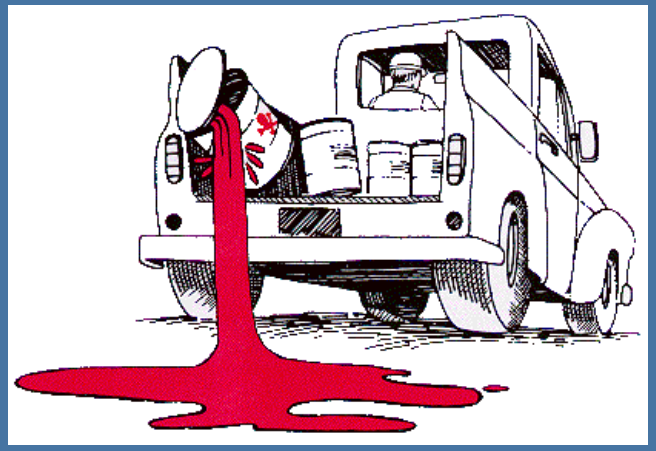
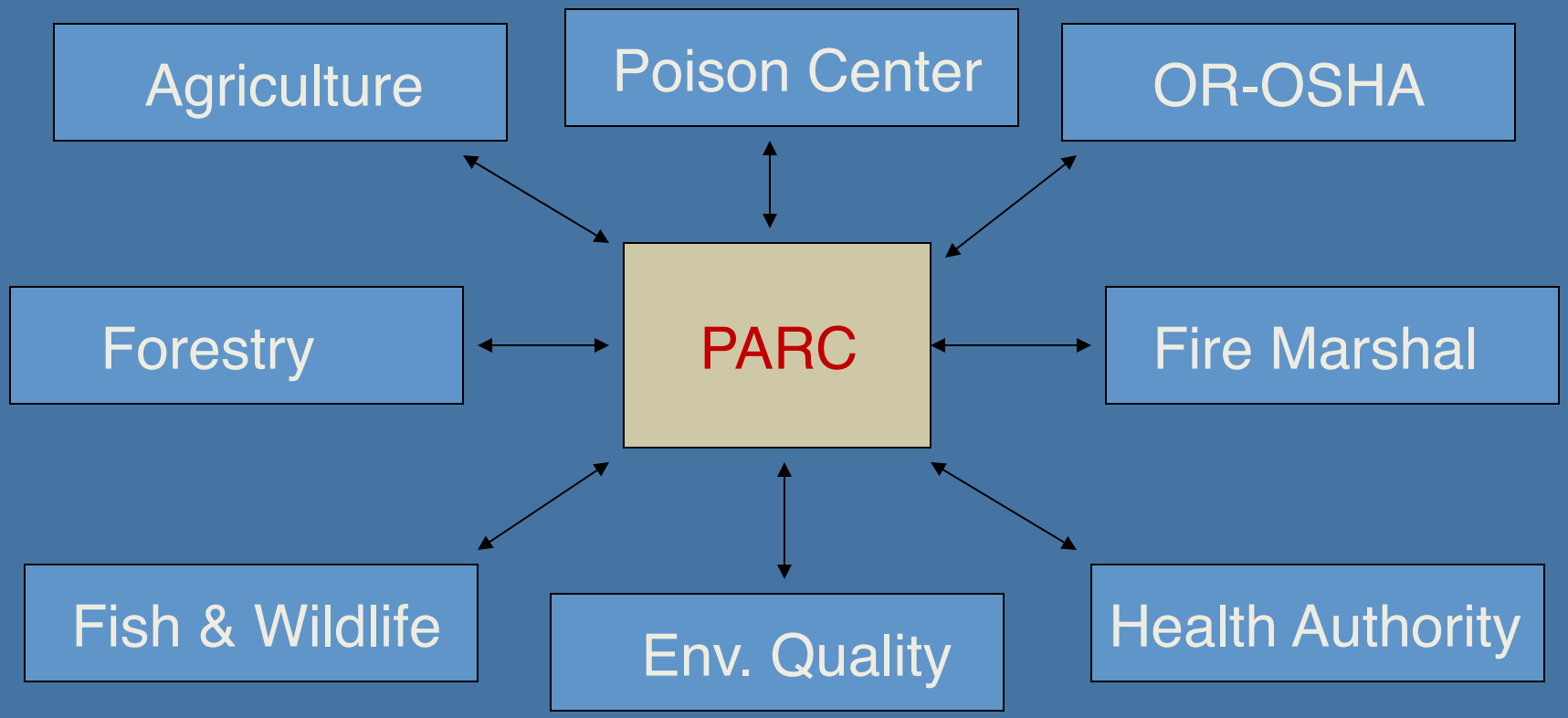


URBAN HORTICULTURE LEARNING FROM HISTORY: PESTICIDE SPILLS DURING TRANSPORTATION

Pesticide Spills during Transport: Why is it an Issue?

