

Low-Impact Development Code Update

Thurston County
Community Stakeholder Group
June 25, 2015



Overview

The County is required to review its local development codes under the latest NPDES municipal stormwater permit.

- What is Low-Impact Development?
- Why do we need to update codes?
- What codes will be reviewed?
- Process and Timeline
- Q & A

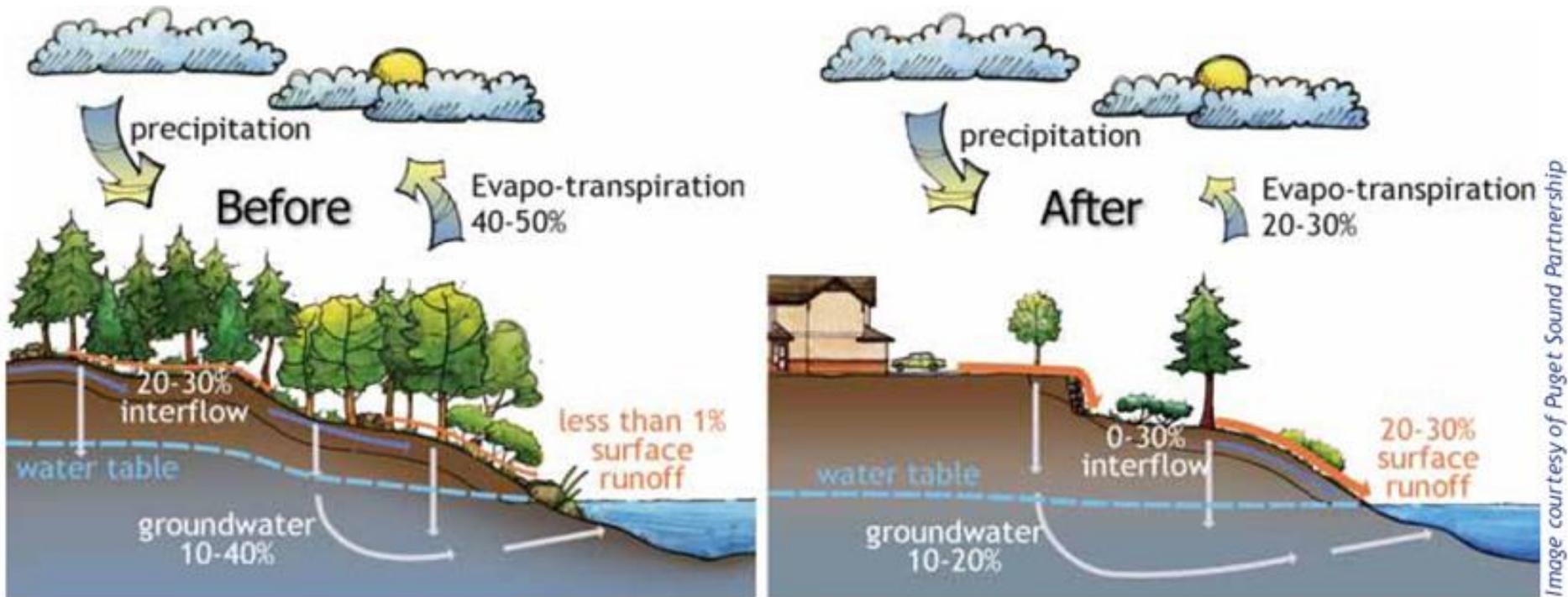


What is LID?

- **Ecology definition:**

Low-impact development (LID) is a stormwater and land use management strategy that strives to mimic pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation, and transpiration by emphasizing conservation, use of on-site natural features, site planning, and distributed stormwater management practices that are integrated into a project design.

Development and the Hydrologic Cycle



Before development almost all rainfall is taken up by plants, evaporates or infiltrates through the ground. After conventional development, surface runoff increases significantly while evaporation and infiltration into the ground decrease.





What is the problem with stormwater?

