

# 2019 TECHNICAL STANDARDS ASSESSMENT RESULTS



## WI Standards Oversight Council



This biennial survey was completed by **316 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.

# 2019 Technical Standards Assessment Results

## SUMMARY OF RESULTS

### BACKGROUND

The Standards Oversight Council (SOC) oversees the collaborative process for developing and updating technical standards that protect Wisconsin's natural resources. Technical standards specify the minimum criteria for planning, design parameters, and operations and maintenance for a practice that provides a benefit to soil and water resources.

SOC conducts a Technical Standards Assessment every 2 years to evaluate its process and give technical experts greater opportunity to improve Wisconsin's technical standards. This input is used by the custodians [Natural Resources Conservation Service (NRCS), Wisconsin Department Natural Resources (WDNR), and Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP)] to help prioritize which standards will be revised, what revisions to make, and what training may be made available.

The 2019 survey was released via the SOC urban and agricultural listservs, Wisconsin Land+Water's land conservation department staff and land conservation committee listservs, on the SOC website, and to several technical standard teams. Outreach was also made through partnerships and external organizations, including NRCS technical service providers, WDNR's Construction Site Storm Water and Municipal Separate Storm Sewer System (MS4) lists, DATCP Land and Water Bureau listserv, WI Farmer's Union, WI Farm Bureau, North American Stormwater and Erosion Control Association (NASECA), and members of agronomy, crop science and soil science societies. Additionally, all recipients of the survey were encouraged to share it with relevant colleagues.

### SUMMARY

A summary of the 2019 Technical Standards Assessment results is presented below; detailed results for each question are provided on Pages 4 to 20.

The 2019 Technical Standards Assessment was completed by **316** individuals. This was the highest participation on record, as shown on Figure 1.

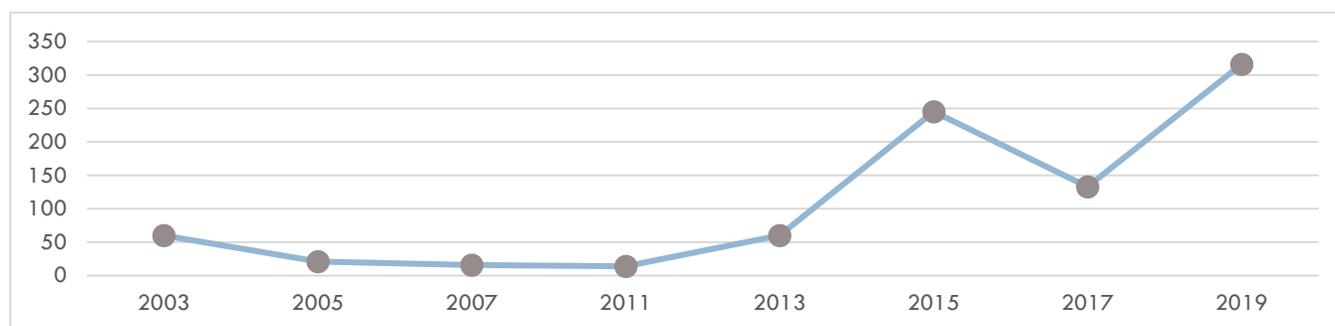


Figure 1. Number of respondents completing SOC Technical Standards Assessment surveys.

County government and private sector comprised the larger participant groups with 31% and 33%, respectively, of the total respondents. Though the private sector participation proportion increased significantly from 2017, it is comparable with that from 2015. For details, see responses for Question 1.

The respondents in 2019 participated less in the SOC process than previous surveys. Over one quarter had never heard of SOC before, though subsequent questions indicated they were familiar with the SOC product and worked on urban or agricultural conservation practices. Conversely, nearly one-quarter commented on draft standards and 15% of respondents participated on a SOC team. For details, see responses for Questions 2 and 3.

Respondents recommended that Proprietary Filtration Devices (1010, New), Underground Detention and Treatment (New), and Constructed Wetland for Storm Water Management (New) be prioritized for WDNR standard updates. NRCS standard updates were ranked more important for Cover Crops (340), Streambank and Shoreline Protection (580), and Nutrient Management (590). For details regarding user priorities for WDNR and NRCS standards, see responses for Questions 4 and 7, respectively.

Respondents to the survey expressed a preference for receiving information on changes in standards via email as summary document, through webinars and regional in person sessions with field time. For details, see responses to Question 9.

At least 100 respondents indicated preference for training on the following recently updated standards: Site Evaluation for Storm Water Infiltration (1002), Rain Garden (1009), Channel Erosion Mat (1053), Ditch Check (1062), and Compost (S100). No NRCS standards were ranked by respondents as a higher priority for additional training, although NRCS recently provided multiple training opportunities for the Waste Storage Facility (313) standard, and few other NRCS standards were published with significant edits over the past 2 years. For details, see responses to Question 10.

## CONCLUSION

Results from this survey are used in the following ways to improve how standards are developed and implemented:

1. **Results are shared with WDNR and NRCS to help identify the need for new or revised standards.** WDNR and NRCS are reviewing feedback in the survey and will incorporate relevant information when prioritizing standards for the forthcoming 2020-2021 Work Plan.
2. **Participants' specific comments regarding standards will be shared with the custodians and with the teams convened to create or revise each standard.**
3. **Results trigger needed communications that can lead to improvements in standards.** For example, SOC will facilitate communication between WDNR, NRCS and those who recommended specific changes and requested follow-up to identify specific opportunities for improvement in standards or the SOC process. SOC will also strive for broader outreach to educate users on the process and encourage greater participation.
4. **Results lead to changes in the process used to develop standards.** SOC and the Custodian agencies reviewed the comments and will consider the criticism for subsequent technical standard revisions. The SOC Program Manager will retain a stand-alone narrative description of changes from the previous and revised versions of a standard. This is in addition to the redlined version of the standard currently maintained.

- 5. Results identify training needs and lead to cooperation among DATCP, NRCS, and WDNR in providing additional trainings on recommended standards.** In response to survey requests, SOC will support & facilitate trainings on recently published technical standards, as SOC and Custodian staff time allows, and conduct additional outreach and promotion of previously recorded webinars. SOC will also provide training recommendations to SITCOM and assist as needed in coordinating other recommended trainings.

# 2019 Technical Standards Assessment Results

## EXTENDED RESULTS

The 2019 Technical Standards Assessment consisted of 14 survey questions. The final 2 questions were related to contact information and are not discussed in this report. Detailed results for the remaining 12 questions are provided below.

1. Which affiliation best reflects your work environment? Please respond to the rest of the survey from that perspective.

	2019 Response Percent	2019 Response Count	2017 Response Percent	2015 Response Percent
Federal Government	4%	17	8%	6%
State Government	12%	47	11%	19%
County Government	31%	122	56%	31%
Other Local Government (city, village, town)	14%	55	8%	13%
Private Sector	33%	127	14%	31%
Other (please specify, see below)	5%	21	3%	N/A

Notes:

*Other* responses: Farmer cooperative, utility, university, manufacturer/supplier, NGO

389 respondents answered to the first 3 questions. Participation reduced to 316 respondents completing the survey.

