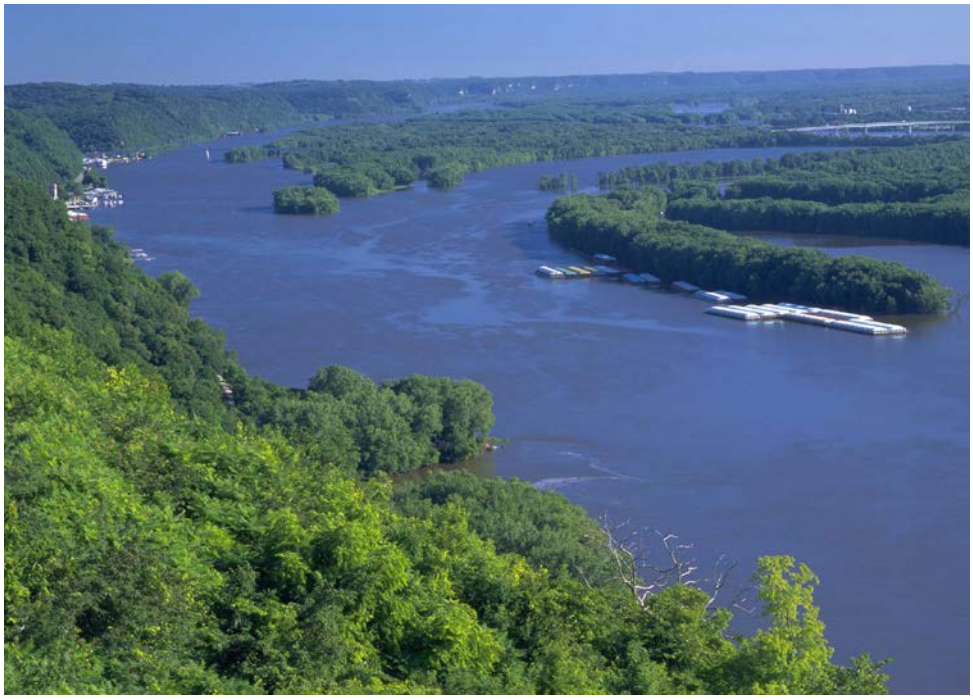
TECHNICAL STANDARDS SURVEY



WISCONSIN STANDARDS OVERSIGHT COUNCIL

2015 Summary of Results

This biennial survey was completed by 245 individuals familiar with Wisconsin's technical standards used in statewide conservation programs. The survey results are used to prioritize revisions and the development of effective technical standards that protect our state's natural resources.

Technical standards survey

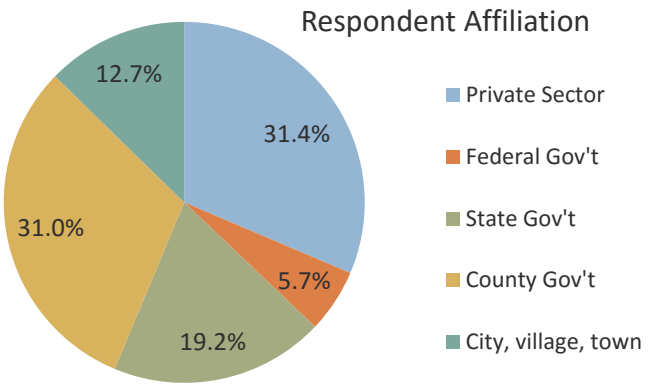
2015 SUMMARY OF RESULTS

Participation in the 2015 Technical Standards Needs survey increased significantly with a higher number of standard user responses and with more diverse disciplines represented in the respondents. The increased participation resulted in more valuable feedback from the private sector and public agencies. Nearly 75% of the respondents thought that Wisconsin's technical standards reflect current research, technology, and field experience. The results also indicated that more improvements are needed to better the standard criteria and implementation. Many suggestions for those improvements were provided.

The comments related to the technical standard improvements will be given to the appropriate Custodian agencies for further review and consideration when revising these standards. Two additional WDNR standards were added to the Work Plan, and the WDNR stormwater engineering group will further evaluate the survey results for any additional projects. The Custodian agencies were aware of and already working on many of the concerns raised by the respondents. The comments bring attention to and reiterate the need to find solutions. The survey results also provided valuable information regarding training needs. SOC will work towards promoting more regular opportunities to educate users on newly revised standards, and support the State Inter-agency Training Committee (SITCOM) to address the training needs.

1. Which affiliation best reflects your work environment?

	Response Percent	Response Count
Private Sector	31%	77
Federal Gov't	6%	14
State Gov't	19%	47
County Gov't	31%	76
City, village, town	13%	31



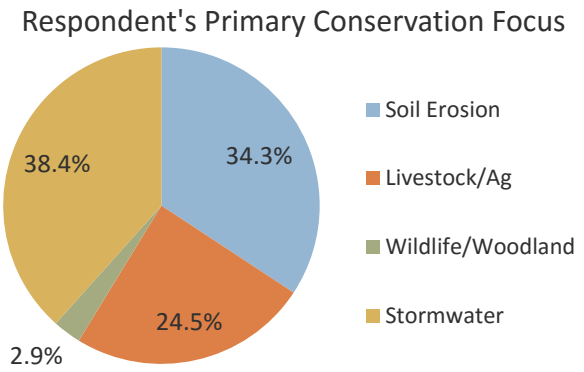
2. How have you previously participated in the Standards Oversight Council process for technical standard development or revision? Check all that apply.

