

FY 2009 RESEARCH PROBLEM STATEMENT

Use this form to submit a problem statement

Submittal via E-mail is preferred: Save the form and give it a new, descriptive name, then send to:
barnie.p.jones@odot.state.or.us

ODOT Research Unit
200 Hawthorne Ave. SE, Suite B-240
Salem, OR 97301-5192

Office Phone: (503) 986-2700
FAX Phone: (503) 986-2844

TITLE

Investigation of Hazardous Spills and Travel Time and Dispersion Characteristics of the Willamette River basin

PROBLEM (Description of need)

The Rivers of the Willamette basin are significant assets in Oregon. While they provide most of the basin with drinking or irrigation water, they also provide multiple scenic and recreational opportunities. However, the Willamette River basin contains numerous rivers provide highway and rail corridors for transport of freight including oil and hazardous materials. Concern over a spill potential into streams from the state highways has prompted a need for more information related to mitigating the effects of a spill on the environment.

PROPOSED RESEARCH, DEVELOPMENT OR TECHNOLOGY TRANSFER ACTIVITY

Several studies of the past 40 years by the USGS have provided hydraulic information necessary to predict the time of travel and dispersion characteristics along the main stem reaches of several Willamette basin rivers. This information could be used to mitigate the effects of a river spill. To achieve these objectives, the existing hydraulic information from dye-tracer studies will be compiled to determine the velocity of a dye cloud as it passes several locations along any large Willamette basin river that did not previously have a dye tracer study. These data would be input to USGS StreamStats.

BENEFITS

The stream velocity and dispersion information obtained from this study will provide fundamental hydraulic data to better determine river travel times to agencies responsible for emergency responses during spills. Also these characteristics can provide a better knowledge of water quality at highway stream crossings.

CONTACT PERSON:

Name, address phone number and e-mail

Glen Hess, USGS
2130 SW 5th Ave
Portland OR 97201
503-251-3236
gwhess@usgs.gov

FOR RESEARCH UNIT USE ONLY

NCHRP
SPR
POOLED FUND
STATE
OTHER

PLEASE RENAME THE COMPLETED FORM WITH A SHORT NAME RELATING TO THE RESEARCH TOPIC.

Submittal of this form via E-mail is preferred. Send to: barnie.p.jones@odot.state.or.us