

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

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## Agenda

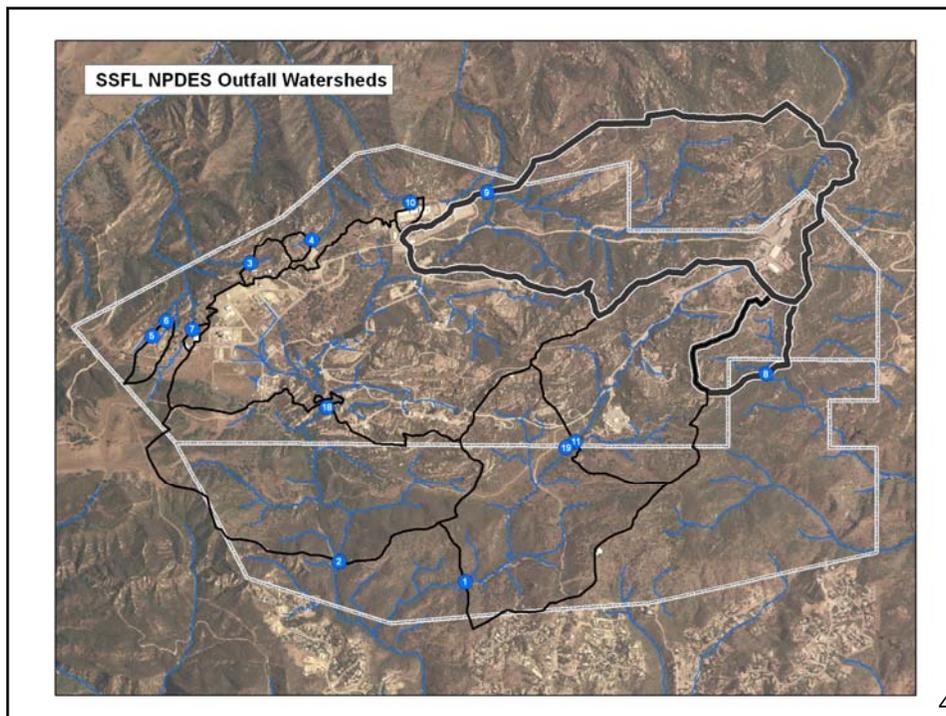
- Scope of Work
- Introduce Panel Members
- Status Report & Next Steps