Answer Options	Response Percent	Response Count
Heard about SOC through presentations, newsletters, etc.	60%	145
Subscribed the SOC listserv	31%	76
Commented on draft standards	33%	82
Participated on a SOC team	16%	40
Other (please specify)	12%	29

Other responses: Most of the other respondents either were aware of SOC from the NRCS State Technical Committee or had not heard of SOC before.

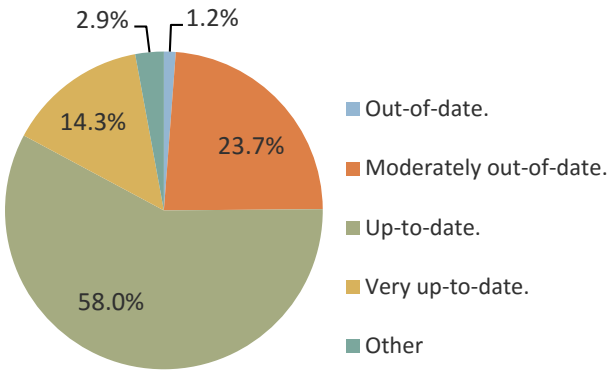
3. Which type of conservation practices do you primarily work on as defined by the categories below?

Answer Options	Response Percent	Response Count
Soil Erosion & Sediment Control (NRCS)	34%	84
Livestock, Waste Mgmt. & Ag (NRCS)	25%	60
Wildlife, Woodland & Recreational Mgmt. (NRCS)	3%	7
Stormwater Mgmt. (DNR)	38%	94



4. How well do Wisconsin technical standards reflect current research, field expertise, and technology?

Answer Options	Response Percent	Response Count
Out-of-date	1%	3
Moderately out-of-date	24%	58
Up-to-date	58%	142
Very up-to-date	14%	35
Other	3%	7

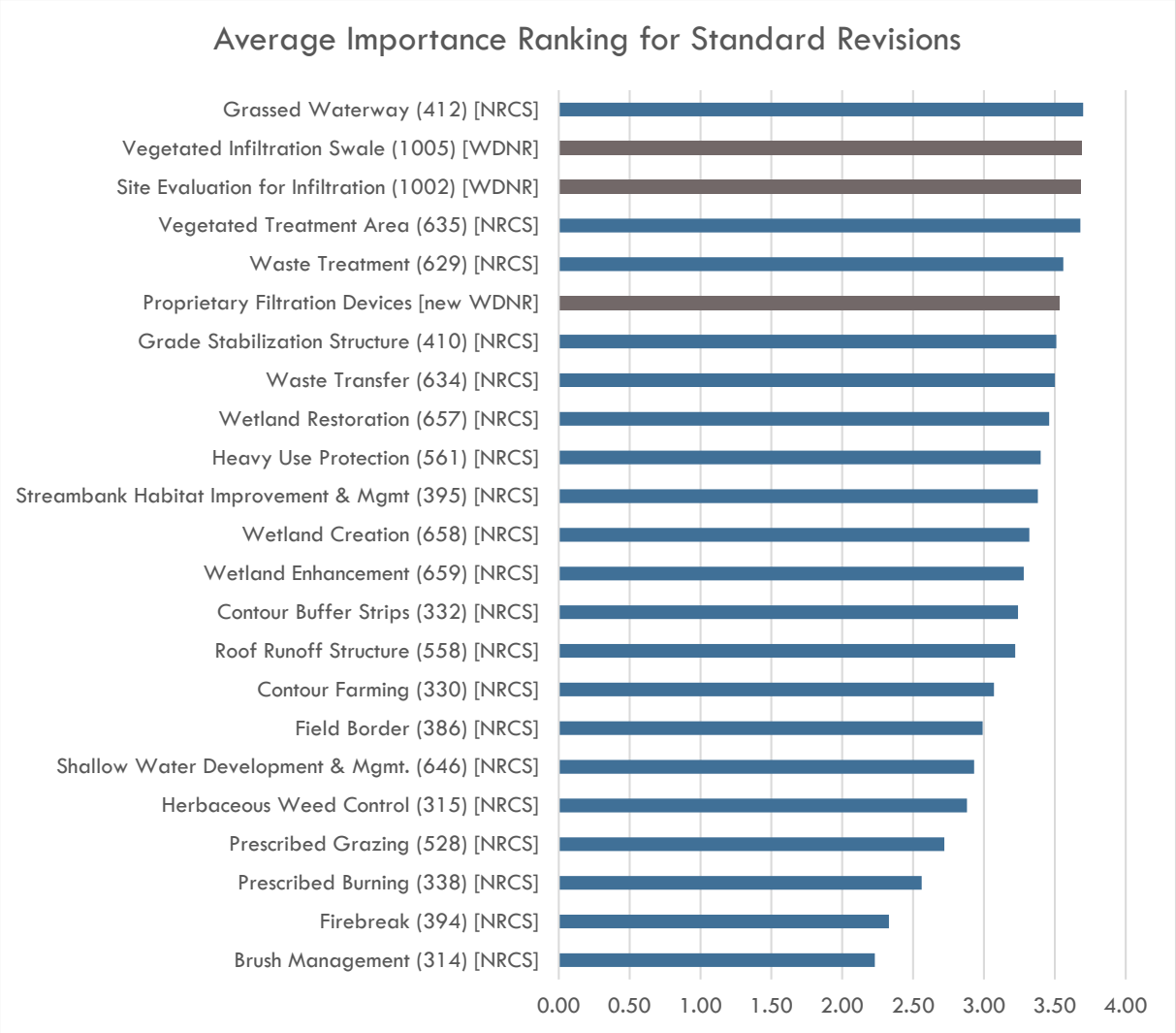


Other responses:

- It would be helpful if I was able to access the current research that helps determine standards.
- Little exposure to standards other than WDNR. WDNR seem to be current.
- I believe that some of the standards are trying to over engineer to compensate for common sense. Changes seem to be made (more rebar, thicker concrete) because of a failure without determining the cause of the failure. If changes are needed to mirror ACI codes then I guess we are trapped. If not, maybe we could investigate ways to build a quality product while managing the cost.
- Probably keeping up. Engineered soil tech standard needs to constantly be updated. Also, failure rates/BMP longevity/durability on BMPs should be tracked and be used as a way to improve the standards.
- Not. Sure. I would really have to look into that one, but I simply do not have the time right now.

5. The following standards are scheduled to be revised in the next two years, although not in any priority. Rank the importance for revising the standards listed below and then provide any input on potential revisions for the work teams to consider.

Participants ranked the importance of a standard revision from 'Not Important' (1) to 'Very Important' (5) or selected 'Not Applicable' to my work. The results shown below were given a weighted average based on the number of responses.



Provide any recommendations for revisions to the above standards.

General comments:

- Capturing as sediment, erosion, runoff, chemicals, etc. as much possible with vegetation is key.
- Standards need to be adjusted to better support initiatives to reduce the impacts of climate change especially intense rain storm management from agricultural land and construction sites; increase pollinator and beneficial insect habitat; reduce contamination of groundwater in karst topography; and significantly reduce sediment loading into fresh water stream, lakes, and river from agricultural land. Packages of practices with improved standards should be developed to focus efforts on these initiatives instead of so much individual practice work. Enforcement of standards is near absent.
- I don't think all standards need revising, they need outreach, implementation, and possibly enforcement.
- Wetland related issues.
- With DNR coming up with new rules for permitting projects and defining conditions for working in wetland areas, it would seem a new look at wetland standards should be revisited. I know very little about the DNR standards, but I would like to learn more.
- Increase invasive plant species regulations
- I am starting to see more integration of the DNR practices with NRCS practices but they sometime conflict. Some effort should be made to have these work together.
  Some of the DNR standards are very limited in application due to limits set in the standard itself. (i.e. 1005) There appears to be no technical reason for the scope of the project to be limited in this manner.

- Revisions should make sense, be easy to follow, and should be written by people with "real world" experience. The general construction community is getting tired of these arm chair engineers coming in and thinking that they know best just because they have a piece of paper. The people writing the revisions should get out in the field and ask contractors about their knowledge of specific practices.
  A prime example: Concrete placed around the inlet of a grade stabilization structure must meet specs and standards despite it not being used structurally. Are you kidding me?

NRCS standard specific comments:

- Related to farming practices, it is EXTREMELY important to address grassed waterways, buffer strips, fence rows, etc. These conservation practices seem to be fading (especially fence rows and buffer strips) and I believe it is having a hugely negative impact on water. In addition, the use of cover crops needs to be addressed and encouraged.
  We have many urban practices, but we SERIOUSLY need to look at agricultural practices. One bad farm with bad conservation practices can outdo many, many years of implementing BMPs. Please address these issues. Thank you.
- I believe that the 314 & 315 standards should be abandoned. Weed and brush control are a landowners responsibility and the NRCS need not be involved. This is a job better suited for the private sector of agronomists and agronomy centers.
  The 330 & 332 contour standards are important, but the present versions are serving us quite well. We don't need somebody "re-inventing" them like they tried to with the 585 standards a few years ago.
  The 410, 412, 561 & 558 are also important, but the present versions are also serving us quite well.
- Enforcement/Enhancement of the grassed waterway standards.
  Keeping agriculture out of lowland/wetland areas.
  Setbacks from road ditches and wetland areas to protect against runoff.
  Developing a standard similar to what fences did in the past. Fences developed a natural buffer along the edges of fields to prevent runoff.
- All the potential tools for the conservation planning toolbox seem equally important as they will all be appropriate for some areas and inappropriate for others. Do not actually refer to many of these existing standards often, but know that some do not seem to take into account frozen soil hydrology, particularly when evaluating the effectiveness of a practice. Some practices that are great for reducing sediment losses from rainfall actually do nothing or lead to greater concentrations of nutrients in snowmelt runoff. Snowmelt and rain on frozen soil should be especially considered for the vegetated treatment areas and practices that are intended to promote infiltration of agricultural runoff.
- Vegetated Treatment Area (635) should be limited to treatment of non-contact manure related runoff (i.e., feed pad after first flush, production area).
- 634-Waste Transfer. The requirement of sections V.A.7. and V.A.8. for calculations and documentation of working pressure and system pressure rating are not attainable for some existing systems. Many existing pumps are custom built or do not have performance information available. Previous standard requirements for pipe ratings for various pump types (chopper, piston, etc.) was more practical. Regulatory staff reviewing for strict conformance with the standard can eliminate the use of these existing pumps due to lack of information on them rather than allowing a pipe specification accommodating custom pumps. This comes as a cost to landowners and a delay in plan approval processing on projects that desire to use existing functional pumps. If a design has been developed and provided under the seal of a professional engineer, standards should not limit the use of existing equipment such as pumps. A means of custom pump use and acceptance should be included in the standard.