2. What has been your interaction with the Standards Oversight Council (SOC) process for technical standard development or revision? Check all that apply.

	2019 Response Percent	2019 Response Count	2017 Response Percent	2015 Response Percent
I have not heard of SOC prior to this survey	27%	104	8%	7%*
I have heard of SOC	43%	166	44%	60%
I am on the SOC listserv	27%	104	48%	31%
I have commented on draft standards	24%	95	46%	33%
I have participated on a SOC team	15%	60	30%	16%
Other (please specify)	2%	9	4%	5%*

Notes:

Other responses: I comment on standards occasionally, I hire a firm to deal with regs, I have heard of but not commented, I serve on technical committee, I was a council member, I volunteered to be on a team.

\*"I have not heard of SOC prior to this survey" was retroactively extracted from the "Other" comments for 2015's survey, and percentages adjusted. This option was new to the 2017 survey.

3. Which type of urban conservation practices have you ever worked on during the past 5 years? Check all that apply.

	2019 Response Percent	2019 Response Count	2017 Response Percent	2015 Response Percent
None. I have not worked on urban conservation practices during the past 5 years.	36%	140	15%	N/A
Erosion control and stormwater management	62%	240	78%	38%
Other (please specify)	5%	21	7%	N/A

Notes:

Other responses: Rain garden (x5), urban forestry (x2), shoreland or streambank restoration/zoning (x3), wetlands (x2), stormwater quality (x3), bioswales (x2) and educational programs.

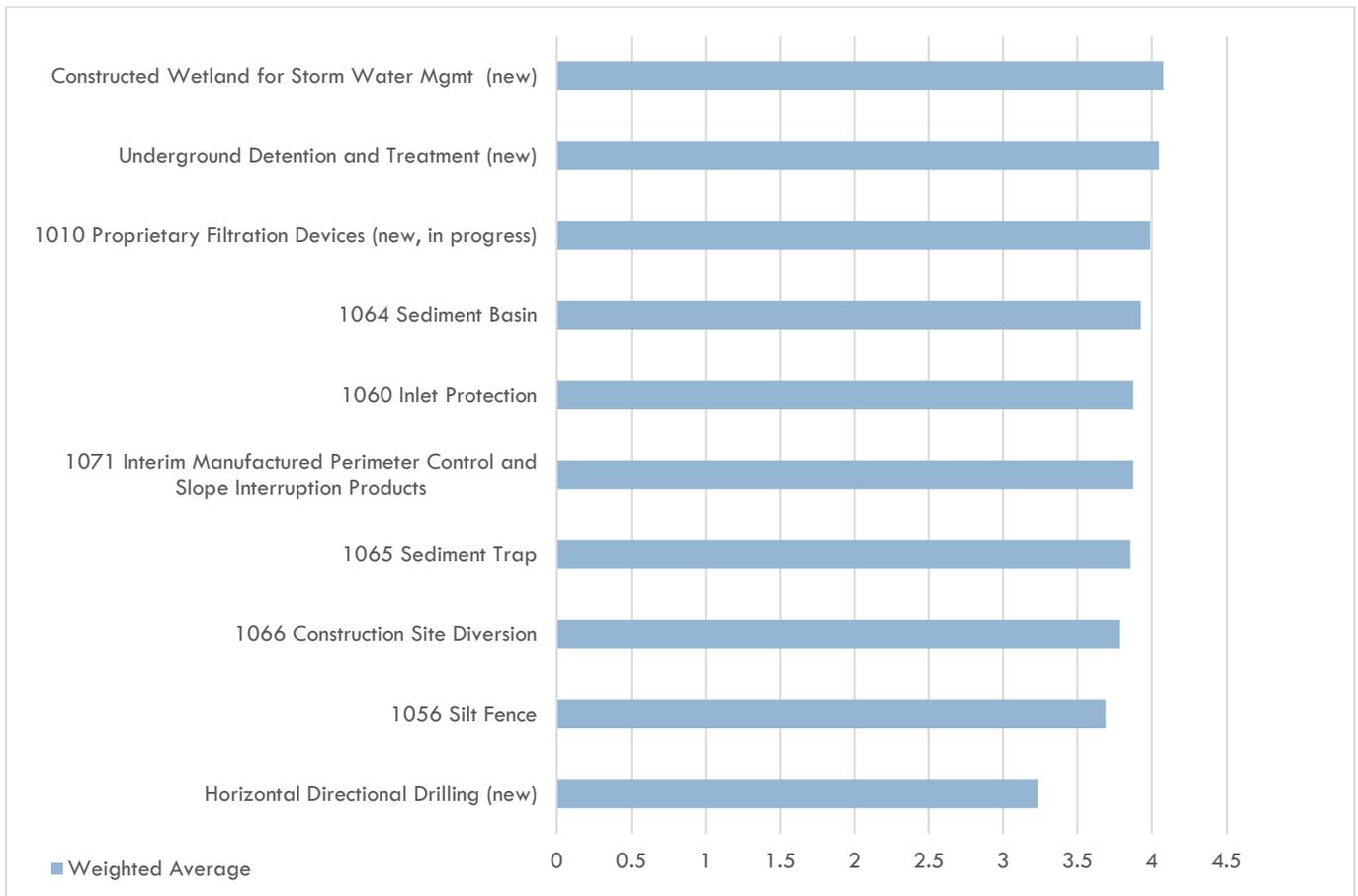
This question structure was adjusted in 2017 to allow users to select more than one option. This question was further changed in 2019 by splitting into 2 questions: one for urban practices and the other for agricultural practices.

4. The following urban (DNR) standards are scheduled to be revised in the next 2 years. Based on your knowledge, rank how important the creation or revision of each standard is to your work. If your work does not include use of a listed standard, please check “N/A.”

219 respondents filled out importance ranking for each of the urban standards listed. Not all survey participants would have worked on urban conservation practices; therefore, it is expected that not all respondents would have answered this question.

The ranking results were analyzed using weighted averages based on the following responses:

Not at all Important = 1, Not Too Important = 2, Unsure = 3, Fairly Important = 4, Very Important = 5  
 N/A responses were not incorporated into weighting of results.