- Stormwater runoff carries pollutants into our waterbodies
 - Motor oil, fertilizers, animal waste, copper, zinc, sediment
- Reduced groundwater supplies for drinking water
- Increased winter flows scour stream channels, cause more erosion
- Impacts to fish and other species
- Leads to closures of beaches and lakes

Thurston County has 49 waterbodies proposed for listing under the Clean Water Act for violating standards.

What is LID?

Conventional approach



- ✓ Larger, centralized facilities
- ✓ Clear and grade site
- ✓ Provides runoff treatment + flow control

LID approach



- ✓ Smaller, decentralized facilities
- ✓ Integrated within landscape
- ✓ Provides runoff treatment + flow control + volume reduction

What is LID?

- Key LID Principles
 - Conserve vegetation
 - Protect soils
 - Reduce and disconnect impervious surfaces
 - Infiltrate runoff on site
- Benefits of LID
 - Reduces volume of stormwater runoff and minimize high flows
 - Remove pollutants from stormwater
 - Reduces area of stormwater facilities

LID BMPs

- Bioretention & Rain Gardens
- Permeable Pavement
- Dispersion
- Soil retention or amendment
- Sheet Flow
- Green Roofs (optional)
- Rainwater Harvesting (optional)



Why do we need to update the codes?

- NPDES Municipal Stormwater Permit, reissued in 2013
 - NPDES = National Pollutant Discharge Elimination System
- Thurston County's 2013-2018 Phase 2 Permit
 - ✓ Public education & outreach
 - ✓ Illicit discharge detection & elimination
 - ✓ Controlling runoff from new development, redevelopment, and construction sites
 - ✓ Operations & maintenance
 - ✓ Compliance & inspections
 - ✓ Monitoring & assessment
 - ✓ Annual reporting

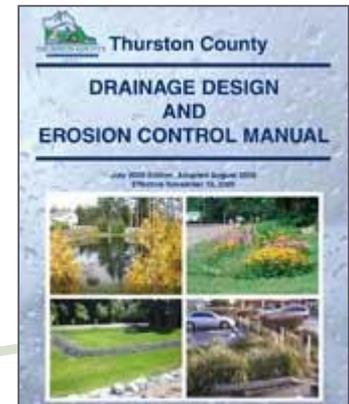


Code updates are only a piece of the stormwater program puzzle.

Why do we need to update the codes?

- Review codes to make LID the “preferred and commonly-used approach to site development” (*where feasible*)
- Should consider measures to minimize:
 - Impervious surfaces
 - Loss of native vegetation
 - Stormwater runoff
- Deadline: December 31, 2016

The County will also be updating the Drainage Design and Erosion Control Manual (DDECM)

