Storm Water Protection

Earth Day 2015
Water Statistics

• Water covers 70.9% of the Earth’s surface.
• 97% of the water on Earth is salt water.
• 3% of Earth’s water is fresh water
  – 0.3% of the world’s fresh water is found on the Earth’s surface in lakes, rivers, streams, ponds, and swamps
  – 68.7% of the fresh water on Earth is trapped in glaciers
  – 30% of fresh water is in the ground
• 95% of the world’s fresh water is underground
Fresh Water Availability

- Salt water
- Lakes, rivers, stream, ponds, swamps
- Ground water
- Glaciers
Protecting these Resources

• Clean Water Act (CWA) is administered by the EPA and delegates to most states, the responsibility for protecting their surface waters.
CWA Goals

• Eliminations of discharge of pollutants into surface waters
• Achievement of a level of quality which provides:
  – Protection and propagation of fish, shellfish and wild life
  – For recreation in and on the water
California

• Storm water protection in California is regulated through the State Water Resources Board (SWRB) and NPDES** Permits:
  – Industries
  – Municipalities (MS4* Phase I and II)

* Municipal Separate Sanitary Sewer System
** National Pollutant Discharge Elimination System (NPDES) permit program
CSUEB Storm Water

• February 2013 the SWRB adopted a MS4* Phase II General Permit for Storm Water Discharges
• Designates state and federal entities with substantial storm water conveyance systems as “Non-traditional” MS4s
• This includes colleges and universities and CSUs
* Municipal Separate Sanitary Sewer System
Challenges

• Non-point source pollution (NPS):
  – Storm water is not treated
  – Many diffuse sources
  – Pollutants are picked up by rain and snow run-off
  – Carried to lakes, rivers, stream, bays, etc
  – Control them at the source

• San Francisco and Suisun Bays receive our campus run-offs
Non-point Source Pollution

- Trash – cigarette butts, plastic bottles, etc
- Run-off – man-made or natural
  - Sediment: construction, erosion
  - Chemical: roofs, car wash, herbicides, pesticides, naturally occurring
  - Biological: pet waste, sewer spills
Best Management Practices (BMPs)

Things that we all can do as individuals:

• Properly dispose of litter
• Car washing practices
• Limit use of herbicides and chemicals
• Pick-up and dispose of pet waste properly
• Use native drought tolerant plants to limit water use and run-off
How Do We Comply?

• Educate campus community and staff
• Implement Best Management Practices (BMPs)
• Inspections and sampling of run-off
• Maintenance of the conveyance systems
• Using Low Impact Design (LID)
• Landscape Design and Maintenance
  – Minimizes run-off
  – Protects habitat
Report to EHS

• Signs of pollution:
  – Oil sheen on water surface
  – Excess trash and debris
  – Odor
  – Colored or cloudy water
  – Excess irrigation run-off
  – Sewer over-flow

• Contact EHS at 5-2395 or UPD