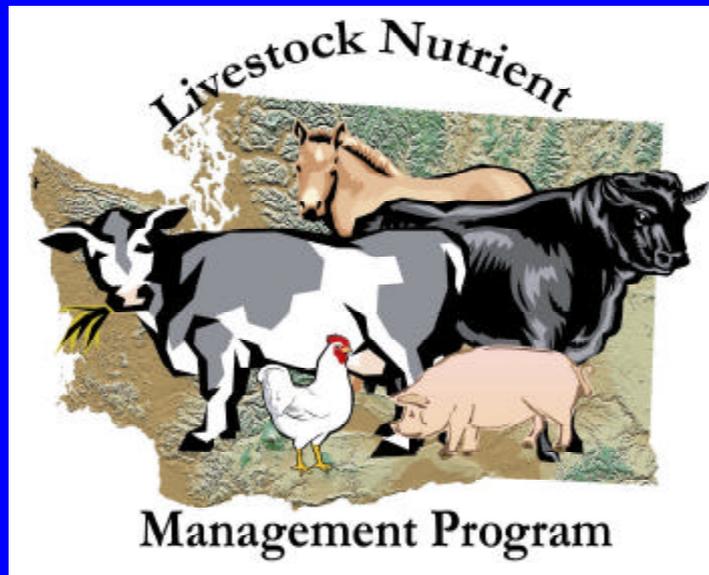
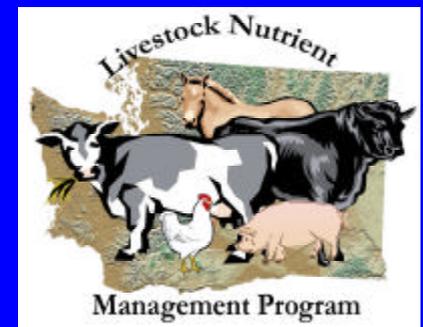


Water Quality Risk Assessment Tool For Livestock Facilities

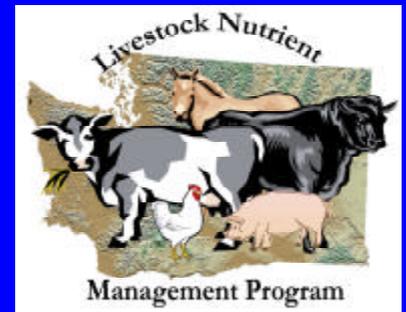


**Joe Harrison
And
Tip Hudson
Washington State University**

**An education program was developed
in 2004 that consisted
of a partnership amongst
Washington State University,
Washington State Department of Agriculture,
Washington State Department of Ecology,
Natural Resources Conservation Services,
US-EPA, and
Conservation Districts state-wide.**



Overall education goal was to provide a common education message related to how livestock operations could adopt management practices that could protect water quality and sustain viable livestock operations.



An identified outcome of the education effort was the development of a Self Assessment Water Quality Tool

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Water Quality Risk Assessment Tool for Animal Feeding Operations



The risk assessment tool contained in this document has been developed to assist livestock producers in Washington State to make a self-assessment as to the relative risk of their operation of having an impact on surface and ground water quality.

The tool is designed to be used in two steps:

Step 1: Determine if your operation is an animal feeding operation (AFO).
[Due to the uncertainty (April 2005) of what factors will result in a designation of a facility as a Concentrated Animal Feeding Operation (CAFO), step 1 does not attempt to categorize a facility as a CAFO].

Step 2: Determine the relative risk of having an impact on surface and ground water quality.

Photos that are used in this assessment tool are for example purposes

[Go to Decision Tree](#)

Directions Read First Introduction Decision Tree Risk Assess Tool Pictures BMP

Ready

start Microsoft PowerPoint ... AFO Risk Assessment ... Microsoft Excel - Live ... 10:12 PM

Water Quality Risk Assessment Tool for Animal Operations

Primary Use of Tool: The risk assessment tool was developed to assist livestock producers in Washington State to make a self-assessment as to the relative risk of their operation of having an impact on surface and ground water quality.

Second Use of Tool: Demonstrate the types of BMPs that might be effective for protecting water quality and connecting landowner with local Conservation District staff

Training and Use of the Tool

A three day workshop was held in which the tool was debuted as well as a series of presentations which were centered around real-farm case studies.

A mailing was made to >12,000 livestock producers in WA State encouraging them to contact the Conservation District Or access our website to complete the Assessment Tool.