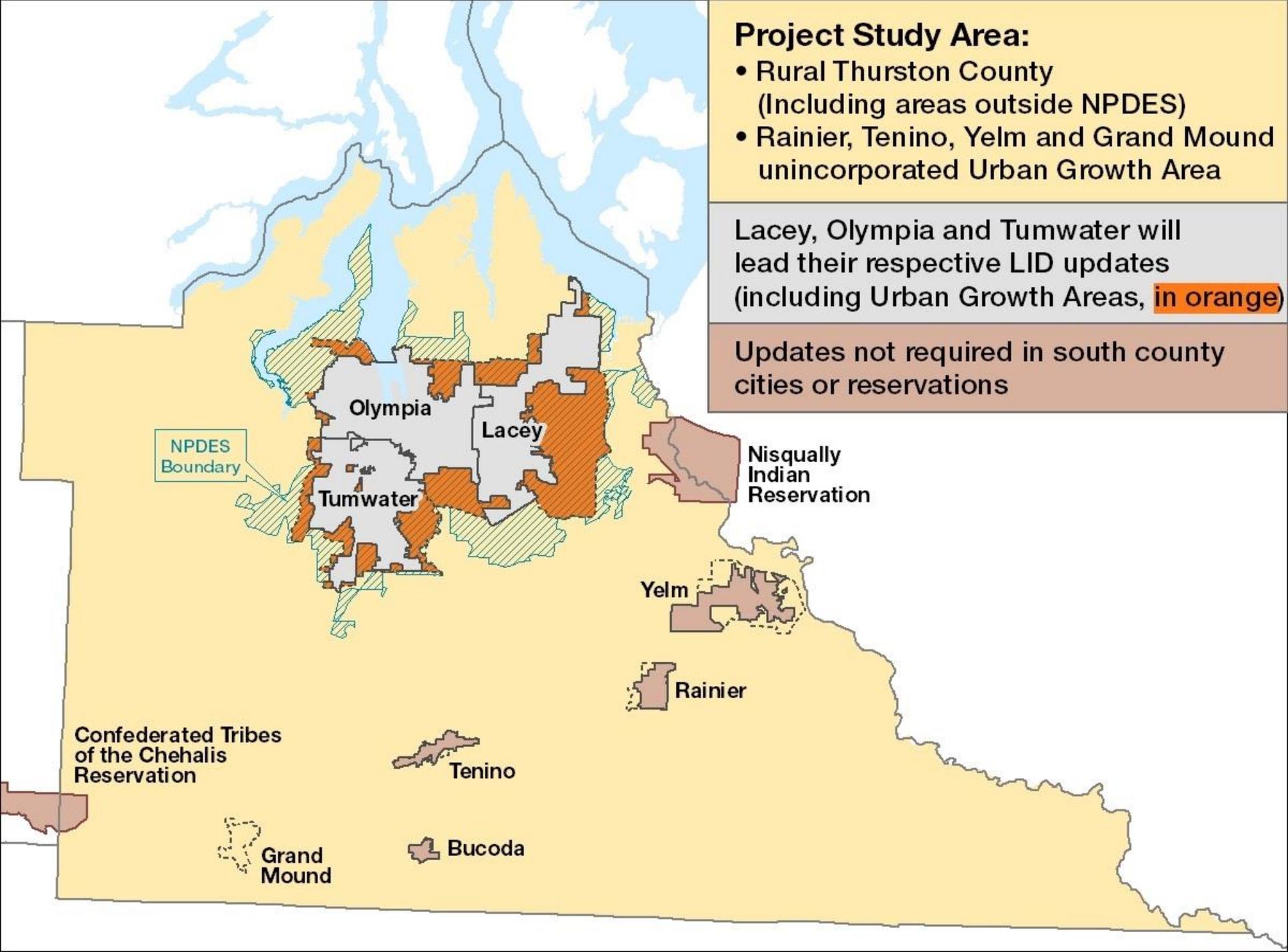


Project Study Area:

- Rural Thurston County
(Including areas outside NPDES)
- Rainier, Tenino, Yelm and Grand Mound
unincorporated Urban Growth Area

Lacey, Olympia and Tumwater will lead their respective LID updates (including Urban Growth Areas, **in orange**)