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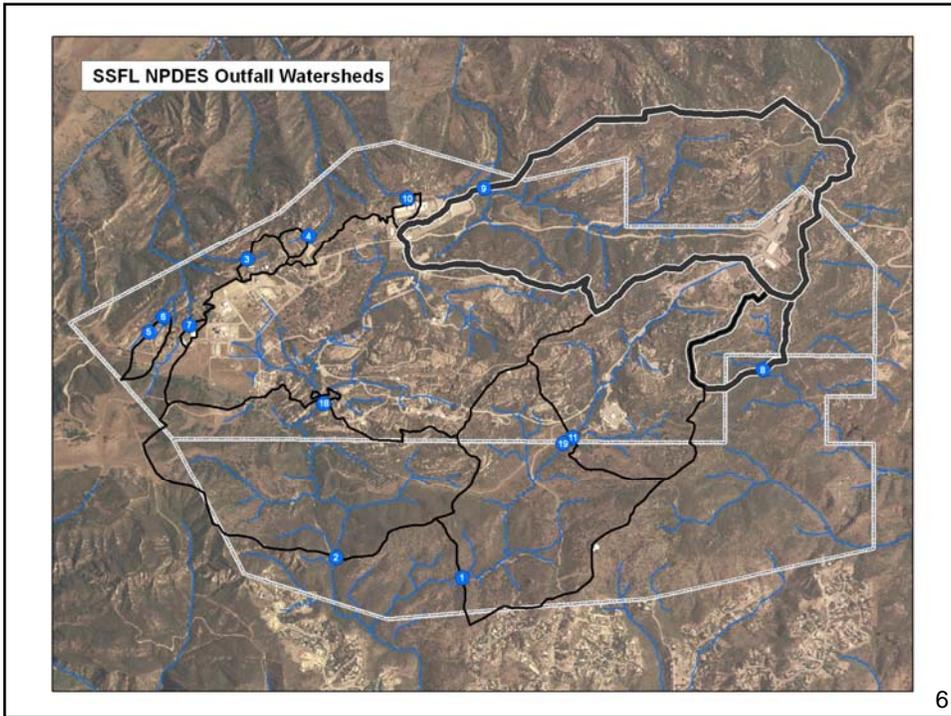
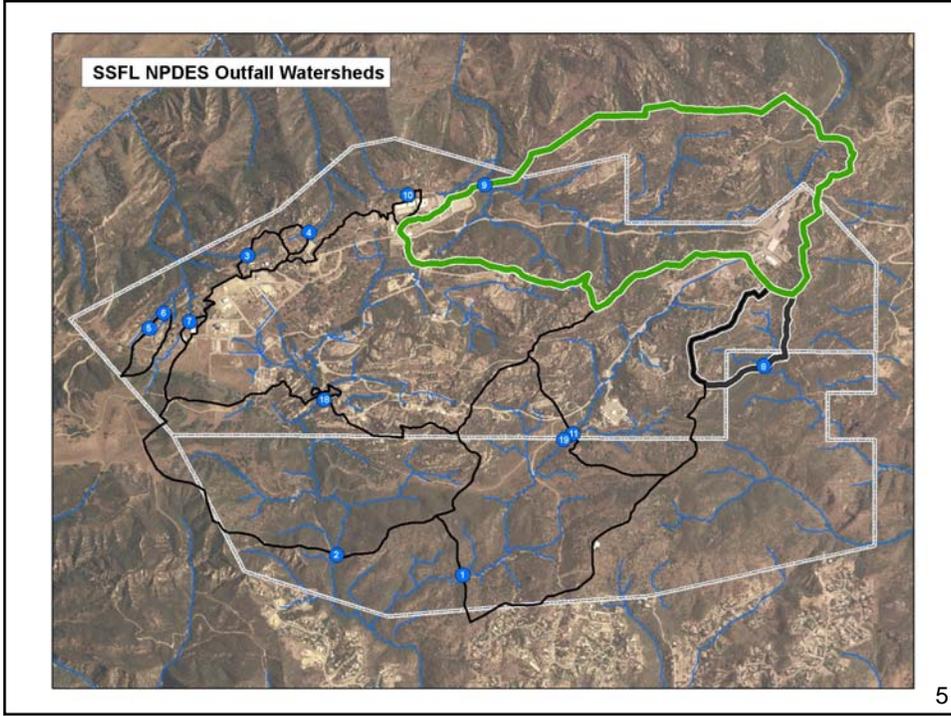
## Scope of Work

