Stormwater Regulation and Codes

Permeable Pavement Workshop



Keith H. Lichten, P.E., Chief Watershed Management Division

Overview

- Storm water: regulatory drivers
- Challenges
- Opportunity: Permeable Pavement
 - "Slow it, spread it, sink it"
 - Tool in the toolbox

Regulatory and other drivers

- Clean Water Act
 - Fishable, swimmable waters
- Groundwater supply & protection
- Public safety
 - Flood management
 - Infrastructure protection



Clean Water Act

- Framework: Water Quality Standards
 - Water quality parameters
 - Beneficial uses
 - Anti-degradation
- Regulatory tools
 - WQ design storm
 - TMDL wasteload allocations
 - CSO reduction

Challenges & Opportunities

- Hydromodification
 - Flooding
 - Infrastructure threats & maintenance









Challenges & Opportunities

- Reducing air and heat island impacts
- High quality built environment
- ADA accessibility





Challenges & Opportunities

- Legacy built environment
- Standard practices





Permeable Pavement Tool in the Toolbox

- Slow it, spread it, sink it?
- Change: Design and installation
- Operation and maintenance





Permeable Pavement

Tool in the Toolbox

- Water quality storm
- Flood management & climate change role
- Significant co-benefits





Summary

- Storm water: regulatory drivers
- Range of water & other co-benefits
- Permeable Pavement: significant tool

Stormwater Regulation and Codes

Questions?



Keith H. Lichten (510) 622-2380 Keith.Lichten@waterboards.ca.gov

