

JOINT REGIONAL AGREEMENT ON WATER QUALITY TRADING

Initial Discussion Guide, March 26, 2013

Agreement Element: Quality standards for project implementation & performance

Most credit calculations are modeled assuming BMPs are performing at their best in reducing pollution. A trading program needs quality standards to shape design of a BMP and performance standards to make sure a BMP is being operated and maintained appropriately to meet the assumptions modeled in the credit calculation. Quality standards are also a way to ensure that the actions taken on the ground are enhancing ecosystem function for the credited actions in a way that is ecologically responsible and contributes toward watershed health and resiliency (i.e. using native species in riparian forests instead of hybrids). For most programs, quality and performance standards are tied to NRCS' manuals. In some cases, trading programs may wish to add or change these standards. NRCS standards are widely available and widely applied. Agricultural and resource professionals and landowners are typically familiar with applying them, easing their acceptance. However, because NRCS standards were intended as guidelines for agricultural producers and professionals, they can be problematic to apply in a crediting context. They are written with a lot of flexibility and focus more on factors to consider instead of specific requirements and thresholds. Using a "you should consider" vs. a "thou shalt approach" makes it easier to apply standards to a range of scenarios, but more difficult to distinguish when the BMP is in or out of compliance.

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Willamette Partnership and the Lower Boise program sought guidance from stakeholder groups, including restoration practitioners and technical committees to build BMP guidelines specifically suited to their program's needs.

I. Options and examples

Quality standards for BMP design and construction

<p>Option A <i>Each eligible BMP must be designed and constructed using quality standards defined by NRCS.</i></p> <p>Who does it this way? Most trading programs in the Midwest use NRCS practice standards. Idaho's Lower Boise program engaged a state BMP technical committee that used the NRCS FOTG standards, and hired a former Agriculture Research Service scientist to develop the equations for each practice to quantify the reductions based on the design standards.</p>	<p>Option B <i>Each eligible BMP must be designed and constructed using quality standards defined and approved by a state agency.</i></p> <p>Who does it this way? In Medford, riparian plantings use quality standards defined by a stakeholder group of riparian restoration professionals and incorporated into DEQ's Internal Management Directive.</p>
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Comment [Schary1]: Lower Boise belongs under option A because we used the NRCS standards, not our own.

Deleted: Idaho's Lower Boise program engaged a technical committee, who worked with ag professionals to craft standards.

Performance standards for BMP operation and maintenance

<p>Option A <i>Each eligible BMP must be maintained according to NRCS performance standards.</i></p>	<p>Option B <i>Each eligible BMP must be maintained according to performance standards approved by a state agency.</i></p>
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<p>Who does it this way? Most trading programs in the Midwest use NRCS practice standards. Idaho's Lower Boise program engaged a state BMP technical committee that used the NRCS FOTG standards.</p>	<p>Who does it this way? In Medford, riparian plantings use quality standards defined by a stakeholder group of riparian restoration professionals and incorporated into DEQ's Internal Management Directive.</p>
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Questions to consider:

[When and where are additional standards \(above NRCS standars\) needed? Does it make sense to establish additional standards for BMPs generating credits, rather than address water quality concerns with NRCS standards in another venue? How will cost-share programs and other funding sources using NRCS standards work with BMPs developed using different or additional standards? How will that affect farmers' interest in trading?](#)

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Comment [Schary2]: These are just suggested questions since that section was missing and I thought those who don't like NRCS standards need to discuss the pros and cons of going with another set of standards.

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II. Recommended default

All BMPs must be designed and maintained to meet or exceed standards approved by the state water quality agencies. Those standards, at a minimum, should be built from NRCS practice standards. State-level standards may add more specificity or requirements as necessary.

III. Reasons to deviate from the default

There may be site-specific considerations for some BMPs that require some flexibility. In these cases, trading programs should define some process for approving a site-specific set of quality and performance standards.

IV. Comparing some of the existing quality and performance standards from NRCS, OR, and ID

Best Management Practice		Implementation Standards		
Practice Type	Practice	Natural Resources Conservation Service (NRCS): Conservation Practice Standards	Oregon DEQ: Internal Management Directive	Idaho DEQ: Water Quality Trading Guidance
Structural Practice	Riparian Forest Restoration	<p>Sample Criteria (Practice Code 391):</p> <ul style="list-style-type: none"> • Buffer must be positioned appropriately and designed to achieve sufficient width, length, vertical structure/density and connectivity to accomplish the intended purpose. • Use tree and shrub species that are native and non-invasive. Substitution with improved and locally accepted cultivars or purpose-specific species is allowed. For plantings and seeding, only viable, high-quality and adapted plant materials will be used. • The minimum width shall be at least 35 feet measured horizontally on a line perpendicular to the water body beginning at the normal water line, bank-full elevation, or the top 	<p>NRCS Code 391 and;</p> <ul style="list-style-type: none"> • All plant materials must come from locally-sourced seed within the same EPA ecoregion. • Plantings must be based on appropriate plant community determined by local reference site. Unless different at the local reference site, the site must support a minimum of 1,600 stems per acre (average) at project year five. • The site must have no more than 10 percent invasive shrub or tree species, and no more than 20% invasive herbaceous species. 	N/A

		of the bank as determined locally.		
	Sprinkler Irrigation	<p>Sample Criteria (Practice Code 442):</p> <ul style="list-style-type: none"> • Design Application Rate. Rates shall be selected such that runoff, translocation, and unplanned deep percolation are minimized. • <u>Criteria for Low Energy Precision Application and Low Elevation Spray Application: Distribution Patterns-</u> For center pivot systems, nozzle discharge CU using the Heermann-Hein weighted area method shall be used in selecting sprinkler spacing, nozzle size, and operating pressure. Nozzle discharge CU shall not be less than 94% of the calculated design flow rate needed at the discharge point. For linear systems, discharge shall be based on equivalent unit areas. <u>Nozzle Spacing-</u> Nozzle spacing shall not be greater than two times the row spacing of the crop, not to exceed 80 inches. 	N/A	<p>NRCS Code 442;</p> <ul style="list-style-type: none"> • Design, installation, operation and maintenance must follow specifications of NRCS Practice Code 442. • Monitoring must ensure that sprinkler conversion is made according to NRCS Code 442. Periodic visual inspection should be made to assure there is no runoff.

Cultural Practice	Crop Rotation, residue and tillage management	<p>Sample Criteria (Practice Code 328):</p> <ul style="list-style-type: none"> • The selected crops and the cropping sequence shall produce sufficient and timely quantities of biomass or crop residue, in conjunction with other practices in the management system, to reduce sheet and rill and/or wind erosion to the planned soil loss objective. • To reduce excess nutrients in the soil profile, use crops with quick germination and root system formation, a rooting depth sufficient to reach the nutrients not removed by the previous crop, and nutrient requirements that readily utilize the excess nutrients. <p>Sample Criteria (Practice Code 329):</p> <ul style="list-style-type: none"> • All residues shall be uniformly distributed over the entire field. • No full-width tillage shall be performed regardless of the depth of the tillage operation. 	NRCS Code 328 and 329	<p>NRCS code 328 and 329 and;</p> <ul style="list-style-type: none"> • Sprinkler irrigated and micro irrigation systems are not eligible. Applicable on any field producing low residue crops. • High residue crops must be part of traditional low residue crop rotation. • High residue crops must be followed by directly seeded crops, using cleaned irrigation furrows to irrigate direct-seeded crop. • Minimum tilling and direct seeding of nitrogen-fixing crops such as alfalfa, peas-alfalfa, or mint, followed by a high nitrogen-utilizing crop.
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