

**West Coast Governors' Agreement on Ocean Health  
Polluted Runoff Action Coordination Team  
Draft Work Plan**

**May 15, 2009**

Open for public comment until July 10, 2009

Visit <http://westcoastoceans.gov/contact> and submit comments to [comments@westcoastoceans.gov](mailto:comments@westcoastoceans.gov)

**Polluted Runoff ACT Members**

| <b>Representing</b>           | <b>Name</b>                             | <b>Affiliation</b>  |   | <b>Email</b>                  | <b>Phone</b> |
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**Related Action Plan Goal**

- **Improve coastal water quality by reducing water pollution through better stormwater management, pollution source detection and reduction, and other strategies to reduce polluted runoff.**

**Action 1.1**

*Work with the Administration and the U.S. Congress to provide full funding for coastal water quality programs to reduce polluted runoff, and enhance monitoring and enforcement of water quality regulations to improve the health of West Coast coastal waters.*

For Action 1.1, *The Governors sent a letter to the House and Senate Appropriations Subcommittees urging restoration of FY 2008 funding for the coastal nonpoint pollution control program on June 6, 2007.*

<http://westcoastoceans.gov/docs/Mollohan%20Frelinghuysen%20Letter.pdf>

<http://westcoastoceans.gov/docs/Mikulski%20Shelby%20Letter.pdf>

## **Action 1.2**

*Combat polluted runoff through a variety of methods including low impact development (LID) and sharing strategies employed for existing and planned incentive programs to state and local governments on this objective.*

## **Background**

In September 2006, the Governors of Oregon, Washington and California signed the West Coast Governors' Agreement on Ocean Health. Under this agreement, the three States, by working together and consulting with federal agency leads and stakeholders, developed a bold set of actions to improve the health of our ocean and coastal resources. On July 29, 2008, the three States released a final action plan that outlines many activities on a range of issues. In November 2008 the Polluted Runoff ACT met in Seattle to discuss the issues and develop a work plan. The team's early discussions in Seattle centered on the challenges associated with the action plans' assignment to the team. Specifically the team finds that there is a significant challenge to relate the wide scope of the issue (polluted runoff / water quality) to the narrow scope of the only specific, prescribed action (conduct Low Impact Development training) contained in the action plan.

In its analysis of the polluted runoff issue the Action Plan states:

*"Poor water quality is directly related to polluted runoff. The main sources are developed areas, marinas, air pollution, agriculture, forestry practices, modification of shorelines and streams, and degradation of wetlands and other vegetated coastal habitats."*

In the discussion of the issue the Action Plan also states:

*"Low impact development strategies support the long-term viability of coastal communities, described under Priority Area 7. These measures help urbanized areas rebound from hazard events and adapt more easily to climate changes."*

The members of the team recognized in Seattle that the Action Plan's list of possible sources of polluted runoff would only be partially served by implementing LID strategies as they only affect landscapes under new and re-development pressure. The team found that LID strategies serve as excellent pollution prevention strategies in areas under development pressure. But the team agreed it will be difficult, if not impossible, to demonstrate improved water quality in coastal communities without expanding the effort significantly to address the various sources of polluted runoff and to add restoration efforts to the pollution prevention approach specified in the Action Plan.

After crafting this position statement, the team focused on developing a work plan to implement Action 1.2 as effectively as possible to achieve the plan's polluted runoff goals. The team identified 5 tasks that would help achieve the goals while staying within the boundaries set by the identified action (Action 1.2) and the directions from the Executive Steering Committee.

Three of these tasks were short-term activities that require no funding and are aimed at collecting existing information that could serve to inform better implementation of the remaining two tasks. These remaining two tasks require some funding to occur and represent the team's longer-term commitment to institute a sustainable development approach in the West Coast states' coastal communities. The overarching strategy developed by the team relies on building a central node of an existing LID network on the West coast that will serve to collect lessons learned and hopefully improve the efforts being deployed to protect coastal water quality. So this means that tasks 1 through 4 will all feed back information to the "partnership" formed in task 5, which will cycle back through new tasks related to grant funding, training, etc.

### **Summary of Work Plan Tasks and Milestones**

**Task 1:** Examine incentive-based programs that encourage local governments to use LID strategies in community planning. **[Status: Completed - see summary table, [Table 1.](#)]**

**Task 2:** Collect information on grant programs and share lessons learned to effectively provide incentives and assistance for communities to pursue activities aimed at reducing the impacts of development in coastal areas. **[Status: Completed - see summary table, [Table 2.](#)]**

**Task 3:** Contact the American Planning Association and state and local planning agencies, and support the incorporation of LID and climate change impacts into local coastal plans. **[Status: Completed - see summary table, [Table 3.](#)]**

**Task 4:** Coordinate with NOAA and local governments to bring coastal community planning and development training to six interested West Coast communities (two in each state). **[Status: Six NOAA Coastal Community Planning and Development trainings being offered in 2009 and developing six more on polluted runoff, LID and other sustainable approaches to controlling and improving coastal water quality. See summary table, [Table 4.](#)]**

Milestone 4.1: Working with NOAA, identify six Coastal Community Planning and Development (CCPD) venues/host by August 1, 2009. **[See [Attachment 1](#) for more information on CCPD training.]**

Lead: NOAA (Ephraim Leon-Guerrero (USEPA) will coordinate w/NOAA)  
Budget needs: \$0 (Training provided by NOAA.)