**Figure 2. Weighted average score for the importance of creating or revising a given urban standard. (Note: higher numbers were those ranked more important)**

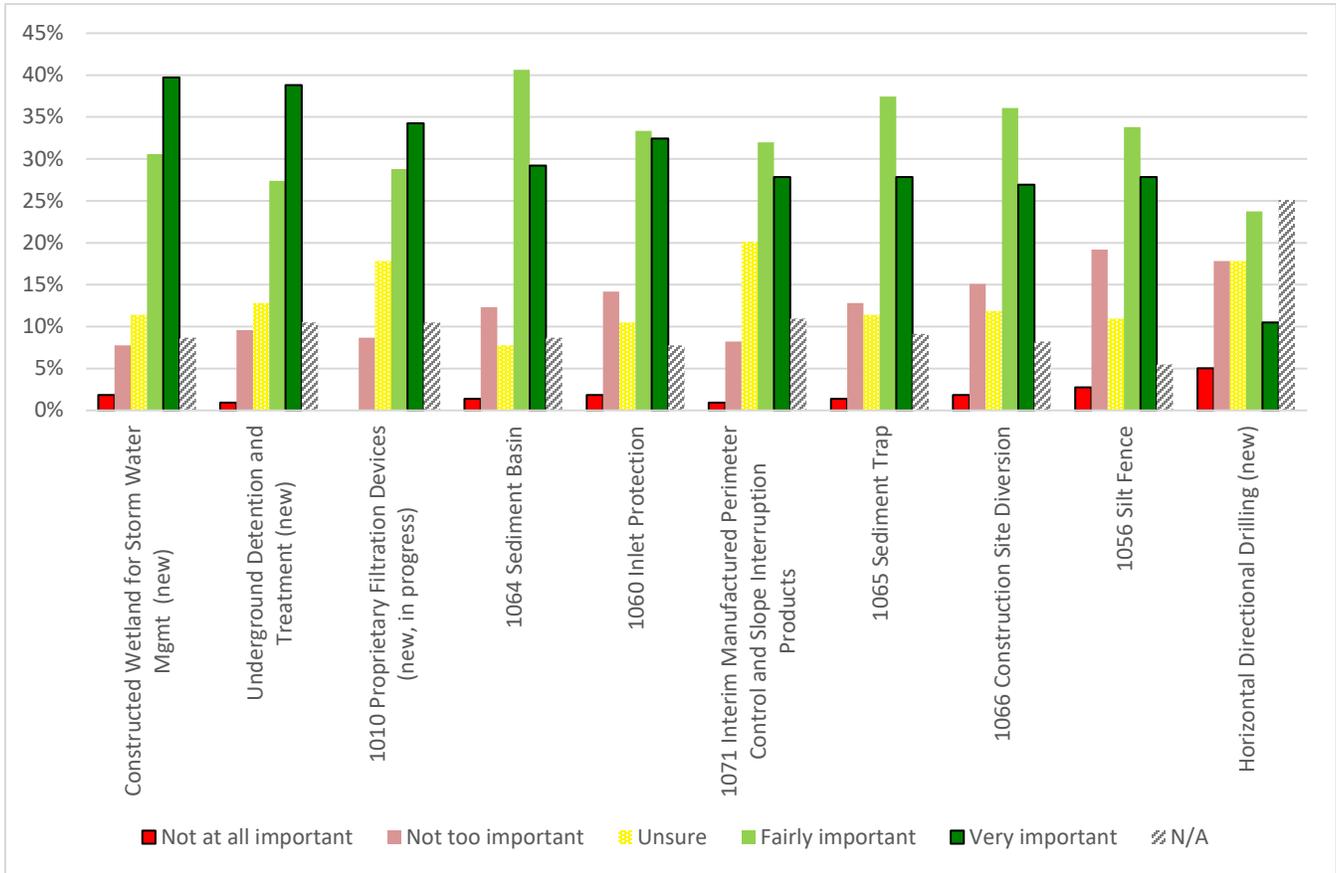


Figure 3. Individual rating results for importance in creating or revising a given urban standard.

Provide input on potential revisions for the work teams to consider:

General Comments Received:

- Glad to see new standards. Keep up the great work!
- Consider revising stormwater standards to reflect new rainfall patterns (more intense spring rain events).
- My new 2nd edition of Construction Site and Sediment Control (at publishers now) includes updated literature and practices on these controls.
- New standards should have a priority over updating some of the standards that already exist unless they are knowingly not working well.
- Many of these concerns are handled directly by our engineer but I do work with many developers and groups.
- The existing standards are more than adequate for the industry today. Additional standards and oversight just add confusion and cost to compliance which people then avoid or ignore.
- Contractor friendly, construct ability, durability.
- Clear, concise and consistent.
- Cost of the controls needs to be considered and factored into the usage rate.
- Please include maintenance issues to be considered/addressed during design.
- We already have an overabundance of rules for all of these things that seem to deter and prevent any new buildings in our community.

Standard-Specific Comments Received:

- Dewatering at construction sites needs to be clearer. Also when can lakes be drawn-down and re-filled?
- Green Infrastructure.
- Great to see HDD on the list.
- I would like to see more emphasis on linear projects (utility, roadways, etc.) and how to use the technical standards.
- I look forward to seeing the Proprietary Filtration Devices technical standard, and hopefully the inclusion of suspended pavement systems for tree planting in developed areas to increase rooting volume while also increasing storm water mitigation. One example is Silva cells.
- Improve the evaluations standards (SLAMM modeling) for Proprietary Filtration Devices and for Proprietary Treatment devices. Though the advertised sediment removal rates may not meet advertised values, they have been proven to exceed the credit provided in the modeling.
- Increase in trend to not use silt fence.
- Straw bale checks should be removed from 1071, due to longstanding issue of completely incorrect installation.
- Framed inlet protection for 1060 (x2). Inlet protection should include framed or ridged framed devices to help prevent sediment in the curb line, flooding/icing and avoid improper installation of Type D.
- Small, easily built, sediment traps in ditchlines with a downstream ditch check (either bales, wattles or stone).
- We have many existing infiltration basins that were designed to technical standards that do not work in actual practice. There are many variables that may be the reason (poor soil infiltration rate assumptions, brought on-line too soon, draw down times). The main factor appears to be infiltration basins created using soils with infiltration rates of 0.50 in/hr that do not draw down within 24 hours and all plant growth dies. There needs to be a more clearly defined exemption for poor soils, as digging test pits across an entire plat is unreasonable.
- Constructed wetlands for storm water management seems like a great opportunity to help mitigate flooding issues that are plaguing the state right now. Good for future planning.
- It's most important to conserve existing wetlands. Allowing substitution of artificial wetlands is not a good substitute for natural wetlands.
- Infiltration of underground detention water. When is it allowed?
- The use of iron slag to reduce P if applicable in any standards.

5. Which urban technical standards not on the above list need to be created or revised? Please write which standards or topics and a brief explanation of your recommendation.

Comments Received:

- Please do not change standards just to change standards. It is getting harder to keep up with the updates. You just get use to using a standard then it changes.
- Procedures for trying new/innovative practices that are not covered by a current technical standard
- It's important to stop factory farms from spraying manure, and from allowing runoff from manure to get into the groundwater and streams. The water belongs to the people of Wisconsin, who depend on clean water to survive. We need technical standards that will protect our water from pollution caused by manure of farms that are simply too big to be sustainable.
- 1001 Wet Detention Basin (x2) standard is about 12 years old and in need of some updates. exhibits are really outdated and not reflective of typical designs.

