



The Certified Inspector of Sediment and Erosion Control Newsletter

Special Interest Articles:

- The Clean Water Act Turns 40!
- DUG East Workshop Tackles Environmental Issues
- LUP Projects
- CBIA vs. SWRCB
- What To Do When You Are Not Wanted
- Cost Effective BMPs for Inactive Construction Sites
- Field Training – SWPPP Tailgate Sessions

The Clean Water Act Turns 40!

By D. Clark, CISEC #0408

This year celebrates the 40th anniversary for the Clean Water Act, the driving force behind water quality laws in the United States, including the creation of the National Pollutant Discharge Elimination System, or NPDES. The Clean Water Act is the motivating force behind the erosion and sediment control programs we work to implement each day. So, after 40 years, why are inspectors still hearing the same old excuses?

Many of us working to implement erosion and sediment control programs fall into the same trap that contractors do: we focus on excuses rather than responsibilities, we don't have staff, we don't have time, we don't have the money--and the list goes on. Rather than focusing on what is missing, focus on what you have. If you work for a jurisdiction, remember that you are the link to the Clean Water Act.

Here are a few ideas on how jurisdictional inspectors can help redirect contractors back to the basics:

1. Start with the permit. A well-reviewed permit should include all of the information the contractor needs, even if the information is provided as attachments. This is the most complete "education and outreach" effort a jurisdiction can provide. Make it standard policy to tell each contractor that he/she is responsible for reading the notes and comments on an approved erosion and sediment control plan. When a contractor says "tell me what to do and I'll do it", point to the permit. The information should all be there.
2. During inspections, don't pass sites that don't comply with the basic requirements or have improperly installed BMPs. It's easier to say than it is to do, but it's an inspector's job and in the long run, it will help the contractor out. Don't fall into the trap of "approved with corrections" or similar approvals that don't hold water. Similarly, don't provide "partial approvals" unless a follow-up inspection is scheduled within a reasonable time.
3. Have an "or what" clause. Ask yourself: If an inspection is "approved with corrections", then the contractor needs to make corrections "or what" happens? If there isn't an answer to that, then don't approve the inspection. In cases where a contractor simply won't install BMPs, but it isn't resulting in sediment or pollutants leaving the site, consider using "Stop Work Orders." A Stop Work Order focuses a contractor on corrections; citations and civil penalties generally take more time to administer. Given a choice, most contractors choose to do things right rather than face a Stop Work Order.
4. Don't waive requirements. If base measures are required on all sites, then require them on all sites. It's hard to convince a contractor that BMPs are important if they're waived on every project.
5. Finally, don't be afraid to tell contractors you're changing the way you do inspections—you're going back to the basics. After all, it's the way things are supposed to be done.

Jurisdictions play perhaps the most important role in the Clean Water Act. Helping contractors see the value of doing things right the first time not only saves time and money, it may help reduce the need for added legislation.

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DUG East Workshop Tackles Environmental Issues

By J. Murray

Submitted by Joe Crea, CISEC #0007

As several thousand people prepared for the main conference at Developing Unconventional Gas (DUG) East in Pittsburgh, PA, a smaller group took part in an environmental workshop organized by Exploration and Production (E&P) magazine. Among the speakers was Richard Vaclavik, area Vice President for Northeast U.S., Halliburton, who talked about water management issues associated with hydraulic fracturing and Joe Crea, Environmental Compliance Specialist for Kleinfelder.

The goal in any shale operation is to minimize water use, Vaclavik said, "to limit the negative impact of water." Because there is a limited supply of water on the planet, "We as an industry need to change the way we think about it," he continued, "We've got to minimize our impact on the environment. If we are using water, we need to use it responsibly."

One way to achieve that end is to improve carrier systems for water--hydraulic fracturing fluids. This is the reason Halliburton is moving from "environmentally friendly" chemicals to environmentally focused energy development, Vaclavik explained. It also is the reason for a renewed focus on flow back water treatment.

For the industry to be successful, service providers need to supply products and services that decrease the footprint of operations, minimize emissions, and increase operational efficiency.

Joe Crea, CISEC No. 0007, addressed the need to ensure safe development. "Many projects that are now shut down or where fines are being levied are the result of poor planning of erosion and sediment control", he said. "Planning can avoid costly mitigation and possible litigation in the wake of environmental mishaps."

One of the concerns Crea discussed was the fact that engineers creating the development plans often do not get out into the field which can cost a company in the long run, because too many things can be overlooked. Walking the site is important to evaluate the level of groundcover, which can affect erosive conditions down slope, and to be aware of what might come onto the project site from upslope areas in the event of heavy rain.

The goal is to protect the physical, chemical, and biological properties of waterways. To achieve that, Crea said, "Proper planning is critical as is proper inspection of the site. It is for this reason that inspectors and designers should both become certified through a credible nationwide certification programs such as the Certified Inspector of Sediment and Erosion Control (CISEC)

Site restoration is another component of the project that has to be considered from the outset. That takes planning and will be easier if steps are taken at the beginning.