Milestone 4.2: Working with NOAA, deliver six CCPD events in the selected locations by December 31, 2009.

Lead: NOAA (Ephraim Leon-Guerrero (USEPA) will coordinate w/NOAA)  
Budget needs: \$0 (Training provided by NOAA.)

Milestone 4.3: Working with the communities and the LID Center, Inc., develop six customized "polluted runoff, LID, water quality, sustainable water management" trainings for each of CCPD venues by January 31, 2010.

Lead: Greg Gearheart (State of CA)  
Budget needs: \$75,000 (\$12,500 per venue) (Priority 3)

Milestone 4.4: Working with the communities and the LID Center, Inc., deliver six customized "polluted runoff, LID, water quality, sustainable water management" trainings for each of CCPD venues by May 1, 2010.

Lead: Greg Gearheart (State of CA)  
Budget needs: \$75,000 (\$12,500 per venue) (Priority 3)

**Task 5:** Create and convene a first meeting for a West Coast Low Impact Development (LID) Partnership aimed at coordinating training, certification of practitioners, outreach, regulatory and implementation tools related to LID in CA, OR and WA. **[Status: Collecting stakeholder information, developing core partnerships and planning the kickoff for late 2009. See [Table 5](#) for more details on this task/milestone.]**

Milestone 5.1: Working with the stakeholders (partial list identified in [Table 5](#)), convene a kickoff meeting West Coast LID Partnership by November 1, 2009.

Lead: Greg Gearheart (State of CA)  
Budget needs: \$30,000 (Priority 1)

Milestone 5.2: Working with the newly formed partnership, host three meetings, total, and deploy a web site containing feedback up-to-date information identified in Tables 1 through 4 of this work plan by May 1, 2010.

Lead: Greg Gearheart (State of CA)  
Budget needs: \$120,000 (Priority 2)

### Summary of Funding Needs

The total requested amount is \$300,000. This cost includes \$150,000 for six, customized trainings and \$150,000 for kickoff and 1-year support of proposed "West Coast LID Partnership." ***Given the extremely limited resource and budget (especially travel) constraints facing the team organizations, the Polluted Runoff ACT will only be able to work on milestones 4.1 and 4.2 if no additional funding is provided.***

**Action 1.2:** Combat polluted runoff through a variety of methods including low impact development (LID) and sharing strategies employed for existing and planned incentive programs to state and local governments on this objective. (WCGA Action Plan, page 37 and Appendix A, p.103)

**Table 1 - Team Input on Task 1 - Examine Incentive-based Programs for LID Drivers**

| Task 1   | Examine incentive-based programs that encourage local governments to use LID strategies in community planning. |  |  |   |  |
|--|--|--|--|---|--|
|  | Responsibility   | Resources  | Opportunities  | Timeline/Pollut.  | Success Meas.  |
| <p><b>Washington</b></p> <p>1. LID Local Regulation Assistance: Puget Sound Partnership &amp; consultant provides technical assistance to help local govts. revise their codes to allow for, encourage, or require LID (their choice). Have worked with 32 local govts. during '05-'08. Working with another 4 Jan – June '09.</p> <p>2. LID Training: Puget Sound Partnerships &amp; WSU Extension are offering technical classes on LID around Puget Sound. Classes cover all aspects of LID, from site assessment, through planning, construction, and erosion/sediment control, through long-term maintenance. Four-part class, includes certification for attendees of all 4, 2-day classes.</p> <p>3. LID Guidance: Have LID Technical</p> | <p>Puget Sound Partnership</p> <p>Puget Sound Partnership</p> <p>PS Partnership,</p>                           | <p>Time-intensive with 122 local govts. in Puget Sound. State believed to have funding for July 1, 2009 – June 30, 2011</p> <p>State believed to have funding for July 1, 2009 - June 30, 2011</p> <p>Need technical, adequate training &amp; certification for all professions— local govt., contractors, builder, engineers</p> <p>Need updated,</p> | <p>New Action Agenda for Puget Sound calls for state to help local governments revise codes to require LID; provide training to multiple audiences; and identify and use new incentives for LID.</p> <p>New court decision requires state to revise NPDES phase I muni permit to require LID where feasible.</p> | <p>Continue to help local govts. in next 24 months.</p> <p>All urban pollutants.</p> <p>July 1, 2009 - June 30, 2011.</p> <p>Urban pollutants.</p> <p>'09-'10</p> | <p># of local govts. that have revised their codes for LID.</p> <p>Number of projects in these communities that include LID approach and/or techniques.</p> <p>New incentives developed &amp; used.</p> <p># of trainings provided; # of staff trained; # of staff certified.</p> <p>Updated</p> |