- Black eye on pesticide users
- Very expensive to clean up
- Loss of Product (more $$)
- It's time consuming (lots of "company" come to visit you)
- Loss of life/illness/loss of wildlife/fish/ environmental contamination
- **PREVENTION** is far **LESS TIME** consuming and much **LESS EXPENSIVE**!

Pesticide Analytical Response Center (PARC) Board Membership*



* With consultation from OIOHS and OSU's EMT Dept.

Pesticides tend to Travel

- From the manufacturers to the distributors & dealers
- From retailers to end users, and from storage and mixing locations to the application site.
- There are many opportunities for spills to occur.
- However proper preparation prior to transport can make the difference between an annoying inconvenience and a community –scale disaster.

The Three C’s

Vehicle Operator- First Line of Defense

- Reaction is critical
- Will need to work with first responders/EMS
- Should understand the nature and hazards of the pesticides being transported and safe handling procedures.
- Should be trained in basic emergency response procedures such as spill control and emergency notification procedures.

Vehicles Equipped with:

- Phone number in vehicle for 24-hour emergency assistance.
  - A special code that inspires immediate pick-up?
- PPE appropriate for the pesticides in transit.
- Spill kit- either commercial or self-assembled
- Operators MUST be trained to use all equipment properly.

Emergency Procedures

- If a spill or accident occurs:
  - Don appropriate PPE
  - Control the flow of material
  - Contain it to prevent further spread
  - Clean up: Know your limits & WHEN TO CALL FOR HELP!
    - Soil contamination: 2-3”
  - DO NOT leave the site attended
  - Keep vehicles and people from entering the area

What are the restrictions on pesticides during transportation?

Washington Regulations (Chemical store to facility and to the field)

- **WAC 16-228-1200**
- (3) Pesticide containers shall be secured during transit by use of side or end racks, bracing, chocks, tie downs, or other means to prevent their sliding, falling, tipping, rolling, or falling off the vehicle with normal vehicle acceleration, deceleration, or change in direction.

Oregon Regulations (Chemical Store to farm and to the field)

- None

Independence

110 gallons of Prowl H20
(Pendimethalin)

Prowl H2O

- Extensive road surface contamination due to tracking from vehicles prior to road traffic being stopped.
- Initial cleanup: absorbent to contain
- 200 tons of road shoulder soils excavated
- Subsequent sampling of road & shoulders, still contaminated.
- Portion of road surface replaced & more shoulder soils excavated.

Prowl H20

- The last soil samples taken from the surface of the drainage (1/20/09) indicated a detectable residual contamination on the west and east sides of the highway drainage.
- ❖ "The adjacent properties on the west side of the highway consist of rural commercial and residential use with individual domestic wells in the area. Balance of properties to the east are agriculture."

Arm Chair Quarterbacking

Maybe roll up the windows???


NEW SEASON
NURSERY

Some where on a road in the Willamette Valley….

Photo: Officer T. VanCleve

Sequence of events

Photo: Officer T. VanCleve

Sequence of Events

Photo: Officer T. VanCleve

It's unknown, so lets stand in it!

Prior Arrangement

Let’s take a look at the truck….

(no one SAW if fall off this truck…but against the back is Trust)

Photo: Officer T. VanCleve

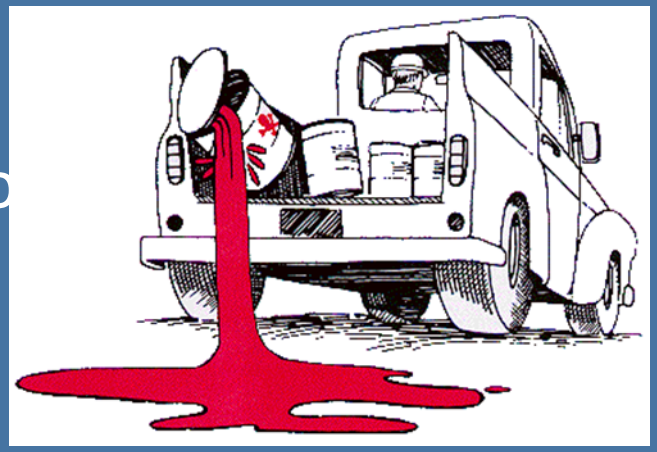
Contributing Factors: The Whys

Photo: Officer T. VanCleve

Downtown Medford

- Employees of an orchard had driven into town in a pickup. After they parked they noticed one of the Paraquat containers in the back had tipped over, the lid was not secured, and had drained out the back o the pickup and into water running in the curb.

