How to prepare for the rainy season.
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In the old days, a rainy day merely meant a lost working day relative to the construction contract. Now, the entire rainy season requires contractors and builders to do much more in order to protect receiving waters from pollution originating from construction sites. Although sediment and erosion control measures are required year round, the greatest risk is during the rainy season. The rainy season is **October 1 through April 30** of each year as defined by the State. All project sites will be scrutinized during this time of year and appropriate enforcement actions taken if a site is not adequately protected. In addition, a State General Construction Permit is required for sites with soil disturbances of 5 acres or more. This permit requires the applicant to develop and implement a Storm Water Pollution Prevention Plan (SWPPP, *pronounced "swip"*) which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting storm water and with the intent of keeping all products of erosion from moving offsite into receiving waters; eliminate and reduce non-storm water discharges; and inspect all BMPs. Additionally, the State General Construction Permit was amended (Resolution No. 2001-046) to require sampling and analysis of discharges.

Local jurisdictions in addition to the local Regional Water Quality Control Board will be looking for compliance with established minimum standards. The County of San Diego as part of their Project Clean Water lead a technical work group to develop a model construction activities program for the region (pursuant to the San Diego Municipal Storm Water Permit that was adopted on February 22, 2001) which provides guidance and recommended minimum standards for both the local agencies and the building industry.

As you prepare for the rainy season, the following five key areas should be considered:

Training: All personnel working on site should receive training and know how to incorporate Best Management Practices (BMPs) into their activities. Since sediment is the major pollutant of concern from construction sites, the training would include information on sediment and erosion control measures (e.g. what to use where and how to install it). Storage of materials is also a concern. Potential contaminants should be covered to eliminate contact with storm water. Concrete washout areas should be adequately sized, well marked, and used by the concrete trucks. Documentation of employee training, including subcontractors, must be included in the Storm Water Pollution Prevention Plan (SWPPP) onsite.

Over the past six months, EGCA worked with the City of San Diego's Storm Water Pollution Prevention Program to develop a comprehensive 2-day training seminar to address "everything a contractor needs to know". The seminar included an exercise to plan sediment and erosion controls for a site as well as installation of those controls in the field. The course was offered three times and both private and public sector employees attended. There were presentations from the Regional Board staff, the City of San Diego,

the County of San Diego and Caltrans to provide additional information related to regulatory expectations and enforcement. The course will be offered in the future if there is a demand. There is also training sponsored by other organizations available.

Planning: Thought should be given to how much area will be exposed during the rainy season. Implementation of sediment and erosion control measures for the active work areas will be required prior to each rainstorm. Erosion prevention by not grading an area is the most effective way to keep sediment on site during construction. When areas are disturbed, they need to be stabilized as soon as possible. Interim erosion control measures such as blankets and tackifiers must be used until revegetation is established.

Since almost all construction is done in phases, attention must be given to the sediment and erosion controls needed for each phase of work. Planning ahead of time is necessary to ensure that sediment and other pollutants are contained on site. Specifically, where the drainage areas are? Where the potential sources of pollution are located? What measures are in place to address the pollutants during each phase of construction?

The Storm Water Pollution Prevention Plan is where this planning is written down. The information contained in the SWPPP is intended to aide in managing pollution prevention on site.

Materials: The contractor should have adequate materials or supplies on site in order to protect exposed areas. It will do absolutely no good to merely have materials ordered when the rainstorm comes. Suppliers are very busy during the wet season and to ensure timely delivery of necessary materials, planning ahead is key. Get to know your various suppliers. Ask them about the various products available and what the lead times are for obtaining the desired materials. There are a number of different types of materials that can serve the same purpose. Be resourceful and consider all your options before making a purchase. Remember that measures need to be inspected after each rainstorm. New purchases may be required if the performance of existing BMPs was not good enough to keep sediment on site. Anticipate material purchases throughout the rainy season.

Proper Installation: There are many more BMPs seen at construction sites these days but many are not installed correctly. BMPs that are just “for show” will lead to problems down the road. BMPs must be installed properly to be effective. Proper installation requires knowledge and planning (i.e. adequate time). For example, it takes more time to install a silt fence properly than it does to install it incorrectly. Digging the trench to bury 6-inches of material even requires different equipment. Proper installation is critical.

Remember, one BMP doesn’t fit all situations. For example, a silt fence (or other sediment control) at the toe of a very large slope will not adequately do the job. Erosion controls (e.g. blankets, tackifiers) are to be used in conjunction with sediment controls. Slope areas must be stabilized and treated or covered to prevent erosion until vegetation is established.

Record Keeping: In storm water, the three things that will protect you from problems with the Regional Board are documentation, documentation, and documentation. The State permit requires that a pre-storm and post-storm inspection be made of the existing BMPs. Documentation of the inspections is required to be a part of the SWPPP. Take some time and become familiar with the State construction permit and what specifically it requires. If the site is less than 5 acres, record keeping is still a good idea. Most local jurisdictions require sediment and erosion control plans before a grading permit is issued. Documentation that demonstrates compliance with those approved plans and shows the BMPs to be effective is invaluable. A site inspection may come a few days after a rainstorm so what the inspector sees is what you have documented. This can weigh in your favor if evidence of the BMPs working as designed exists or be disastrous if no documentation is provided.

In closing, sediment and erosion control is not rocket science but it does cost money and require forethought. Planning ahead will ensure that project construction is executed without unexpected costs or delays. Well-planned BMPs cost less than BMPs that are implemented in a crisis situation so get ready before the rain is forecasted and be prepared.

More information about the State Construction Activity General Permit can be found at the State Water Resource Control Board website:
http://www.swrcb.ca.gov/stormwtr/construction.html

The model construction activities program for the San Diego region can be found on the County's Project Clean Water website:
http://www.co.san-diego.ca.us/cnty/cntydepts/landuse/env_health/pcw/pcw_wg.html