King County Water Quality
Trouble Call Program

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King County facts

- 39 incorporated cities
- 12th most populated county in the U.S.
- Population of 1.7 million
- 2,131 square miles of land
- 760 lakes and reservoirs
- 3,000 miles of streams
- 975 wetlands
- 4 major river systems (Snoqualmie/Cedar/Green/White)
- 800,000 acres of forestlands
- 34.1 inches average annual precipitation

Source: King County DNRP Annual Report 2003
Trouble Call Mission

- Respond to, investigate, and cooperate with multiple agencies on surface water quality issues and environmental emergencies in King County.
King County Resources

Field staff
- Wastewater
- Solid waste
- Parks
- Roads

Vessels (5)
- From 14’ whaler to 48’ research vessel

Laboratory
- Wide-range of expertise
- Fast turn-around-times

Response Vehicle
- Laptop w/ ArcGIS
- Sampling equipment
- Digital camera/GPS unit
- Booms/pads for spill containment
Trouble Call Data for 2005

- 117 Incidents
- Field investigated more than 79 incidents
- Collected 56 water quality samples
- KC Environmental Lab analyzed over 500 parameters

2005 Incidents

- Construction: 4%
- Oil: 23%
- Natural: 21%
- Sewage: 23%
- Other: 29%

Legend:
- Construction
- Oil
- Sewage
- Natural
- Other Spills
How we assist other agencies
How we assist other agencies:

- We monitor many areas of King County
How we assist other agencies:

- We provide public agencies with Trouble Call sample kits
  - Agencies get training
    - Collect a quick, one time water quality sample
    - No cost for analysis
How we assist other agencies:

• Mutual-aid responder when notified of spills
  – Washington State Department of Ecology
Collaborating Agencies

• King County:
  – Public Health-Seattle/King County
  – DDES
  – Roads

• State of Washington:
  – Agriculture
  – Ecology
  – Fish and Wildlife
  – DNR
  – DOT

• Water and Sewer Districts
• EPA
• NOAA
• United States Coast Guard
• University of Washington

• Cities:
  – Seattle
  – Bothell
  – Black Diamond
  – Kenmore
  – Shoreline
  – Lake Forest Park
  – Federal Way
  – Bellevue
  – Kent
  – Kirkland
  – Woodinville
  – Renton
  – Tukwila
  – Des Moines
Trouble Call Responds to

- Wastewater incidents
- Natural events
- Illegal dumping
- Unusual emergencies
- Oil Spills
Wastewater Incidents

- Respond to:
  - Spills along the King County conveyance system
- Collect/analyze water samples
  - bacteria and nutrients
- Appropriate contacts:
  - Public Health
  - Local Jurisdictions
- Post signs
- Provide ongoing water quality monitoring of surface waters
Combined Sewer Overflow after a rain event
36” sewer line break
Natural Phenomena

- Orange plankton in West Seattle
  - Noctiluca

- Fishkill-Lake Washington
  - Three-spine Sticklebacks

- Foam on Lake Washington
  - Phytoplankton decomposition and the release of algin

- Odor complaints along Alki Beach
  - Ulva (sea lettuce) seaweed
Natural bio-sheen
Algae identified as Botryococcus
“Nuisance” algae
Iron bacteria
Phantom midges on Sammamish Slough
Illegal Dumping

• Attempt to identify the Responsible Party
  – Immediate cleanup

• Photo documentation

• Collect water quality samples
  – Identify unknowns
  – Quantitative analysis
  – Toxicity testing

• Enforcement action
  – Local jurisdiction
Restaurant grease discharged from pipe
Illegal dumping of fuel along Seola Creek (Burien/Seattle)
Shadow Lake – sinking of boat resulting in oil spill
Unusual Emergencies

- Herbicide application
- Fish kills
- Construction activities
  - de-watering
  - erosion/sediment control
- Odor complaints
- Toxic algal blooms
- Fire responses near surface waters
- Frogs in lake
- WNV-crows
Small tug sunk on Lake Washington Ship Canal
Marina fire in Portage Bay
Chemical warehouse fire: runoff of chemicals and fire-fighting foam to Springbrook Creek
Oil Spills

- Assist lead jurisdiction during incident response
- Monitor surface waters
  - Boats
  - Staff
  - Lab services
- Monitor wastewater system
- Utilize our supply of booms and pads
Residential oil tank punctured, resulting in spill to basement sump-discharge to lake.
Leaking UST discharging heating oil to Puget Sound
7,000 gallon diesel spill from flood control facility
Heating oil in creek from UST-City of Tukwila
Point Wells Oil Spill-4800 gallons

Dept of Ecology
Future Challenges

• Gov. Gregoire established the “Puget Sound Partnership”
  – preserve Puget Sound by 2020 with critical spill response resources

• Streamline notifications for spills

• Continue to improve relationships with local agencies
  – Jurisdictional boundaries
  – Communications
  – Resource sharing
  – Welcome locals within the ICS
It's beautiful! ...as long as you don't look overboard.
“Alone we can do so little; together we can do so much”-Helen Keller

For more Information:

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