

## Technical Standards Needs Assessment Results September 2011

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### 1. Permanent Soil Erosion and Sediment Control Technical Standards (NRCS)

Technical Standard (date)	Standard Number	Needs Revision	Needs Guidance Material	Needs User Training
Channel Bed Stabilization (1/11)	584		1	2
Contour Farming (11/08)	330			1
Contour Buffer Strips (4/09)	332	1	1	4
Critical Area Planting* (6/02)	342	4		
Diversion (12/10)	362			2
Field Border (11/09)	386			1
Filter Strip** (1/01)	393	1	2	1
Grade Stabilization Structure** (1/10)	410		2	3
Grassed Waterway (1/11)	412	1		1
Heavy Use Area Protection (1/11)	561	1	2	
Lined Waterway or Outlet (8/06)	468		2	3
Mineshaft and Additional Closing (3/08)	457			1
Seasonal High Tunnel System for Crops (Interim) (10/10)	798		1	1
Sediment Basin (12/10)	350		1	2
Spoil Spreading (12/10)	572			
Streambank and Shoreline Protection (11/09)	580	1	3	2
Stripcropping (4/09)	585	1		2
Terrace (12/10)	600	1	1	2
Water and Sediment Control Basin (1/11)	638		1	2

If you checked "Needs Revision," please explain why. Comments:

- 342 is almost 10 yrs. Old
- Contour buffer strips and terraces are very hard to design using the standard and Rusle2. This needs to be clearer and more consistent in this standard family. Critical area is old – need more seeds per sq ft and need to align with 327 and 512 for consistency. Filter strip is over 10 years old; is there better technology out there?
- Streambank Protection: because DNR requires some jobs to have vegetated riprap, it would be good to have some guidance (or perhaps revision) with techniques for planting in rock and also

some species suggestions (as there are some species that are appropriate in this setting, and some that do not work). Definitely there are people throughout the state who have had experience & trials with vegetated riprap that could share their knowledge about what works & what does not work.

- Critical Planting Area should be looked at for seeding deadlines; i.e. the permanent seeding deadline seems much earlier than needed. Standard 393 should be reviewed to include other models to determine thickness; i.e. USDA Forest Service Buffer Design Tools. Standard 561 should be revised to include various concrete/sub-base thicknesses for heavier traffic loads.
- This is most likely under critical area stabilization. Needs better guidance for seeding rates for grassed waterways. Recommend higher rates. Also a possible split seeding date range for introduced grasses or introduced legumes.

## 2. Temporary Soil Erosion and Sediment Control Standards (NRCS)

Technical Standard (date)	Standard Number	Needs Revision	Needs Guidance Material	Needs User Training
Conservation Crop Rotation (1/11)	328		1	2
Mulching (1/11)	484			
Residue Management, No Till/Strip Till/Direct Seed (10/06)	329		2	2
Residue and Tillage Management, Mulch Till (10/06)	345		1	2
Residue Management, Seasonal (10/06)	344		1	2
Residue and Tillage Management, Ridge Till (10/06)	346		1	2
Sinkhole and Sinkhole Area Treatment (12/10)	527		1	2

If you checked “Needs Revision,” please explain why. Comments:

- Need to intergrate [sic] in vertical tillage

## 3. Livestock, Waste Management and Other Agricultural Technical Standards (NRCS)

Technical Standard (date)	Standard Number	Needs Revision	Needs Guidance Material	Needs User Training
Access Control (10/08)	472			
Access Road (9/10)	560			
Agrichemical Handling Facility (5/09)	309			1
Amendments for Treatment of	591			1

<b>Agricultural Waste</b> (6/05)				
<b>Animal Trails and Walkways</b> (1/11)	575			
<b>Closure of Waste Impoundments</b> (11/06)	360	1	2	4
<b>Conservation Power Plant</b> (11/08)	716			2
<b>Feed Management</b> (12/10)	592			1
<b>Fence</b> (9/10)	382			
<b>Forage and Biomass Planting</b> (12/10)	512			2
<b>Forage Harvest Management</b> (5/09)	511			
<b>Manure Transfer</b> (6/09)	634	Revision in progress		
<b>Nutrient Management</b> (9/05)	590	4		2
<b>Pest Management</b> (6/03)	595		1	1
<b>Pipeline</b> (7/11)	516			
<b>Prescribed Grazing (Managed Grazing – Wisconsin)*</b> (12/08)	528			
<b>Roof Runoff Structure</b> (9/10)	558		1	
<b>Solid/Liquid Waste Separation Facility</b> (6/05)	632		1	1
<b>Stream Crossing</b> (1/11)	578			
<b>Vegetated Treatment Area</b> (8/08)	635	1	2	2
<b>Waste Facility Cover</b> (8/07)	367		1	1
<b>Waste Storage Facility</b> (6/09)	313	Revision in progress		
<b>Waste Treatment</b> (6/09) (currently under revision to address the feed storage leachate portion of the standard)	629		3	3
<b>Watering Facility</b> (5/11)	614		1	2

