

QC for sediment control

Based on more than twenty years of experience in the Colorado stormwater industry, here are a few quick tips to help site Supers evaluate the quality of the BMPs they are getting from their BMP contractor. In this case we are looking specifically at sediment control BMPs like silt fence and wattle. This is not a comprehensive installation guide, although we are working on that, but a review of the most common mistakes or weaknesses we see in the field. If you as a site super know what to look for, you can make sure your contractor is giving you your money's worth.

Silt Fence: Most of the critical information is in your BMP detail in your SWMP document if you want more info, but the critical elements are:

1. The bottom of the fabric should be buried in a trench and backfilled so that water is held by the fence, and cannot flow under or around the silt fence. In most cases, there will be 10" or more underground. If you can pull it out with one hand, it will very likely blow out when water accumulated behind the fence.
2. Stakes: Your wooden stakes should be no more than 8 feet apart, and can be closer on corners or low spots where you know runoff will accumulate.
3. Staples: Not all staples are created equal. Best is a 1" crown staple so it can grab several strands of the woven silt fence material at once.
4. Staples: Also, a really good installation will have 3 to 5 staples in the top few inches of the fence. If the top stays attached, the bottom is not going anywhere because of the proper trenching and backfilling, right?
5. Staples: Now we are nit picking, but if your staples are at a diagonal, they will catch both horizontal threads and vertical threads, for an even more secure grab.
6. There is more to know about silt fence placement, like how much upslope area a given quantity of silt fence can service, and keeping it on contour, or out of concentrated flows, but at a minimum, you should not see gaps between sections, and you want to turn up the ends of a silt fence run so that water does not flow around the fence.

Wattle: Again, get to know your wattle installation detail from your SWMP in case there are any unusual requirements in your local jurisdiction, but the basics include: Aliquam ut maximus neque.

1. Wattle is to be placed in a shallow trench and backfilled on the upslope site. This will only be a few inches deep, but it helps avoid gaps under the wattle that might come from being on un-even surfaces.
2. Stakes used on wattle are much smaller than silt fence stakes. Their purpose is to keep it from being pushed or floated out of location by surface water flows.
3. Joints: Wattle will typically come in 25 foot lengths, so on a longer installation there are a lot of joints or connections. Depending on your spec, this can be a butt joint or an overlap, but gaps are not allowed. For overlap joints, be sure to set up the joint like a shingle, where the upslope wattle overlaps the downslope wattle.