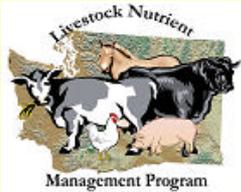
Workshops (>50) were then held with producers across the state by conservation districts alone or in cooperation with Tip or I.

Water Quality Risk Assessment Tool for Animal Operations

The tool is designed to be used in two steps:

Step 1: Determine if your operation is an animal feeding operation (AFO).

Step 2: Determine the relative risk of having an impact on surface and ground water quality.



This self assessment tool has been developed in Microsoft Excel.

To view the pages properly, make sure that you adjust the view by going to the "View" selection on your top toolbar.

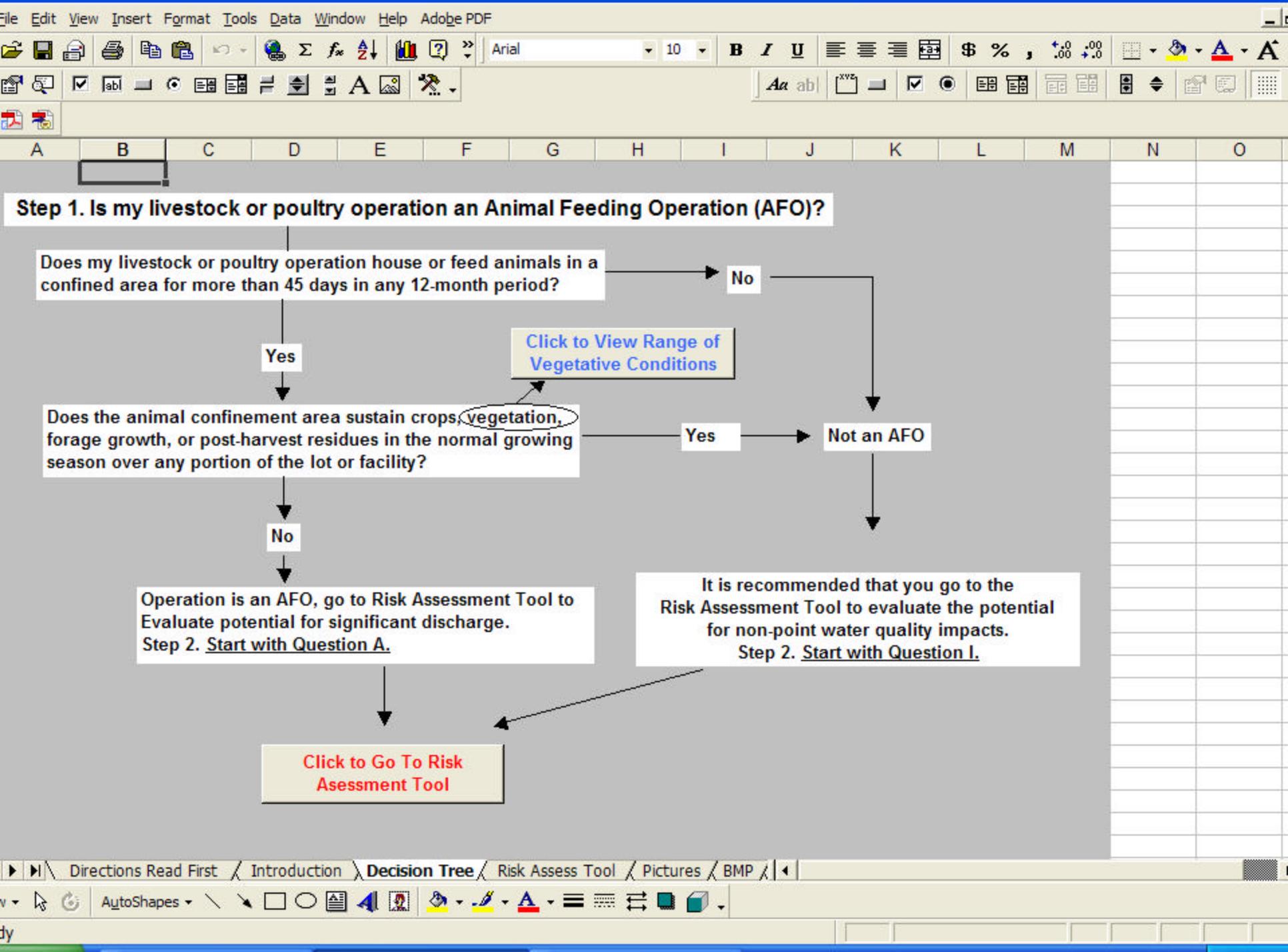
To navigate, simply scroll down a page or click on buttons to move to a new location or page.