  629-Waste Treatment. V.C.1.a.4) states that "Contaminated runoff shall be delivered (via gravity or pump) to a VTA, or shall be collected and land applied according to a NMP." There should be verbiage to clarify that the first flush is the portion to be collected, stored and land applied rather than being ambiguous. The remainder of the runoff may be directed to the VTA or diverted around the VTA in accordance with section V.D.1. of NRCS Code 635.

DNR standard specific comments:

- The "Wisconsin Construction Site Handbook" needs to be updated. Erosion control methods and materials have and continue to change and should be reviewed on a more regular basis.
- I have used Proprietary Filtration Devices on many municipal projects to help them meet NR 216/WPDES Stormwater Permit requirements. Guidance on the best uses of these devices (when, where, how) would be helpful to making sure requirements are actually met.
  Site evaluation for infiltration also seems to be something that at a minimum, municipalities could use more education.
- Not sure what Proprietary filtration devices is referring to; not sure what is proposed to be reviewed / revised in the infiltration standards. The level of importance might be different based on the content to be reviewed.

- Infiltration standards should include design options for water quality enhancement prior to infiltration, especially benzene, toluene, ethylene and xylene, nitrites, chloride.
- Vegetated Infiltration Swale (1005): Similar to Bioretention for Infiltration (1004), some form of engineered soil mix may be needed in the swales. I suggest not requiring such a sandy blend, maybe something more similar to previous 1004 media requirements (i.e. 50% topsoil, 30% compost & 20% sand.)
- The bioretention standard should all to be 2 feet deep like an infiltration basin.
- I think including more options for site evaluation based on new technologies or small sites with limited resources would helpful.
- Assuming the proposed Proprietary Filtration Devices [new WDNR] standard advances, it needs to be done in a manner so that it recognizes individual technologies versus providing a blanket recognition to all systems. These technologies are individually unique due to their proprietary nature and different compositions of filter media. Other states with robust proprietary recognition programs - such as Washington & New Jersey - focus on verifying and certifying individual stormwater technologies.

6. Are there technical standards not on the above list that need revision or development? If so, please write which standards or topics and a brief explanation of your recommendations. Click the links to see a listing of NRCS standards or WDNR standards.

NRCS standard specific comments:

- Related to farming practices, it is EXTREMELY important to address grassed waterways, buffer strips, fence rows, etc. These conservation practices seem to be fading (especially fence rows and buffer strips) and I believe it is having a hugely negative impact on water. In addition, the use of cover crops needs to be addressed and encouraged. We have many urban practices, but we SERIOUSLY need to look at agricultural practices. One bad farm with bad conservation practices can outdo many, many years of implementing BMPs. Please address these issues. Thank you.
- Soil Amendments - including the use of gypsum (calcium sulfate materials), as part of an integrated whole systems approach that includes cover crops, tillage and water management practices.
- 590....ha! Bad Joke. :(
- 590 plans and UW recs. change with increased yields
- Nutrient Management 590, Pest Management Planning, Vegetative Buffer for construction sites. Add raingarden requirements for all cities and developed areas that included native plants instead of riprap and non-native seed mixtures.
- Possibly a standard for identification and treatment of ephemeral gully erosion to follow up on upcoming changes to the 590 standard.
- Gully/channel erosion
- Field run off
- 313 Waste Storage Facility section V.B.3.d. requires all vertical cast in place wall joints to have one control joint with embedded waterstop every 100 feet with a minimum of two per four-sided structure. Temperature and shrinkage steel can be designed into these CIP walls to eliminate this need for joints. Splitting up a CIP wall with waterstop joints is creating an unnecessary weakened joint that could possibly invite leakage over time as the waterstop gets brittle. A tank without waterstop designed by a registered professional engineer, will provide for easier and seamless construction that will better serve the water tight requirement. I would propose this to be an acceptable option for tank construction.
- New Standard to address high density feed lots located on very permeable soils to address groundwater contamination concerns.
- Stream Crossing (578). Would like to see more coordination between NRCS, DATCP, and DNR on general permits and conditions for projects to be eligible for General permits. It seems difficult that following NRCS standards and specifications that we shouldn't be able to design a stream crossing that doesn't meet the General Permit requirements for DNR.
- Irrigation of any sort, residue and tillage management

DNR standard specific comments:

- Ditch Check (Channel) WDNR-1062 1) V.B.1.: Rather than "one ditch check for every two feet of drop in the channel", space so the bottom of the upslope Check is the same elevation as the top of the next downslope Check.
  2) V.C.2. Allows use of manufactured products listed in the WDOT-PAL as temporary ditch checks but many of them exceed the maximum height allowed in V.A.1. of 16 inches.

