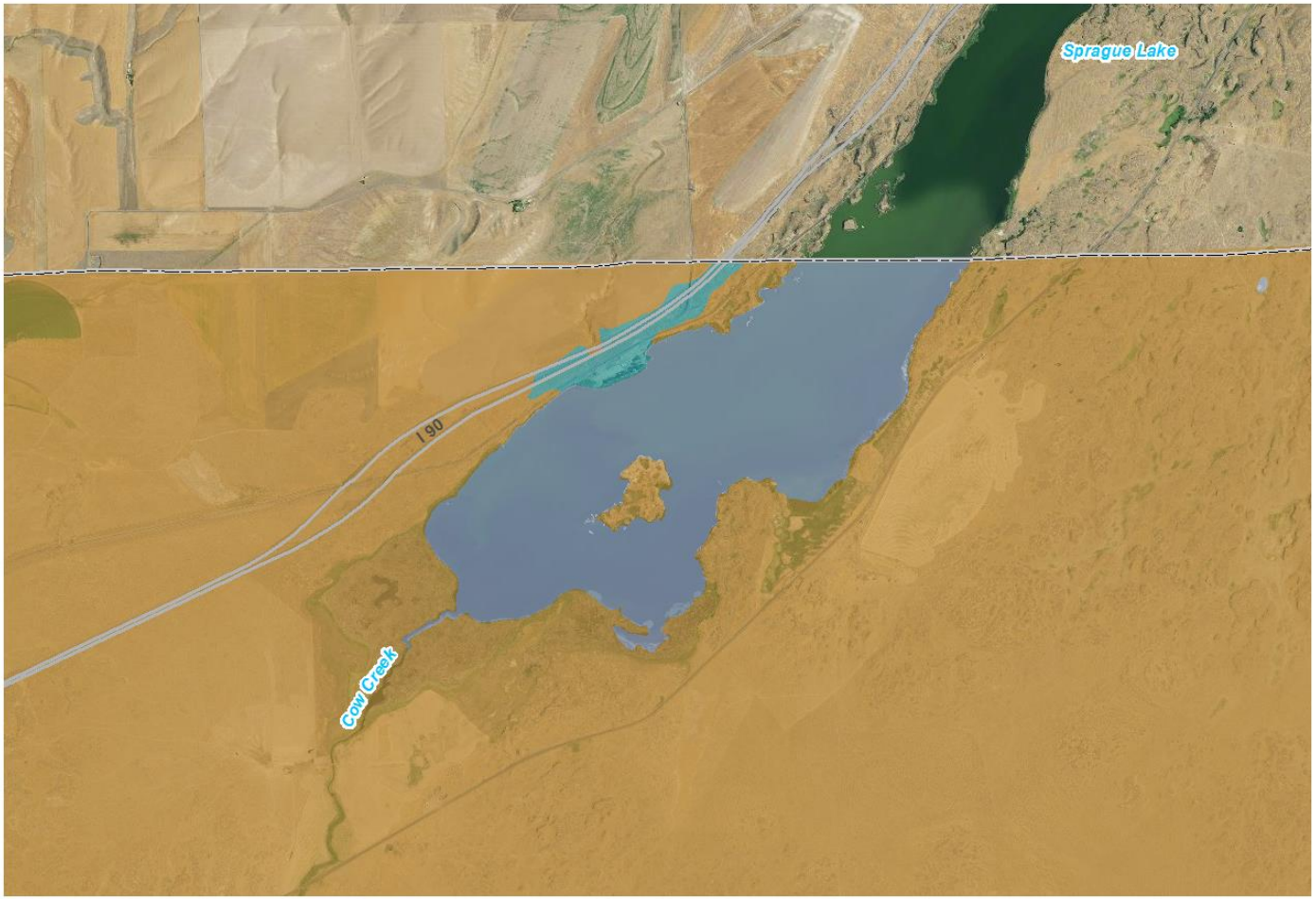
Rangeland

Adams County

0 0.4 0.8

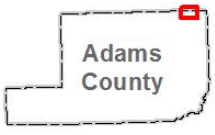
Miles

Soils Around Sprague Lake



