Planning Riparian Buffer Practices in FY16

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Today's Objectives

- Discuss NRCS goal to provide quality conservation plans

- Announce what has changed for FY16 planning

- Explain revised TN-14 (Wildlife Habitat Evaluation Guide)

- Explain SVAP2-Stream Visual Assessment Protocol

- Introduce a new planning tool to assist with buffer alternative development

- Walk through example buffer planning process

Conservation Planning-NRCS Foundation

The NRCS objective in conservation planning is to help the client manage resources for sustained use and productivity while considering economic and social needs.

Planning is complex and dynamic

The planner strives to balance natural resource issues with economic and social needs of our farmers and ranchers through the development of the conservation plan.

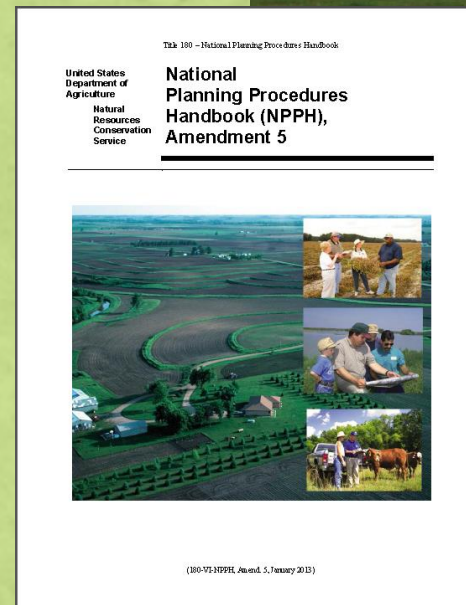Modified natural channel

Concerned Neighbor

Beginning Farmer

Old fence infrastructure

"Best" hayland is adjacent to stream

Resource Management Alternative (RMS)

Our Job is to:

- Identify ALL resource concerns on the planning unit

- Provide conservation practice alternatives to improve all resource concerns

- Discuss the alternatives with the landowner

- Document the discussion and clients decisions in case file

Title 180 – National Planning Procedures Handbook

United States
Department of
Agriculture

Natural
Resources
Conservation
Service

**National
Planning Procedures
Handbook (NPPH),
Amendment 5**

(180-VI-NPPH, Amend. 5, January 2013)

What has changed?

Biology Tech Note 14 (1999) has been revised

What has changed?

New buffer width requirement for treating Inadequate Fish & Wildlife Habitat resource concern

Riparian Width Requirement

<u>Minimum</u> buffer width of 50 feet on 70% of the length of the planning unit

What has changed?

Riparian length element added

Riparian Buffer-Length Requirement

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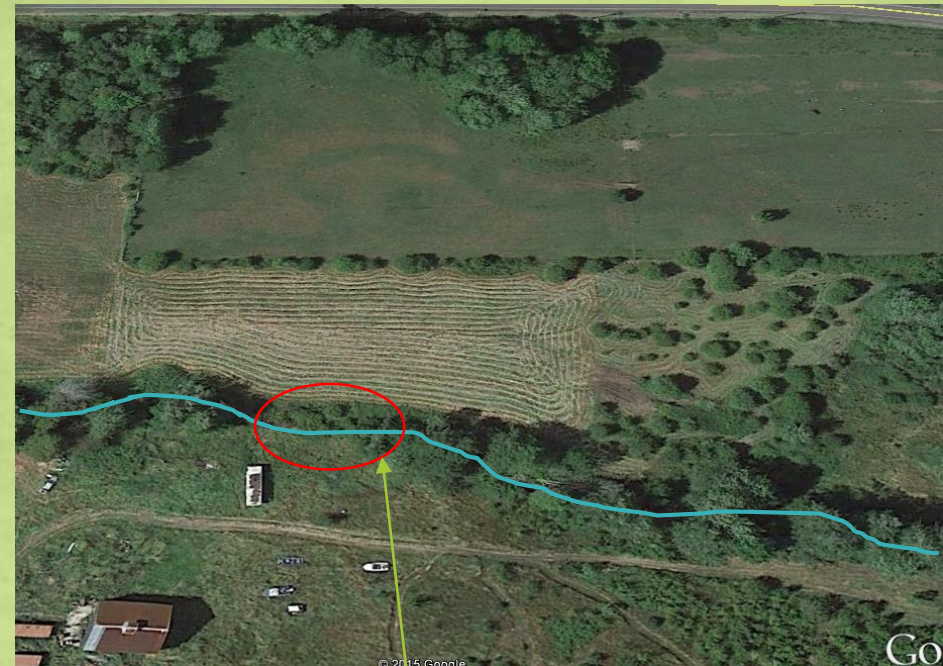
Gap

Gaps in the buffer

- Infrastructure near channels on agricultural operations is common

- Access roads, livestock lanes, pump stations, outbuildings, etc.