If you checked “Needs Revision,” please explain why. Comments:

- A lot of the guidance material is from out of state
- Pest mgmt – old, is there better way now to complete IPM; tech note should be updated
- Standard 360 I feel could use updating based on the experience gained over the last 5 years. I would like to see better guidance on determining when to stop excavation of contaminated material. Standard 590, yeah.
- 590 Standard needs to be updated to reflect recent information regarding winter application of manure. 635 Standard needs to be updated to reflect changes in guidance from WIDNR for NR243 CAFOs.
- Nutrient Management – recommend splitting the standard into 2 sections, one for operations with livestock manure or organic waste and the other for grain farmers that only utilize commercial fertilizers.

#### 4. Wildlife, Woodland and Recreational Management Technical Standards (NRCS)

Technical Standard (date)	Standard Number	Needs Revision	Needs Guidance Material	Needs User Training
Aquaculture Ponds (7/11)	397			
Aquatic Organism Passage (6/11)	396			
Clearing and Snagging (12/10)	326			
Conservation Cover* (11/08)	327			
Constructed Wetland (11/05)	656		1	1
Cover Crop (11/09)	340	1	1	1
Brush Management (11/09)	314			
Early Successional Habitat Development/ Management (8/01)	647	1	1	1
Firebreak (3/08)	394			
Fish Raceway or Tank (6/11)	398			
Fishpond Management (3/00)	399			
Forest Site Preparation (6/02)	490	1	1	1
Forest Slash Treatment (1/11)	384			
Forest Stand Improvement (4/03)	666	1	2	3
Forest Trails and Landings (4/03)	655	1	1	2
Hedgerow Planting (6/02)	422			
Herbaceous Weed Control (12/10)	315			1
Pond (7/11)	378			1
Prescribed Burning (3/08)	338			
Restoration and Management of Declining Habitats (2/04)	643	1	1	1
Riparian Forest Buffer (1/01)	391	2	1	2
Shallow Water Management for Wildlife* (6/02)	646			1
Shoreland Habitat (Interim) (7/01)	643A	1	1	
Stream Habitat Improvement and Management (5/06)	395			
Trails and Walkways (12/10)	568			
Tree/Shrub Establishment (4/03)	612			
Tree/Shrub Pruning (6/02)	660	1	1	
Wetland Creation (5/02)	658		2	2
Wetland Enhancement (5/02)	659		2	1
Wetland Restoration** (9/00)	657	1	2	3
Wetland Wildlife Habitat Management* (6/02)	644			
Wildlife Upland Habitat Management* (7/00)	645			
Windbreak/Shelterbelt Establishment (6/02)	380	1	2	2

If you checked “Needs Revision,” please explain why. Comments:

- A lot of the guidance material is outdated for both 657 and 380.
- Riparian Forest Buffer is old. Any new developments; Cover Crops need to be updated to include cocktails and new cover crop selection tools.
- Shoreland habitat standard & guidance both need revision: after 10 years on the books & experience statewide, this standard & guidance definitely needs revision! Especially now with many counties using this standard as a mitigation choice with the shoreland zoning rules! Among other items the planting densities need to be revised, as well as the natural recover method which doesn’t work unless there is heavy maintenance.

**5. Storage or Distribution of Surface or Groundwater Technical Standards (NRCS)**

Technical Standard (date)	Standard Number	Needs Revision	Needs Guidance Material	Needs User Training
Drainage Water Management (6/11)	554			1
Irrigation System, Sprinkler (7/11)	442			
Irrigation System, Tailwater Recovery (7/11)	447			
Irrigation Pipeline (7/11)	430			
Irrigation Regulating Reservoir (1/10)	552			
Irrigation Water Management (7/11)	449			
Open Channel* (4/09)	582			1
Obstruction Removal (12/10)	500			
Pond Sealing or Lining, Flexible Membrane Lining* (3/08)	521A			1
Pond Sealing or Lining, Bentonite Sealant (1/11)	521C			1
Pumping Plant (7/11)	533			
Spring Development* (6/08)	574		1	
Structure for Water Control (1/11)	587			1
Subsurface Drain* (4/09)	606		1	1
Surface Drain, Field Ditch (6/03)	607			
Surface Drainage, Main or Lateral (8/06)	608			
Underground Outlet (1/11)	620			
Water and Sediment Control Basin (1/11)	638			
Water Well (4/11)	642			
Water Well Decommissioning (6/11)	351			2