You can also navigate from page to page by selecting a worksheet by clicking on the tabs at the bottom of the page.

Go to Introduction

Go to Acknowledgements





Step 1. Is my livestock or poultry operation an Animal Feeding Operation (AFO)?

Does my livestock or poultry operation house or feed animals in a confined area for more than 45 days in any 12-month period?

No

Yes

[Click to View Range of Vegetative Conditions](#)

Does the animal confinement area sustain crops, vegetation, forage growth, or post-harvest residues in the normal growing season over any portion of the lot or facility?

Yes

Not an AFO

No

Operation is an AFO, go to Risk Assessment Tool to Evaluate potential for significant discharge.
Step 2. Start with Question A.

It is recommended that you go to the Risk Assessment Tool to evaluate the potential for non-point water quality impacts.
Step 2. Start with Question I.

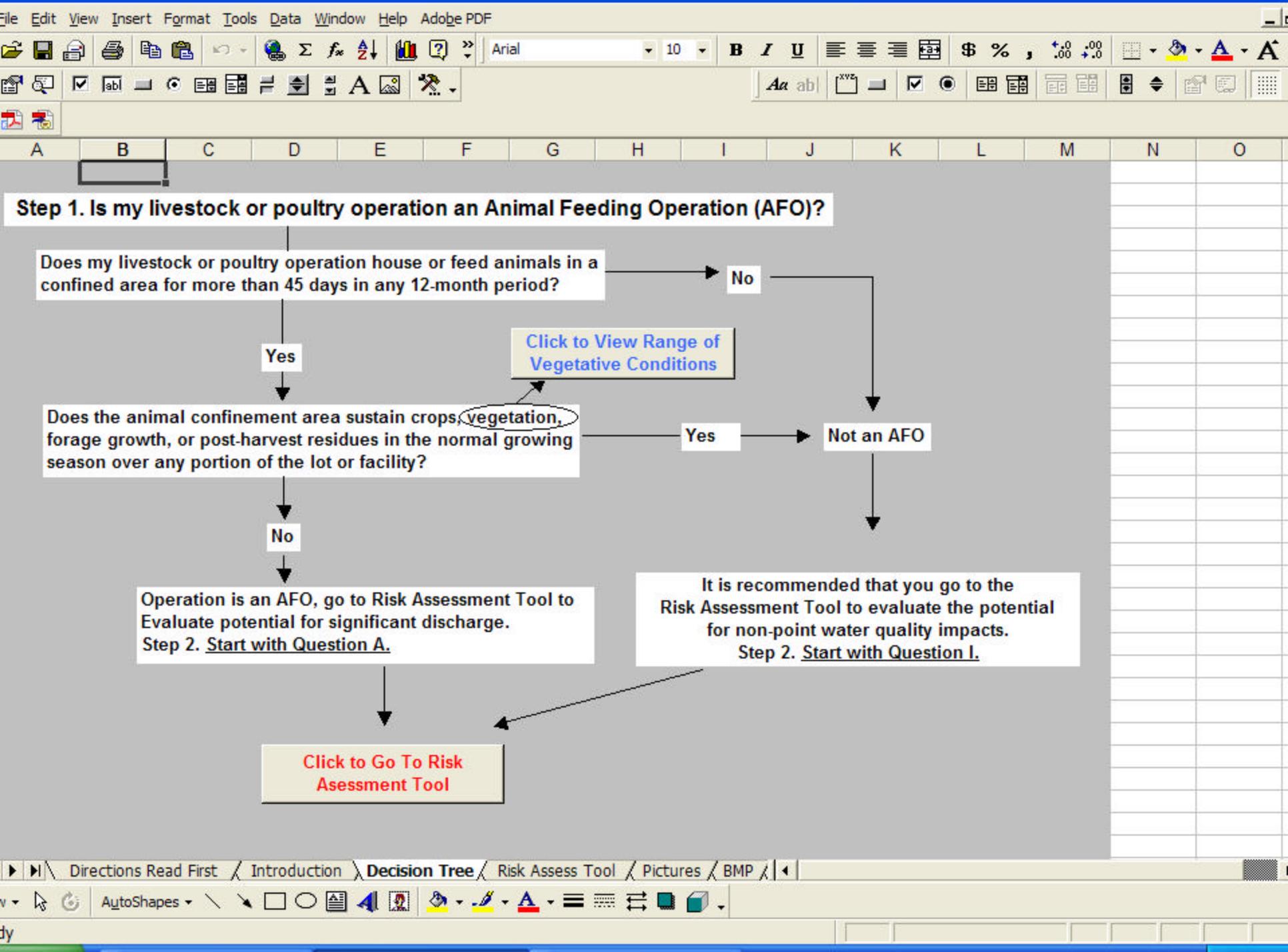
[Click to Go To Risk Assessment Tool](#)