| Task 1   | Examine incentive-based programs that encourage local governments to use LID strategies in community planning. |   |  |  |   |
|--|--|---|--|--|---|
|  | Responsibility   | Resources   | Opportunities  | Timeline/Pollut.   | Success Meas.   |
| <p>Guidance Manual for Project Sound (2005). Will revise it in 09-10. Consists of specs, installation recommendations, O&amp; M, costs, etc. In process of revising flow control credits for about 7 different LID techniques. Once completed, this might provide sufficient \$ incentive for LID implementation.</p>  | <p>Dept. of Ecology, WSU, private sector, local govts.</p>   | <p>accurate flow control credits, and new LID technical center (research, training)</p> |  | <p>Urban pollutants.</p>   | <p>guidance; updated flow control credits; developers choosing LID for projects.</p>  |
| <p><b>Oregon</b></p> <p>1. Develop summary of LID programs and projects occurring in Oregon.</p> <p>2. Examine opportunity to include LID in Territorial Sea Plan, State developments/redevelopments projects, City/County/Regional Land Use Planning and Development Ordinances, Watershed Water Quality Management Plans, and possibly in Phase I MS4 Stormwater permits.</p> <p>3. Develop and circulate model LID ordinance and put together source list for LID methods and BMPs used in other areas And post on DEQ and others websites.</p> | <p>DEQ</p>   | <p>Coastal Nonpoint Source Pollution Control Program (CNPCP)</p>                        | <p>TMDL/Land Use Plans and Development Ordinances</p>  | <p>2009 - 2010<br/>Stormwater runoff and associated pollutants</p> | <p>Number of local governments that have revised their codes for LID.</p> <p>Number of projects in these communities that include LID approach and/or techniques.</p> <p>LID Technical assistance/ outreach</p> |
| <p><b>California</b></p> <p>1. Guidance: work with LID Center to develop CA hydro-modification water quality standards (objectives and criteria for protecting beneficial uses) and LID Technical Guidance for possible coast-wide use.</p>  | <p>State WRCB &amp; LID Center</p> <p>Audience – Multiple: planners, builders, local govts.</p>                | <p>None – need approx. \$50k</p>  | <p>Coast-wide guidance is possible, but caution against 'regional' differences that could derail a</p> | <p>6 – 12 months<br/>Multiple pollutants.</p>                      | <p>Hydro-mod standards</p>  |

| Task 1  | Examine incentive-based programs that encourage local governments to use LID strategies in community planning.       |  |   |   |   |
|---|--|--|---|---|---|
|   | Responsibility   | Resources  | Opportunities   | Timeline/Pollut.                          | Success Meas.   |
| <p>2. Incentive-based: City of Palo Alto has a rebate / fee system that promotes onsite stormwater management solutions. It is active now and our San Francisco Bay Regional Board (Shin-Roei Lee) is watching this and hoping to extend this to State fees.</p> <p><a href="http://www.cityofpaloalto.org/depts/pwd/flood+_storm/stormwater_rebates/default.asp">http://www.cityofpaloalto.org/depts/pwd/flood+_storm/stormwater_rebates/default.asp</a></p> | <p>State WRCB &amp; SFB Regional Board will observe &amp; report back – developers &amp; builders are “audience”</p> | <p>Staff time available. Could use some contract resources to do more through evaluation (appr. \$5k?)</p> | <p>larger manual</p> <p>There must be other communities doing this ... if coordinated, it could be really interesting</p> | <p>No timeline / Multiple pollutants.</p> | <p>Runoff or amount of rebate (\$) distributed.</p>                             |
| <p><b>EPA</b><br/>Region 10 -- Watershed &amp; Growth Planning Resources Center for Puget Sound, a non-profit.</p>  | <p>EPA/Puget Sound Partnership</p> <p>Audience: local &amp; tribal govts.</p>  | <p>\$500k needed; may be available from PSP/EPA from Congressional appropriation</p>                       |   | <p>Primarily nutrients &amp; toxics</p>   | <p>Steps: Solicit local and tribal governments on specific assistance needs</p> |
| <p><b>NOAA</b><br/>EPA/State (Partners) Capacity Building:<br/>1. Training on BMPs to coastal municipal governments</p> <p>2. Risk assessment and predictive models</p> <p>EPA/State – Surfrider -- Science (need to connect to resource?)<br/>1. Monitoring – existing standards, feedback, compliance—LA beach closures<br/>2. Pollution treatment and retention techniques</p>   |  |  | <p>e.g., Salmon Safe; Fish Friendly Farming; BMP Certification; WCGA Center?</p>  | <p>Petrogenic; copper?</p>                |   |
| <p><b>Oregon Sea Grant</b><br/>1. Low Impact Development Education</p>  | <p>Several groups</p>  | <p>Coastal Nonpoint</p>  | <p>Coordinate</p>   | <p>Stormwater runoff</p>                  |   |

| Task 1   | Examine incentive-based programs that encourage local governments to use LID strategies in community planning. |   |   |   |               |
|--|--|---|---|---|---------------|
|  | Responsibility   | Resources   | Opportunities   | Timeline/Pollut.                                    | Success Meas. |
| <p>for 'Phase II' Communities along the coast.</p> <p>2. LID Conference/Symposium to gather those working on LID in one location and share information</p> | <p>are doing this. Sea Grant &amp; Extension Services (other partners?)</p>                                    | <p>Source Pollution Control Program (CNPCP)</p> <p>Need additional resources for statewide coordination and to broaden approach</p> | <p>w/these groups on a regional basis to address more groups and broader audiences (planners, developers, etc.)</p> | <p>and associated pollutants</p> <p>2009 - 2010</p> |               |

