

Erosion Control in the Cloud



Going “paperless” with an erosion control Web-based application.

By Jeff Mazanec

Effective erosion and sediment control on an active construction project requires planning, design, permitting, installation, maintenance, and both routine and after-rainfall inspections. Monitoring erosion control efforts and keeping track of what can easily turn into a “paperwork nightmare” can be time-consuming and difficult, especially if a municipality has multiple active construction projects underway. It’s not uncommon for a community to have just one person responsible for meeting construction site permitting and inspection requirements on dozens, and sometimes hun-

dreds, of construction projects each year. In addition, if not closely monitored or addressed in a timely manner, erosion control problems can lead to project delays, angry residents, additional expense, and distress for property owners.

R.A. Smith National (www.rasmith.com) is working with communities throughout the U.S. that are taking advantage of PermiTrackESC, a cloud-based application for administering construction site erosion and sediment control inspections. With this unique application, field personnel use an iPad, tablet, smart phone, or laptop comput-

Project Name	Type	Permittee	Authorized Inspector	Last Final Inspection
University Crossing (64)	Plat S	The Lenhart Company	Krupp at University Crossing	11/01/2013 12 hours ago
Blackhawk 8th Adn Ph 3 (30)	Plat S	McKenzie, 300 Corporation	Mead & Hunt	10/31/2013 2 days ago
University Crossing Bldg 6 (36)	Comm>20k NS	University Crossing Apartments, LLC	Krupp General Contractors, LLC	10/30/2013 3 days ago
Yale Equip. & Services (24)	Comm>20k S	Wahlgren Schwenn Inc	Wahlgren Schwenn Inc	10/30/2013 3 days ago
Royster Clark Demo (73)	Comm>20k NS	Ruedebusch Development & Construction	Ruedebusch Development & Construction	10/28/2013 5 days ago
Hercules Trail Apts (33)	Comm>20k S	Stockbridge Trail LLC	Stockbridge Trail LLC	10/27/2013 6 days ago

PermiTrack’s administration screen provides easy overview and access to erosion and sediment control information on all active projects.

er with an internet connection to enter project inspection information at the project site. No paper to keep track of or file. PermiTrackESC is essentially a paperless reporting system that also generates inspection reminders; automatically distributes inspection reports among inspection staff, contractors, and owners; and provides secure report storage and retrieval.

PermiTrackESC has several key advantages over manual methods for administering an erosion and sediment control monitoring system.

Effective administration of a construction site erosion control program. The cloud-based application provides staff with up-to-date information on inspections completed for each permitted project so they can decide which projects might need further attention to maintain compliance. The application also automates distribution of inspection information among inspection staff, the permitting authority, permit

holders, and the public. Users can choose to generate inspection reminders based on anticipated rainfall or other site-related events and to automatically remind inspectors when any individual project is overdue for an inspection. These tools stretch the reach of inspection program administrators with limited resources, and maintain all data on a secure remote server with internet access.

Concurrent use of an online tracking system by multiple staff from multiple locations. Using a mobile device, field personnel visiting a site can view the site's erosion control plan, inspection history, and past reports and create a new inspection report with photos and notes to record their observations. All data is automatically saved in the cloud-based PermiTrackESC database.

Electronic inspection report input with automated distribution to all involved parties. This feature supports substantial time savings by replacing

PermiTrack Erosion Control (ESC) Settings Jeff Mazanec

City of Fond du Lac, WI

Projects

- 2012 Utility and Street Project
- 2013 Utility and Street - Auburn Street
- 2013 Utility and Street - Everett Street and Champion Avenue
- 2013 Utility and Street - Fourteenth Street
- 2013 Utility and Street - Grace Avenue and Sunset Circle
- 2013 Utility and Street - Kaye Street
- 2013 Utility and Street - N. Main Street
- 573 Van Dyne Road
- ANR Pipeline Relocation Fond du Lac River
- Bashaw Builders Condo Development
- Baumhardt 176 Fill Site
- Bob's Pizza
- Calvary Cemetery
- Con-Way Freight Service Center
- David Gloss - CBRF
- Eastwind Villas Condominium
- Excel Engineering
- Fairgrounds Stormwater Quality Pond
- Fire Station #3 Addition
- Fond du Lac Motel & Conference Center
- Forest Mall - Parking Lot Renovation
- Fruth Field
- Hickory Street Substation
- Hoerth Storage
- Holiday Dodge Parking Lot

Active Construction Projects Erosion & Sediment Control Permit Information
Select a project to view information or leave feedback.

PermiTrack supports direct access to current project information, as shown for the City of Fond du Lac, WI.

hand-written reports with portable electronic reports and physical mailing of printed reports with electronic distribution and access.

Linked site and best management practices (BMP) photos during the inspection. The value and credibility of an inspection is greatly enhanced by photos documenting the existing condition of any particular BMP or construction item. Over time and consecu-

tive reports, these photos also document progress or challenging issues.

Contractor self-inspections with full-time agency access. Immediate access to contractor self-inspections greatly leverages limited staff effectiveness. Contractors are required to record construction site erosion and sediment control inspections weekly, as well as within 24 hours of every rainfall greater than 0.5 in. While printed copies of reports must be accessible to the permitting agency at the construction site, a paper format does not provide real-time value. With immediate electronic access, the permitting agency can confirm that the inspections have been completed and view the results. This facilitates effective construction site compliance by documenting the frequency and results of required inspections.

Public records access and feedback on active construction site activity. The public can be provided with full-time internet access to active construction site information and records through a user-friendly map interface. Public view-

PermiTrack enables communication from the public to the contractor and MS4 staff through an easily accessed online form, expediting direct contact to responsible parties and facilitating prompt response.

