



# The Mosier Train Derailment – How the City Responded

Photo: EcologyWA

The purpose of this article is to establish the approximate timeline of the June 3, 2016 derailment of 16 oil tanker cars in the city of Mosier. It describes in detail how the incident unfolded and the immediate impact on Mosier.

The following timeline of the city’s incident response was generously provided by Mosier City Administrator Kathleen Fitzpatrick. With only minimal editing, the timeline is presented here in its original form in order to provide the clearest perspective on the depth of challenges faced by the city and the resulting impacts. Also noteworthy is the fact that the timeline below begins on June 3, but continues into October.

## Mosier Train Derailment Incident Timeline

### Friday, June 3:

- 12:15 p.m.: Oil train derails in the city of Mosier. Sixteen cars of a 96-car train carrying Bakken crude oil.
- 47,000 gallons of oil escaped from four rail cars. During the derail, one of the cars tore off the lid of a sanitary sewer manhole and as a result, approximately 13,000 gallons of the oil flowed into the nearby wastewater treatment plant, where it was contained. The oil was later pumped out and taken to an off-site disposal facility. The wastewater treatment plant and associated piping was later restored to operating condition.

1. Total volume released: 47,000 gallons
2. Estimated volume recovered from the waste water treatment plant (WWTP): 13,000 gallons

3. Estimated volume in 2,960 tons of excavated soil: 18,000 gallons
  4. Estimated volume burned: 16,000 gallons
- Water from the Columbia River was pumped continuously for eight hours on the burning cars, to cool them. As the metal of the burning tanks cooled, the fire gradually subsided. Then 10 gallons of Class B foam with water extinguished the remaining small fire at the end of the cooling operation.
  - Mosier School evacuated.
  - Mosier Manor (76 homes) evacuated.
  - Five residences on Rock Creek Road evacuated.
  - State of WWTP unknown—city calling for portable toilets. Some brought in by local orchardists.
  - Mosier’s east water tank empty: city cannot provide enough water for emergency response.
  - Safety zone created and initially fire is left to burn.
  - School becomes an incident command post. 200 first responders and incident command team on site.
  - Interstate 84 closed.
  - Mosier residents put on boil water alert notice and no flush notice.
  - City residents put on stand-by for evacuation.

*(continued on page 20)*

# Disaster Resiliency

- Washington Department of Ecology (DOE) launched an overflight from Olympia to determine if oil is entering the Columbia River, and activated a crisis management team to support responders in the field and provide support to the response in Oregon if needed.
- 7:00 p.m.:
  - Incident command post established at Port of Hood River.
  - DOE team in the air is monitoring the smoke and run-off and confirm that no oil has entered the Columbia River.
  - Another team is in the water and performing air monitoring by boat. More air monitoring equipment is en route.
  - Preventative measures are being put into place and include placing a boom (an oil containment tool) in the river at Rock Creek. Other strategies are also identified and will be implemented for sensitive, natural, cultural and economic resources in the area.
  - Currently four rail cars are observed to be on fire and Interstate 84 in Wasco County remains closed.
- 10:00 p.m.:
  - There is still no oil released into the Columbia River, and air monitoring results are showing no dangerous levels outside of the half-mile exclusion zone.
  - Three rail cars continue to burn. The priority for the duration of the evening is to ensure rail cars are kept cooled down until fire can be completely extinguished. Responders are hopeful this will occur throughout the night.
  - Interstate 84 remains closed and the Oregon Department of Transportation reports a 20-mile backup.

## Saturday, June 4

- 2:00 a.m.: Fire extinguished.

Between 10-15 acres of wildland burned, including the Oregon Department of Transportation right of way, city property, Mosier Waterfront Park landscaped areas, and the Historic Columbia River Highway tree corridor.
- 2:00 p.m.: Unified Command Established.

Using guidelines from the Federal Emergency Management Agency's Northwest Area Contingency Plan, a unified command post was established at the site of the derailment and is governing this cross-border response. Unified command is part of the national Incident Command System (ICS) for multi-agency responses and includes federal and state coordination.



## Agencies involved:

- Environmental Protection Agency
- Oregon Office of Emergency Management
- Oregon Department of Environmental Quality
- Oregon Department of Transportation
- Washington Department of Ecology
- U.S. Coast Guard
- Yakama Nation
- Mosier Fire Department
- Other local agencies

## Status of Rail Cars

- A total of 16 cars were involved in the derailment on Union Pacific lines near Mosier. Four cars were involved in a fire and were breached to some extent.
- The fire from the burning cars was extinguished at approximately 2:00 a.m. on June 4, and the site continues to be cooled so that response crews can begin removing the oil from the train cars.

## Sheen on Columbia River

- An oil sheen was observed on the Columbia River near the derailment site early morning. It is contained within the oil booms that were deployed on June 3.
- Water sampling is underway to confirm if the oil sheen is the same oil from the derailed cars.

## Transportation

- Interstate 84 was re-opened early morning.
- Rail lines remain closed with no timeframe for re-opening.
- River traffic has not been impacted.
- After WWTP plant is vacuumed for high benzene levels, operator is allowed to enter and discovers that WWTP is no longer functioning and the sewer main has been destroyed upstream of the plant.



Photo: EcologyWA

## Wednesday, June 8:

- On-site transfer operations from crude oil tank cars to cargo tank trucks. Tank trucks then move as a convoy to Union Pacific rail facility in The Dalles.
- Union Pacific staff police controlling perimeter. Must call in advance to get a police car to take residents for access to homes on Rock Creek Rd.
- Active continuous air monitoring in the proximity of the transfer operations to detect any atmospheric hazards.
- Special Mosier City Council meeting held.