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Return to Decision Tree





Step 1. Is my livestock or poultry operation an Animal Feeding Operation (AFO)?

Does my livestock or poultry operation house or feed animals in a confined area for more than 45 days in any 12-month period?

Yes

No

[Click to View Range of Vegetative Conditions](#)

Does the animal confinement area sustain crops, vegetation, forage growth, or post-harvest residues in the normal growing season over any portion of the lot or facility?

Yes

Not an AFO

No

Operation is an AFO, go to Risk Assessment Tool to Evaluate potential for significant discharge.
Step 2. Start with Question A.

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Step 2. Start with Question I.

[Click to Go To Risk Assessment Tool](#)

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Image [Image Tools Icons]

Risk Assessment Tool				Practice Considerations			
Question	Proximity of Confinement Area to Water, Confinement Condition Factors, or Factors Related to Non-AFO Operations	Higher Risk H	Lower Risk L	Enter an H or L or NA (NA = not applicable) in the cells below	If risk is high, consider these Best Management Practices	NRCS Code	Possible Cost Share
Are animals confined for a portion of the day?		Yes		No	h	NA	NA
Is the confinement area located in a floodplain?		Within floodplain		Above floodplain	h	Move animal confinement area out of flood plain	561
What is the distance from the confinement area to any water well(s)?		Less than 100 feet away		More than 100 feet away	h	Consider relocating lot and conduct water quality test on well water	EFOTG Section 3 and local ordinances
How close is the confinement area to Surface Water?		Less than 100 feet away		More than 100 feet away	h	Consider relocating lot or routing surface water through culvert	(buried culvert 620) EFOTG Section 3 and local ordinances
Does the confinement area slope towards surface water and encourage overland movement of water?		Yes		No	h	Consider installing berm, filter strip, or grassed waterway	362, 393, 412 EFOTG Section 3 and local ordinances
Are there established pathways for movement of surface water runoff from confinement area? (ditch or subsurface drain)		Yes		No	h	Consider installing berm, filter strip, or grassed waterway	362, 393, 412 EFOTG Section 3 and local ordinances
Is run on surface water						Consider installing berm	362, 393, 412 EFOTG Section 3

Directions Read First Introduction Decision Tree Risk Assess Tool Pictures BMP

AutoShapes [Drawing Tools Icons]

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Return Q E



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24		Factors Adopted to Reduce Risk	Higher Risk	Lower Risk	Indicate H or L or NA (NA = not applicable)	Best Management Practice	NRCS Code	Cost Share				
25	P	Is manure managed or removed regularly from AFQ?	No	Yes	h	Routine manure collection and storage	313	.				
26	Q	Do you stack/store manure under cover?	View Picture	View Picture	h	Use of manure at agronomic rates	590, 633	.				
27	R	Do you spread manure on fields based on nutrients in manure?	No	Yes	h	Divert rain water via gutters, downspouts, outlets, catch basin, and diversions	362, 558, 638	.				
28	S	Do you divert clean water away from buildings and manure storage areas?	No	Yes	h	Adopt practices to maintain high forage yield.	314, 511, 512, 528, 548, 590	.				
29	T	Are pastures in productive condition?	View Picture	View Picture	h	Adopt practices to maintain high forage yield.	314, 472, 511, 512, 528, 548,	.				
30	U	Does pasture management allow plant recovery before plant dormancy?	No	Yes	h	Adopt practices to filter surface water	386, 390, 391, 393	.				
31	V	Is there a vegetated buffer/filter strip between facilities and surface waters?	View Picture	View Picture	h	Develop approved mortality practices.	316, 317	.				
32	W	Do you have a mortality management plan?	No	Yes	h	Soil test regularly	590, 633	.				
33	X	Do you soil test?	No	Yes	h	Develop a nutrient management plan with	328, 511, 528, 590,	.				
34	Y	Do you have a nutrient management plan?	No	Yes	h	Limit access of animals to timbered areas	472, 528, 561	.				
35		Other Management Factors	Higher Risk	Lower Risk	Indicate H or L or NA (NA = not applicable)	Best Management Practice	NRCS Code	Cost Share				
		Are the naturally timbered areas on your property protected from trampling or										