- 30% of a buffer can measure less than 50 feet in width and still meet planning criteria

Using the results in Planning Process

Upland Woodland (PC = 60%)	Present	P.C.*	Planned A	P.C.*	Planned B	P.C.*
Forest diversity	33%	Below PC	33%	Below PC	67%	
Grazing system	100%		100%		100%	
Downed woody material	33%	Below PC	67%		100%	
Snags	25%	Below PC	50%	Below PC	75%	
Brush piles	67%		67%		67%	
Forest openings	17%	Below PC	67%		67%	
Wildlife drinking water	67%		67%		100%	
Acres: 120.0 Score:	17%	Below PC	33%	Below PC	82%	

Evaluation Summary

TN-14 formatted to point out the specific habitat elements that are in need of improvement.

SVAP2 Revised for Washington

75 Page Document!

4 Page Document!

SVAP2 Revised for Washington

- Data Sheets formatted for use in the field

- Summary Section for instant results!

- Notes Section to remind you why you circled what you did

How do I know if the site meets Planning Criteria?

Resource Concern Checklist

Found in NRCS eFOTG Section III

Defines target threshold for each resource concern

Aquatic Habitats

Terrestrial Habitats

Planning Criteria for Aquatic Habitats

Resource Concern	Screening Questions No = Met Screening (Not a Resource Concern) YES = Needs to be Assessed	YES or NO or NA (Not Applicable)	Assessment Tools (check all that were used)	Assessment Level Required to Meet Planning Criteria YES = Meets Planning Criteria NO = Resource Concern	YES or NO or NA (Not Applicable)
WILDLIFE RESOURCES					
22A. INADEQUATE HABITAT FOR FISH AND WILDLIFE- Habitat degradation (Aquatic)	Is Aquatic habitat present?		☐ Washington Biology Tech Note 14: Wildlife Habitat Evaluation Guide (WHEG)-Version FY 16 ☐ WA SVAP2 Field Reference Sheets ☐ Washington Water Quality Technical Note 1	Is the Wildlife Habitat Evaluation Guide (WHEG) rating for aquatic habitats greater than or equal to 0.7? **AND when surface stream present** SVAP2 Overall Score is Good (range of 7 to 8.9) **AND/OR** All individual element scores are equal to or greater than a score of 7.	

Riparian Buffer Conservation Strategy for Working Lands

- NRCS will Pilot in FY16

- Intended to provide planners with buffer alternatives to include in producer conservation plans

- Applies to all NATURAL channels, including streams modified to improve drainage

- NOT intended for planning buffer alternatives on constructed ditches (drainage or irrigation)

Riparian Buffer Conservation Strategy for Working Lands

- Strategy assumes natural channels have been modified in past (moved, straightened, dredged) and that channel maintenance will continue to facilitate active agriculture

- Tool identifies individual ecological functions provided by riparian buffers

- Allows planner to provide education to landowners regarding comprehensive list of ecological functions

Riparian Buffer Conservation Strategy for Working Lands

- Provides criteria to show practice alternatives to treat different resource concerns and specific ecological functions at the individual agricultural operation

FY 16 Riparian Buffer Conservation Strategy for Working Lands

Introduction: This buffer strategy applies to all natural channel types, including streams modified to improve drainage. This methodology is intended to provide planners with buffer alternatives to include in conservation plans. It is not intended for planning buffers on constructed ditches. The strategy assumes the majority of stream reaches on working lands have been modified (moved, straightened, dredged) and continue to be managed by the agricultural community to facilitate active farming.

STEP 1: Identify Resource Concern — Inventory Tool Options: WA Biology TN-14, SVAP2, WA Water Quality TN-1, 303 (d) list

STEP 2: Select Desired Buffer Function(s)

STEP 3: Determine Minimum Required — Minimum Buffer width (each side):

STEP 4: Select Conservation Practice Alternatives

STEP 5: Determine plant community & species selection[1]

SOIL BE	WQ Nut	WQ Pest	WQ Path	WQ Sed	WQ Temp	HAB Aq	HAB Up	Ecological Function	35 ft	50 ft	>100 ft (Western WA)	>75 ft (Eastern WA)	Options	Suggested plant materials***
					X	X		Shade stream 60% to maintain water temperature and increase dissolved oxygen	(water drop)	(fish)			390, 391, 422, 612	Deciduous trees, conifers, shrubs preferred; herbaceous vegetation in low precipitation areas or saturated soils
X				X		X		Reduce bank erosion	(animal, water drop)	(fish)			390, 391, 422, 612	Woody species with deeper root systems that resprout from roots or from broken branches
				X				Stabilize surface soil	(water drop)				390, 386, 393, 327, 342	Herbaceous plants with fibrous root systems
				X		X		Trap sediment in surface runoff	(water drop)	(fish)			386, 393, 327, 342	Stiff-stemmed grasses; high stem and debris density, tolerant of sediment build up
	X					X		Trap nutrients in surface runoff	(water drop)	(fish)			386, 393, 327, 342, 422, 601	Herbaceous plants with fibrous root systems
		X				X		Trap pesticides in surface runoff	(water drop)	(fish)			386, 393, 327, 342, 422, 601	Herbaceous plants with fibrous root systems
			X			X		Trap bacteria and other pathogens in surface runoff	(water drop)	(fish)			386, 393, 327	Herbaceous plants with fibrous; high stem and debris density
				X				Slow water runoff and enhance infiltration	(water drop)				327, 342, 386, 390, 391, 393, 422, 612	Combination of deciduous trees, conifers, shrubs and herbaceous species
							X	Habitat and travel corridor for small terrestrial wildlife (invertebrates, reptiles & amphibians, bird species nesting in edge habitat)		(bird)			327, 390, 391, 393, 422, 612	Combination of deciduous trees, conifers, shrubs and herbaceous species
							X	Habitat and travel corridor for medium to large terrestrial wildlife (bird species nesting in interior, small mammals, large mammals, large predatory mammals)			(bird)	(bird)	327, 390, 391, 393, 422, 612	Combination of deciduous trees, conifers, shrubs and herbaceous species
				X				Facilitate stream channel migration (meandering)			(fish)	(fish)	327, 391, 612	Combination of deciduous trees, conifers, shrubs and herbaceous species

