Green Stormwater Infrastructure: Traditional Stormwater Retention Basins

[00:06] Eban Bean: Hi, I'm Eban Bean.

Mark Clark: And I'm Mark Clark.

[00:07] Eban Bean: We are here at a conventional stormwater basin. Mark, looking behind us, what do you like about this?

[00:17] Mark Clark: Well, you know, we have to balance the reality that this is adequate to meet the stormwater regulations, at least from the standpoint of a certain storage volume and a certain water quality expectation based on design.

[00:29] And, to minimize the cost of land required, basically they went deep. And that gives them the storage. Now, because they went deep, they now have a safety hazard, because the sides are too steep.

[00:41] So, now we have a chain-link fence. The idea of trying to turn this sort of a basin into an amenity in the community is really going to be a challenge, because they're keeping the people out.

[00:50] Eban Bean: Absolutely.

[00:51] Mark Clark: The aesthetics really are going to be very difficult to meet. So, you know, here's where we have a trade-off between what it takes to meet the regulatory requirement and where we can go with amenity and a lot of the other environmental services that we could integrate into the basin.

[01:04] Eban Bean: That’s right. It looks like we've got a nice thick carpet of algae on the top here, not very aesthetic, but as you said, kind of meeting the regulatory requirement that we have, and keeping, I guess, our public safe, by not having it be accessible to us, so definitely not going to be, you know, coming here for an enjoyable time, probably going to try and avoid this as much as possible. It's probably not going to be improving property values in the nearby area.

[01:33] Mark Clark: And this basin really has to do with the road infrastructure out there. This really isn't integrated into a community. It’s trying to keep costs down so the public tax dollar doesn't have to basically be expended unnecessarily, but it really does limit the value of this piece of landscape.

[01:51] Plus, that whole idea we had talked about before, which is trying to minimize that holistic effect on the hydrologic cycle. We're not really doing that here. This doesn't have a treatment train. This has a storage area, and that's basically, again, meeting the requirements, but at a very minimum standpoint.

[02:07] Eban Bean: There's a big large erosion area that's been caused by all the stormwater coming in very quickly, eroding out the bank underneath, and then it's been stabilized with riprap. Again, doesn't really provide much as far as a natural habitat or natural environment for any type of organisms there.

[02:27] Mark Clark: And this is an older basin, so perhaps the ideas that we have now and that we're trying to show through low impact design, you know, really weren't the options that were available at the time. And this is where we're trying to show what opportunities exist to move away from this minimum, regulatory, yes, but minimum to something that's more beneficial holistically to everybody involved.

[02:48] Eban Bean: Yeah, and I would say this is better than just water going directly off the roadway into just any type of a stream or channel. We get some type of a treatment, sediment being dropped out, that water not going into that water body. It's filtering through the soil before it goes into the ground, so it is an improvement from a few decades ago. Maybe a generation past that was a good improvement but there are steps that we can do better.

[03:12] Mark Clark: We can do a lot better.