Soil Type

- Sandy Loam
- Silt Loam
- Other



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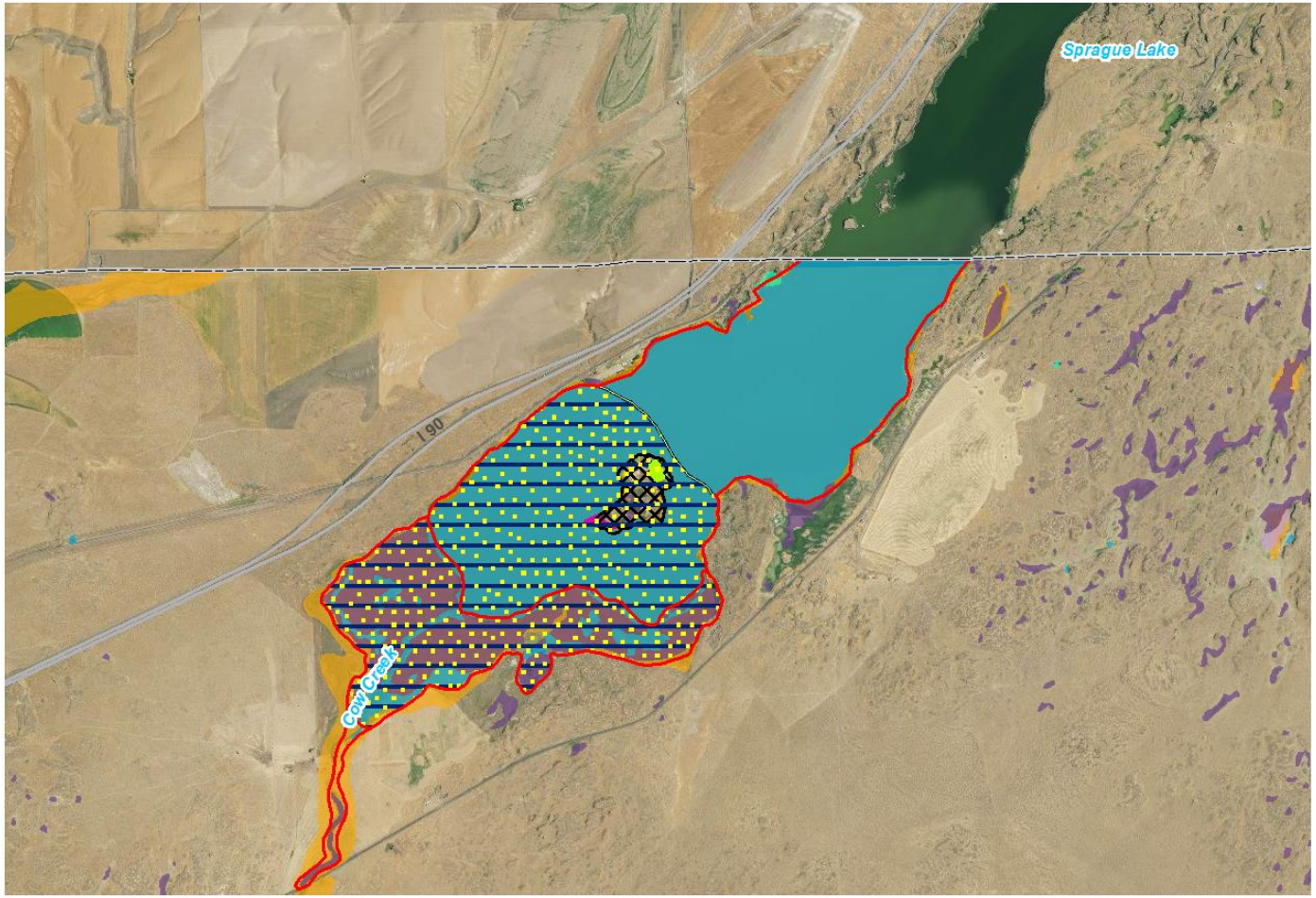
Miles