**Table 2 - Team Input on Task 2 - Collaborate on Related Grants**

| Task 2  | Collaborate on grant programs and share lessons learned to effectively provide incentives and assistance for communities to pursue activities aimed at reducing the impacts of development in coastal areas. |  |               |                                    |  |
|---|--|--|---------------|------------------------------------|--|
|   | Responsibility   | Resources  | Opportunities | Timeline/Pollut.                   | Success Meas.  |
| <p><b>Washington</b></p> <p>1. Grants: Dept. of Ecology issues grants for SW retrofit and LID (was \$18m, unsure how much now); LID demonstration projects (was \$10m, unsure of continuing); and local SW program development (was \$7m for Puget Sound communities)</p> | <p>WA Department of Ecology</p>  | <p>State budget shortfall jeopardizes this \$. However, new Action Agenda and focus on PS should help. Unsure how much \$ available during '09-11 biennium.</p> <p>Local govts. have asked for state-funded pot of \$s</p> |               | <p>Addresses urban pollutants.</p> | <p>Difficult. WQ improvements happen slowly; alot of noise. Certainly could use projects completed; short-term monitoring (req. of LID demo. Projects)</p> |

| Task 2  | Collaborate on grant programs and share lessons learned to effectively provide incentives and assistance for communities to pursue activities aimed at reducing the impacts of development in coastal areas. |   |  |  |  |
|---|--|---|--|--|--|
|   | Responsibility   | Resources   | Opportunities  | Timeline/Pollut.   | Success Meas.  |
|   |  | to cover liability they may take on through LID projects.   |  |  |  |
| <b>Oregon</b><br>1. Utilize State Revolving Fund to implement LID<br>2. Use 319 NPS Grants to implement LID<br>3. Work with Economic Revitalization Team to provide info. to local govts. on LID  | Local govts. and state   | SRF Loans<br>319 NPS Grants<br>Implement through local land use planning requirements                           | 1. Utilize State Revolving Fund to implement LID   | Local govts. and state   | SRF Loans<br>319 NPS Grants<br>Implement through local land use planning requirements                      |
| <b>California</b><br>1. Lessons learned from AB 739/SW Advisory Task Force is reviewing & discussing LID funding priorities & criteria. This project may result in both a 'lessons learned' and a more prospective look at funding LID-related projects.                                  | SW Advisory Task Force (incl. Al Wanger)<br>Audience: primarily MS4s   | Already funded.   | Yes--collaboration would work with other states  | This report should be available to share by Dec. 2009.<br>Multiple pollutants. | Output = report  |
| <b>EPA -- West Coast Estuaries Initiative Grant Program</b><br>Region 10 is using these funds to give grants to local and tribal coastal governments to promote assistance and capacity to plan and manage growth in a way that protects watersheds and ecosystem functions in estuaries. | Region 10  | \$7.5m<br>These are intentionally large grants (\$.5m range) so that the governments have the resources to take | Find a way to collaborate & coordinate the focus and purpose of grant monies with a state before each agency issues RFPs |  | We will be sharing info. about the projects that we have funded at a major research conference in Feb. 09. |

| Task 2   | Collaborate on grant programs and share lessons learned to effectively provide incentives and assistance for communities to pursue activities aimed at reducing the impacts of development in coastal areas. |  |  |   |   |
|--|--|--|--|---|---|
|  | Responsibility   | Resources  | Opportunities  | Timeline/Pollut.  | Success Meas.   |
| <p>Region 9 is using these funds to fund projects that improve estuarine water quality and restore coastal habitat through implementation of comprehensive watershed plans, strong local partnerships, and leveraged resources.</p>                                  | <p>Region 9</p>  | <p>a comprehensive approach<br/><br/>\$7.5m</p>                                  | <p>Project selection criteria emphasizes LID and innovation in coastal communities</p> | <p>Both urban runoff pollutants and non-point sources of pollution.</p> | <p>All projects required to monitor &amp; report project outputs and outcomes incl. WQ improvements and habitat restored.</p> <p>Region 9 planning a conference to report project successes</p> |
| <p><b>NOAA</b><br/>Restoration Grants - e.g. will provide list.<br/>- Wetlands<br/>- Easements<br/>* California settlement \$s--SEP?</p>   |  |  |  |   |   |
| <p><b>Oregon Sea Grant</b><br/>Coastal Incentives Estuarine Education &amp; Technology helps coastal communities develop technical capacity or tools to help protect estuarine habitats.</p> <p>Needs: monitoring and efforts beyond the limited life of grants.</p> | <p>NOAA</p>  | <p>NOAA monies-- unsure if funding available but it's a large nationwide pot</p> | <p>Plenty of opportunity for new partners and new tools developed</p>                  | <p>Monies currently available by grant, yearly</p>                      | <p>Require 'impact' as success statement</p>  |