If you checked “Needs Revision,” please explain why. Comments:

## 6. Stormwater Management Technical Standards (WDNR and Commerce)

Technical Standard (date)	Standard Number	Needs Revision	Needs Guidance Material	Needs User Training
<b>Bioretention for Infiltration*</b> (11/10) (revision to be scheduled for engineered soil)	1004		1	2
<b>Channel Erosion Mat</b> (12/04)	1053			
<b>Compost</b> (10/04)	S100	1		
<b>De-Watering</b> (4/07)	1061			1
<b>Ditch Checks</b> (3/06)	1062			
<b>Construction Site Diversion</b> (3/06)	1066			
<b>Dust Control</b> (3/04)	1068			
<b>Filtration Devices</b>	To be assigned	Creation to be scheduled		
<b>Grading Practices for Erosion Control-Temporary</b> (3/04)	1067			
<b>Infiltration Basin</b> (10/04)	1003			
<b>Infiltration Trench – Urban</b> (custodian changed from Comm to WDNR, but may change again based on agency reorganizations)		Finalizing in progress		
<b>Land Application of Anionic Polyacrylamide</b> (7/01)	1050			1
<b>Manufactured Perimeter Control and Slope Interruption Products (Interim)</b> (11/10)	1071	2		
<b>Mulching for Construction Sites</b> (6/03)	1058			1
<b>Non-Channel Erosion Mat</b> (8/03)	1052			
<b>Pervious Pavement</b>	To be assigned	Creation to be scheduled		
<b>Proprietary Stormwater Sedimentation Devices</b> (4/09)	1006			1
<b>Sediment Bale Barrier</b> (8/03)	1055			1
<b>Sediment Basin</b> (3/06)	1064			1
<b>Sediment Control: Water Application of Polymers (Interim)</b> (11/02)	1051	1	1	1
<b>Sediment Trap</b> (9/05)	1063		1	1
<b>Seeding</b> (11/03)	1059			
<b>Site Evaluation for Stormwater Infiltration</b> (2/04)	1002			1
<b>Silt Fence</b> (3/06)	1056	1		
<b>Silt Curtain</b> (9/05)	1070			
<b>Stone Tracking Pad and Tire Washing</b> (8/03)	1057			
<b>Storm Drain Inlet Protection for Construction Sites</b> (10/03)	1060	4		
<b>Swales</b> (5/07)	1005			
<b>Toxicity of Land Applied Erosion Control</b>	To be assigned	Creation to be scheduled		

<b>Products Containing Polyacrylamide</b>				
<b>Turbidity Barriers (9/05)</b>	1069			
<b>Turf Nutrient Management (Interim)* (5/06)</b>	1100	Revision to be scheduled		
<b>Vegetative Buffer for Construction Sites (5/03)</b>	1054			
<b>Wet Detention Ponds (10/07)</b>	1001			1

If you checked “Needs Revision,” please explain why. Comments:

- GTCWI has been working on a revised standard for inlet protection that we believe may do a better job of cleaning storm water while recognizing the need to safely pass the storm events.
- Compost (S100) - Changes to DNR Admin Codes pertaining to compost. Perimeter Control & Slope Interruption (1071) - These should be separated into two and change Commerce references. Water Application of Polymers (1051) - V.C.4. Delete, WisDOT does not maintain a list of these products on our PAL; V.C.3.e. include a brief explanation why WisDOT would be notified of testing, can use DOT projects for testing after use restriction is given; include information that polymers interact with the chemical make-up of both the sediments and water and one product may work in one place and not at all in another; include field tests to know that you are using the correct Polymer for your application. Silt Fence (1056) - V.A.1. description is of slope interruption, but VI.C. says it should not be used as a diversion, these can easily be found to be contradictory; V.D. explain when tieback on drawing should be used; consider adding heavy duty silt fence (essentially backed by hog fence); on drawing show overlap and twist method steps 2 and 3 are reversed. Inlet Protection (1060) V.A.4. Delete or edit, WisDOTs FF Fabric has large openings 600 microns and will truly only stop coarse sands, manufactured products should use the manufacturers material, that is what they tested and intend to be used, FF Fabric is okay for a generic installation; V.B.2.b. should be 'Types B & C'; V.C.1.c. seems like the paragraph is missing here; include something on manufactured inlet protections in addition to generics.