Action taken: Shoulders shrugged. What could be done? They had no idea.

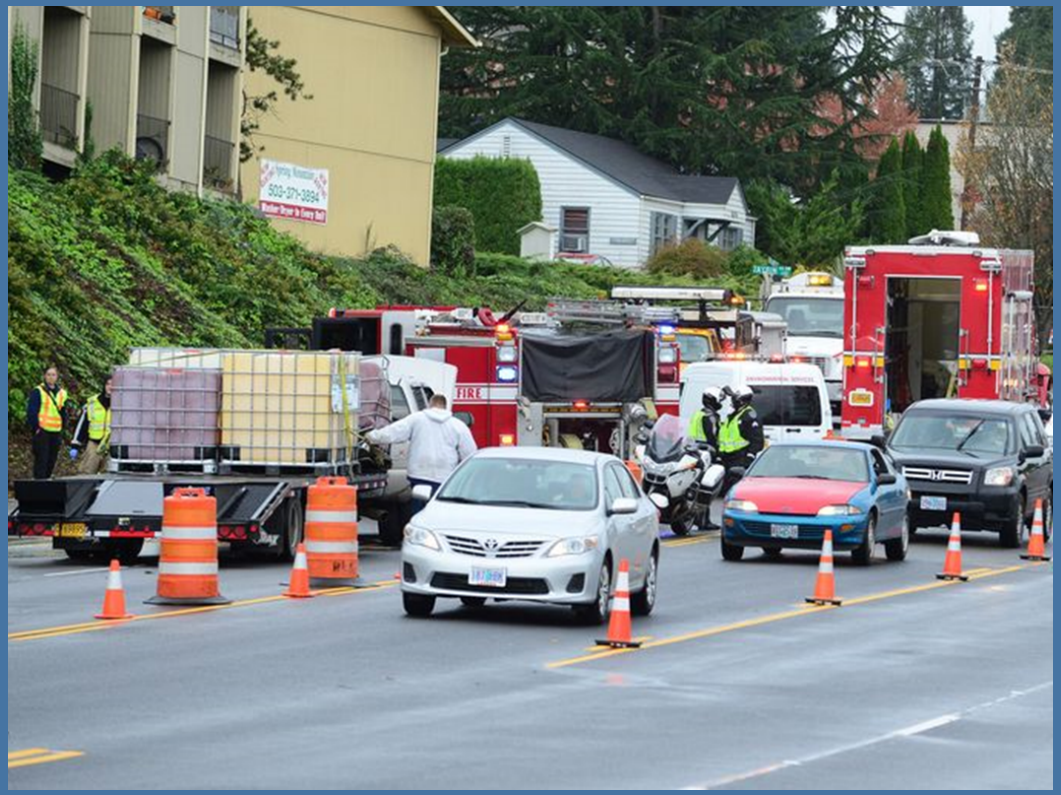


Phosdrin container off a vehicle on a rural road near a bus stop

- Casualties: a robin and a cat, traumatized child
- DEQ excavates site
- Oregon OSHA initiates inspection with the County with enforcement action taken.

When the driver hit the brakes hard, two of the 400 gallon totes shifted and fell off

Photo: Statesman Journal



The spill closes Wallace Road

between Edgewater & Glen Creek in West Salem

Affecting **All** Lanes of Traffic for **two** hours.