3) If ditch checks are expected to be trenched in that should be mentioned in the standard.

- I have used ditch checks in some instances for more permanent sediment and/or quantity controls on some highway projects. The current technical standard does not seem to have any guidance on this and that may be helpful. The biggest issue I worry about is maintenance of these checks since it's easy to install and then forget about them.
- Dept. of Commerce and Dept. of Natural Resources already has the Method for Predicting the Efficiency of Proprietary Storm Water Sedimentation Devices (1006) Standard. While entirely focused on proprietary Hydrodynamic Separator (HDS) BMPs, there appears to be no systems that have competed this standard's requirements since its inception in 2008. This calls into question whether this standard provides a realistic pathway for the regulated community affected. Contech respectfully requests the SOC to review and revise this standard as quickly as possible. One concern with this standard is an emphasis on laboratory testing versus real world field testing. Field testing should be the priority of this program as long as influent PSD data is available to help characterize a site.
  A new standard should also consider newer technologies that focus on mimicking bioretention BMPs, such as biofilters. The new standards should incorporate the latest water quality standards and move beyond the sole focus of TSS and - at a minimum - also include total phosphorus.
- Underground wetlands - although I understand SLAMM can handle these, more might be used if a Tech Std existed
- Change WinSLAMM to allow hydrodynamic separators to get credit without the 5 micron requirement. Make them more user friendly.
- Silt fence for topsoil piles should be re-evaluated for sites that provide adequate erosion control site-wide. This should be handled on a case-by case basis. These mandates are expensive and unnecessary on large sites that have proper perimeter erosion controls.
- Some could use tweaking based on current research using innovative techniques, not same old i.e. buffer areas at end of drainage pipes to capture water before entering streams/ditches
- Consider updating the Permeable Pavement Standard 1008 to reflect differences between systems. For example, systems such as PaveDrain are less prone to clogging and more responsive to cleaning than many other types of permeable pavements. Designers should be able to take advantage of these differences in performance.
- 1050 - Land Application of Anionic Polyacrylamides and 1058 - Mulching for Construction Sites are both very outdated. Since 01 and 03 respectively, many technologies in erosion controls have come on to the scene that control erosion many times greater than these, while providing much more exceptional vegetation growth. Almost all states have 3 or more categories of Hydraulic Erosion Control Products (HECPs). These outdates standards need to be revised.
- WDNR 1050 and 1051 need revisions desperately, especially 1051. I've been assisting DNR on this, so it should be listed.
- Scour prevention at storm sewer outfalls, pond inflow locations, culverts, etc.
- Compost (S100)- Using compost to amend sandy soils to meet percent fines in separation layer of infiltration practices.
- Wet detention pond
- Dewatering is a must; current standard is insufficient to handle real life situations.
  Need new standards re: 1) artificial wetlands/vegetation areas; 2) wet pond maintenance (specifically routine herbicide / algaecide treatments, & design/shape/vegetation used in and around ponds); 3) rainwater harvesting / cisterns; 4) alternative vegetation and maintenance re: chloride impacts in and around grassed swales along roads; 5) winter stabilization techniques (a separate standard addressing an assemblage of different practices that work during winter would be great!)
- Tubular erosion control methods and materials need to be reviewed and clarified.
- Leaf Management and Pickup
  Soil enhancement for infiltration
  Stormwater Pond Dredging
- Bioretention for Infiltration (1004): In lieu of requiring live plants (plugs, perennials, etc.), planting requirements should be reconsidered to allow for seeded vegetation in the flat bottoms of biofilters. Especially as the engineered soil mix becomes less like soil and more like sand, live plant installations become less and less viable. A more cost-effective approach of seeded establishment should be allowed, similar to what is allowed in Vegetated Infiltration Swales (1005.) I would recommend some expanded language on seeding establishment, i.e. requiring the basin to be kept 'offline' for XX months to allow the vegetation to establish.
- BMP Maintenance Spoils Disposal
- In-stream waterway sediment management. Turbidity barrier and silt screen just don't seem to be sufficient for most of our construction projects in flowing streams.

- WDNR has a lot of options related to infiltration; however, I would like to see a standard for filtration devices that can be applied in areas where infiltration is not achievable due to native soils. I know there is information out there (via DNR); however, I find others (developers/consultants/contractors) can get confused by the names. Just a thought.

7. Would you or your colleagues benefit from additional training or resources to properly implement NRCS and DNR technical standards? If you select "yes" or "not sure", please explain the training needs below.

Answer Options	Response Percent	Response Count
No	25%	59
Yes	52%	122
Not sure	23%	51
Other (specify)		84
	answered question	**232**

Which standards have the greatest need for training? If possible, please tell us what type or more specificity on what aspect of standard training is needed?