**Table 3 - Team Input on Task 3 - Coordinate with APA**

| Task 3  | Work with the American Planning Association and state and local planning agencies, and support the incorporation of LID and climate change impacts into local coastal plans.                    |                               |  |   |  |
|---|---|-------------------------------|--|---|--|
|   | Responsibility  | Resources                     | Opportunities  | Timeline/Pollut.  | Success Meas.  |
| <p>All States (WA in particular) annually provide coastal land use and LID training that qualify for APA/AICP credit.</p> <p><a href="http://www.planning.org/cm/whatiscm.htm">http://www.planning.org/cm/whatiscm.htm</a></p>  |   |                               |  |   |  |
| <p><b>Washington</b><br/>We currently don't work that closely with the American Planning Association, however we could partner with them on regional trainings. We do work closely with the American Public Works Association, Association of Cities, state agencies, local governments, WSU Extension, UW Sea Grant, and private business.</p>   | <p>Shared responsibility. Largest state leaders in stormwater are Department of Ecology and Puget Sound Partnership. Conservation district staff provide a lot of assistance to landowners.</p> | <p>From existing funding.</p> | <p>Partner with APA on trainings. Begin to incorporate climate change more fully into planning. Work with state land use planning office (Community, Trade and Economic Development) more.</p> | <p>Could occur within 2009-11 biennium.<br/>All urban pollutants.</p> | <p>New partnership with APA. Success in incorporating climate change into more planning, including SMPs.</p> |
| <p><b>Oregon Sea Grant</b><br/>Oregon State University Extension is working with local governments in 'Phase III' communities to encourage adoption of LID Best Management Practices into ordinances and site specific project design. We are developing tools to help with land use decision-making related to runoff and forest cover within land uses. We have six trainings planned on the Westside of Oregon in the next 12 months and approximately \$85k in resources committed.</p> | <p>Oregon State Extension</p>   | <p>\$85k committed</p>        |  |   |  |

| Task 3  | Work with the American Planning Association and state and local planning agencies, and support the incorporation of LID and climate change impacts into local coastal plans. |   |                           |   |   |
|---|--|---|---------------------------|---|---|
|   | Responsibility   | Resources   | Opportunities             | Timeline/Pollut.                                    | Success Meas.   |
| <p>The Non-point Education for Municipal Officials (NEMO) Program is also delivering education to jurisdictions in Oregon. OSU is also partnering with the Dept. of Land Conservation and Development (OLCD) to help local jurisdictions improve their ordinances and understand why they need incorporate LID ordinances and projects into their communities. They are delivering a lot of support and materials to local jurisdictions--we are the educational component and the follow-through to see that long term progress is made.</p>   | <p>Oregon State University Extension</p>   |   |                           |   |   |
| <p><b>California</b><br/> The California Water and Land Use Partnership (CalWALUP), CA member of the national NEMO Program has been delivering education to jurisdictions, agencies and stakeholders in California. CalWALUP partners are working with a number local jurisdictions improve their land use ordinances for water quality protection and to understand how to incorporate LID ordinances and projects into their communities. This effort is part of a coordinated statewide LID outreach, education and training initiative.</p> | <p>Shared, Coastal Commission lead</p>   | <p>In-kind (current), additional funding needed for training needs identified</p> | <p>Training, outreach</p> | <p>Multi-year / various urban runoff pollutants</p> | <p>Survey, implementation of LID measures, ordinances, etc.</p> |

**Table 4 - Team Input on Task 4 - Conduct 6 LID Trainings**

| Task 4  | Coordinate with NOAA and local governments to bring coastal community planning and development training to six interested West Coast communities (two in each state). |  |  |   |  |
|---|---|--|--|---|--|
|   | Goals and Objectives  |  |  |   |  |
|   | Responsibility  | Resources  | Opportunities  | Timeline/Pollut.                                | Success Meas.  |
| <p><b>Washington- Actions/Objectives</b><br/>                     Trainings should be LID/site scale, and watershed wide. Watershed-wide should target protection and be restoration-related.<br/>                     Outputs: Pre and post surveys (make sure post surveys are minimum 6-12 months after training) and seek to measure <u>actions taken as a result of training</u>, or at least influenced by training.<br/> <u>Lowest Level:</u> Increased awareness.<br/> <u>Higher:</u> Action taken.<br/> <u>Higher Still:</u> Improvement in environmental indicator.</p> | Puget Sound Partnership can partner with Ecology, WSU Extension, UW Sea Grant, EPA, Conservation districts, APWA, APA, others   | Need \$ for meeting rooms, refreshments, guest speaker fees, travel expenses, training materials, registration coordination, and day of event help. Partnership can provide part of FTE for planning, interagency coordination, day of event implementation. | Opportunity to begin to explore benefits of LID and other techniques undertaken at the watershed scale; increased awareness; | If funding is made available, 2009-11 biennium. | Environmental/public health/recreational indicators include: beach closures, shellfish growing area improvements, B-1B1 (macro-invertebrates), flow in streams, 303d listings, etc |
| <p><b>Oregon</b><br/>                     Goal: Reduce coastal pollution impairing beneficial uses of coastal waters resulting from stormwater runoff.<br/>                     Objective: Increase use of low impact development techniques used by local planners.<br/>                     Task: Conduct six training sessions, two in each state targeted to the needs of the region to promote the advantages of LID and provide a fundamental</p>   | Partnership can partner with DEQ, OSU Extension, Oregon Sea Grant, EPA, Conservation districts, APWA, APA, others   | Need \$ for meeting rooms, refreshments, guest speaker fees, travel expenses, training materials, registration coordination, and day of event help.<br>Partnership can   | Opportunity to begin to explore benefits of LID and other techniques undertaken at the watershed scale; increased awareness; | If funding is made available, 2009-11 biennium. | Environmental/public health/recreational indicators include: beach closures, shellfish growing area improvements, (macro-invertebrates), flow in streams, 303d listings, etc       |