Spill closes Wallace Road between Edgewater & Glen Creek

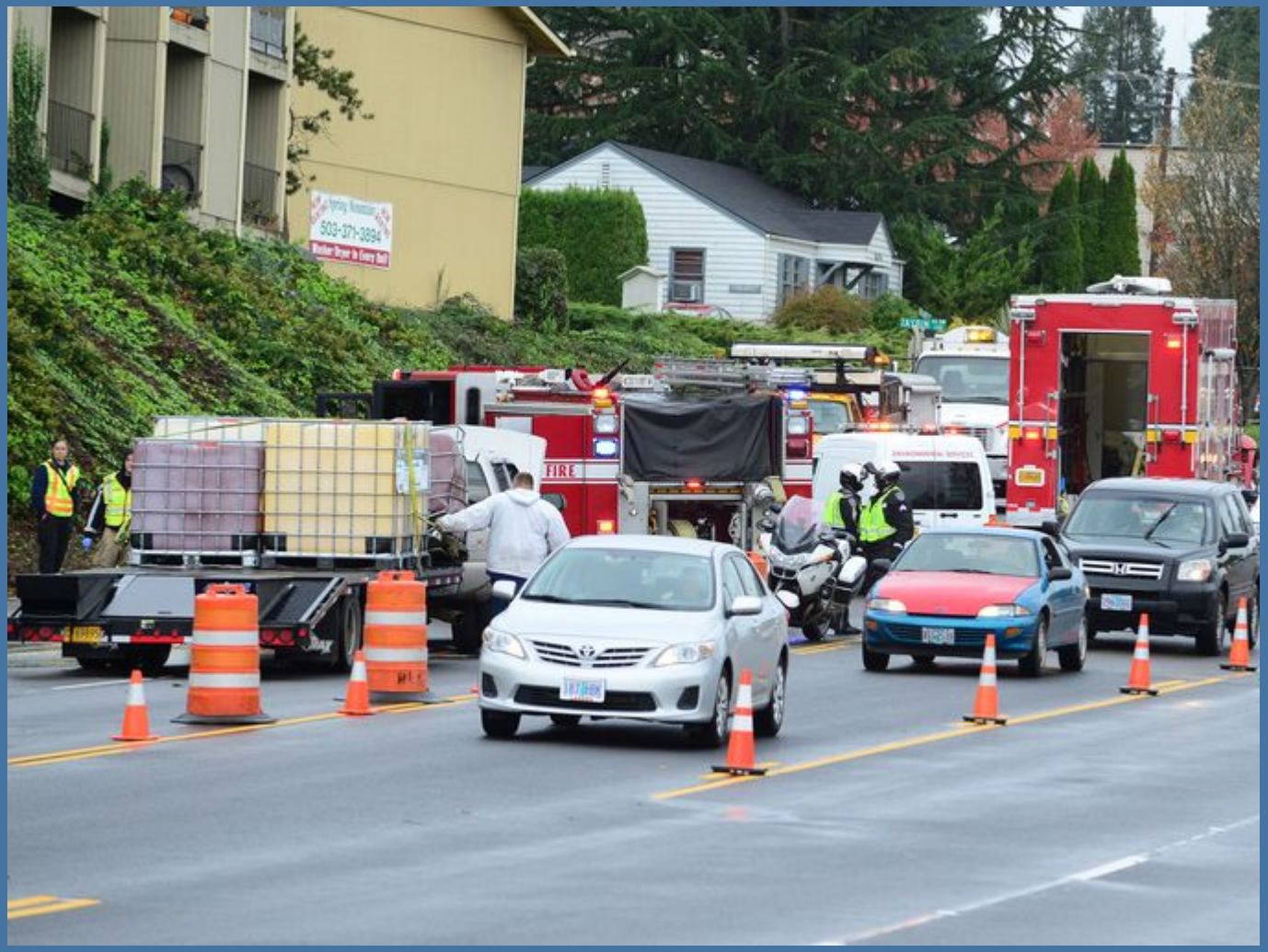


Photo: Statesman Journal

Fire Chief: It is Unknown Why the Containers fell off the truck.