- Site Evaluation for Storm Water Infiltration - Standard 1002 (x3). No need to restrict testers to soil scientists. SOC needs to reconsider the requirement of having a Professional Soil Scientist or Professional Geologist conduct soil investigations for stormwater infiltration after 2022. WI Certified Soil Testers are qualified to do the soil profile descriptions in accordance with this standard and SPS 385. The standard needs to include Geotechnical Engineers who are licensed as Professional Engineers to be qualified to complete Step C of the evaluation process. Geotechnical engineers work on a daily basis classifying and evaluating different soil types and groundwater issues and are just as, and in many cases more, qualified to perform these evaluations as either a Licensed Professional Soil Scientist or a Licensed Professional Geologist. I highly recommend this portion of the standard be updated.
- Bioretention 1004 (x2) - review the requirement for plugging. Based on field experience and lab testing, engineered soil as specified does not drain as designed.
- Filter Strips (x3) - A standard is needed as this practice is frequently improperly used and TSS reduction is attributed in WinSLAMM. Could use a "Filter strip" standard for stormwater for sites where additional pollutant reductions are needed beyond the conventional BMPs, such as to meet higher levels of control in a TMDL. The filter strip could be a pretreatment measure or apply where shallow groundwater or bedrock prevent other BMPs from being installed.
- Tree planting for storm water management (x3) - trees provide an array of benefits to the public including shade and reduced energy use, improved air quality, aesthetics, and storm water mitigation. Trees are a form of green infrastructure that should be included in DNRs recognized 'toolbox' of options to help manage storm water quantity and quality. Tree pit methods that improve survivability.
- All standards that will/may change as a result of potential wetland regulation changes.
- Using constructed wetlands for stormwater management would be awesome, but there have been agency roadblocks in the past (example: NRCS has lack of regional expertise in this area, and is tentative to install or recommend this practice). Providing technical training & educational events for benefits of this practice would be highly beneficial.
- Regulatory process for wetland fill permits; DNR (as well as ACOE) process needs to be accelerated
- Construction Standard for temporary bypass of creeks/streams.
- Level spreaders.
- Use of turf reinforcement mat.
- Floating storm water treatment islands; alternative media for biofilters, multi-cell basin berms
- Compost-based erosion control; green infrastructure.
- Silt Sock / Sediment Sock.
- Iron slag usage.
- Energy dissipation for outfalls/culverts.
- Outlet protection.
- If restoring swales at the most downstream end of a project (i.e. last 200 feet or so) provides a good effect while the upper reaches are still being worked on.
- Bedrock mapping requirements for NR 151.

6. Which type of agricultural conservation practices have you ever worked on during the past 5 years? Check all that apply.

	2019 Response Percent	2019 Response Count	2017 Response Percent	2015 Response Percent
None. I have not worked on agricultural conservation practices during the past 5 years.	43%	153	N/A	N/A
Wildlife, woodland and recreational management	25%	89	26%	3%
Cropland management	41%	147	51%	34%
Livestock and waste management	43%	153	63%	25%
Other (please specify)	7%	24	7%	N/A

Notes:

Other responses: TMDL watershed-wide implementation, waste closure, grazing (x2), irrigation (x2), wetland restoration (x2), grassed waterways (x2), Erosion Management (x2), ponds (x2) soil segregation, adaptive management, water conservation for livestock, and geophysical.

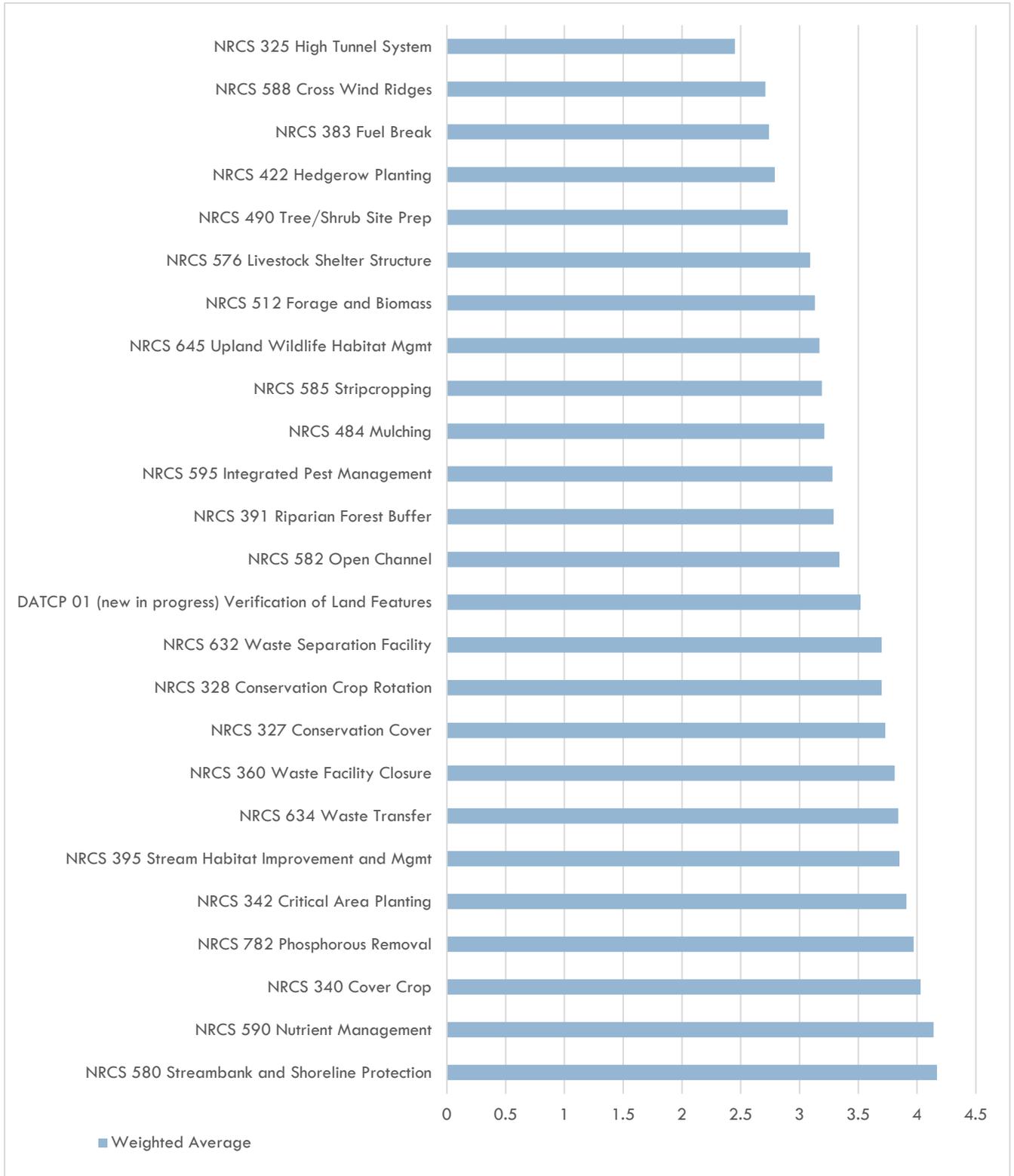
This question structure was adjusted in 2017 to allow users to select more than one option. This question was further changed in 2019 by splitting into 2 questions: 1 for urban practices and the other for agricultural practices.

