Clallam County
Stormwater Work Group
Recommendations

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Public Meetings, February 28, 2011 (Sequim), March 2, 2011 (Forks),
and March 7, 2011 (Port Angeles)
Stormwater in Clallam County

• What is stormwater?
• Why should we care?

Stormwater from human development has environmental, social, and economic impacts:

  – Flooding
  – Increased pollutants in surface and ground waters
  – Erosion and habitat deterioration in streams and shoreline areas
  – Impacts to economics, recreation, and wildlife
Environmental Concerns

- Pollutants in stormwater
- Sedimentation or turbidity
- Decrease baseflow
- Land uses alter hydrology
Land Uses Alter Hydrology

**Developed Condition:**
- Higher and earlier peak flow
- More volume

**Results:**
- Flooding
- Erosion
- Less groundwater recharge

**Natural Condition:**
- Smaller and slower peak flow
- Less volume

**Results:**
- Fewer flooding surges
- Less erosion
- More infiltration and runoff storage
Social Concerns

• Public health
• Loss of recreational activities
• Public safety (flooding)
• Consequences to downstream neighbors
Economic Concerns

- Stormwater infrastructure
- Property damage
Stormwater runoff is affected by development – even rural development
How much stormwater does an average home generate?

<table>
<thead>
<tr>
<th>Potential runoff from 1 inch of rain:</th>
<th>1,200-square foot roof = 748 gallons</th>
<th>1 acre of pavement = 27,150 gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Annual Precipitation</td>
<td></td>
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<tr>
<td>Sequim (16 inches/year)</td>
<td>12,000 gallons/year</td>
<td>0.4 million gallons/year</td>
</tr>
<tr>
<td>Port Angeles (39 inches/year)</td>
<td>29,000 gallons/year</td>
<td>1.1 million gallons/year</td>
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<tr>
<td>Forks (107 inches/year)</td>
<td>80,000 gallons/year</td>
<td>2.9 million gallons/year</td>
</tr>
</tbody>
</table>
Clallam County
Stormwater Management Plan

• Purpose: Protect Clallam County lifestyle
  – Prevent or minimize flooding and erosion damage on private and public property
  – Protect water quality and water resources
  – Prevent or minimize recreational closures
  – Protect aquatic habitat
  – Acting now is more cost-effective than mitigating later
  – Address state and federal requirements in a manner best-suited for Clallam County
Developing the Stormwater Management Plan

• Convene Work Group (WG)
• Lifestyle, environmental, and regulatory
  – Current and future issues for Clallam County
  – Clallam County’s current regulations
  – State and federal requirements
  – Examples from other jurisdictions
• WG recommendations
• Public meetings
• New code
Work Group Recommendations

- Public education, outreach, and involvement
- Development and redevelopment requirements, including low impact development
- Illicit discharge detection and elimination
- Pollution prevention and operation and maintenance for municipal operations
- Long-term compliance
- Sub-basin assessment
- Funding
Public Outreach, Education, Involvement

- Develop and implement a public outreach plan targeting specific practices which impact stormwater.
- Provide education and assistance as needed to implement the Stormwater Plan.
Development and Redevelopment (1)

• Adopt a clearing and grading ordinance which states:
  – All new and re-development must use erosion and sediment control measures during construction.
  – Permits are required for new and redevelopment in specific situations expected to significantly impact erosion, sediment generation, and hydrology.

• Adopt requirements for drainage design and review.
  – Three tiers of stormwater management requirements, based on project size and type.
    • Tier 1: minimal requirements.
    • Tier 2: simplified and can be done by non-engineers.
    • Tier 3: requires technical work (typically by an engineer).
Development and Redevelopment (2)

- Encourage the use of Low Impact Development techniques.
  - May include providing additional incentives for LID.
- Adopt the revised Small Project Drainage Manual.
  - Manual to be used for Tier 2 project designs.
  - Provide adequate staff resources to the Public Works Department to implement the Small Project Drainage Manual.
Illicit Discharge

• Adopt an illicit discharge ordinance.
  – Prohibit illicit discharge to the stormwater system, including to roadside ditches.

• Ensure compliance with the illicit discharge code.
  – Enforce the code.
  – Train staff to identify illicit discharges.
  – Conduct outreach to the public.
  – Work with regional partners to develop a hotline and website for reporting.
Source Control/Pollution Prevention

- Review County practices for opportunities to improve pollution prevention.
- Maintain an inventory of stormwater facilities.
- Document current practices for maintenance and post-storm spot checks of the stormwater system. Note opportunities for improvement.
Long-term Compliance

- Require stormwater maintenance provisions to be attached to property title.
- Require inspections of drainage systems before sale.
- Require ongoing maintenance and repair of drainage facilities.
- Encourage “big picture” approach in drainage plans – address all existing impervious surfaces.
- Prohibit intentional discharges into roadside ditches, as well as filling roadside ditches.
Sub-basin Assessment

- Assess whether specific basins have additional needs or unique conditions that are not addressed by the new stormwater program.
  - Use existing reports, plans, data.
  - Seek funding for basin-specific approaches.
  - Implement, as appropriate, basin-specific incentive programs, regulations, restoration, outreach, or other measures.
Funding

- Establish a sustainable funding source for stormwater strategies.
  - Funds used for incentives, public outreach, monitoring, training, compliance, and matching funds for grants.
  - May develop a fee, collected via property tax statements, to jointly fund the stormwater and OSS programs.
  - Will consider a utility or special district in the unincorporated County.
  - Continue to use permit fees to fund permit processing costs, and to seek grants for short-term expenses.
  - Funds collected should be dedicated to clean water and not diverted to the County’s general fund.
Questions?

For more information, see
http://www.clallam.net/RealEstate/html/stormwater_management.htm

Send comments by March 17 to
stormwater-comments@co.clallam.wa.us