Presentation to the Los Angeles Regional Water Quality Control Board

Progress Report from the SSFL Stormwater Expert Panel

Professor Michael K. Stenstrom, PhD, UCLA

March 6, 2008

Agenda

• Scope of Work

• Introduce Panel Members

• Status Report & Next Steps
Scope of Work

• From Nov. 1, 2007 CDO: (For outfalls 008 and 009) Assemble an expert panel to review site data and evaluate natural BMPs (or ENTS) capable of providing the required treatment to meet the final effluent limits

• Through discussions with Regional Board staff, recommendation was made for expert panel to also review the proposed site-wide design storm (1-year return interval event), with Board to consider limiting applicability of enforceable numeric effluent limits above this storm size
Panel Members

• Dr. Robert Gearheart
• Dr. Richard Horner
• Jonathan Jones, P.E.
• Dr. Michael Josselyn
• Dr. Robert Pitt
• Dr. Michael Stenstrom

Panel Members

• Dr. Robert Gearheart
  – Professor Emeritus, Humboldt State University
  – Water Quality Management
  – Water Treatment through Constructed Wetlands
Panel Members

• Dr. Richard Horner
  – Former Professor, University of Washington
  – ENTS Design/Performance
  – Aquatic Ecology

Panel Members

• Jonathan Jones, P.E.
  – CEO, Wright Water Engineers
  – Stormwater Quality and Quantity
  – Surface Water Hydrology
  – Watershed Modeling
Panel Members

• Dr. Michael Josselyn
  – President, Wetlands Research Associates
  – Wetlands Restoration/Mitigation
  – Wetlands Ecology

Panel Members

• Dr. Robert Pitt
  – Professor of Civil Engineering, University of Alabama
  – Urban Runoff Control
  – Stormwater and Erosion Control Practices
  – National Urban Runoff Program
Panel Members

• Dr. Michael Stenstrom
  – Professor of Civil Engineering, UCLA
  – Stormwater and Wastewater Treatment Systems
  – Modeling and Optimization

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Expert Panel Schedule

• Based on Expert Panel Work Plan submitted on Dec. 15, 2007:

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<th>Proposed Scope</th>
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<td>Design Storm</td>
<td>Working draft complete</td>
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<td>ENTS Conceptual Designs</td>
<td>May 15, 2008</td>
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Public Involvement Component

• Public Participation Meetings
• Periodic reports to RWQCB on project status
• Project information posted on the Internet:

Expert Panel Public Meetings

• From Work Plan:

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<td>Progress on design storm and ENTS selection &amp; conceptual design</td>
<td>March 17, 2008</td>
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<td>Recommended design storm and conceptual ENTS designs</td>
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<td>Progress on ENTS implementation</td>
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<td>Initial ENTS Performance Monitoring Results</td>
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Status Report

- Progress on review of existing proposed site specific design storm (1 year)

- Progress on ENTS selection & design in outfall 008 and 009 watersheds

Progress on Site Specific Design Storm

- Have reviewed existing proposed site specific design storm (1 year event)

- Have implemented evaluation methodology (i.e., long-term continuous hydrology modeling) consistent with LA Design Storm Task Force
Site Specific Design Storm

- Balances the need for treatment with impacts caused by treatment system
  - Largest storms occur infrequently but require large containment and treatment systems
- Should be protective of water quality & maximize permit compliance while also considering site constraints
- Should apply site-wide
- Should be monitorable using on-site rain gauge

Site Specific Design Storm (continued)

- May be achieved via distributed controls rather than exclusively outlet treatment
- Panel has developed a draft recommendation and will present to public on March 17
- Goal, if feasible, is to select a compliance assessment storm that results in ENTS that capture/treat majority (90%) of runoff volume while also considering environmental impacts due to habitat alteration
Progress on ENTS Designs for Outfall 008 and 009 Watersheds

• Have already selected multiple potential ENTS locations throughout these watersheds (i.e., not just control at the outfalls)
• Initially locating ENTS downstream of:
  – Developed areas
  – Areas of known historic activities or surface soil/sediment contamination
• 1st set of draft conceptual ENTS designs in progress

Progress on ENTS Designs for Outfall 008 and 009 Watersheds

(continued)

• Considering locating additional ENTS at offsite locations to address run-on
• Looking for additional locations for “source control” type of BMPs, for example:
  – Remove/cover treated wood and galvanized metals
  – Remove impervious areas
  – Control eroding areas
  – Outfall protection
  – Stream stability enhancements
  – Other source controls identified by the panel or by Boeing
DTSC Coordination

- Many proposed ENTS located near cleanup areas
- Significant coordination required with DTSC for these areas to meet ENTS implementation schedule

Next Steps

- Compliance assessment storm recommendation to be provided with conceptual ENTS designs, tentatively scheduled for April 17 public meeting
- ENTS in Outfall 008 and 009 Watersheds:
  - Develop complete list of ENTS locations and footprints
  - Develop conceptual ENTS designs for each location
THE END

THANK YOU FOR YOUR TIME

For questions or comments, contact:
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