PermiTrack ☰

University Crossing

 City of Madison, WI

Project Info

Permit #	3408
Parcel #	070918414081
Address	5117 University Ave Madison, WI
Description	Demolition and redevelopment of several urban lots into new commercial plat. Revised Grading & Erosion Control Plan 4-25-12 for better management of site with adjusted schedule.

Comment

First Name

Last Name

Street Address

City

State

Zip

Phone #

Email

Comments

ers can also provide feedback on specific construction activity or issues, which is immediately communicated directly to all involved parties. This supports immediate contractor response and focused local government oversight without first requiring MS4 staff to visit the site and track down the responsible parties.

Project-specific inspection forms.

City of Madison, WI

Inspection Report

Edgewater Hotel Redevelopment

Address

666 Wisconsin Ave.
Madison WI 53703

Inspector: Matt Stadelman, Project Engineer
mstadelman@findorff.com

Inspection Date: 07/22/2013

Inspection Time: 01:00 PM

Weather Trends: Partly Cloudy

Temperature: 83 F

Last Precip. Date: 07/21/2013

Last Precip. Amount: 1.8 in

Last Precip. Source: Estimate

Reason for Inspection: After Rainfall

Comments:

Inspection Items

Name: Construction Entrance -- Sweeping/Cleaning

Required: Yes

Inspected: Yes

Status: Active

Condition: Correct

Description: Sweeping or cleaning as necessary to keep adjacent streets, sidewalks and other paved surfaces clean of tracked soil and mud. Must be completed by the end of each work day at a minimum. High traffic sites may require cleaning through out the day.

Comment: Street is in clean condition at this time. Sweeping is continuing on a normal as need basis.



Name: Construction Entrance -- Rock Construction/Tracking Pads

Required: Yes

Inspected: Yes

Status: Active

Condition: Correct

Description: Rock construction or tracking pad if construction traffic



Standard construction site erosion and sediment control inspection forms are based on a series of generic questions and are not specific to any particular project. Instead, PermiTrackESC incorporates project-specific inspection items for each project as set up by the permitting authority when the project is permitted. This provides direct guidance to the inspector so that critical elements of the erosion and sediment control plan are properly inspected and documented.

Effective and automated communication support. Tracking inspection results and dates as well as email addresses for all involved parties is difficult and constantly changing. The application can generate project-specific emails a specified number of days after each project inspection. This replaces paper shuffling and telephone or email notification, freeing up valuable time for inspection staff to focus on more important tasks. Similarly, customized event notices can be generated by inspection staff to advise a filtered list of active project

PermiTrack's reports (sample shown here) include key inspection details supported with detailed comments and expandable photos.



Photos can be automatically attached to each inspection item and provide powerful graphic documentation of existing conditions.

responsible parties, of recent or pending rainfall, or other related events.

Ability for inspectors with mobile internet access to conduct inspections by simply opening a new inspection form for the project. The inspectors enter current weather and recent rainfall information, review past inspection report deficiencies, and are guided through the new inspection by addressing each listed inspection item. As they conduct their inspection, inspectors are able to link digital photographs and add comments for each item. Their input is saved on the cloud server and when final, automatically emailed to all involved parties. The report is also viewable by the permitting agency and, if the interactive map feature is activated, the general public. Field inspections are routinely completed on smartphones, various types of tablets, netbooks, and laptops.

Immediate access by program admin-

istrators to a wealth of information from a single screen. Each project is listed and includes user selected key information, such as project name, location, type, status, and authorized inspector. The date and results of the last recorded inspection are immediately viewable with access to all completed inspection reports. A single screen report listing all current deficiencies reported on any active project is accessible with a single click. This enables program administrators to evaluate the status of each project based on inspection results, the project's unique features and potential for environmental damage, and their familiarity with each related contractor's operations and practices. Accessible information from the office allows them to more efficiently administer their program and better direct their field efforts for greater effectiveness.

The City of Rochester, MN, Public

Works Department has been using PermiTrack since 2008 and has a goal of entering all city projects that require an NPDES Construction Storm Water Permit and other developer-managed projects that require an NPDES CSW Permit and have a city-owned contract. Mike Kraszewski, Storm Water Compliance Specialist, has found PermiTrack to be cost-effective and easy to use. Kraszewski indicated, “PermiTrack is easy and quick for contractors to enter inspection information online and for the city to provide erosion control oversight. The application has been particularly useful to the city in monitoring data for compliance and making additional site visits if needed. There is a further cost savings associated with the ability to distribute information automatically through email versus printing multiple reports.”

Another PermiTrackESC user—Madison, WI—has realized an increase in erosion control compliance among local contractors and a greater awareness of erosion control enforcement by the public. Tim Troester, an engineer in the Madison’s Department of Public Works, said, “We began using PermiTrack in 2007 when we updated our city ordinance to require weekly self-inspections on all sites that disturb areas of 20,000 square feet or greater. PermiTrack has been very useful in reducing the amount of staff time and paperwork that would have been required if self-inspection reports would have been submitted on paper or via email. In addition, the application has

automated a lot of the communication required between the city and its contractors to stay on top of things. Our contractors have also benefitted from the user-friendly automated inspection reporting feature that is available to help them maintain permit compliance.”

The PermiTrack application is owned and maintained by SEHTS (SEH Technology Solutions). R.A. Smith National is an authorized business partner of PermiTrack. Currently there are more than 2,600 projects and 30,000 recorded inspections in PermiTrack. Jeff Mazanec, municipal project manager with R.A. Smith National, works with dozens of communities and private users in Wisconsin and nationwide, providing consulting services, hands-on training and ongoing support services. For more information visit www.myPermiTrack.com to see how easily PermiTrackESC can help you proactively administer erosion and sediment control requirements and permittees or contact Jeff Mazanec at 920-731-8397, ext. 3406.

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