Critical Areas Around Sprague Lake



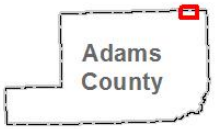
FEMA Special Flood Hazard Area

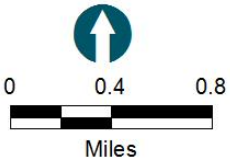
Priority Habitats and Species

- American White Pelican
- Caspian Tern
- Gull Species
- Tundra Swan
- Waterfowl Concentrations
- Western Grebe

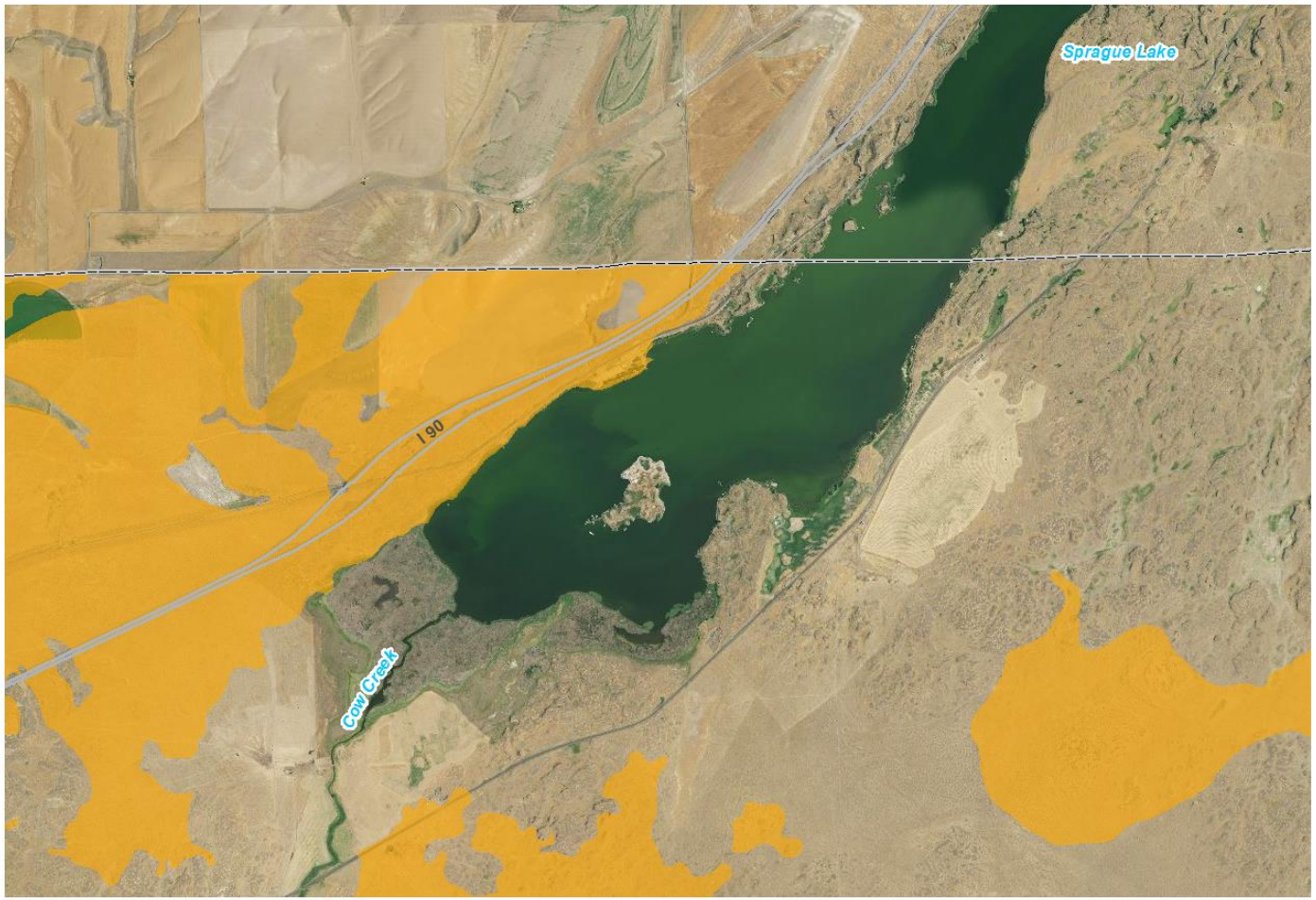
NWI Wetland Type

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Lake/Pond
- Other



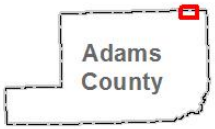


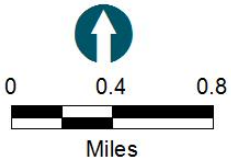
Critical Areas Around Sprague Lake



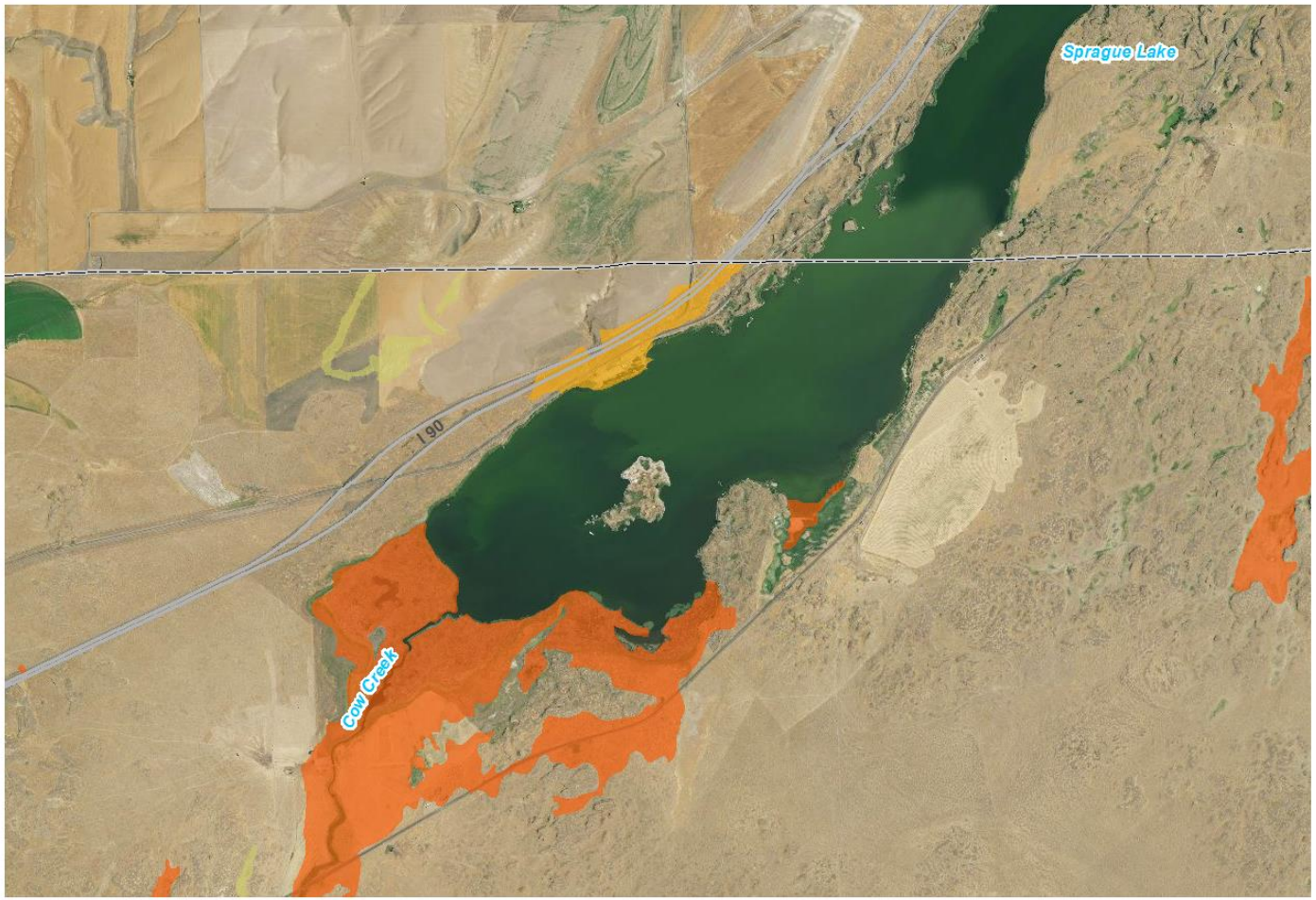
NRCS Water Erosion Potential

Severe



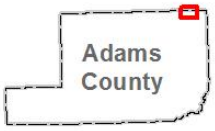


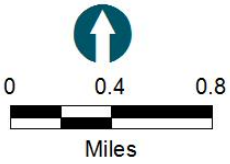
Critical Areas Around Sprague Lake



NRCS Wind Erodibility Group

- 2 More
- 3
- 4L Moderate
- 5 - 8 Less (Not Mapped)





Rangelands – Harder Property

- South of Sprague Lake is grazed and partially fenced
- Practice Highlights:
  - Raising cattle adapted to land (Angus) and good bulls
  - Provide good clean water
  - Cross fencing (over the past 25 years)
