What is SWPPP and why is it important?

Construction activities can have a major and immediate environmental effect on the areas around jobsites if not protected, so the Federal Government's Environmental Protection Agency (EPA) created rules and regulations that contractors, developers, and site owners need to follow. One of those requirements is putting together a Stormwater Pollution Prevention Plan (SWPPP) which highlights all of the requirements contractors on site have to comply with.

When stormwater flows through an active jobsite, it can pick up all kinds of pollutants from debris, chemicals, and construction materials that will eventually transport to the city's storm sewers or worse, local waterways. This runoff can kill plants and wildlife, as well as block drainage lines requiring costly cleanup.

Besides the transport of pollutants, following SWPPP guidelines slows down the flow of water off of the jobsite, which helps reduce localized flooding and erosion.

The Permit

Federal

Construction sites that disturb at least one acre of land are required to obtain a SWPPP permit before starting any construction activities. The process for obtaining that permit, however, is on a state-by-state basis.

The Federal EPA sets the standards for states to follow with their National Pollutant Discharge Elimination System (NPDES) General Permit from Construction Activities. This is also known as the Construction General Permit (CGP).

State

Utah developed their own stormwater permit for construction and default to the most current Federal CGP.

Local

Salem City has developed their own stormwater permit for construction and default to the most current Federal CGP. You can find Salem's most recent Storm Water Management Plan (SWMP) at http://www.salemcity.org/storm-water.htm Salem City also requires a Land Disturbance Permit (LDP) filled out and the appropriate fee's paid regarding the length of the project.

https://cityworks.salemcity.org/public/template/login.aspx

The NOI & SWPPP

NOI & SWPPP must be submitted before the project begins.

In order to seek coverage under the Federal CGP or most state level CGPs, site operators (typically those with either ownership of the site or in charge of day-to-day activities) must submit for a Notice of Intent (NOI). You can file your NOI electronically through the state at https://deq.utah.gov/water-quality/general-construction-storm-water-updes-permits

The template for your Common Plan SWPPP or SWPPP CGP (Construction general Permit) can be found at https://deq.utah.gov/water-quality/general-construction-storm-water-updes-permits .

Inspections

Once you are officially covered under the permit for stormwater discharges, one of the most important steps is setting up inspections. The intent of the inspections is to ensure that all protections required by the permit are in place and in proper working conditions. Typically, these inspections are completed by the General Contractor or a 3rd party inspector hired by the General Contractor or Developer.

At a minimum, the federal permit requires inspection reports to contain the inspection date, inspector name, a summary of findings, any necessary maintenance or correction actions, rain amounts in between inspections, and it any part of the site is unsafe to inspect.

Keeping good records of your inspections, including pictures and dates of repairs made is extremely important, because it's one of the only ways to prove after the fact that your company has complied with the regulations.

Frequency of Inspections

The US EPA requires that inspections take place at least once every 7 calendar days –or- once every 14 calendar days and after a rain event resulting in 0.50" inches or greater. This requirement can increase in locations close to sensitive or protected waters. There are several other exceptions to the inspection frequency rule that can reduce the amount of times necessary for inspection, including areas that have been "stabilized," sites that are in drought-stricken areas, or sites that are frozen. Stabilized sites are those that bare dirt has been covered by vegetative or non-vegetative cover to prevent erosion and sediment loss.

A Salem City SWPPP Inspector will notify you via email or text message if there are corrections to be made to site and you will be given a certain amount of time to have said issues corrected. If corrections are not addressed and resolved by the given time, all activities on site will be halted until corrections have been resolved. If corrections are still not being done, site will be shut down and fines assessed to SWPPP owner/developer per day until resolved.

Governmental Inspections

Governmental agencies, whether local, state, or federal, can inspect your site at any time**. It's important to have your documentation complete and available at all times in case of an inspection.**

The Stormwater Pollution Prevention Plan (SWPPP)

Besides inspection reports, all sites need to have their SWPPP immediately available for reference or if an inspector requests to see it. The SWPPP itself is a "living and breathing document," meaning that it has to be updated as conditions on the site change.

At a minimum, the SWPPP must contain:

- A list of all site operators
- The name and position of the stormwater team and their responsibilities
- The nature of construction activities that will happen on site
- A site map, showing boundaries of the site, locations that construction activities will occur, locations of potential pollutants, locations of stormwater controls, and locations of potential pollutant-generating activities will occur, among others.
- A list of all non-stormwater discharges that may occur
- A description of stormwater controls
- Procedures for inspection, maintenance, and corrective action
- Staff training documentation
- Compliance with other requirements, such as threatened or endangered species, historic properties, and the Safe Drinking Water Act
- SWPPP Certification, which is a signed document affirming that all companies will comply with the requirements of the SWPPP
- Post-Authorization Additions to the SWPPP, such as the NOI, an applicable acknowledgement letter, and a copy of the applicable permit.

This is just a high-level overview of the sections required for the SWPPP, so you should refer to the applicable CGP for more detailed requirements.