| Task 4  | Coordinate with NOAA and local governments to bring coastal community planning and development training to six interested West Coast communities (two in each state). |   |               |  |   |
|---|---|---|---------------|--|---|
|   | Goals and Objectives  |   |               |  |   |
|   | Responsibility  | Resources   | Opportunities | Timeline/Pollut.   | Success Meas.   |
| <p>understanding of basic LID principles.</p> <p>Task: Develop West Coast LID certification program.</p>  |   | <p>provide part of FTE for planning, interagency coordination, day of event implementation.</p> |               |  |   |
| <p><b>California</b></p> <p>Objective--outcome, behavioral<br/>+Training attendees are knowledgeable on principles and practices of LID and larger, watershed-scale issues and tools.</p> <p>Objective--outcome, WP<br/>+in areas with no or few beach postings and due to develop rapidly (n&gt;5% in 5 yrs)?, postings do not increase greater than 5%.</p> |   |   |               |  | <p>Performance Measures: pre and post-training survey/test/evaluation.</p> <p>Measure: beach posting and WQ indicator</p> |
| <p><b>EPA</b></p> <p>Goals: As laid out in West Coast Governors' Agreement on Ocean Health</p> <p>Objective 1: Local communities incorporate LID into site and parcel development.</p> <p>Objective 2: Local communities employ watershed planning to avoid impacts to ecosystem functioning and water quality from growth.</p>                               |   |   |               | <p>-West Coast Practitioners and certified ID and/or watershed planning.<br/>-Promote/train local communities in LID and watershed planning.<br/>-'Export' practices and knowledge from 'advanced' communities to less advanced communities.</p> |   |

**Table 5 - Team Input on Task 5 - Create a West Coast LID Partnership**

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| <p><b>Task 5</b></p>  | <p><b>Explore the creation of and convene a first meeting for a West Coast Low Impact Development (LID) Partnership aimed at coordinating training, certification of practitioners, outreach, regulatory and implementation tools related to polluted runoff and LID in CA, OR and WA.</b></p> <p><b>Goals and Objectives</b></p>   |
| <p><b>Possible stakeholders to invite to the partnership along with ACT members</b></p> |   |
| <p><b>Washington</b></p>  | <p>Local Government -- Choose one or two from the three States. In WA , Curt Crawford, King County or Bill Lief, Snohomish County and co-chair of APWA Stormwater Managers Group or Chris May, City of Seattle.</p> <p>Private Sector/Development -- Either innovative private engineer lide Bill Derry, CH2M Hill or Art Castle, Kitsop HomebuildersAssociation.</p>   |
| <p><b>Oregon</b></p>  | <p>DEQ CNPCP, OSU, Oregon Sea Grant, City of Portland, Portland Metro, home building organization leader (developer) and other city and counties (?).</p>   |
| <p><b>California</b></p>  | <p>Builders: Mark Grey -- NAHB or Building Industry Association of Southern California.<br/> Environmental Organizations: Heal the Bay (Santa Monica Bay)<br/> Darla Inglis -- LID Center (San Luis Obispo)</p> <p>California is currently in the developmental stages of creating a statewide LID support network. This network is designed around implementing the statewide LID outreach, education and training initiative described in Task 3. This statewide initiative is being developed to support LID implementation by providing current and relevant LID related education and technical training to all involved stakeholders in the land use planning and development process. In addition, a multi-campus research and testing center is being developed within the 10 campus University of California system to support rigorous testing and analysis of LID and other stormwater management approaches. This effort is being coupled with a concurrent effort by the Southern California Coastal Research Project to monitor and assess the effectiveness of LID and related Stormwater management approaches in communities and watersheds to achieve water quality standards and objectives. The results of these research and evaluation efforts will be integrated into the statewide education and training initiative, and made available through a "Virtual LID Center" for California, which is currently being developed. This Virtual Center is intended to provide a 'one-stop shop' for LID related information for planners, engineers, municipal staff, developers and other stakeholders including access to the latest LID related research, case studies of LID implementation, training materials, technical and other resources necessary to support successful implementation of LID and alternative storm water management practices.</p> |
| <p><b>EPA Regions 9/10</b></p>  | <p>Local Government -- someone from a smaller rural coastal community not in Puget Sound or San Francisco watersheds<br/> Washington Dept. of Ecology -- Harriet Beale<br/> Green Shores Partnership - cooperate/assist in the development of Green Shores, a third party certification program for shoreline development.</p>  |

**Table 6 - Team Input on Coordination with Other ACTs**

|                                     | Coordination with other ACTs |
|-------------------------------------|------------------------------|
| <b>Habitat ACT</b> (not yet formed) | Six votes                    |
| <b>Sustainable Communities ACT</b>  | Four votes                   |
| <b>Climate Change ACT</b>           | Four votes                   |
| <b>Education ACT</b>                | Three votes                  |
| <b>Integrated Ecosystem ACT</b>     | Three votes                  |

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**Table 7 - Compilation of CA Low Impact Development Definitions**