  - Stock watering wells (6 to 10 run on solar power)

Rangelands – Harder Property

Solar Powered Stock Watering Wells

Rangelands – Harder Property

Yearlings enjoying fresh water (2014 to present)

Rangelands – Harder Property

Yearlings grazing (2014)

Rangelands – Harder Property

- Ag viability:
  - Provide better outreach on locally raised beef (currently sells to Country Natural and Tyson)
  - Work with CDs on voluntary measures can be more productive than regulatory
- Challenges:
  - Irrigation water regulation (lower Cow Creek)
  - Water storage during high flow for use during dry periods
  - Reduced winter runoff
  - Costs of weed management
  - Moisture management for good grazing conditions

Conservation Practices & Functions

Function	Access control/ Fencing	Cross fencing	Watering facility	Spring Development	Heavy use protection area
Filtration/ Purification	●		●		
Recharge/ Retention/ Discharge				●	
Soil Conservation	●	●	●	●	●
Habitat	●	●	●	●	●
Nutrient Cycling	●	●	●	●	

Potential Risks to Critical Areas and Ag Viability

- Change of upland habitat (vegetation)
- Soil erosion/reduce topsoil
  - Reduce long-term productivity of land
- Modified hydrology
  - Changes in climate and precipitation patterns
  - Changes in vegetation
- Water quality
  - Cattle water supply
- Management actions can help mitigate potential impacts

Participation in VSP

- Option 1 – Do nothing
- Option 2 – Implement changes (producer 100% funded) with no commitment to maintain
- Option 3 – Seek technical assistance (industry, CD, or NRCS), then implement (producer 100% funded)
- Option 4 – Variation of Option 3
  - Determine if applicable program/financial incentive is available, enter into contract, and implement (producer/program funded)

Introduction to Goals, Benchmarks, and Measurements

Goals and Benchmarks

RCW 36.70A.720 (1) – Work plan must include goals and benchmarks for the protection and enhancement of critical areas.

> *(e) create measurable benchmarks that, within 10 years are designed to result in*
>
> > *(1) the protection for critical areas functions and values*
> >
> > *(2) the enhancement of critical areas functions and values through voluntary, incentive-based measures*