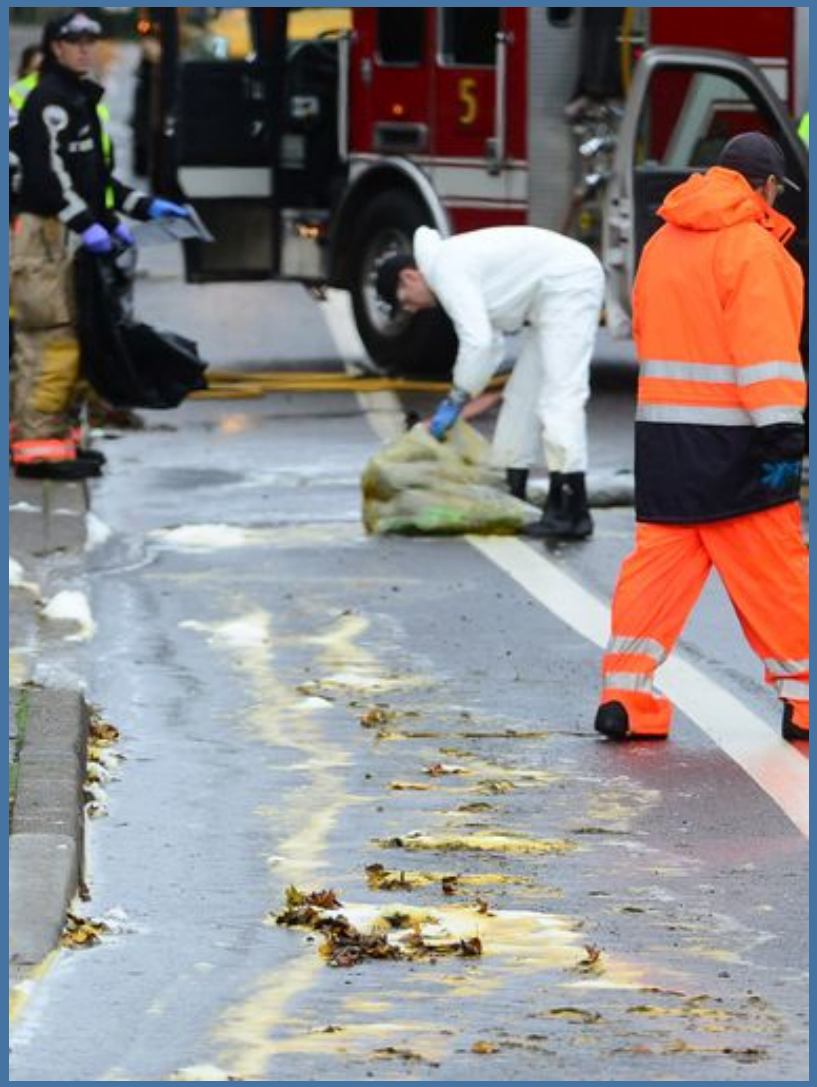


Photo: Statesman Journal

Outcome

- Driver cited for operating an unsafe vehicle.