General Comments

- It would be helpful if I was able to access the current research that helps determine standards.
- Would be good if revisions are made to have some sessions / training on those changes.
- This will all depend on what changes might be implemented.
- It would be good for all of us to get training on any other standards that have been updated in the last few years.
- Reducing sediment and erosion
- Consider web based training sessions as each standard is created/updated.
- Standards that have been newly revised.
- I believe that education on proper use of the Technical Standards is critical to ensuring that the standards are implemented correctly. This is an ongoing challenge in our state, especially as the DNR (my experience is primarily with DNR) changes how they interpret the application of technical standards.
- Additional training is needed to bring others up to speed on the standards so we have less battles in review process
- An to reach contact person for questions about the interpretation of the standards. Also a look into how an entity will review the plans and proposals for a site/project.
- Detailed roll out of standards after changes seems best. Many times the standards change and the revised items aren't clear. At least a written narrative pertaining to each standards changes and reasons for changes would be good.
- In the past when changes were made to some of the standards sessions were offered to go over the changes. This is very helpful. At the very least, a comparison document should accompany the revisions outlining standard the before and after changes.
- For me, the ones that I checked, although it would be great to have training on any of them that are revised or come out new.
- Any training is always welcomed and appreciated!
- It is nice to have training as standards are changed. I really only need training when the ones I work with are updated.
- Overview of all standards and when they would be used.
- Re-creation of wetland BMPs, and BMPs that can filter water through clay soils, as do not have too many options towards sandy soils.
  Also - need to have self-maintaining procedures as do not have budget to maintain many BMPs listed and so unable to construct.

NRCS

- None specific right now. I try to attend as they come up though, especially as things are continuously changing in waste storage & transfer. I don't know if this is specific to standards either, but with NRCS I think a plant ID class would greatly benefit a lot of people as we are constantly being asked to identify different plants.

- 410 - When to use various practices. 635 - Will need training if/when changes come out. 313 - Table 9
- The ones I am working on at the time. The range of work and design I do is from field to barnyard and storage. Plus 590.
- Wetland Creation/Enhancement
  Sediment and Erosion Control
- Streambank protection and habitat. Current practice applications.
- Waste treatment and other ag waste related standards are always good to get updated with.
- Long-term management projects. Wetlands, Conservation Lands, Pollinator Habitat.
- 590 Nutrient Management
- Nutrient Management NRCS 590
- General construction inspection for wire, fence posts, pipeline for livestock watering system, irrigation systems, grassed waterways.
- The newer standards and standards with major changes (more ag waste related) where addition explanation would help clarify standards.
- Any time a standard is updated, training is necessary. Also, some of the more complex standards- 313, 634, 590, 629, 635, 412, 410, 561 need annual training. Other standards- 330, 332, 386, 528 should be trained at least every other year.
- Maybe a 1-2 day seminar on construction conservation practices and a 1-2 day seminar of other conservation practices. I mostly work in construction.
- Keeping grassed waterways at the proper width to sufficiently keep nutrients from getting into our waterways. Developing and enforcing proper setbacks from lowland/wetland areas to keep nutrients from getting into our groundwater recharge areas.
- Vegetated treatment area, roof runoff structure, streambank habitat improvement
- Identification of contributing area to concentrated flow channels
- NRCS 635 Vegetated Treatment Areas
- Revised VTA, Filter strips
- 338, 336, 314, 410
- Streambank standards not well understood. Although NRCS payments are pretty limited to what type of practices are eligible. There should be more bio engineering, remeandering standards.
- Waste Treatment and Transfer, Grassed Waterways, VTAs.
- Example, a training to further discuss the Pond vs. the Grade Stabilization Structure standards. When, where to use one or the other.
- Livestock Fencing
- Would like training on SWPP that offers solutions to runoff problems rather than simply laying out standards.
  Would like training on best erosion control products and methods available now.
  Would like to see training on wetland enhancement coupled with best practices for brush control and invasive control in wetlands.
- Grade Stab
  Silage Practices
- Agronomic practices
- 634, 629
- Wetlands, prescribed burning

DNR

- There is much confusion surrounding the Evaluation for Infiltration (1002) [WDNR] standard. Additional trainings on how to properly implement this standard would be helpful for engineers, site designers, etc.
- Request: Training on proper implementation and maintenance of all the WDNR erosion, sediment and storm water standards. Possibly a handful per year in rotation? This would "train the trainers" that instruct field installers in proper installation and maintenance.
- With wetland permitting requirements seeming to increase in the state, what are adequate alternatives to standard erosion practices that could be utilized for addressing erosion issues in mapped hydric soils on agricultural lands.
- Getting approval via cultural resource reviews, natural heritage inventory and DNR permitting
- Standards related to infiltration, any new standards that are developed
- 1004, 1008 – Permeable Pavement
- Linear practices for rural highways.