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| <p>1. SWRCB Board Meeting Session Division of Financial Assistance May 6, 2008 Item 8</p>   | <p>LID is a sustainable practice that benefits water supply and contributes to water quality protection. Unlike traditional stormwater management, which collects and conveys runoff through a system of pipes and conveyances to surface waters, LID uses green infrastructure to detain, filter, and percolate water onsite. This innovative approach can help meet water quality and water supply objectives and maintain healthy, sustainable watersheds.</p>  |
| <p>2. SWRCB LA Region<br/>Order 08-xxx NPDES NO.CAS004002<br/>WDR for Storm Water (wet weather) and Non Storm Water (dry weather) Discharges from the MS4 within the Ventura County Watershed Protection District, and the Incorporated Cities Within.<br/>Xxxxx xx, 200x</p> | <p>LID is a storm water management and land development strategy that emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect predevelopment hydrologic functions</p>  |
| <p>3. A Review of LID Policies Removing Institutional Barriers to Adoption December 2007<br/>Commissioned and Sponsored by: California State Water Resources Control Board Stormwater Program And The Water Board Academy<br/>Project Officer: Greg Gearheart, P.E.</p>       | <p>LID relies on an integrated system of decentralized, small-scale control measures. These measures range from site design practices to technology driven LID BMPs. The underlying principle of LID is that undeveloped land does not present a stormwater runoff or pollution problem. The evolved natural hydrology of any given site manages water in the most efficient manner. This most often translates to high rates of infiltration, vegetative interception, and evapotranspiration.</p>  |
| <p>4. The Central Coast Water Board</p>   | <p>Minimizing or eliminating pollutants in storm water through natural processes and maintaining pre-development hydrologic characteristics, such as flow patterns, surface retention, and recharge rates.</p>   |
| <p>5. Low Impact Development Technical Guidance Manual for Puget Sound, Puget Sound Partnership and WSU Extension, 2005</p>   | <p>Low impact development is a stormwater management and land development strategy applied at the parcel and subdivision scale that emphasizes conservation and use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely mimic pre-development hydrologic functions.</p>  |
| <p>6. NRDC<br/><a href="http://www.nrdc.org/water/pollution/storm/chap12.asp">http://www.nrdc.org/water/pollution/storm/chap12.asp</a></p>  | <p>LID is simple and effective. Instead of large investments in complex and costly engineering strategies for stormwater management, LID strategies integrate green space, native landscaping, natural hydrologic functions, and various other techniques to generate less runoff from developed land. LID is different from conventional engineering. While most engineering plans pipes water to low spots as quickly as possible, LID uses micro-scale techniques to manage precipitation as close to where it hits the ground as possible. This involves strategic placement of linked lot-level controls that are</p> |

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|  | <p>"customized" to address specific pollutant load and stormwater timing, flow rate, and volume issues. One of the primary goals of LID design is to reduce runoff volume by infiltrating rainfall water to groundwater, evaporating rain water back to the atmosphere after a storm, and finding beneficial uses for water rather than exporting it as a waste product down storm sewers. The result is a landscape functionally equivalent to predevelopment hydrologic conditions, which means less surface runoff and less pollution damage to lakes, streams, and coastal waters.</p>  |
| <p><b>7. California San Diego RWB</b><br/>Order No. R9-2007-0001 NPDES NO. CAS0108758<br/>WDR for Discharges of Urban Runoff from The MS4<br/>Draining the Watershed of The County of San Diego,<br/>The Incorporated Cities of San Diego County, The San<br/>Diego Port District, and The San Diego County<br/>Regional Airport Authority</p> | <p>A storm water management and land development strategy that emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions.</p>  |
| <p><b>8. SWRCB</b> <a href="http://www.waterboards.ca.gov/lid/">http://www.waterboards.ca.gov/lid/</a></p>   | <p>Low Impact Development (LID) is a sustainable practice that benefits water supply and contributes to water quality protection. Unlike traditional stormwater management, which collects and conveys storm water runoff through storm drains, pipes, or other conveyances to a centralized storm water facility, LID takes a different approach by using site design and storm water management to maintain the site's pre-development runoff rates and volumes. The goal of LID is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source of rainfall. LID has been a proven approach in other parts of the country and is seen in California as an alternative to conventional storm water management.</p>  |
| <p><b>9. Region 3 Initial Investigation of The Feasibility and Benefits of LID Site Design Practices for the SF Bay Area</b> by Richard Horner</p>   | <p>Low impact development methods reduce storm runoff and its contaminants by decreasing their generation at sources, infiltrating into the soil or evaporating storm flows before they can enter surface receiving waters, and treating flow remaining on the surface through contact with vegetation and soil, or a combination of these strategies. Soil-based LID practices often use soil enhancements such as compost, and thus improve upon the performance of more traditional basins and biofilters. The study encompassed vegetated swales (channels for conveyance at some depth and velocity), vegetated filter strips (surfaces for conveyance in thin sheet flow), and bioretention areas (shallow basins with a range of vegetation types in which runoff infiltrates through soil either to groundwater or a subdrain for eventual surface discharge). Application of these practices in a low impact site design mode requires either determination that existing site soils can support runoff reduction through infiltration or that soils will be amended using accepted LID techniques to attain this objective. Finally, the study further broadened implementation options to include water harvesting (collection and storage for use in, for example, irrigation or gray water systems), roof downspout infiltration trenches, and porous pavements.</p> |

