



Standards Oversight Council (SOC)

Developing effective technical standards that protect Wisconsin's natural resources

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DNR 1072 Horizontal Directional Drilling Standard Team

MEETING NOTES

Thursday, March 11, 2021 ▲ 9:00am – 12:00pm ▲

Virtual Meeting (online)

9:00 Welcome & Introduction (Kate)

Goal: Welcome, and review today's meeting objective.

Attendance: Kate Brunner;

Team: Kim Gonzalez (Team Leader); Amy Minser; Brad Eifert; Mike Hackel; Elliott Mergen; Geri Rademacher; John Edwardsen; Lance Newman; Matt Fehler; Susan Knabe, Abby Williamson, Ann Nye.

Absences: Dana Halverson

Guests: Barbara Richards, Viroqua

Goals for Today's Meeting: Close discussion on Practice Descriptions (though there will be more time on wordsmithing), Come to a decision on the break-points for size related risk and the practices appropriate for all practices

Notes Review (Kate, Team)

Goal: Review and approve 2/9/2021 draft meeting notes.

Draft notes from the last team meeting (on 2/9) were emailed around to the team. No Action Items remain open. No questions or comments on these draft 2/9 minutes; Kate will post online as final.

Practice Descriptions (Amy, Kim)

Goal: Review changes to the Monitoring, Reporting, and Recordkeeping descriptions.

- The Reporting and Recordkeeping sections are being abbreviated and incorporated into Monitoring. DNR prefers to shorten this up to match DNR requirements and program needs and not create new requirements or new

deliverables. Amy has talked to DNR spills program staff about their reporting requirements.

- The practice descriptions are substantially done. There are areas for clarification and could still be edits to be made with the text more in Technical Standard format. Kim has been adjusting the practice description work from the team so it's in the tech standard format and the style and detail is more parallel for all practices.
- Kim reviews the draft standard on-screen, highlighting major areas:
 - Some of the technical standard format is locked for consistency among all standards.
 - She highlighted text in yellow the areas that need work. For example, subjective wording or special cases (like "complex projects" or "poor" soil conditions) or consistency with wording change (like frac out vs incidental release vs inadvertent release). We would want to either define this language or look at more clear wording.
 - One missing item that the team has touched on is a user-friendly way to communicate which practices apply. If anyone has ideas that can suggest, and we'll get to this later as well.
- Kim will share the Word doc with the team, and Team members should provide feedback before the next meeting. We'll talk about assignments to work on some specific areas of the standard later.

Size Risk Definition

Goal: Review and discuss breakout group work related to delineating size-related risk. Determine best groupings for practice lists.

We pivot the team conversation from WHICH practices to now shift to WHEN do the practices apply?

1. Things to keep in mind as we work to decide the trigger point between the lower size risk and mid-level risk:
 - We are going to talk about the decision for size-related risk – focusing in on the length that we'll use as a breakpoint between low risk and medium risk. We'll incorporate environmental resource risk and geology risk later.
 - Don't focus on exceptions and outliers but think about the majority of projects. We may be able to capture these outliers in other way unrelated to size risk.
 - Practice lists may be only triggered for a **specific area** of the project. Amy shows an "HDD Screening Map" to demonstrate then there may be a limited area within the overall HDD project where there would be more elaborate practices triggered, not necessarily the whole project. This

segmenting of a project is something to keep in mind as we discuss the size trigger.

- Based on the practice descriptions, there is currently a small list of practices that would change between these low-size-risk and medium risk groups.
 - We'll confirm the list of practices in the "always" column vs those that are applicable in a medium-size project later, but look at the list for reference.
 - For now, Field Geotechnical survey is the only change from all projects to medium risk based on size. One group proposed moving Field Site Walk-Through and Pre-Construction Meeting to medium risk. We'll return to this idea later.

