Oregon Museum of Science and Industry (OMSI)

City of Portland, OR (1996)

Background:

Portland has a reputation for encouraging innovative stormwater management. In 1990, Portland's Bureau of Environmental Services (BES) set out to show what could be accomplished when all parties involved agree on a common mission. They felt this could be best illustrated by the parking lot designed for the Oregon Museum of Science and Industry (OMSI). This project, the redevelopment of a former industrial site located on the Willamette River in downtown Portland, first came to the attention of BES in 1990 when plans were submitted for review. Although at that time there were no specific site design requirements for stormwater discharging into the river, BES staff approached OMSI requesting that the museum voluntarily redesign its landscape and parking lots to capture stormwater pollution. While the nonprofit's management was interested, OMSI agreed to revision only on the condition that changes would not increase costs or delay completion.

Monitoring:

What BES suggested was an adjustment to site grading and an alteration to landscaped medians to have grassed swales accept rather than shed runoff. Once OMSI realized the benefits of such a design, the museum took the concept further, requesting that the medians be enlarged and designed to retain water even longer. Four acres of the completed parking lot drain to vegetated swales planted with native wetland species. Net redevelopment costs fell an impressive $78,000; that's even after the addition of extra design fees. Perhaps even more impressive was the city's effort to cut through red tape. No policy or code at the time mandated site design measures geared to water quality; nonetheless, Portland put together a team of relevant agency representatives to work with OMSI to advance the project through approval procedures.

Conclusions:

As a result, the OMSI parking lot now has an infiltration capacity sufficient to handle three-quarters of Portland's average annual rainfall (0.83 in. in 24 hours) and that removes 50% of the average annual total suspended solids loading from the site.

This is another really good, and early, example of the direction we need to pursue in order to address the stormwater problem we have in the region and Bay. But like the many other developments/retrofits we've looked at, this one does not address sufficient volumes of runoff nor completely mitigate contaminants in the flow leaving the site to be used as an example of a project that achieves the goal we are sponsoring for the Bay.