"Topsoil is the life of the site," Crea explained, advising operators, "Don't mix it. Preserve it." If the original topsoil is replaced during the site remediation phase, re-growth will be expedited. Following this advice can improve a company's ability to avoid fines and delays and eliminate unnecessary risks, and because safe operations experience more production time, implementing these principles can be economically profitable as well.





LUP Projects

*By A. Elam,
CISEC #0821*

I work for Mid-State Consultants, Inc. and have been a CISEC member since August 2011 and have several years of experience as an inspector, primarily with linear underground/overhead projects (LUP) type 1 risk level 1 projects.

Our work consists of installing telecommunication lines such as fiber optic and copper wire. Located in rural northern California, our construction season typically runs from early spring to late fall. Temperatures can run between 90 to 100 degrees in the summer and in late fall, from 40 to 50 degrees to freezing. Our construction zone is along state highways and county roads, digging in the shoulder or bar ditches, and sometimes right in the road itself. Occasionally we do directional bores, for various reasons, such as stream crossing or culverts.

LUP jobs tend to move along quickly and don't pose a huge threat of sediment and erosion issues because our jobs require us to restore our construction activities to pre-construction conditions at the end of each day. Our contractors use equipment, such as backhoes, rock saws and excavators to dig a trench. They are also responsible for all cleanup activities in accordance with the SWPPP. Cleanup equipment consists of street sweepers, water trucks and hand brooms. We install BMPs such as wattles, silt fence and tracking pads. Also on occasion, we install straw or hydro seeding.

The most important suggestion for on the job is communication with the contractor and taking a lot of pictures. It's critical for everyone to be on the same page, as we are one team looking for a successful outcome.

CBIA vs. SWRCB

*By B. Martin,
CISEC #0948*

After 3 years of regulatory fighting and 2 years of litigation, Sacramento Superior Court Judge Lloyd G. Connelly has invalidated the Numeric Effluent Limits (NELs) contained in the Construction General Permit for stormwater runoff issued by the State Water Resources Control Board (SWRCB).

The SWRCB picked a 500 NTU NEL for turbidity (sediment runoff) and 6-9 pH units as the NEL for pH. The SWRCB claimed that they were relying on 3 different studies to support the NELs chosen. The Court, however, characterized the studies as limited or inconclusive and concluded that the NELs lacked substantial evidentiary support. Judge Connelly acknowledged that data could have been developed to support some NEL if the SWRCB had followed the request of the California Building Industry Association (CBIA) made during the administrative process to use Numeric Action Levels (NALs). Unfortunately, the SWRCB refused.

The Court found that the NELs were subject only to balancing factors under federal law not state law and that the SWRCB is required to comply with the cost-benefit factors set forth in the federal Clean Water Act in establishing NELs. The Court concluded that the NELs are invalid and unenforceable unless and until the SWRCB can produce the data that demonstrates that available technologies will actually achieve the NELs.

Stay tuned since this story is not yet complete!





What To Do When You Are Not Wanted

By R. McKee,
CISEC #0138

Have you ever been assigned to inspect a project and then find out the employees of your own company, or the superintendent for the contractor that hired you, doesn't want to "WASTE" their time with you? Do you ever feel like they see you as enforcing another unnecessary government regulation? How many times have you felt that the builder or contractor does not see the benefits of your work?

What can you do? How can you convince them that your job has value to them? What if you could save them money or could make their job a little easier? What if your presence **BENEFITED** them?

Let's see what I can suggest, and you decide if it would help.

FIRST, WE NEED TO BUILD A RELATIONSHIP.

Start by getting to know the superintendent and discuss with him what his expectations are; ask him how you can help to make his job easier; mirror his comments but never try to convince him of your value! You want him to like you enough to give your actions a chance to speak for you. Walk the job and make notes (you may need to wait until the job has progressed to accomplish this). Observe what is happening on the job and what may lead to extra work and extra expenses at a later time. Meet with the superintendent and ask him about what challenges he is encountering. Share your observations and offer some suggestions on how YOU CAN HELP. Keep checking on him, keep asking what you can do to help, get your hands dirty, but, make sure he knows you're helping him. Now that he knows you care and that you are there to help him, not tell him what to do, the trust will start to build.

SECOND, LEAD HIM TO COST SAVINGS.

Now you need to have your homework ready for this opportunity. Know your facts, and rely upon the trust you built to show him how the 5 dollar rock bag will outlast and outperform the two dollar bag. They look better, work better, and last longer. You need to show him that the BMP's you choose will save him money. When possible avoid structural BMP's and build berms or dig ditches, etc. We all know that if you build a more expensive, good quality track out pad (instead of throwing some gravel down), it will pay for itself, (several times over) with savings on street sweeping. Start small and work your way up to bigger expenses.

THIRD, DO NOT STOP!

Be flexible, and try to find an approach that will meet the needs of the environment and the contractor. Keep asking how you can help, look for ways to do a little extra, and thank him. For what you ask? Each time he comments about how easy it has been to work with you, when he notices that he is spending less to maintain the job, and when he notices that the job is cleaner and looks better. Thank him for giving you the chance to work with him.