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35		Other Management Factors	Higher Risk	Lower Risk	Indicate H or L or NA (NA = not applicable)	Best Management Practice	NRCS Code	Cost Share				
36	Z	Are the naturally timbered areas on your property protected from trampling, or tree bark damage, due to livestock?	No	Yes	h	Maintain effective windbreaks	380, 650, EFOTG Section 3	.				
37	AA	Is the primary protection from wind or snowstorms by windbreaks or naturally timbered areas at least 100 feet from surface water and wells?	No	Yes	h	Adopt practices to maintain high forage yield.	472, 528	.				
38	BB	Are the grazing areas managed to prevent trampling and overgrazing by livestock?	No	Yes	h	Adopt practices to filter surface water	313, 362, 386, 390, 391, 393, 634, 635	.				
39	CC	Does your wash/waste water (water used to groom livestock, wash stock trailers, clean out stalls, etc) filter through managed vegetation prior to leaving the property or reaching surface water and wells?	No	Yes	h	Adopt practices to filter surface water	313, 362, 386, 390, 391, 393, 634, 635	.				

If after completing the self assessment tool, you determine that any of your responses fall into the higher-risk category, it is recommended that you seek further assistance by contacting your local conservation district. Please remember that this evaluation is an attempt at providing guidance for a complex set of site specific conditions.

[Go to List of Conservation Districts](#)

Directions Read First Introduction Decision Tree Risk Assess Tool Pictures BMP

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Return to Risk Assessment Tool

