



River West
Neighborhood Association

Stormwater Presentation

April 11, 2011, 6:00pm
Brooks Room (Bend Public
Library)

Topic: Stormwater Management Strategies

Introductions - Barb McAusland & Leslie Olson

- Concerns with increased residential development comes increased water runoff
- Need to have landscaping techniques and understanding of City's strategies for stormwater management

Guest Presenters:

- Wendy Edde - City of Bend Stormwater Program Manager
- Hardy Hanson - City of Bend Streets/Stormwater Supervisor
- Chris Hart - Heartsprings Design LLC, Owner

Wendy Edde

- Stormwater ends up in outfalls, infiltration through soil or underground through injection devices
- Maintenance and Capital Improvement Plan implemented as part of Task Force created in 2007 and includes improvements and monitoring in the following areas:
 1. Priority on underpasses (to be in construction soon, or in current study)
 2. Storm pipe inventory in conjunction with master plan (in progress)
 3. Ordinances in progress, as is outreach/ education
 4. Storm pipe cleaning and surveying conducted. Discovered a range of issues, such as illegal connections, gas lines penetrating storm lines, collapsed and damaged pipes, fully-sedimented pipes, and buried catchbasins.
 5. Galveston Ave swale project implemented as part of reconstruction from 14th to 17th Streets
 6. Specific locations (Utica, Stannium & 18th, etc) with recurring problems have been remedied
 7. Marking drains for discharge only (call if you see problems)
- Geology in Central Oregon dictates much about drainage. Hard basalt varies between 40 to 80 feet below surface. Thinner soils with tuff stone creates drainage challenges
- Developed surfaces (impervious) reduce to 40% infiltration (vs. 60% without surfaces)
- Low-impact development reduces surface area, potential pollutants from penetrating stormwater system, and reduces velocity of and storing of stormwater. Strategies include Green roofs, permeable asphalt, pavers, etc.
- Hillside sites offer varying strategies to mitigate site run-off and erosion (shared driveways, deep-rooted vegetation, avoiding steep slopes)

- Bend Development Code includes landscape and driveway requirements for new development. City of Bend has direct links to the Design Guide and the Standards & Specs (public draft) on their website under public works division

Chris Hart-Henderson

- First response should be in the form of a fully-guttered roof
- Next form of protection is installing 'rain strips' (consisting of minimal planted area) along roof edges which catch excess roof water runoff and distribute directly into ground
- Another option is rain harvesting collection, which comes in different forms:
 1. Manufactured devices (fit with a filter fabric material) called a "Water Matrix" and can hold up to 32 gallons. These cost approx. \$1/gal and are locally made.
 2. Custom-made Cisterns
- In Central Oregon, it is quite possible to capture rainwater for most irrigation needs. Net Zero homes attempt this strategy for all domestic water use needs.