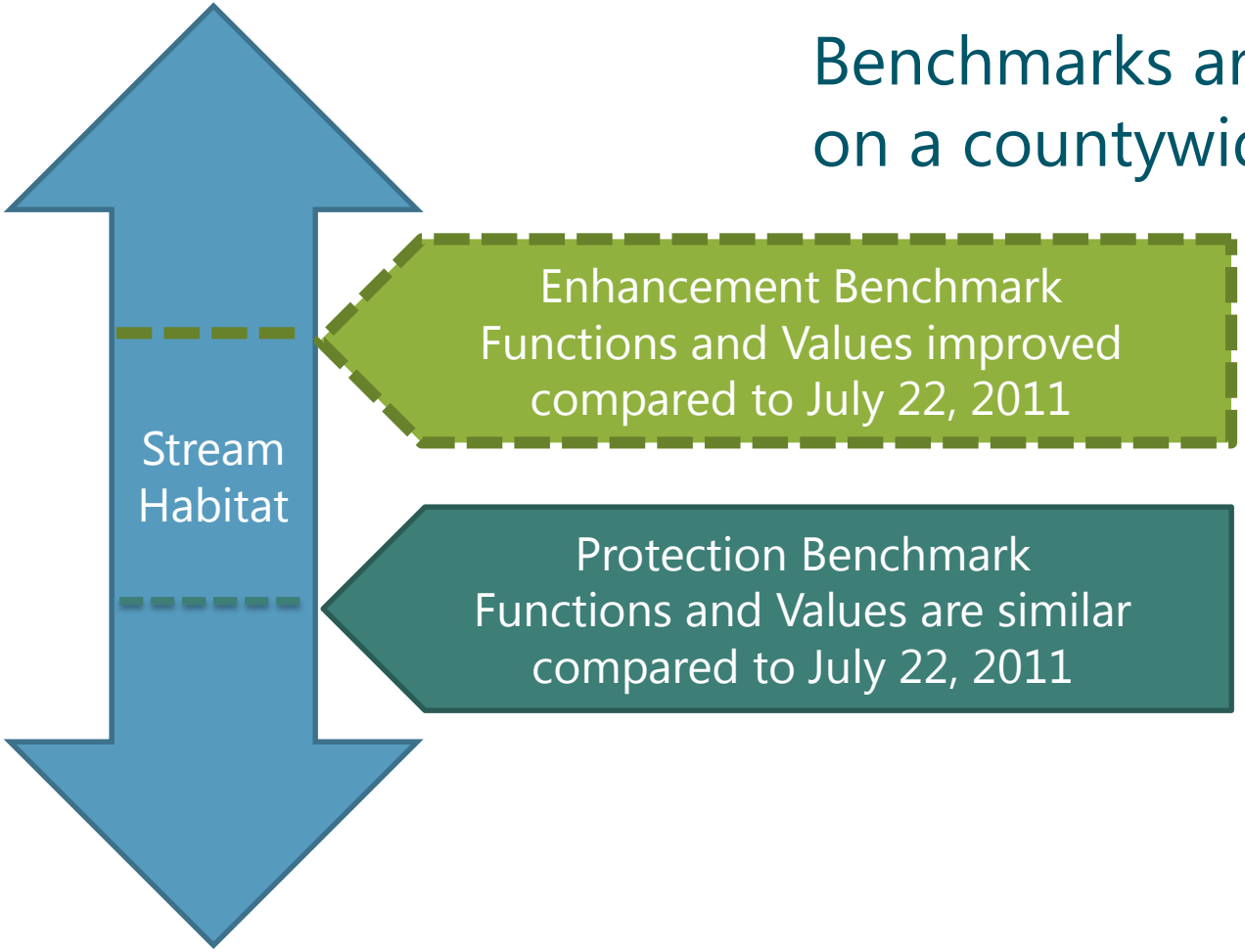
- ***Protect*** *= Prevent the degradation of functions and values existing July 22, 2011*
- ***Enhance*** *= Improve the critical areas processes, structure, and functions of ecosystems and habitats existing July 22, 2011*