- 2. **Lines for size-related risk** – we complete an initial poll, then of each of the 3 breakout groups identify how their group came up with the length for trigger from small to medium size.
 - When talking about size, team agrees that we need to refer to product diameter. That is a fact that can be documented and is used in permitting, whereas reamer sizing and bore sizing is more flexible and may change even in the middle of drilling. Usage of "product diameter" addresses the issue of bundling, though the bundling language remains in the parking lot to be confirmed in the tech standard language later.
 - Team agreed that we need 8 for a decision, but unanimity is best!
 - The size-related risk charts proposed by each of the breakout groups are reviewed together on-screen, side-by-side. The initial variations were 250', 550', or 850', though upon reconsideration the group that had selected 250' moved up to 550'. There was also a group that preferred 6" diameter over 8" diameter.
 - One representative from each group briefly summarizes their initial group decision for the breakpoint for length between "small" and "medium" size risk. The full Team discusses options and variations.
 - Factors that went into the size risk: the volume of fluid, the size of equipment, and the proximity to receptor (e.g. storm sewer). Things like geotech conditions and depth of cover are also factors in IR risk, which will be considered later.
 - For 2" or less pipe sizes, the drill shaft keeps the hole open but the hole needs to be reamed greater than 2". Drilling mud is used for all size product. For both 6" and 8" product diameter, a larger diameter reamer (10" or 12") will likely be used rather than 6" or 8".

- In gas, 8" is very common pipe diameter since that's the largest polyethylene pipe. Polyethylene is more flexible so driller can use fewer reaming passes and therefore less risk of IR. Larger than that is a different gas pipe (carbon steel) and more rigid so would need more ream passes.
- After team discussion, we confirm unanimous team agreement to use 3 size risk categories:
 - ≤8 inches diameter and ≤850 feet long;
 - >8 inch but <24 inches diameter, and >850 feet but ≤1500 feet long; and
 - ≥24 inches diameter for any length, or HDD bore length of >1500 feet.

*** For symmetry in communicating thresholds, Team Leader proposes large category be ≥24" and ≥1500' ***

Practices for Size-Related Risk (Kim, Team)

Goal: Review list of practices for all projects and those appropriate for size-related risk.

- Kim introduces the introductory practices table shared on-screen. This table was created from the practice descriptions which identified the conditions where a practice applied. Some nuances for this table:
 - Some practices had a basic requirement for all projects, then had additional specifications for certain project or site characteristics (complexity, size, env, etc.), which are noted with a "b." or "c."
 - Brackets indicate a Consideration.
 - Environmental resources have mostly been discussed as presence or absence of water resource or "high quality" resource. The environmental resources will need some clarification and definition in the standard.
 - Geology risk categories were identified by presence of karst and/or presence of "high risk" soil. This language will also need clarification in the standard writing.
 - So far, practice applicability is based on individual factors independently, and is not triggered by certain combinations of factors. For example, a geophysical survey is triggered by screening which indicates presence of karst **regardless of other factors** such as the size of the project--a project would **not** need to have a combination of factors such as karst presence and also a large size and also water resources present to trigger a geophysical survey. (However, this might change if the team defines 'complex' projects/HDDs as a combination of factors.)
 - This table doesn't address the combination of factors (yet)—like if a project is small size plus a high quality water resource, what are the

combined factors. The practice descriptions often mention “complex” sites which may be the terminology used by the combination of risk factors—this is yet to be determined.

- Allow flexibility for field modification. Site conditions sometimes discovered while in the field may result in a length change or discovery of geological conditions (added to parking lot list).
- This table is a tool the team can use while reviewing the draft technical standard to better visualize and track the conditions that trigger each practice.
- Team discusses proposed changes and agrees to some adjustments:
 - Field Site Walk-Through and Pre-Construction Meeting can be unnecessary for smaller projects (unless there are other factors, like high quality resources present). Team agrees to move both of these practices OUT of the “All Projects” list and for size risk these will be in only the medium and large size categories. Both Field Site Walk-Through and Pre-Construction Meeting projects are also appropriate with environmental resources and complex projects. Details are in the practice description text, which has been migrated to the draft standard format, which will be emailed out to the Team for review after this meeting.
 - Hydrofracture analysis – this is not Criteria, but a Consideration. This is used only for difficult geotechnical situations in very long bores (regardless of diameter). Team agrees this is appropriate and language is more clear in the practice description text.
 - Team discussion option to add Site-Specific Frac Out Plan and Site-Specific Spill Plan to the medium size projects rather than just large or complex size projects. The contractor often is required to develop their own site-specific plan and not the utility company. A contractor often isn’t yet on board at the time of the storm water permitting. After team discussion, it is agreed to keep both the Site-Specific Frac Out Plan and Site-Specific Spill Plans for large projects and complex projects (no change).
- Based on team discussions, Kim will make changes to the draft standard text before forwarding that to the team for review.