7. The following agricultural (DATCP, NRCS) standards are tentatively scheduled to have more substantial revisions in the next 2 years. Based on your knowledge, rank how important the creation or revision of each standard is to your work. If your work does not include use of a listed standard, please check “N/A.”

186 respondents filled out importance ranking for each standard listed. It is expected that not all survey participants would have worked on agricultural conservation practices and therefore would not have answered this question.

The ranking results were analyzed using weighted averages based on the following responses:

Not at all Important = 1, Not Too Important = 2, Unsure = 3, Fairly Important = 4, Very Important = 5  
 N/A responses were not incorporated into weighting of results.



**Figure 4. Weighted average score for the importance of creating or revising a given agricultural standard. (Note: higher numbers were those ranked more important)**

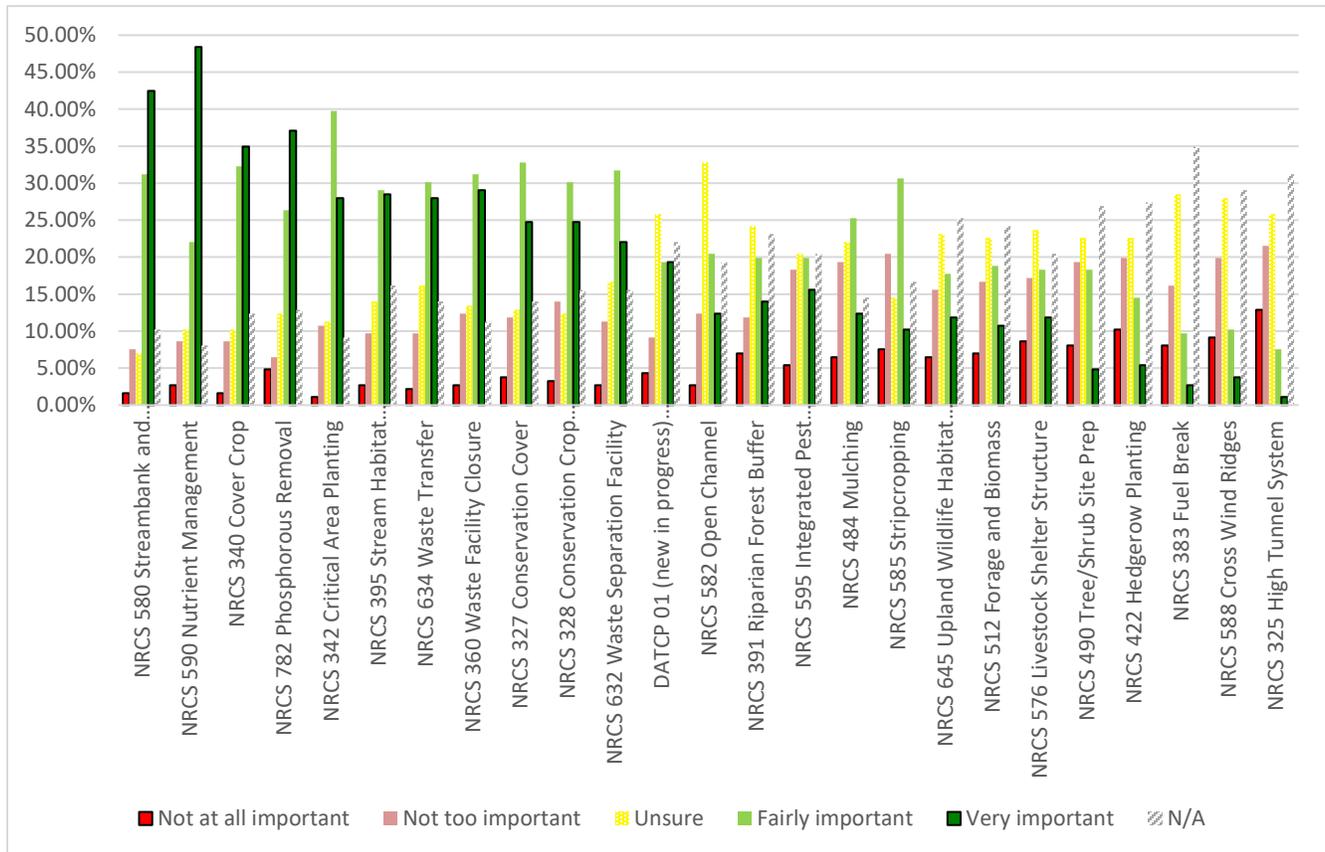


Figure 5. Individual rating results for importance in creating or revising a given agricultural standard.

Provide input on potential revisions for the work teams to consider:

General Comments Received:

- Don't fix it unless it's broken
- No need to revise many of the standards listed. Give each standard more than 2 years before you feel the need to tweak or change it. NRCS tends to do what it wants anyway and has national requirements. SOC process really is not that effective anymore. Many of these practices listed do not need the SOC process.
- When revising these standards keep in mind that the more restrictive these standards are getting, the less folks want to cost-share with us because it becomes too cumbersome and/or expensive.
- All standards - need to stop using A2809 for regulatory limits or perhaps use it differently - the UW shouldn't be a quasi-regulator.
- There needs to be more education and opportunity for putting poor to marginal lands back to nature and Confinement operations need to have firm regulations.
- Not sure why the DNR has chosen to continually go after WWTP for phosphorus removal, when they admittedly say 95 to 99% of the phosphorus is coming from farmers. If you're not willing to go after farmers, then leave municipal WWTPs alone. It's absolutely ridiculous to crack down on WWTPs that have effluent with a phosphorus level that is lower than the receiving waters. There's not a whole lot of common sense being used by forcing small municipalities to spend millions when it's only addressing 1 to 5% of the

problem. It would be better served to educate farmers and possibly come up with some sort of tax break incentive to leave a larger buffer near waterways.

- 1st 'Standard', get the manure on the field in a safe, practical, and as environmental sound as possible to avoid surface runoff using waste utilization. 2nd 'Standard', Micro manage nutrients, all fertilizer applications, and plans.
- Soil health needs to be included in all applicable standards.
- Some of these are a little too heavy handed and probably should be left to the municipality.
- Please establish water quality standards that actually enable units of government to meet TMDL water quality parameters i.e. phosphorus.
- If changes are made to a technical standard, a template/guidance document should be created to assist in standardize design documentation and BMP compliance with the specification.
- Any updates in regards to cost savings for farmers and handling more drastic rainfall events would be beneficial.