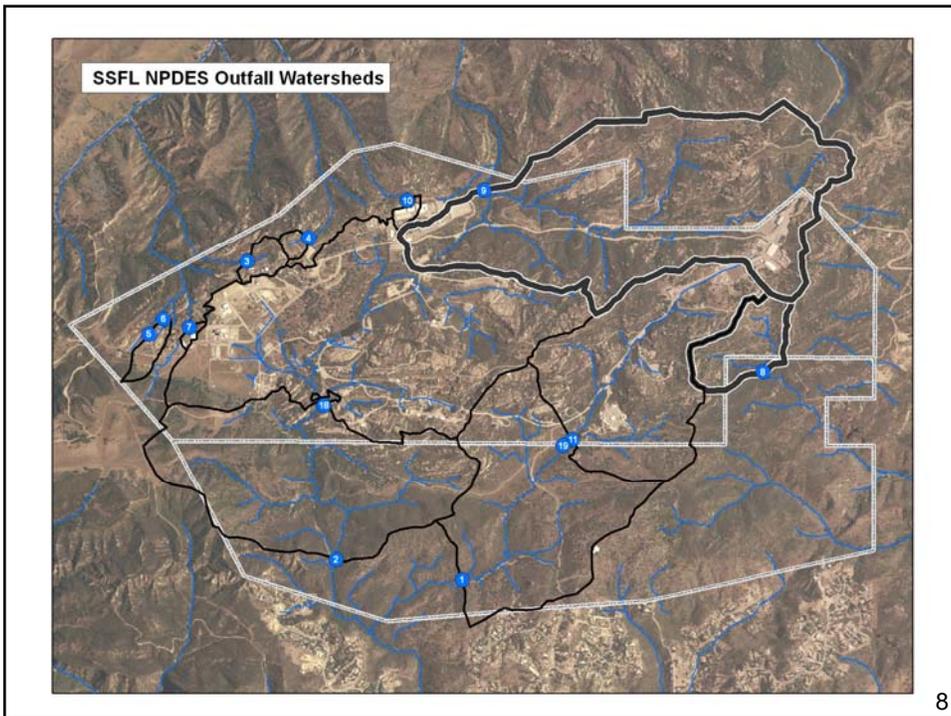
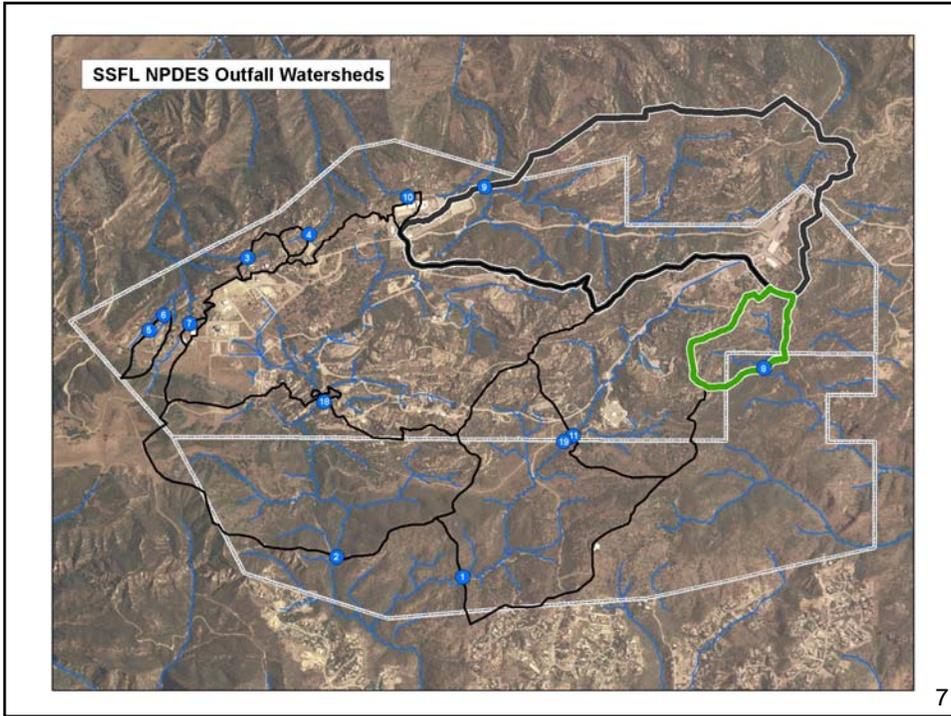
- From Nov. 1, 2007 CDO:  
(For outfalls 008 and 009) Assemble an expert panel to review site data and evaluate natural BMPs (or ENTS) capable of providing the required treatment to meet the final effluent limits
- Through discussions with Regional Board staff, recommendation was made for expert panel 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

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## Panel Members

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

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## Panel Members

- Dr. Robert Gearheart
  - Professor Emeritus, Humboldt State University
  - Water Quality Management
  - Water Treatment through Constructed Wetlands

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## Panel Members

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

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## Panel Members

- Jonathan Jones, P.E.
  - CEO, Wright Water Engineers
  - Stormwater Quality and Quantity
  - Surface Water Hydrology
  - Watershed Modeling

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## Panel Members

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

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## Panel Members

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

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## 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:

Proposed Scope	Proposed Date
Design Storm	<b>Working draft complete</b>
ENTS Conceptual Designs	May 15, 2008
ENTS Final Designs	July 15, 2008
ENTS Permitting	August 15, 2008
ENTS Construction	October 31, 2008
Final Permit Limits Become Effective	June 10, 2009

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## Public Involvement Component

- Public Participation Meetings
- Periodic reports to RWQCB on project status
- Project information posted on the Internet:  
[http://www.boeing.com/aboutus/environment/santa\\_susana/ents/index.html](http://www.boeing.com/aboutus/environment/santa_susana/ents/index.html)

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## Expert Panel Public Meetings

- From Work Plan:

Proposed Scope	Proposed Date
Panel introduction	<b>Complete</b>
Progress on design storm and ENTS selection & conceptual design	March 17, 2008
Recommended design storm and conceptual ENTS designs	April 17, 2008
Progress on ENTS implementation	September, 2008
Initial ENTS Performance Monitoring Results	June, 2009

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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

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## 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

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## 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

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## 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

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## 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
- 1<sup>st</sup> set of draft conceptual ENTS designs in progress

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## 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

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## DTSC Coordination

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

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## 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

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**THE END**

**THANK YOU FOR YOUR TIME**

For questions or comments, contact:  
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