### Additional Questions:

#### 1. How would you prioritize the standards needing revision?

- 342, 380, 657 in that order
- Compile your list and let NRCS determine based on the results.
- Shoreland Habitat needs to be done 1<sup>st</sup> and then streambank protection. Perhaps the shoreland habitat guidance can provide information about planting in riprap with the streambank protection just needing a reference to the guidance.
- Revise the standards that have more impact on runoff and erosion control.
- Forest Site Preparation, Forest Stand Improvement, Forest Trails and Landings would be the top 3.
- Deal with the standards needed for conservation compliance with NR 151 and Farmland Preservation Program first.

- At this time, we [DBA] do not believe any standards need revision. If NRCS has data indicating that standards are not being properly implemented by engineers and operators, the first step must be to provide additional education and guidance. Technical standard revisions should ONLY be contemplated if actual ENGINEERING problems are identified with the standard.
- First the quick and easy ones, second 'everyday' practices, finally newer practices.
- The VTA and Waste Treatment standards should be prioritized for revision.

## **2. Do you know of a new conservation practice for which a technical standard is needed?**

- Rain garden standard, streambank and shoreline bio-engineering standard
- Alley Cropping 311, Multi-Story Cropping 379, Road/Trail/Landing Closure 654, Silvopasture Establishment 381, Windbreak/Shelterbreak Renovation 650.
- DATCP needs to add to ATCP 50 a technical standard for leachate runoff from feed storage.
- Outfall stabilization at culvert ends or similar, and shoreline protection.

## **3. Are there existing standards that could be combined or deleted?**

- Perimeter Control & Slope Interruption (1071) These should be separated into two, there are products and descriptions that apply to one and not the other, I understand why Comm combined them, but as a Tech Std they should be separate. Silt Fence(1056) and Bale Barrier(1055) could be added to or referenced in Perimeter Control.
- Some of the non-structural practice standards could be combined into a Gully/Rill Erosion Control Standard.

## **4. Do you have other technical standard concerns you would like SOC to be aware of?**

- We [DBA] are concerned that revisions are being made to technical standards without a demonstration that engineering requirements are inadequate. Rather, we understand from NRCS staff that, by and large, the success or failure of a technical standard depends on the user's interpretation and implementation of the standard, not on the adequacy of the standard itself. We are also very concerned that Wisconsin NRCS is embarking on revisions to technical standards prior to the National NRCS revisions being finalized.
- The following are minor edits: The Ditch Check std (1062) states that a double row of bales is a BMP, but under Sed. Bale Barrier(1055) bales cannot be used in concentrated flows, minor, but may want to evaluate the difference. Sediment Bale Barrier(1055) VI.C. comment- when using double row of bales should stagger the joints. Temp Grading Practices for EC (1067) typo V.A.1. last line in first column 'grad' should be 'graded.' Non-Channel E-Mat (1052) V.C.1. "Jute fiber for use on slopes 2:1 or flatter, ONLY for sod reinforcement." Moved the word "only" within the sentence slightly different and more accurate meaning. Seeding (1059) Why would you use a nurse crop? Perhaps include in definition.



- Very little guidance and training has been given recently in regard to the non-structural practices, such as contour strip cropping, contour plowing, residue management, etc.

(Comments only provided via email from Peter Wurzer, DATCP)

Agrichemical Handling Facility FOTG Standard 309

This “sump” design portion of this standard is not very specific and varies considerably from those requirements made by State agencies. More guidance concerning liquid tightness of this below ground transfer area would be helpful.

Heavy Use Area Protection FOTG Standard 561

A table could be added to this design standard to simplify the loading conditions vs. slab thickness computation. We have started designing slabs based on machinery and load weight, subsoil’s etc. A simple table with commonly used loaded equipment and subsoil’s vs. slab thickness would be very helpful. Equipment could be farm tractor’s/skid steers, Bobcat type scrapers, and front end loaders carrying sand or feed. Having the slab thickness in a table would speed things up for designers.

Corrugated Metal Pipe Conduits Wisconsin Construction Specifications 6

Some questions have come in about the caulking compound and the requirements that fibers and other inert filler materials are used to obtain a minimum of 60% solids by weight. Several products are available that contain solids but not necessarily fibers and they may want to be added into the specification as allowed.

**Interested in volunteering?**

**Yes:** Charles Sibilsy (Adams Co. LWCD), Greg Rebman (NRCS), Dairy Business Assoc., Michelle Reynolds (WisDOT - have in the past and would sit on any of the DNR Tech Stds teams)

**Maybe:** Patricia Cicero (Jefferson Co. LWCD), Chris Homburg (Green Tier Clear Water Initiative)