15-Mile Creek Case Study

PARC Interagency Coordination

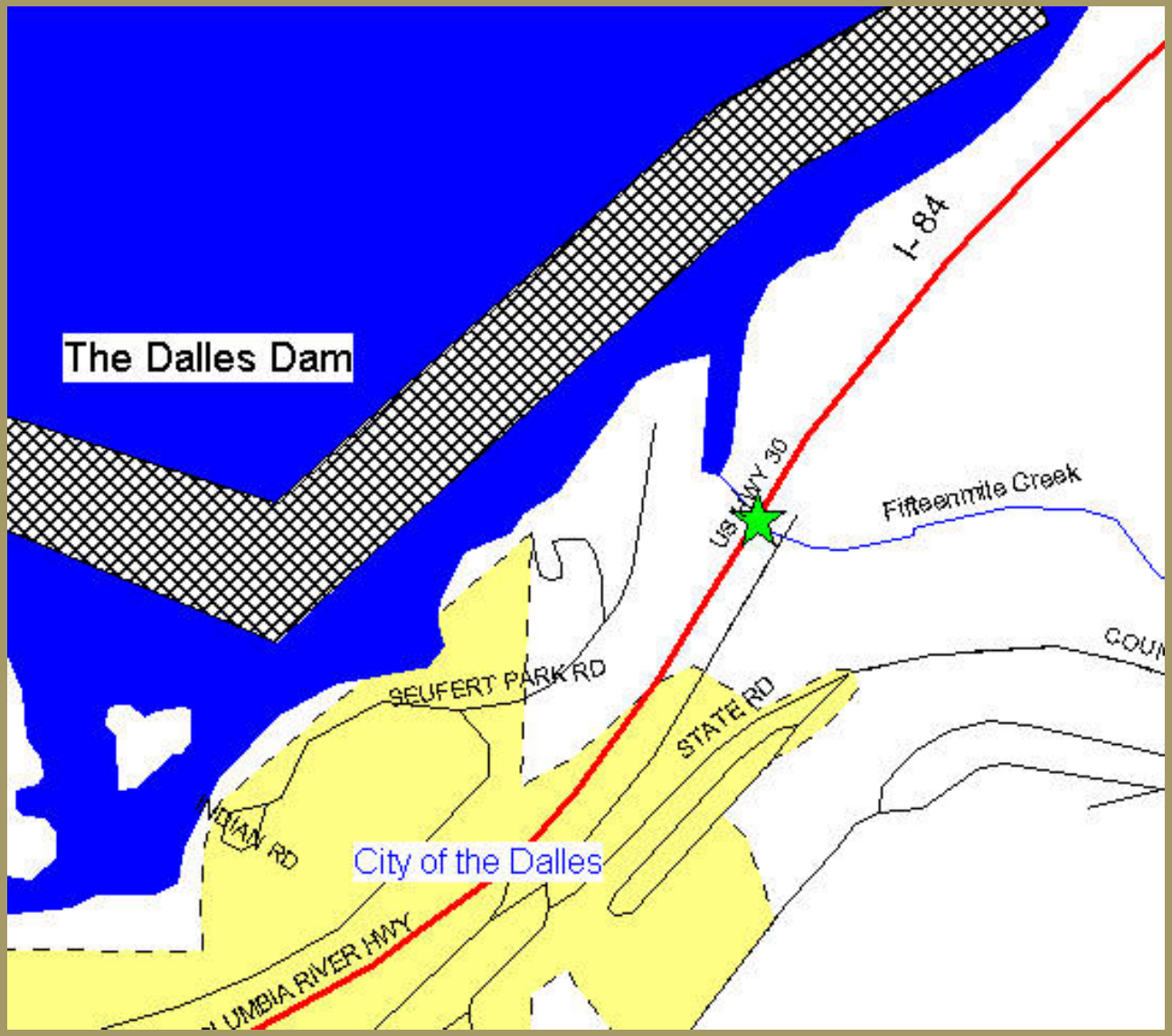
Oregon Department of Fish & Wildlife

Oregon Department of Environmental Quality

Oregon Office of the State Fire Marshal

Oregon Health Authority

The Scenario



2,600-gallon herbicide spill (Goal)

near The Dalles

Trailer fell into creek

Product highly toxic to fish and aquatic life

First Response

Local Agencies:

- Dalles Police Dept.
- Oregon State Police
- Mid-Columbia Fire & Rescue

Oregon Emergency Response System

Regional Hazardous Materials Team

Environmental Response

- **DEQ**: incident commander, media & community liaison
- **ODFW**: environmental damage assessment
- **OHA**: spill evaluation & exposure investigation.

Environmental & Public Health Impacts

- Dead steelhead, lamprey, non-game fish, and crayfish.
- No dead fish found in Columbia River.
- First Responder symptoms.

Interagency Coordination

In addition to the PARC Agencies….

- The Dalles City Police
- Oregon State Police
- Mid-Columbia Fire & Rescue
- Gresham\Multnomah HazMat Team
- Oregon Emergency Response System
- Environmental Protection Agency, Region X
- Bonneville Power Administration
- U.S. Army Corps of Engineers
- Wasco Sherman Public Health Department
- Confederated Tribes of the Warm Springs
- Washington state and local agencies

The COSTS--$$$

- Grower: Loss of product-varies
- Oregon State Fire Marshal:
  - A Haz Mat response : 8 HM Team Members + 2 Response Vehicles = $1,125 an hour
- DEQ:
  - Minimum response: $500
  - Average cost between: $500 and $5,000
  - Worst case: $5,000 and just keeps going

And Tie Downs, or a box costs HOW MUCH????

Costs for 15 Mile Creek

- Over 6,000 yd^3 of contaminated sediment removed.
- Millions of gallons of water treated.
- Continuing environmental monitoring.
- Estimated cost of **<u>$7 million.</u>**

Designed to be Transported?

Or Regulations May Occur:

Whoops, should have strapped it down BEFORE it fell off!

Take Home Message

- Extensive problem
- We need solutions
  - What works (& is easy= likely to be used)
  - Low cost
- We need to get the word out: SECURE YOUR LOAD!
  - Suppliers
  - Pesticide Use groups
  - ODA, DEQ, OR-OSHA, ODF

The CHALLENGE

- Find an EFFECTVE and EASY way to secure pesticide containers and we will champion the technique!
- The **BEST WAY** and the **CHEAPEST** way to deal with pesticide spills during transport is

TO PREVENT THEM FROM HAPPENING!!!!

SECURE YOUR LOAD!

Questions??

Contact:

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garnet.r.cooke@oregon.gov