Plan of Action (Kate, Kim)

Goal: Review action items and agenda items for next meeting (April 8, 2021).

Reiterate Action Items from today’s meeting:

- **Kate:** finalize 2/9/21 notes and post online
- **Kate:** prepare 3/11 draft meeting notes, **Kim** reviews, then full **Team** reviews
- **Kim and Kate:** prepare agenda for 4/8 meeting.

- **Team:** respond to Doodle poll by noon tomorrow to set up more meetings for May and beyond. **Kate** and **Kim** and **Amy** will confirm meeting dates and **Kate** will set up calendar entries.
- **Kate** will create a Sign-up Genius to get volunteers for a few specific homework tasks for small groups to accomplish before the next meeting. **Team** should sign up for the task that interests them. Details will follow via email:
 - Prepare Checklists – these were previously suggested for walk-throughs and plans.
 - Define thresholds for wetlands and environmental resources – confirm details for thresholds that trigger certain practices, such as the kind or location of a water resources.
 - Design outreach and training materials - How are we going to communicate this to the public—training details like graphics and a PowerPoint to show the steps and how this will look. Amy will lead this process.
 - Define and clarify what is a “complex” project.
 - A little too soon, but future homework could be developing the decision-making tool. The parameters for this tool will be set up more after working out the complexity definition.
- **Kim:** refine draft standard text to incorporate discussion points and decisions, then send out to the team with other assignment detail.
Team will review the text and provide feedback with specific, suggested language. Highlighted items are to draw your attention to areas we had specific condition or threshold where a practice would apply, or items that need more input. The standard text will be used for the specific homework assignments mentioned above.

12:00 End

Parking lot for later discussion (from previous meetings):

1. Develop a communication tool for determining which practices apply for a specific project (decision tree, matrix, flow chart, scorecard, etc.), including a combination of different risks.
2. What resources to use for clarifying/defining environmental sensitivity and where to find them (like DNR’s SWDV and NRCS soil survey)? Be clear what “environmental sensitivity” is of concern (e.g. wetlands and waterways, rare species, cultural resources, etc.?)

3. Use flexible language in Frac Out Plan and Spill Plan descriptions to allow for either lots of little plans (spill, frac out, staging, execution, contingency, etc.) or large “megaplan.” Submittal style could be at user discretion.
4. Clarify requirements for projects that have multiple stream crossings or different quality resources. Similarly, clarify requirements with multiple HDD runs separated by pits.
5. Review language consistency and change “bore” to “drill” or “drill path”. Make sure language is clear to be HDD drill.
6. Ensure requirement is to maintain monitoring throughout the project (e.g., not just the first reaming pass or when other limiting factor). *INCORPORATED INTO PRACTICES LANGUAGE*
7. A smaller (12.75”) pilot hole is often used to start HDD, then reaming tools used to increase diameter. Pilot and reaming tends to be when frac out occurs—suggestion to add this as a consideration.
8. A checklist for the 3 walk-throughs (design phase, planning and pre-construction) could be an attachment to the standard or prepared for DNR to use as an example for the users.
9. Subjective language to clarify, or make additions to Glossary – words such as low or high risk, complex, sensitive, large, small, qualified etc.
10. Standard should also allow some flexibility for field modification. Site conditions sometimes discovered while in the field may result in a length change or discovery of geological conditions.