#### Standard-Specific Comments Received:

- Mulching standard should be revised to include what type of erosion control blanket should be used in what scenario. Also currently, the standard does not allow biodegradable staples because they are not metal or U shaped. Streambank Protection should include more specifics about non-rock techniques and stream barbs.
- Stream and Habitat need additional criteria for determining where/how much habitat is needed - agency disagreement and opposition has caused problems for landowners and jeopardized projects - a consistent methodology that is agreeable to NRCS, County staff, Trout Unlimited, DNR, etc. is needed.
- Open Channel should allow field staff to grade streambanks to reconnect a stream to its floodplain.
- NRCS Tech. Std. 782 is outdated and needs to be revised.
- Land application of WWTP biosolids on agricultural land is critical to effective wastewater treatment and disposal. Amount of acreage needed to dispose of biosolids must be considered when changing any nutrient management standards.
- 590 - fall/winter manure application - new data exists.
- 590 - Something in the standard to assure plans are being implemented and followed. Lots of money spent on developing plans that are immediately placed in a draw and never looked at again. Updated checklist are useless except for the people who need the acreage numbers to justify Nutrient Management funding.
- Nutrient Management is a great tool, but often data is misrepresented or the plan is only written for the current crop year. Amendments should be added to limit place holders and to include at minimum of 2 years of projected rotations and manure placement.
- Review the 590 standard's statement regarding untreated manure and its restricted use within the vicinity of public water supplies. Explore the possibilities of conditional variances under which this standard may be questioned and modified.
- 590 and 595 should be modified to provide groundwater protection practices, especially in geologically sensitive areas like the Central Sands, Northwestern WI and all Karst areas.
- Nutrient Management-Go back to waste utilization, where you simply verify the landowner has enough land to spread manure based on setbacks, karst features, wells, wet soil types, etc, etc. and certain amount of applied manure tonnage per acre. Then add an optional BMP of managing manure applications and nutrients. This could entail cost share for micro managing manure applications for crop needs, applications of commercial fertilizers where manure was restricted to apply, for manure applicators to strictly comply with the NMP from paper to field, for NMP writers to update NMP in season to take into account

unforeseen issues like weather, and any other item that would assure these plans are being implemented from the paper plan to the field.

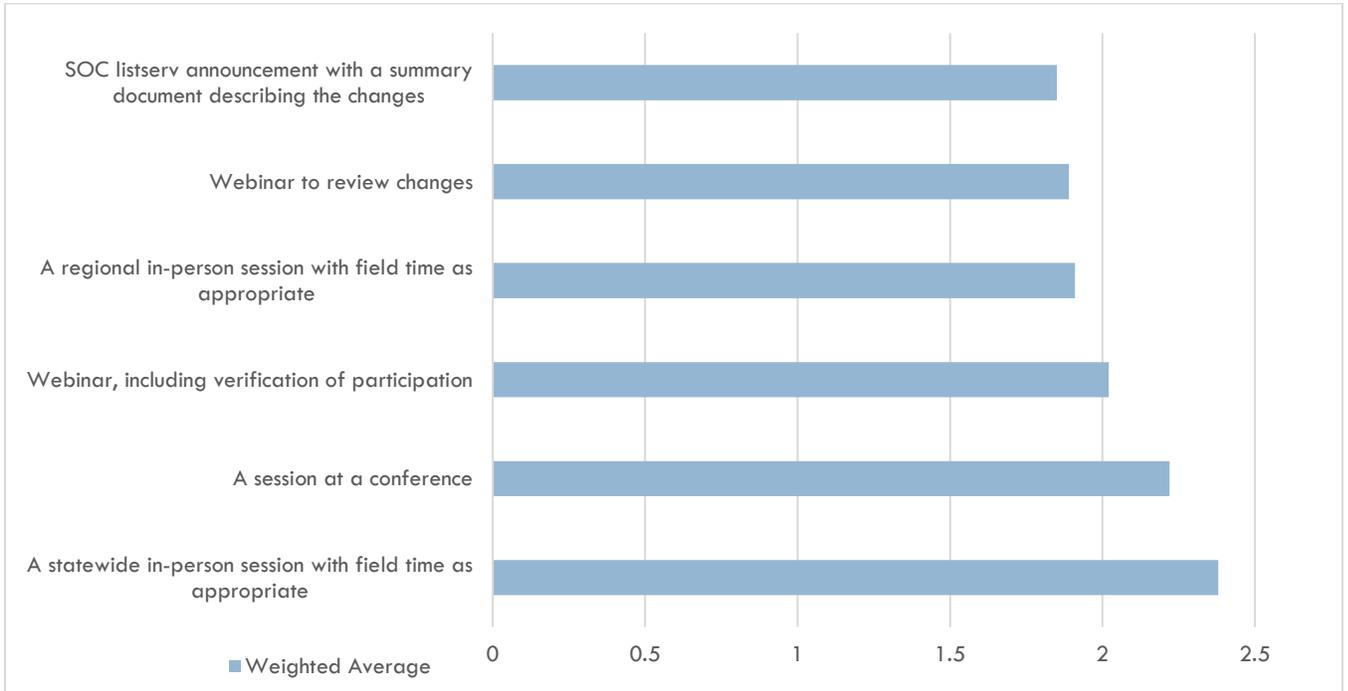
8. Which agricultural technical standards not on the above list need to be created or revised? Please write which standards or topics and a brief explanation of your recommendation.

Comments Received:

- Create an incentive program for farmers to leave buffer (uncultivated) areas adjacent to waterways.
- Implement mandatory stream/waterway buffers, similar to MN.
- Dug well decommissioning standard needs to be created. It seems that there is a lot left to interpretation regarding suitable fill materials, compaction of fill materials, etc.
- The well abandonment standard is pointless in the state of WI. Our plans are irrelevant to the treatment of the well as per state code.
- Composting Facilities, Tech. Std. 317 (x3). Include other organic by-products including food waste. Many farms in Wisconsin are looking to Manure Composting as a low cost tool for manure management. The current rules and regulation are vague and scattered throughout legislation and NR Codes. When questions are posed, often they go unanswered. Compost would also be a great alternative to commercial fertilizer in sensitive areas given manure is composted aerobically, resulting in a stable form of nutrients. Livestock operators are showing great interest in advanced compost facilities as a viable alternative to convention manure storage. The current standard is outdated and lacking detail.
- 629 waste treatment (x3). The soil absorption and holding tank parts need to be updated to incorporate BMP design criteria developed since 1999. If a producer wants to store their milkhouse waste, they can only store 10 days worth of waste. It doesn't make sense especially in a system where producers are trying to keep their stored manure in a more solid state.
- 635 needs some editing to make it easier to find the different sections based on large, medium and small facilities. Many people have struggled to find the correct section to work under. I think just adding some lines to divide would be all it would take.
- I would like to see a standard developed specific to culvert design.
- Geophysical applications addressing NR 151.
- The sinkhole standard needs to be revised badly as it's not even functional right now. At a time when we are seeing record numbers of sinkholes, it's impossible to do a USGS review on all of them due to staff shortages.
- Animal waste management.
- Cattle over-wintering/feeding areas.
- I think we have more science for 340.
- Revise the 313 standard. It was made more complex than necessary. You can have strong environmental protection, while at the same time, keeping it simple.
- Waste transfer-don't understand what can be done and when.
- 410 Grade Stabilization.

