stormwater management for clean rivers

SW Texas Green Street and Wetland Enhancement

Where there was once flooding on private property and unimproved streets, there are now innovative stormwater management facilities, a restored wetland and sidewalk. While residents appreciate the improvements, completing the project took several years, compromise and adaptive management.

Project Description

Localized flooding from unimproved streets around SW Texas Street in Portland caused significant erosion and led many property owners to improvise stormwater systems. The city proposed that property owners form a local improvement district (LID) to fund street and stormwater improvements. Public support was not sufficient to form an LID until the city agreed to fund

additional green street facilities as part of the project. The project area is at the headwaters of Stephens Creek, one of the few streams in southwest Portland that still flows freely to the Willamette River.

Before

- Unsafe, rutted, gravel streets with no safe place to walk
- Unmanaged stormwater runoff eroded streets and caused basement flooding
- Degraded wetland was used for illegal dumping
- Sediment and street runoff ran untreated into Stephens Creek headwaters

After

- 20-foot-wide streets, with one sidewalk and parking on one side
- Pre-existing driveway connections were maintained
- Swales and wetland detention to manage stormwater runoff from a 17 acre basin



Texas Street looking east toward wetland before improvements



Texas Street under construction

- Acquisition and restoration of a 0.62-acre wetland
- Protection of downstream habitat and sewer infrastructure improvements



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working for

and a livable,

an Saltzman, Commissioner Dean Marriott, Director

Challenges

- Initial lack of neighborhood support
- Complicated design for swales on steep streets
- Matching street grades with existing driveway connections
- Funding for construction and on-going maintenance
- Monitoring active use of facility

Tools to Engage Property Owners

- Regularly scheduled meetings with consistent staff attendance
- Project goals established at first meeting adhered to throughout
- Neighborhood "champions" notified fellow neighbors throughout planning, design and construction
- City demonstrated commitment of capital improvement funding
- Local church participated in LID even though not obligated
- Sense of community created by project



The completed street with a restored wetland.

The enhanced wetland drains to Stephens

Creek which flows into the Willamette River.

Costs and Funding

\$942,000 - street improvements by local improvement district (average assessment \$15,000)

\$1.38 million - stormwater improvements (\$1.3 million dollars from BES capital improvement program,\$77,000 from an EPA Innovative Wet Weather Grant)

Community Benefits

- Nearby schools use wetland as outdoor science classroom
- Community uses wetland and sidewalk for informal gathering
- Wetland provides educational opportunities for responsible pet ownership and Stephens Creek subwatershed ecology
- Momentum to form grassroots Stephens Creek stewardship group

Resources

City of Portland Environmental Services www.portlandonline.com/bes

Dogs for the Environment www.portlandonline.com/parks/greendogs

City of Portland Environmental Services Watershed-Friendly Vegetation Resources www.portlandonline.com/bes/vegetation

City of Portland Willamette Watershed Characterizations and Projects www.portlandonline.com/bes/watershed/willamette