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| <p><b>10. Implementation of LID in Salinas, CA WorkShop #2 2006</b><br/> Chris Conway, Kennedy/Jenks Consultants<br/> Central Coast RWB</p> | <p>Drainage features and practices that mimic natural hydrologic functions to reduce the rate, volume and pollutant loading of urban runoff to pre-development conditions<br/> Hydrologically functional site design combined with pollution prevention measures to compensate for land development impacts on hydrology and water quality<br/> Decentralized stormwater micro-management techniques to mimic the original hydrologic regime</p>   |
| <p><b>11. Central Coast Water Board</b></p>   | <p>Minimizing or eliminating pollutants in storm water through natural processes and maintaining pre-development hydrologic characteristics, such as flow patterns, surface retention, and recharge rates.</p>   |
| <p><b>12. California's Water and Land Use Partnership</b></p>   | <p>LID is an alternative method of land development that seeks to maintain the natural hydrologic character of the site or region. The natural hydrology, or movement of water through a watershed, is shaped over centuries under location specific conditions to form a balanced and efficient system. When hardened surfaces such as roads, parking lots, and rooftops are constructed, the movement of water is altered; in particular, the amount of runoff increases and infiltration decreases. This results in increased peak flow rate and volume, and pollution levels in stormwater runoff. LID designs with nature in mind: working with the natural landscape and hydrology to minimize these changes. LID accomplishes this through source control, retaining more water on the site where it falls, rather than using traditional methods of funneling water via pipes into local waterways. Both improved site design and specific management measures are utilized in LID designs. LID has been applied to government, residential, and commercial development and redevelopment, and has proven to be a cost-efficient and effective method for managing runoff and protecting the environment</p> |

## Attachment 1: Training Fliers from NOAA

# Coastal Community Planning and Development

## Training Opportunity for Regional Collaborators: West Coast Governors' Agreement on Ocean Health

Ensuring clean coastal waters, protecting ocean and coastal habitats, and supporting vibrant coastal communities—these are among the critically important goals specified in the action plan of the West Coast Governors' Agreement on Ocean Health. None of these goals can be fully realized without bringing together a variety of coastal professionals and stakeholders to plan and develop communities in ways that are both environmentally and economically sustainable.

For community professionals and stakeholders who are updating—or who anticipate updating—their general plans, “Coastal Community Planning and Development” training is a valuable aid. As highlighted in the Governors' Agreement, the states will coordinate with the National Oceanic and Atmospheric Administration (NOAA) to bring this course to six interested communities in Washington, Oregon, and California (two in each state). Furthermore, this training can be customized to focus on growth alternatives as they relate to issues such as water quality, financing mechanisms, and adaptation to hazards and climate change.

### Targeted Participants

This course was developed by the NOAA Coastal Services Center and is designed for those who would like to participate in, or are currently participating in, planning and development activities in their communities. The training is most productive when attended by a broad spectrum of community members, such as local elected officials and related personnel, developers, business leaders, realtors, community groups, members of civic organizations, coastal resource managers, and concerned citizens. Alternatively, the training can be designed for participants from a broader region, where groups of participants (ideally three to five) work with others from their geographic area throughout the two-day training.

### Goal

Coastal Community Planning and Development training will enable participants to understand, plan, and guide efforts to implement alternative growth and development approaches in their coastal communities.

### Learning Objectives

- ✓ Participants will learn to recognize the drivers of conventional development and understand the consequences to coastal communities of continuing this development pattern.
- ✓ Participants will learn about alternatives to conventional growth and development, including the defining principles and the economic, social, and environmental benefits to coastal communities.
- ✓ Participants will be able to assess the current state of growth and development in their communities.
- ✓ Participants will become familiar with useful tools and resources for alternative growth efforts.
- ✓ Participants will understand the purpose of, process for, and results from creating a collective vision for how and where coastal communities will grow.

# Coastal Community Planning and Development: Course at a Glance

## **Unit 1: Understanding Conventional Development: Drivers and Consequences**

Identify the characteristics of conventional development. Then *consider your own community* and establish causal links between characteristics and consequences.

## **Unit 2: Identifying Alternative Growth and Development Principles**

Learn to identify alternative growth and development principles within *your own community*, choose the location or proposed location, and identify the combination of principles already in place.

## **Unit 3: Identifying Benefits of Alternative Growth and Development**

Understand important benchmarks by reading and discussing case studies of communities that have won the Environmental Protection Agency's "Smart Growth" Awards. Participants will identify the principles implemented, benefits documented, and strategies used by award-winners to achieve their visions. Consider and discuss the applicability of a particular case to *your own community*.

## **Unit 4: Identifying Tools and Resources to Aid Planning and Implementation Efforts**

Lead and discuss actual case studies of communities effectively implementing alternative growth strategies. Learn the six-step implementation framework, types of tools, and the place in the planning process each tool is appropriately used. Then consider the usefulness of these tools to *your own community* and their place in the process of implementation.

## **Unit 5: Assessing Local Regulations**

Use a coastal development "scorecard" to assess *your community's* status along the continuum of alternative growth and development.

## **Unit 6: Stakeholder Analysis**

Conduct a stakeholder analysis to identify the individuals or groups that must be involved in a collaborative smart growth planning process in a community.

## **Unit 7: Visioning Exercise**

Use a base map of *your community* or project area and work with others to create an understanding of community values and a vision of the type and location of future growth and development.

## **Unit 8: Identifying Opportunities and Next Steps: Beginning a Community Action Plan**

Engage in group discussion to identify the actions needed to allow alternative growth and generate appropriate strategies for achieving them.

## **To Learn More About Coastal Community Planning and Development Training**

Contact Susan Fox at [Susan.Fox@noaa.gov](mailto:Susan.Fox@noaa.gov) or (843) 740-1144. For more information about the West Coast Governors' Agreement, visit [www.westcoastcoceans.gov](http://www.westcoastcoceans.gov) or contact Rebecca Pollock at [Rebecca.Pollock@noaa.gov](mailto:Rebecca.Pollock@noaa.gov) or (510) 251-8326.