Washington State Livestock Technical, Financial and Educational Assistance

Natural Resources Conservation Service Website: www.wa.nrcs.usda.gov

Washington State Conservation Districts Website: www.conserver.org

Office Addresses and Phone Numbers

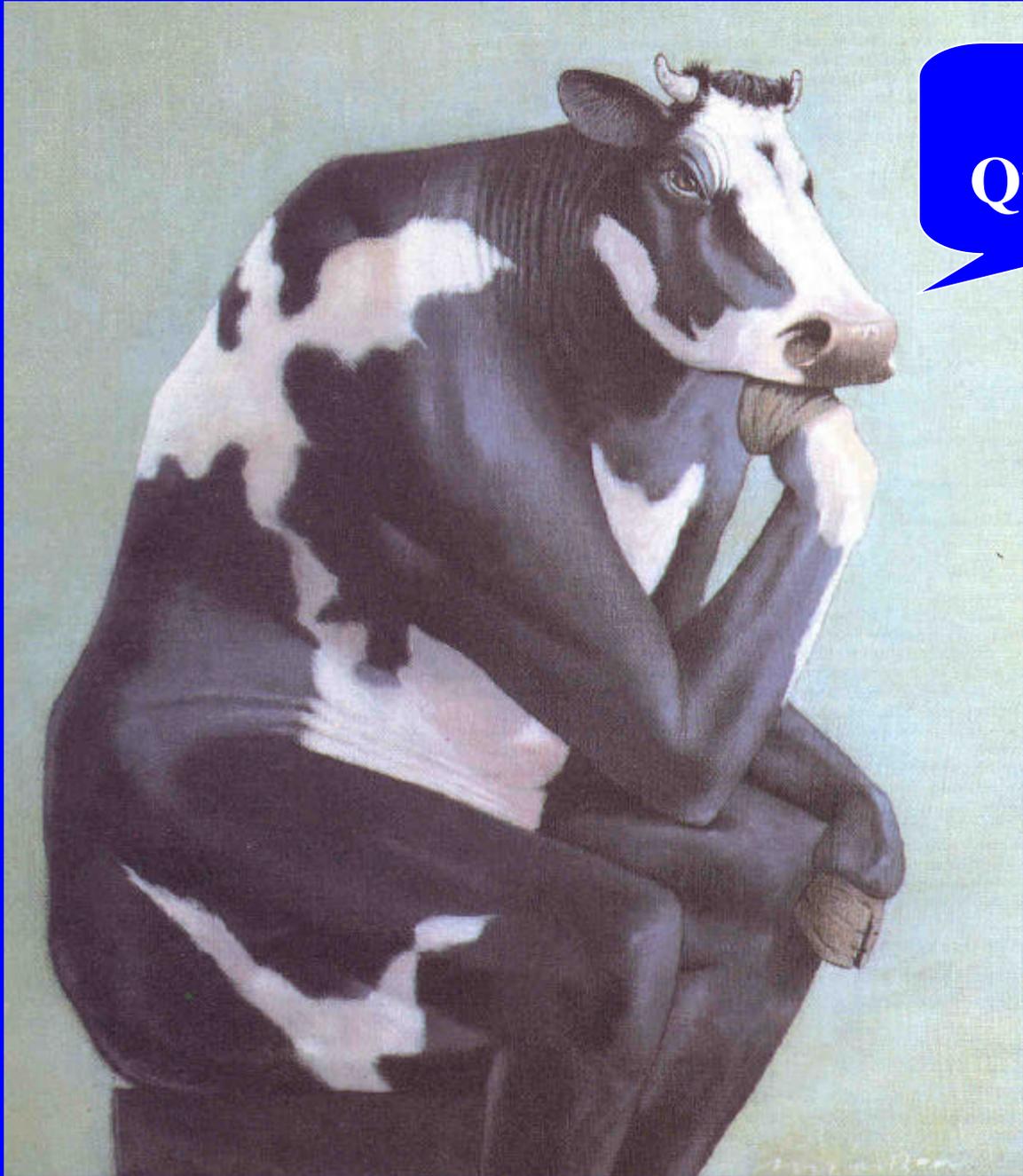
OFFICES	ADDRESS	NRCS Phone	CD Phone
Adams	402 E. Main, Ritzville 99169-1338		509/659-1553
Adams	506 Weber Avenue, Suite B Ritzville 99169	509/659-1761	
Asotin County	720 - 6th St., Suite B, Clarkston 99403-2012	509/758-8012	509/758-8012
Benton	618 8th Street Prosser 99350	509/ 786-1923	
Central Klickitat	1107 S. Columbus Ave., Goldendale 98620-9296	509/773-5822	509/773-5823
Chelan County	301 Yakima St. Room 307, Wenatchee 98801-2996	509/664-0210	509/664-0265
Clallam	111 E. 3rd, Room 2A, Port Angeles 98362-3018	360/ 452-8994	360/452-1912
Clark	11104 NE 149th St, Bldg. C, Suite 400, Brush Prairie 98606-9518	360/883-1987	360/885-2284
Columbia	U.S. Post Office Building, 202 S. Second St., Dayton 99328-1327	509/382-2421	509/382-4773
Cowlitz	2125 - 8th Ave., Longview 98632	360/425-1880	360/425-1880
Eastern Klickitat	1107 S. Columbus Ave., Goldendale 98620-9296	509/773-5822	509/773-5823
Ferry	84 E. Delaware Ave., PO Box 1045, Republic 99166-1045	509/775-3473	509/775-3473
Foster Creek	103 N. Baker St., PO Box 428, Waterville 98858-0428	509/ 745-8561	509/745-8362
Franklin	1620 Road 44 N., Pasco 99301-2667	509/545-8546	509/545-8546
Grays Harbor	330 Pioneer Ave. W., Montesano 98563-4499	360/249-5900	360/249-5980
Jefferson County	205 W. Patison St., Port Hadlock 98339-9751		360/385-4105
Jefferson County	111 East 3 rd Street, Room 2B Port Angeles 98362	360/452-8994	
King	935 Powell Ave. SW, Renton 98055-2908	206/764-3325	206/764-3410
Kitsap	817 Sidney Ave., Port Orchard 98366-2460	360/337-4433	360/337-7171
Kittitas County	607 E. Mountain View Ave., Ellensburg 98926-3863	509/925-8585	509/925-8585

Decision Tree / Risk Assess Tool / Pictures / BMP / CD List / Acknowledgements

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Unanticipated Benefit of Tool

Allowed Conservation Districts an opportunity to gather information on the need for technical assistance in their county, both for planning and practice implementation.



**Any
Questions**