9. How do you prefer to obtain training on new or updated criteria for technical standards?  
Rank up to your top 3 in order of preference, with 1 being your preferred method.

327 respondents contributed to the results in Figure 6.



**Figure 6. Weighted average score for training preferences expressed by respondents. 1 is preferred method, 2 is second choice, 3 is third choice.**

Additional Comments Received:

- This depends on the amount of changes and revisions made to the standard. If it's a few tweaks, the announcement and summary of changes is sufficient. Offering webinars or in person trainings are very helpful when changes are high volume or significant.
- I did not select the conference session because some information may need to be more timely.
- NASECA every year.

10. Standards that have been recently revised via SOC's Modified or Full Processes are listed below. Would you like to see training for these standards?

316 respondents contributed to the results in Figure 7.

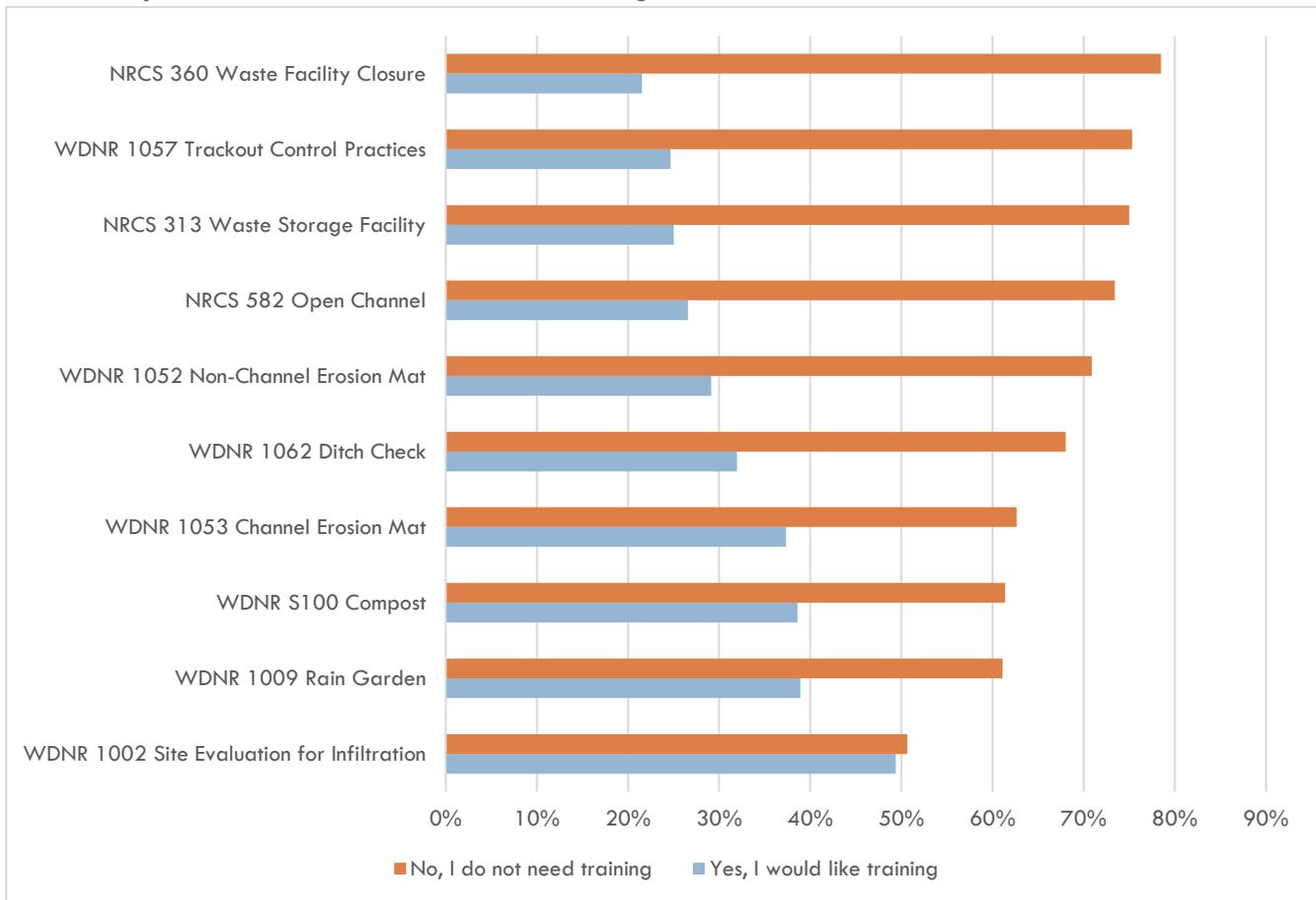


Figure 7. Training needs expressed by respondents.

Comments Specific to NRCS 313 Waste Storage Facility Training:

- Usually can find it offered if needed
- Periodic regional in person sessions (x2)
- Online/webinar is preferred (x2)
- Email notification of revised standard
- The acceptable information to be on plans keeps changing
- Separation technology and irrigation of liquid
- Additional training on soils (especially perched vs. seasonal saturation vs. subsurface saturation), clarifications on subliner and tile placement
- Continued soils investigation training is always good
- Already took training for the big revision
- Provide a template for pleasing NRCS

- Provide all staff with the ability to answer basic in-field questions from producers seeking information on standards and specifications.
- In-Field Time of Construction training to new standard

Comments Specific to NRCS 360 Waste Facility Closure Training:

- Regional in person
- Webinar (x4)
- Simple practice, should be done at area level
- Example plan discussion
- Provide staff with a background knowledge on the specific resource concerns this standard addresses, under which conditions it is desirable, and the relationship between this standard and local, state, and federal laws.

