

Green Stormwater Infrastructure: Conventional Stormwater Retention Basins – Improvements Over Traditional Designs

[00:07] Mark Clark: We're here at a relatively conventional, sort of, stormwater design. This basin is relatively large. It's receiving runoff from a large retail space, lots of parking lot and rooftop area that causes flow into this basin.

[00:20] A couple of the factors of this basin is that the side slopes are relatively shallow, so we don't have to have a fence around it for safety issues. That allows us to integrate a walking path, a bicycle path, some benches, providing a little bit more of a public access to utilize this space as a recreational area, passive recreational area.

[03:40] We also see that along the far shoreline and in front of me here are some native plantings that are taking the place of otherwise grass that would be taking up some of this space. Sometimes, a lot of stormwater basins have grass mowed right down to the water's edge. By putting this plant material in, we don't have to have that intensive maintenance and management.

[00:59] But what we don't see in this particular basin is a whole lot of vegetation actually in the water. And that water is where the nutrient uptake is going to occur, and the reduction in some of the contaminants.

[01:09] So, if we had more of a littoral shelf, planting along that zone of the shoreline that's flooded on a regular basis, that would help us treat the water and remove some of those contaminants.

[01:20] Instead, what we'll oftentimes see is algal growth, filamentous algae or phytoplankton in the water column that can become undesirable and in certain circumstances create some algal blooms that actually fix nitrogen. It can become somewhat of a problem.

[01:34] But really, this is just a good example of a stormwater retention basin, a traditional type basin, that might be found in a residential or a commercial landscape.