Updates not required in south county cities or reservations



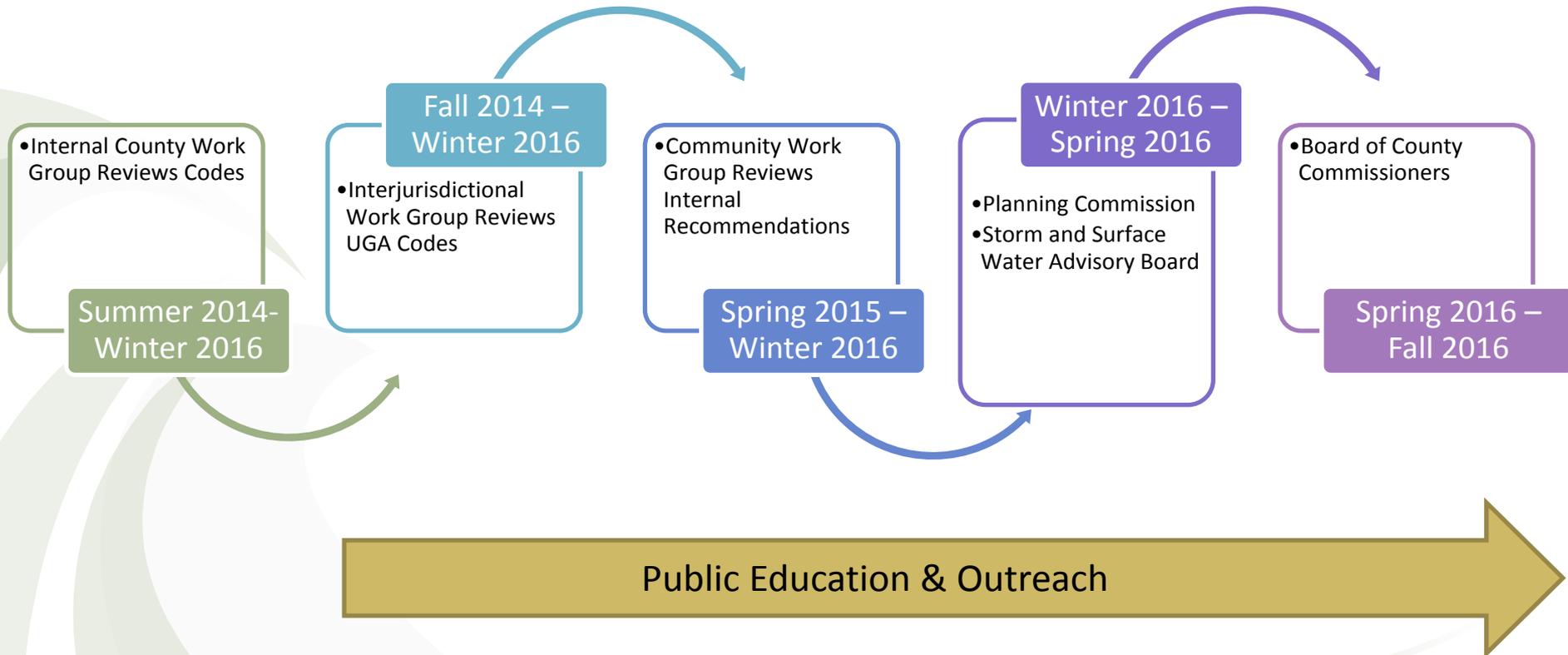
What codes will be reviewed?

- Zoning Code
- Parking
- Landscaping
- Subdivisions and Open Space
- Clearing and Grading
- Streets and Road Standards
- Site Planning and Assessment

- UGA Codes (Lacey, Olympia, Tumwater)
 - *review of these are led by the individual jurisdictions*