Comments Specific to NRCS 582 Open Channel Training:

- Technical Standard good enough
- Webinar (x6)
- Session at conference
- Email notification of revised standard
- Simple practice, should be done at area level
- Overview of the process, followed by good real world examples
- Include 2-stage ditch siting/design, watershed impacts, water quality improvement
- Construction in channels where bypass is difficult

Comments Specific to WDNR 1002 Site Evaluation for Infiltration Training:

- Webinar (x12)
- Session at conference (x2)
- Email notification of revised standard
- Training in-field with issues discussion
- Periodic regional sessions
- Ongoing PDH opportunities
- Overview of the process, followed by good real world examples
- Conduct a 10' deep soil pit and a split-spoon auger
- Common mistakes, use of standard to appropriately site infiltration

Comments Specific to WDNR 1009 Rain Garden Training:

- Technical Standard good enough
- Webinar (x11)
- Session at conference (x2)
- Brochures (x2)
- Overview of the process, followed by good real world examples
- In-field training
- Common practice for LCDs, WDNR should provide regional training

Comments Specific to WDNR 1052 Non-Channel Erosion Mat and WDNR 1053 Channel Erosion Mat Training:

- Technical Standard good enough
- Webinar (x9)

- Document listing changes (x2)
- Session at a conference

Comments Specific to WDNR 1057 Trackout Control Practices Training:

- Webinar (x9)
- Document listing changes (x2)
- Session at a conference (x2)

Comments Specific to WDNR 1062 Ditch Check Training:

- Technical Standard good enough
- Webinar (x10)
- Document listing changes (x2)
- Session at a conference
- Email notification of revised standard

Comments Specific to WDNR S100 Compost Training:

- Webinar (x6)
- Document listing changes (x2)
- Session at a conference
- Email notification of revised standard
- In-field training
- How dairy farmers could increase adoption of this process
- Define, explore, and analyze the types of composting practices being utilized statewide, where it is most appropriate, and the benefits of it.

11. WDNR and NRCS have numerous other technical standards not listed above. What other standard-related training do you need for your work? List the standard and, if possible, include specific recommendations.

**33 of 316 respondents commented on this question.**

General Training Comments Received:

- Any new Technical Standard should have a webinar to introduce and go through the new standards.
- If a standard has substantial changes then have a webinar to explain the changes but if the changes are minor then an update of the standard document is enough.
- Need training mostly on the new standards, not modified old standards
- Post construction storm water tech standards
- General training on stormwater control maintenance and expected changes with time
- Ongoing PDH opportunities.
- I am very concerned about higher levels of groundwater, especially during storms. I do not need training for work, as I am a lay person, but I urge you to write and enforce standards that address changes in weather resulting from climate change. I also urge you to protect property owners from pollution from factory farms. Thank you for your interest in my concerns.
- NR 151, NR 140
- A comprehensive training that highlights important groundwater protection/conservation standards and how to implement them would be useful. This is a topic of growing concern and interest.

Standard-Specific or Technical Comments Received Related to Training:

- Hydraulic Erosion Control Practices
- Interim Manufactured Perimeter Control and Slope Interruption Products
- Practical use training of the Soil Loss & Sediment Discharge Calculation Tool
- Inlet protection and temporary stabilization
- Appropriate vegetation for Bioretention, rain gardens, vegetated swales
- CPS 1001 (x2)
- CPS 1002 (x3) Site Evaluation for stormwater infiltration with focus on determining design infiltration rate based on field data. Interpretations. This needs to be coordinated with DSPS since their interpretations of the Technical Standards sometime differ from WDNR.
- 1004 Bioretention for Infiltration (x2) including updates and interpretations. This needs to be coordinated with DSPS since their interpretations of the Technical Standards sometime differ from WDNR.
- 1006 Proprietary storm water sediment devices with how to model in WinSLAMM
- 1008 Permeable Pavement
- WDNR 1061 Dewatering (x2). Evaluation and guidance of what options can work for contractors to reduce TSS during construction dewatering. How to, options, how traditional practices do or do not meet standards
- Stream bypassing/diversion
- Wetland restoration for reducing impacts of flooding and nutrient delivery to streams
- Compost Facility NRCS 317 (x3) - Growing number of farm operations looking in to composting manure. Specifically facilities of 500au or larger. Manure Composting vs. Manure Storage
- 580 Need specific state-wide training for this practice. #1 practice being used in NE WI.
- CNMP - Cons 6-8
- 378, 410, 468, 578-culvert, 629

12. What other comments for SOC or the Custodian agencies (NRCS, WDNR, DATCP) regarding SOC's process for technical standard revisions and development can you offer?

**29 of 316 respondents commented on this question.**

**Comments ranged widely, including suggestions for continued agency collaboration (DNR, NRCS and DSPS) and building teams with more representation by practitioners. The full list of comments grouped by major theme are provided below.**

General Comments Received:

- Keep up the great work notifying us of updates, drafts, and review copies of the Tech Standards!
- Keep up the good work!
- I would strongly support online or web-based outreach and/or training opportunities.
- Keep doing what you are doing as far as communication. Since I have signed on to the subscription service I feel that I am much more in tune with opportunities.
- Fantastic effort between the agencies and WI Land + Water to create the Council. How to best engage ag advisors, ag companies to learn, to share ideas?

- How to find out what standards will be worked on next/are under development?
- Appreciate reaching out for input.
- I am a BETA tester for WinSLAMM.
- You are all doing a great job keeping standards updates, at times I feel the changes are happening somewhat too often.
- When a technical standard is revised provide a redlined copy of the old standard or a list of items that have changed.
- Development of a model ordinance that municipalities can use to adopt the standards as rule rather than recommendation.
- Consider collaborating with DSPS for consistency with what they review. In particular, soil suitability form infiltration and bioretention/infiltration design approval.

Comments Related to Specific Technical Practice:

- Technical standards for evaluating native plantings should be improved upon.
- Review of projects for stormwater, especially infiltration, need to be done by one agency. One of WDNR and DSPS need take the lead, preferably the WDNR since they have the expertise in house.
- I would like to know more about getting on the team to help lend my expertise especially with utility (linear) construction.
- I've received some conflicting information from DATCP vs NRCS on soils logging, specifically in listing percentages of gravel. DATCP told me the percentages of all categories need to add to 100%, NRCS soils scientist told me that % sand and % fines add to 100% then the other percentages are listed on top of that. Consistency in what is required would be appreciated.

Comments Related to SOC/Team Process:

- Keep the politicians out of technical standard development and revision approval. They should be advisory only.
- If the purpose of the SOC is to update/create technical standards that need to be implemented "in the field", can the SOC consist of at least an equal number of practitioners as regulators? It is in everyone's best interest to implement technical standards. By allowing practitioners to have (at least) an equal voice in creating the technical standards, the chance of successful adoption would increase dramatically.
- NRCS should make all their state and national requirements first in the standard, then go to the SOC process. No use going through the SOC process then having NRCS make changes to meet national requirements after that. Wastes non-NRCS agency staff time.
- Generally speaking the technical standards are easy to read and understand. Over time, most fuzzy language has been revised but there is always room for improvement. I know the standards very well and use the standards for site design and training fellow employees.
- Too many highly educated and yet inexperienced people are on the committees or leading the committees. Every revision makes things more complicated for application and less practical for field application and success.
- Make sure the process isn't dominated by strong-headed office staff. Experienced field people are needed to cite "real world" examples of successes and failures.
- Keep up the good work! On a side note, I would like to see more DNR folks, namely Chapter 30 people be directly invited to trainings around the state.