## Thursday, June 9:

- Rock Creek Road residents still under boil water notice and cannot use toilets, drains in kitchen or bathroom, no toilet use.
- The clean-up is still going 24/7 with lights and noise all night and all day.

- Rock Creek Road is still closed to through traffic as clean-up continues. Residents can request an escort.
- Contaminated soil removal begins. 2,960 tons of contaminated soil will eventually be removed.
- Historic Columbia River Highway state trail still closed at east end of the Mosier Tunnels to keep people out of the work zone.

## Friday, June 10:

- The last derailed train car removed to Portland.
- Contaminated soil removal continues with heavy equipment on the road.
- Community meeting scheduled at the Grange by Union Pacific at 6:30 p.m. to provide residents with information on response, recovery and claims.

## Saturday, June 11:

- Incident command disbands and moves out of the Mosier Community School.
- Soil removal continues with heavy equipment on the historic highway.
- Residents on Rock Creek Road allowed to use drains/toilets/showers.

## Sunday, June 12:

- U.S. Senator Ron Wyden meeting with Mosier leaders and first responders.
- Construction continues across the street from my house, and I am told that there will be all-night work on Tuesday night.
- Gate at west end of the Mosier Twin Tunnels opens.
- Clean-up and construction continues on site.

*(continued on page 22)*

- Residents still on boil water notice.
- Mosier Manor and Rock Creek Road residents still evacuated.
- Portable toilets brought in for crews and residents.

## Sunday, June 5

- Boil water notice still in place.
- Residents cannot use drains in bathrooms, kitchens, toilets.
- Residents still evacuated from Mosier Manor, Rock Creek Road.
- Rock Creek Road closed to traffic. Residents using Mosier Twin Tunnels state trail.
- Community meeting at the Mosier Grange for Mosier residents. Video of meeting posted.
- PM.: Evacuation order lifted for Mosier Manor.

## Monday, June 6:

- Sewer bypass system set up so that most residents (except for those at Rock Creek Rd) can use their toilets, sinks, showers, etc.
- 13 rail cars remain on site.
- Mosier exit 69 has been re-opened.

## Tuesday, June 7:

- Residences on Rock Creek Road next to the train derailment tested for benzene and other compounds by toxicology consultants CTEH.
- Road conditions: I accompanied the two CTEH staff. We waited 30 minutes to travel on Rock Creek Road, but we were unable to get through even on official business, so we parked up at the quarry and hiked down to the two houses.
- Crews work all night to recover a significant amount of oil from derailed train cars.

## MOSIER TRAIN DERAILMENT

### Monday, June 13:

- Boil water notice lifted for Rock Creek Road residents at 2:00 p.m.

### Tuesday, June 14:

- Contaminated soil project continues as crews work underneath Highway 30 to determine if oil traveled in that direction.
- One extraction well drilled today and one more to go.
- WWTP work continues on a 24/7 basis.
- Trucks and equipment from five different contractors and flaggers at site. Flaggers hold back traffic for up to 20 minutes at a time.
- Rock Creek Park is reopened. The booms are still clogging the beach and equipment will be moving in and out of the park for months for the ground water contamination mitigation.

### June 15:

- Crestline Construction begins work to replace 600 feet of influent sewer pipe along Rock Creek Rd. Road closed intermittently.

### June 17:

- Sewer pipeline work finished.
- Repaving Rock Creek Rd. work begins. 575 feet of the street will be replaced.

### June 18:

- Last sewer plug removed and normal gravity flow to WWTP restored. Treated sewage filtered through a charcoal filter. The remaining few loads of wastewater in the Baker Tanks are hauled to Hood River for disposal.

### June 21:

- Still an oil sheen in Clarifier #1 and MH #1.

### June 22:

- Repaving of Rock Creek Road completed.

### June 23:

- GAC filter removed and normal WWTP operations begin.

### June 27:

- Engineering firm CH2M continues to gravel and level along Rock Creek Road.

### July 8:

- The DEQ releases a report that monitoring well #4 has tested for high levels of contaminants.
- CH2M has proposed installing an air sparging system to address the contamination found near MW-4. This involves installing pipes through which air is injected into the groundwater, to drive off contaminants.

### July 20:

- WWTP repairs and replacement parts still ongoing.

### July 28:

- Two sparge wells and two monitoring wells have been installed in Rock Creek Park to address the groundwater contamination. There will soon be a total of seven sparge wells and four new monitoring wells.
- Drilling continues Friday and Saturday.
- The air compressor will be set up and running at the WWTP the week of August 8. It will run for a few months or maybe more.

### July 29:

- Mosier Restoration Plan submitted by the DEQ to Union Pacific Railroad for review.

### August 4,5,8,9:

- Trenching work scheduled for Rock Creek Park.
- Drilling work under the tracks for the piping to the air compressor for the biosparging operations.

### Week of August 12:

- 30 more mature trees scheduled to be removed from burn area.
- Biosparging operations continue.
- Groundwater research and modeling begins to confirm the assumption that the city's wells will not be impacted by ground water contamination.

### October 2016:

- Mosier city manager, project manager from CH2M and the DEQ continue to work on ground water remediation, a punch list of items for the WWTP, and the Restoration Plan. The plan will be implemented over the next two years with active partnership of city, Union Pacific, CH2M, DEQ and ODOT. ■