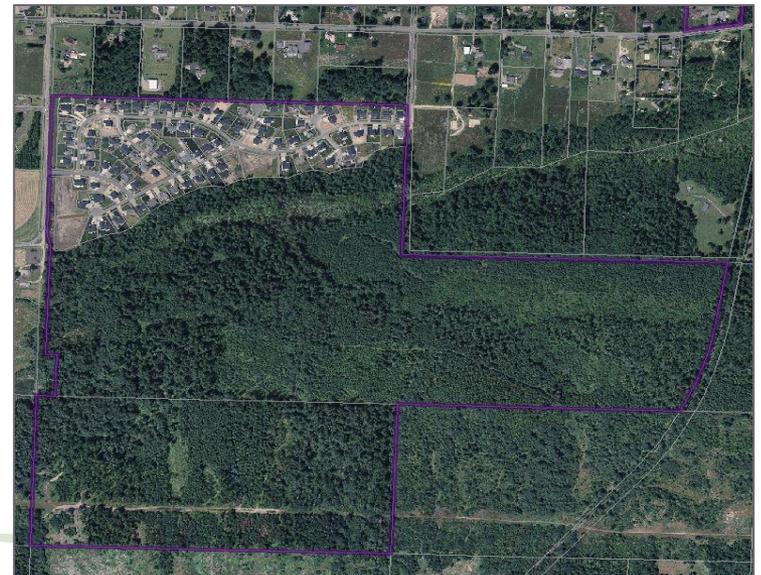
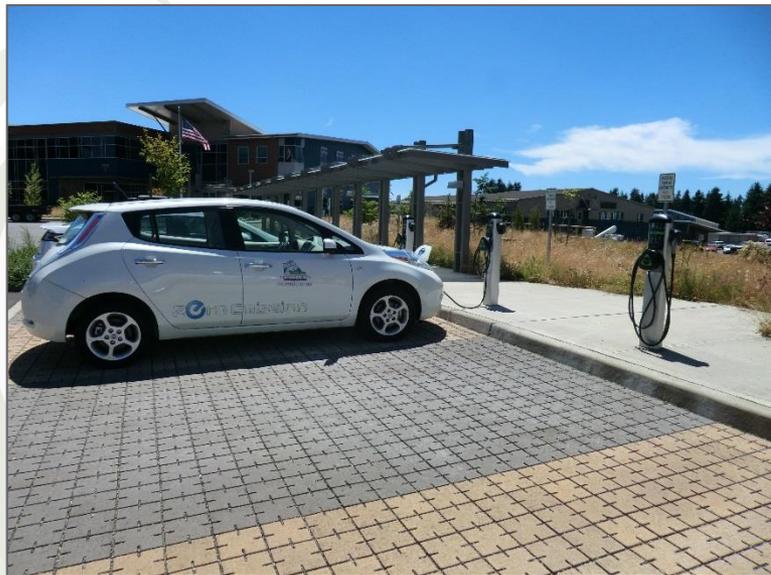


Project Timeline



Potential Changes

- Maximum vs Minimum Parking Requirements
- Narrower Road Widths
- Landscaping and Open Space that Better Integrate Stormwater Facilities
- Native Vegetation and Tree Retention



LID Community Workgroup

- First meeting in June 2015
- Meet up to 8 times between June and February 2016
- Review proposed code changes from internal review
- Consider incentives, offer suggestions/feedback to County
- Members
 - Developers
 - Architects
 - Landscapers
 - Engineering Firms
 - Realtors
 - Fire Districts
 - Utilities
 - Builders

LID Community Workgroup

- This group is Advisory.
 - Function as a sounding board, identify gaps and opportunities
 - Final decisions will be made by the Board of County Commissioners
- How can we make LID the “preferred and commonly-used approach to site development?”
 - What are the barriers you see to implementing LID practices in the current the permitting process?
 - What incentives would make LID more feasible?
 - What tools or information do you need?

Potential Topics for Future Meetings

- Parking
 - Minimum vs maximum space requirements
 - Stall dimensions
 - Landscaping within parking lots
- Buildings
 - What incentives, if any, would be effective to encourage the use of green roofs, rainwater harvesting systems, and other innovative building techniques?



Potential Topics for Future Meetings

- Landscaping, Open Space, Subdivisions
 - Landscaping standards
 - Open space requirements
 - Incentives for clustered development
- Native Vegetation
 - Standards for dedicating, preserving or replanting native vegetation areas
 - Regulations related to forest land conversion



Potential Topics for Future Meetings

- Street Standards
 - Street widths and cross-sections
- Impervious Surfaces
 - Appropriate uses for permeable pavements
 - Impervious surface limits or trading
- Site Review
 - Integrating LID into site plan



Potential Topics for Future Meetings

- Maintenance
 - Long-term costs of maintaining LID facilities
 - Outreach to HOAs and homeowners
- Incentives
 - What systems can the county put in place to encourage LID?
 - Which potential incentives are effective?
- Other?



Questions?

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Project Website

<http://www.co.thurston.wa.us/waterresources/lid>