Stormwater Control Measures or Best Management Practices (BMPs)

As with any government-controlled program, documentation is key to compliance, but actually carrying out the intent of the project on site should not be lost in the process. As mentioned above, properly filtering and controlling the speed and volume of water runoff from jobsites is extremely important for environmental health to the wildlife, waterways, and humans around you. In order to control runoff, there are a variety of Stormwater Control Measures and BMPs that contractors should employ.

I just want to highlight a few of the most common control measures found on jobsites:

Silt Fence

Silt fence is probably the most common control found on construction sites. Its role is to act as the last line of defense around the perimeter of the jobsite, slowing down the flow of water and keeping debris within the boundaries. Silt fence is intended to be partially buried in order to keep water from flowing underneath the fabric. Large jobsites can have miles of silt fence, but it's important to keep up with maintenance of it, especially when sections get damaged or there is a buildup of sediment in front of it.

Sediment Track-out Controls

Another point of concern on a jobsite is where trucks and other equipment exit from the jobsite. As we all know, mud tends to stick pretty well to tires and tracks and that mud can track with us for miles after we exit the site. In order to combat that, a common control is to add large rocks or a rumble strip to the exit to knock as much mud off of tires and tracks as possible. As the vehicles bounce over the rocks, the mud should be knocked off.

Just like silt fence, though, this area needs a good amount of maintenance to keep up its efficiency. The more vehicles that pass over the entrance, the more packed down the rocks will be and the voids will also fill with mud and other debris. A periodic rough up of the stone with an excavator bucket is a common cure to that problem, but sometimes more stone needs to be brought in. If that doesn't do the trick, a tire wash station can be set up to mechanically clean off wheels before exiting the site.

Failing to properly control track out is one of the easiest ways to get reported by neighbors and motorists.

Inlet Protection

Before the site is fully stabilized, storm sewer inlets need to be protected from muddy water and other pollutants. A common protection seen on site are inlet protection filter bags, which keep debris and sediment from getting into the inlet, but allow water to pass through.

Keeping these inlet bags clear of debris and mud is key though, as blocked inlets can create flooding issues on site.

Concrete Washout

The chemicals found in concrete can have devastating effects on wildlife and waterways, so controlling concrete-laden runoff is very important. Construction sites need to be able to contain water that contains concrete and should have a designated concrete washout area. After a concrete truck empties their truck, they have to clean the chute out before the concrete hardens, typically by just spraying water on the chute. The same goes for any concrete wheelbarrows.

Concrete washout areas come in many forms and sizes and there can be specific requirements based upon local and state regulations. In many areas, a plastic lined pit in the ground can serve as a proper concrete washout. In other areas, a sealed metal container, like a dumpster, is required. Once the concrete hardens, it can be removed from the washout area and discarded.

There are many more stormwater control measures found on jobsites and each project can have unique needs. There is no ‘one size fits all” approach to controlling stormwater, which is why the SWPPP is treated as a living and breathing document.

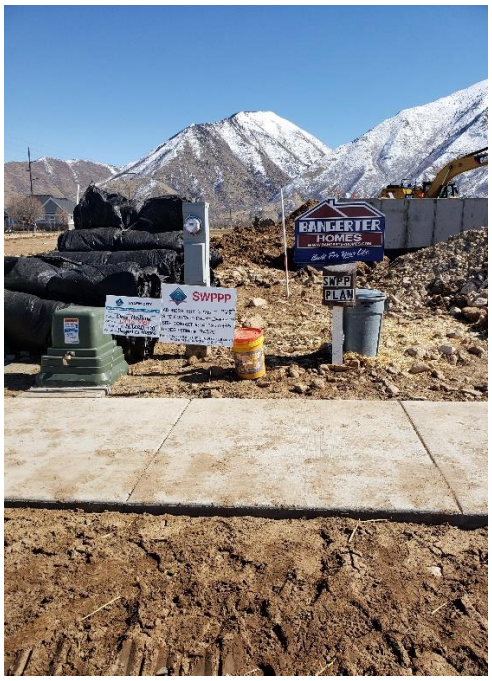
Closing out the Permit/Filing for the NOT

The NOI stays open and contractors must comply with the permit until it has been formally closed. In order to close it, contractors must file for a Notice of Termination (NOT), in most cases.

Being ready and able to file for the NOT can be a source of confusion, however. In order to be able to file for the NOT, the site must meet the following requirements (according to the federal permit):

- All areas that were disturbed during construction must have final stabilization, which generally means that vegetation has grown to 70% of cover over 100% of the site (no large bare areas) or is completely covered by non-vegetative materials, such as mulch, rock, or pavement. Many contractors may think they're complete once seed is placed, but the permit cannot be closed until the proper growth is achieved.
- All construction materials, equipment, and debris must be removed from site
- All temporary stormwater controls must be removed
- All potential pollutants have been removed

Salem City requires that one of their representatives visually inspect the site before approving the NOT and others issue the NOT immediately when filed.



Under an Acre SWPPP example

Over an acre SWPPP examples

Straw Waddles

Silt Fencing

Inlet Protection

Berms

Concrete Washout

Erosion Control

Track-out pad

Wet Weather Control