Goals

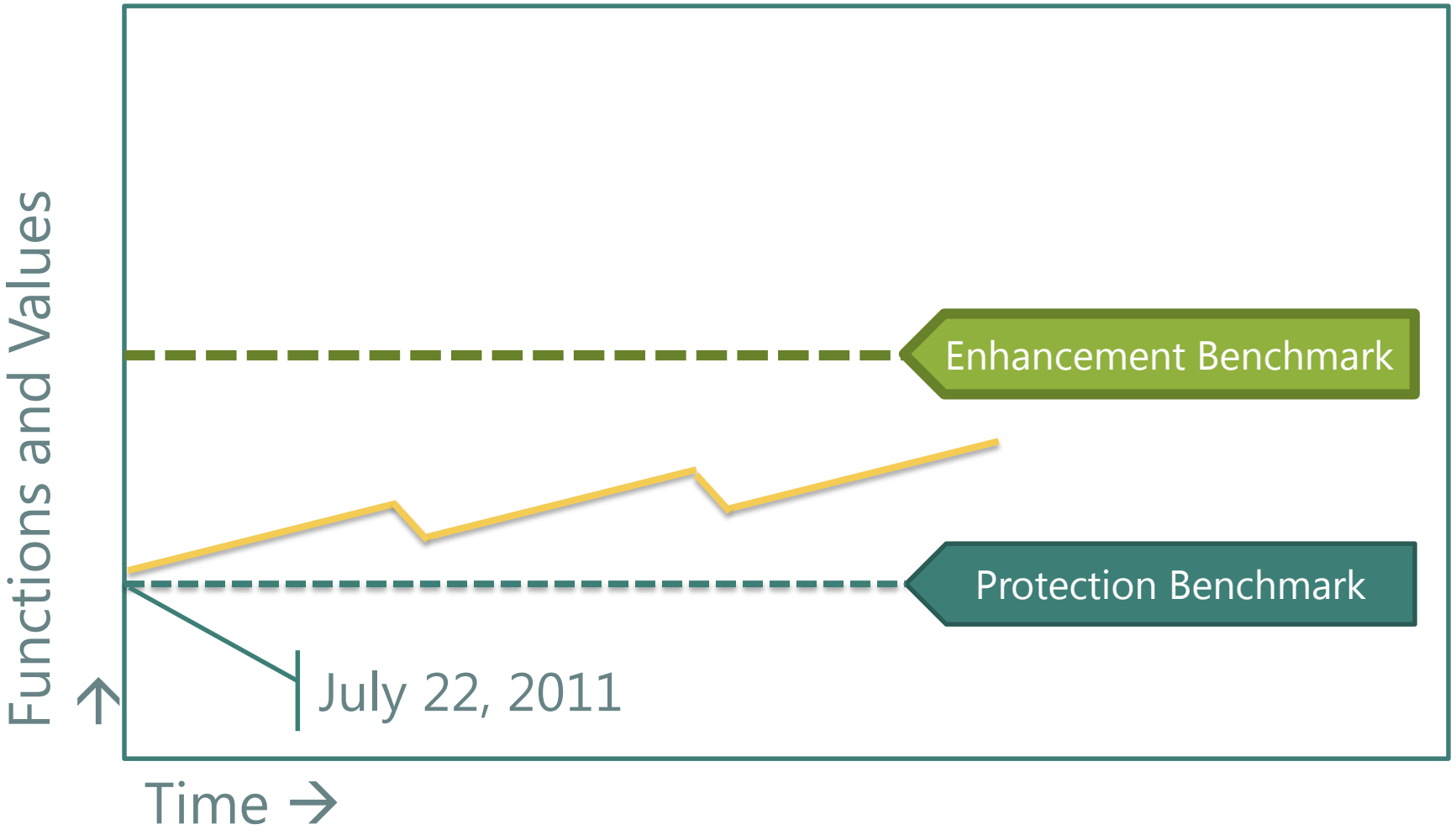
- The work plan includes both **protection and enhancement goals** and benchmarks
- Protection goals must be met through VSP
  - Current VSP funding provides for protection of critical areas
- Enhancement goals are not required to be met through VSP
  - Counties can enhance if additional funds become available for incentives
- Establishing and meeting enhancement benchmarks helps:
  - Document ecological lift
  - Buffer baseline conditions from unforeseen events (e.g., fire)
  - Helps assess County-wide protection of critical areas functions and values

Measurable Benchmarks

Benchmarks are evaluated on a countywide basis



Monitoring and Benchmarks



Critical Area Functions and Values

	Water Quality	Hydrology	Soil Health	Habitat
Wetlands				
Fish and Wildlife Habitat Conservation Areas				
Critical Aquifer Recharge Areas				
Geologically Hazardous Areas (Erosion)				
Frequently Flooded Areas				

Outreach

Outreach

During Plan Development

- Upcoming meetings and forums
- Distribution lists to utilize
- Others?

Work Plan

- Ongoing education and communications on VSP
- Individual agricultural producer outreach
- Farm conservation planning

Roundtable Discussion

Next Steps

Expected Next Steps

- January 10, 2016
  - Conceptual Overview of Work Plan
- February (no meeting)
  - AQ Prepare Work Plan
- March – May
  - Review and Comment on Work Plan