- WinSLAMM program for suppliers of products used in the program.
- Stormwater practice standards as they are developed.
- Practices related to infiltration and filtration.
- I review storm water management and erosion control plans on behalf of municipalities. It's frustrating when I call a WDNR representative to ask a question and am told "Oh, that standard is outdated and the new writing should be XXX. It will be corrected with the next revision". That has happened multiple times and it is very frustrating, especially if a review is already issued and the design engineer was told of the change while speaking with WDNR. Any time something like that is noticed an email should be sent to the listserv to make sure everyone is on the same footing.
- Field training as practices and NR DNR storm water
- Site evaluation
- NR151 has a lot of gray areas that need to be further explained especially in regards to compliance for FPP
- At minimum, get news of changes to said standards on a yearly basis. I hear about said changes about 2 years after the fact from WiDNR staff while working together on some critical sites (EC and or SW requirements in an urban environment
- Best management practices for dewatering and maintaining sediment within the project limits for construction projects.
- Proper installation and selection of erosion/sediment control BMPs
- Any technical standard that can be utilized and related to WisDOT projects.
- Proper installation and usage of devices
- All erosion control methods and materials should be included in training for both regulators and construction trades.
- Better guidance for selecting the best E-Mat and seeding mixture combinations for temporary and final restorations. I've seen a lot of DOT projects over the past five years in which the restoration plans are either too generic and don't fit the site or are too complicated with multiple combinations of mats and seeds mixes, which will not be implemented per plan.
- Site Evaluation for Infiltration (1002), Vegetated Infiltration Swale (1005) and Proprietary Filtration Devices
- Infiltration tech standards
- Storm Water runoff and sizing requirements.
- I think practice specific training maybe after the revised standard has been released would be beneficial training, for all practices.
- Streambank erosion mitigation
- Erosion control BMP installation would be beneficial for both designers, contractors, and municipal officials.
- Stormwater related training is always of interest if available across the state.
- Storm water standards
- Permit process, EC BMP's, Infiltration
- Infiltration swales
- In-stream waterway sediment management. Turbidity barrier and silt screen just don't seem to be sufficient for most of our construction projects in flowing streams.
- DNR permitting and how it relates to General and Individual permits for projects for wetland and waterbody projects. Including how to put together erosion control plans and permits for larger projects in excess of 1 acre of disturbance. What exactly is DNR looking for, maybe we could standardize it and make it simpler. Course on what, when, and how to define and use the right forms and how DNR would like the information sent in. It seems that the plans we do are far more defined than a contractor or landowner submitted plan.
  Possible for DATCP or regional staff to work with the Threatened and Endangered species program to do assessments for projects? Is it fair that we continue to use NRCS for this function?
  Try to get state and federal agencies to work together, see question 6 above.
- Modeling stormwater management practices
- Contractors and Developers seem to be in the greatest need of training as they still seem to struggle with understanding why construction site erosion control is important or in some cases why it is even required.
- Tech Standards 1002, 1003, 1004, and 1007. In my experience, the infiltration related standards are the hardest for people to understand. Especially differentiating between critical items and items within the standard which could have some "wiggle" room based on site conditions and the intent of the regulations and standards.
- Standards that pertain to practices that have been removed from our landscape or are increasing in number should be focused on.
- Dewatering is can be done effectively on many different sites, but it requires different techniques. Good to know how practices can effectively be installed and maintained during winter months. (winter construction / rain events on

frozen ground / snow melt events.)
Will lack of or improper maintenance of vegetation in and around wet ponds cause these features to become a source of nutrients rather than a collection point prior to our waterways? There's a need for better long-term vegetation maintenance around wet ponds.

- Stormwater mgt, wetlands

8. For county or agency staff and those interested in professional development, please rate the following as an interest in possible breakout session topics and list any additional session ideas for the 2016 WI Land+Water Conference.

Answer Options	Rating Average
Designing gravity flow systems with sand-laden Manure - Utilizing channels, guillotine valves, augers, etc.	2.4
Stormwater management with large farm expansions - successes and challenges	2.9
Design alternative for solid manure stacking within the production area	2.8
Procedure for assessing existing storage structures that met previous standards - When does it need to be brought up to the current standards?	3.1

Please list any additional technical breakout session ideas here.

- Procedure for assessing existing storage structures that met previous standards - When does it need to be brought up to the current standards?
- Each of these topics should be a one day training, not just a breakout session. Please offer training on these topics. Thank you.
- Stormwater management, erosion control (per NR151 non-ag standards), and invasive species control in road easements and on roads projects
- Feed storage runoff and milkhouse waste.
- Milk-house waste transfer/dosing using a siphon system or a system without pumps.
- Sand Channels do not work in Wisconsin, visit the UW Ag Station to learn more.
- Barnyard Runoff System Design
  Evaluation of Barnyards for compliance with State Standards
- Control systems available for bunker runoff collection, transfer and management. Which provide most economic solution to leachate and runoff collection.
  Vegetated Treatment Area management. Techniques and success stories on keeping these areas functional, effective and a purposeful use of land. It would be nice to hear some actual data showing the effectiveness of VTAs.
- Logging soil test pit investigations / soil engineering properties.
  GPS surveying, background, layout procedure etc.
- Discharges from Ag. tile drainage systems. How to treat nitrates with bark beds and dissolved P with sand./iron filters
- How to complete Stream Habitat Suitability Index (HSI)
- Legal ramifications of manure as a groundwater pollutant.

9. The Standards Oversight Council will celebrate its 20-year anniversary in 2016! To gather data on the improvements SOC has contributed to Wisconsin conservation programs, please share a statement of how SOC has impacted your work or any success stories in the creation of an oversight body for consistent technical standards for Wisconsin's conservation programs.

- It's nice to have coordination rather than contradiction.
- SOC has sought to make all technical and resource protection and enhancement projects and knowledge available and supported to- and for-all counties in WI.
- Great work sharing information and concerns.