A CISEC's value increases when we help one superintendent at a time "**DO HIS JOB BETTER!**"





Cost Effective BMPs for Inactive Construction Sites

By J. Loggans, CISEC #0572
and D. Feidner, CISEC #0574



With the recent proliferation of land developer foreclosures and repossessions, So Cal Sandbags, Inc. (So Cal) has been presented with the challenge of developing cost effective BMPs for large dormant developments that are in all phases of construction. Most of these projects are forecast to be inactive for three to seven years. This inactivity does not relieve the responsibility of keeping the site in compliance with the regulations of the California Construction General Permit (CCGP).

Consider a single family residential development sprawling across a hillside in the Inland Empire region of Southern California. The designer's plans for this 239 acre project required installation of approximately 40,000 gravel bags and 10,000 linear feet of silt fence. Knowing that this project will be dormant for several years, these approved plans created an ongoing maintenance nightmare with the repair or replacement of gravel bags and silt fence each year or two depending on the life expectancy of the BMP

The annual budget for materials alone was a staggering \$34,480 with approximately \$24,960 in labor cost alone to cut and dump bags, repair or replace silt fence, remove sediment from check dams and repairing hillside erosion two or more times each year.



Analyses of the costs lead us to conclude that the approved plans were not an effective way to maintain a site with zero construction activity. Thus, use of rock check dams was suggested as an alternative to gravel bags to minimizing the annual replacement of perishable BMPs (e.g., poly bags, silt fence, etc.)

With the approval of the designer, approximately 1,500 tons of 6-inch minus aggregate material were used to construct a series of 75 check dams. The average size of each check dam was approximately five foot at the base and three foot tall with lengths ranging from twenty five to forty feet. In order to maintain access by inspectors and regulatory agencies, each check dam was constructed with a drive over berm adjacent to the structure.

Now that all check dams have been constructed with rock, the need to remove and replace bags each year has been eliminated and only a loader is needed a few times a year to remove accumulated deposits of sediment. In addition, silt fence barriers have been removed from the project as the native non-irrigated seed mix germinated and provided sufficient slope coverage. These minor changes have resulted in a \$57,000 per year savings to the owner.



In a secondary effort to reduce costs of storm water compliance inspections, a meeting was held with the State Water Resources Control Board (SWRCB) inspector responsible for this area. This meeting resulted in the inspector agreeing to reduce the amount of required routine weekly inspections to one time per month with continuing pre and post storm monitoring as required by the CCGP. By reducing the amount of required site inspections, an additional \$9,000 per year of additional costs was eliminated.

The project has now been dormant for four years with a net savings of \$55,100 (83.4%) each year for a grand total of \$220,400.

The above example illustrates the benefit of inspectors always making efforts to communicate with designers and regulatory personnel. Not only does this save money, but it allows for more efficient maintenance activities to ensure compliance with the CCGP.



Field Training – SWPPP Tailgate Sessions

By S. Maragakis, CISEC #0674

Tailgate and toolbox safety meetings are a Federal OSHA requirement to be held on construction sites at a minimum of every 2 weeks. This presents a perfect opportunity for the CISEC to add value to the inspector-client relationship by assisting the construction superintendent with training and recording keeping related to the SWPPP when environmental topics are addressed during the safety meeting.



Setting Up a Tailgate/Toolbox SWPPP Meeting

The SWPPP Tailgate meeting is a 10 to 15 minute on-the-job meeting held along with the OSHA safety meeting to keep workmen alert on SWPPP-related issues for the site, provide training on relevant topics and ensure accurate record keeping.

Why Have Them?

The Environmental Tailgate sessions should be tailored to the construction activities scheduled and used as a training tool for the construction team. The meetings can be used to address actual problems on the job such as BMPs that conflict with construction means-and-methods. In addition, the meetings would fulfill the NDPEs General Construction Permit training and documentation requirements under section 3.7 (and the proposed CGP under section 7), and many State CGP regulations that also require training to be documented and added to the site SWPPP document. The meeting can draw on the experience of workmen and use that experience to remind all employees – especially newer ones – of storm water compliance and permissible/non-permissible effluent discharges.

What to Talk About?

Review the most recent BMP inspection report and discuss required corrections, trends, weather forecasts, and anything else that may contribute to keeping the site compliant. Keep the topic relevant to the tasks that workers perform. An excellent source for topics is the SWPPP documents itself which likely has sections such as:

- BMP Inspection and Maintenance
- Erosion and Sediment Control
- Non-Stormwater Discharges
- Stormwater Management
- Material Management
- Spill Response
- Housekeeping

How to Run a Good Meeting

Hold the meeting on the job, preferably where everyone can sit and relax. Ensure that the meeting is held at the beginning of a shift or after a break so as not to impact construction productivity. Choose the topic carefully. Topics should be relevant to the ongoing construction activities and encourage participation within the group via questions and answers. Do not choose too broad a topic. Keep your meeting short - usually 10 to 15 minutes don't forget a sign-in sheet for record keeping.

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