WA NRCS October 30, 2015

Site specific planning - Example

Step #1 – Identify Resource Concerns

Run the tools

Benchmark Score:

- TN-14 Riparian Area (Right Bank)= 0.13

- SVAP2= 4.3 (Poor)

- 303d listed reach for Bacteria located ~1000 feet downstream

Step 1: Identify Resource Concerns

Inventory Tools Used: WDOE 303d & SVAP2 & Bio TN-14 (FY'16 version)		Resource Concern
Planning unit contains a stream reach that is labeled with a Bacteria parameter on the WDOE 303d list		WATER QUALITY DEGREDATION: Excess pathogens and chemicals from manure, bio solids or compost applications
SVAP2 shows the following elements with a score below 7:	Element 9-Manure or Human Waste Presence	INADEQUATE HABITAT FOR FISH AND WILDLIFE-Habitat degradation (Aquatic)
	Element 4-Riparian Area Quantity	INADEQUATE HABITAT FOR FISH AND WILDLIFE-Habitat degradation (Aquatic)
	Element 5-Riparian Area Quality	INADEQUATE HABITAT FOR FISH AND WILDLIFE-Habitat degradation (Aquatic)
	Element 12- Fish Habitat Complexity	INADEQUATE HABITAT FOR FISH AND WILDLIFE-Habitat degradation (Aquatic)
Bio TN-14 (FY'16 version) Riparian Area Score = 0.13		INADEQUATE HABITAT FOR FISH AND WILDLIFE-Habitat degradation (Aquatic)
		INADEQUATE HABITAT FOR FISH AND WILDLIFE-Habitat degradation (Terrestrial)

Step 2: Select Desired Buffer Function(s)	Step 3: Minimum Buffer Width (each side)	Step 4: Select Conservation Practice	Step 5: Determine plant community & species selection
Trap bacteria and other pathogens in surface runoff	35 ft. to treat Water Quality Resource Concern and 50 ft. to treat Habitat Degradation	422 and 382 to treat WQ Res Concern; 422, 393 and 382 to treat Habitat Degradation	Herbaceous vegetation with fibrous root systems OR Shrubs with filter strip on landward edge
Overhanging vegetation	50 ft. to treat Habitat Degradation (Aquatic)	391 (50 ft. wide) and 382 to treat Habitat Degradation	Combination of deciduous trees and shrubs with conifers
Provide litter (leaves, twigs, branches, organic matter and roots) input to stream	50 ft. to treat Habitat Degradation (Aquatic)	391 (50 ft. wide) and 382 to treat Habitat Degradation	Combination of deciduous trees and shrubs with conifers
Root stability supporting undercut banks	50 ft. to treat Habitat Degradation (Aquatic)	391 (50 ft. wide) and 382 to treat Habitat Degradation	Combination of deciduous trees and shrubs with conifers
Provide source of large woody debris	100 ft. to treat Habitat Degradation (Aquatic)	391 (100 ft. wide) and 382 to treat Habitat Degradation	Combination of conifers and deciduous tree species
Crop pollinator habitat	35 ft to treat Habitat Degradation (Terrestrial)	422 (35 ft wide) or 327	Combination of conifers and deciduous tree species

This is the RMS Conservation Practice Alternative

Landowner selected alternative

Step 2: Select Desired Buffer Function(s)	Step 3: Minimum Buffer Width (each side)	Step 4: Select Conservation Practice	Step 5: Determine plant community & species selection
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Landowner selected planting a shrub buffer for pollinator enhancement

EQIP funding to treat Inadequate F/W Habitat-Degradation-Terrestrial

Reminder…

- The new buffer width criteria is used when planning a buffer which will treat an Aquatic HABITAT resource concern

- Buffers to treat a WATER QUALITY resource concern are still going to be offered as an alternative during RMS planning

Photo Credit: Whatcom CD

Questions?

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