- It is good to having the broad background of people and agencies involved.
- Great job re: DNR/DOT coordination of standard details and products for erosion control. Erosion and sediment control standards and post construction storm water standards are a great resource I use daily.
- The SOC process is critical to ensure that technical standards are practical and useable.
- SOC is good! If you don't have socks, shoes begin to smell. If you don't have SOC, standards begin to stale.
- All agencies working together under one umbrella charged with developing and improving practice standards for water quality.
- SOC standards are critical in "evening" the playing field for bidding. It also assists inspectors/reviewers to perform their duties more efficiently.
- SOC has done an outstanding job over those 20 years and it needs to keep going.
- Keep up the good work, we all benefit from oversight!
- SOC is being proactive on providing and requesting information with stakeholders. Please continue.
- I worked on the Filter Strip SOC team and found that we made some productive improvements to the standard.
- Is a good venue for developing and maintaining consistent, up-to-date standards for Wisconsin.
- The SOC has repeatedly demonstrated their skill in producing quality technical standards by allowing scientific research to guide development of realistic objectives.
- SOC has provided updated and proven standards to give guidance when doing conservation design work.
- The work on erosion control has helped with our everyday work on construction projects and the new innovative ways that are being developed and tested keep the best practices up to date with new technology.
- Consistent technical standards produced by SOC award merit to practices that can be proposed to landowners as remedial efforts in reducing pollution and environmental preservation.
- It creates consistency across agency lines.
- Seems to be going well.
- The organization and professionalism brought in by the current program manager is huge! The SOC is an easily accessible clearing house for a wealth of information needed to perform my job. Keep up the good work!
- There were differing approaches as how to best design treatment facilities across state and local agencies. SOC has helped to create a statewide uniform and accepted set of design standards.
- The joint partnership between county, state and federal agencies that comprise the SOC has greatly enhanced communications between conservation partners and resulted in a proactive approach to conservation practices.
- Of particular help with manure storage and transfer challenges.
- SOC is the catalyst for both agency & private sector communication. In the case of our department, it allowed us to provide input on the 313 standard. Helping shape its format and to further communicate our viewpoints to those most actively involved with that particular BMP.
- I like the emails updates of the standards being revised.
- Without updated standards to back up my reasoning for the work and designs, I make I would have been laughed at and told to leave farmer's properties.
- SOC has done a great job in bringing various state agencies and private sector experts together to help establish uniform statewide standards, which is exactly what the contracting industry asked for.
- The SOC creates reliable and authoritative standards I have used for 20 years. If it were not for the standards developed and supported by SOC, it would have been much harder for me to do my job as a civil engineer, both on the municipal side and on the developer side. All other standards are not nearly as comprehensive or reliable.
- Utilize the Conservation Practice Technical Standards documents frequently to ensure compliance with construction site erosion control requirements.
- The SOC has, in my mind, made a HUGE step possible with the hours and hours of time and effort to establish a permeable pavement standard. I feel this will open doors which needed to be opened to further the knowledge and possibilities for this BMP. I feel this alone will help the state effectively aid redevelopment - a big win for the state's economy! NICELY DONE!
- Proper standards are needed in ensure water quality.
- This is the most comprehensive and fair process for conservation practice standards and specifications. The process provides opportunity to incorporate common sense into standards which is critical for improved effectiveness and manageability.
- SOC provides for a high level of technical design oversight and a benchmark that all conservation professionals should aspire to.
- Provided an integral step in providing peer reviewed documents within a system.
- nutrient management is the first time I have heard of SOC

10. Do you have other comments for SOC or the Custodian agencies regarding SOC's process for technical standard revisions or any other technical standard concerns?

- Please work to eliminate overlap of standards as much as possible.
- We don't have training for construction like we did years ago. Seems since people have retired, we stopped training, maybe 5-6 years ago.
- Comment that I have heard from WPDES permitted landowners concerning meeting current standards when standards are constantly changing.
- Thanks for the good work Gini Knight.
- Glad that DOT has also become a member.
- Technical standards are important but allowing some flexibility within designs is critical to allow for innovation in the rapidly evolving storm water and erosion control industry. If a registered/certified professional signs and submits a design that meets required results, enforcing agents should have the option to approve such designs while holding said designers responsible for proper installation and performance.
- Just keep watching the new technologies when it comes to manure.
- We need better promotion by the NRCS staff of the conservation practices available to farmers. Standards won't do any good if only a few in-touch farms know about the practices.
- Some standards discourage creative problem solving. Variance processes should be more clear and more flexible. Just because something isn't in the standard doesn't mean it is a bad idea or won't work.
- Great job keeping the standards up to date.
- Wisconsin Construction Specification 4 Concrete
  The change in requirements to check each batch mix design for conformance with NRCS standards seems like a step back from just being able to order NRCS mixes from each plant. I would suggest rather than take out the NRCS pre-approved mixes, make non-NRCS pre-approved mixes an option to be accepted upon verification that all meets the specification.
- Try your best to have standard revisions make sense.
- When reviewing the standards, please consider the practicality of building the bmp. I feel that increasing the complexity leads to decreased efficiency, lack of maintenance and in some cases failure.
- Keep up the good work.
- Get WisDOT involved as a member
- I just want to take a moment to tell you all that your hard work is very much appreciated. I think your process and people are wonderful...maybe not perfect, but who/what is? KEEP UP THE GREAT WORK!
- All revisions for any standard or specifications should be run through the process. This process provides those checks, balances and transparencies that government should have.
- Maybe some sort of booth at the WLWCA conference?