

## **Resources at Risk for IT Baltimore, at Cherry Point, Puget Sound, WA**

### **I. Spill Source Information**

This report was prepared at 10:00 EDT on 29 August 2001. Information in the report is based on the report of a spill of several hundred barrels of light refined products from the vessel at the Cherry Point facility on 28 August. By evening, sheens had spread 2 nm to the north and 1 nm to the south.

### **II. Geographic Region Covered**

This resources at risk covers the nearshore area north to Birch Bay and south to Lummi Bay. This area does not necessarily correspond to actual or potential oil locations. Consult other Hotline reports for oil location information.

### **III. Expected Behavior of the Spilled Material**

The spill is reported to be a mixture of gasoline, diesel, and jet fuel No. 5. Light refined products quickly spread into thin sheens that can cover large areas. Small waves and chop will readily disperse it into the water column, thus potentially impacting fish and shellfish in shallow areas. Seldom does enough oil strand on shorelines to require cleanup.

### **IV. Shoreline Resources at Risk**

The shorelines in the area of likely impact are predominantly mixed sand and gravel beaches. The only intertidal marshes are in the northeast corner of Lummi Bay. Both Birch Bay and Lummi Bay have extensive sandy tidal flats, and Lummi Bay has extensive eelgrass beds as well as sheltered muddy tidal flats on either side of the large diked oyster farm that covers about one-third of the bay. Light refined products will leave an oily band on the sand and gravel, and heavy accumulations will readily penetrate into the porous sediments. However, light accumulations on beaches are expected to be naturally removed by tidal flushing, evaporation, and microbial degradation within a short time. Shoreline cleanup is usually not required, unless human health or sensitive resources are at risk. The sheens will spread across the tidal flats but be lifted by each rising tide with no residue expected. Along marshes, significant impacts are likely only if the diesel pools against the shoreline and penetrates into the marsh sediments. The extensive dikes around the oyster farm in Lummi Bay pose a special problem if they become oiled because, during natural weathering, they could release sheens that could be a longer-term source of oil exposure to the commercially grown oysters and natural populations of shellfish in the bay.

## **V. Biological Resources at Risk**

### **Birds**

Birds are at risk of impact from this spill, because Lummi Bay is an important waterfowl and shorebird concentration area and these birds do not always avoid light sheens. Species present at this time include: Bald eagles (federal listed species) with ~10 nests between Birch and Lummi Bay, migratory waterfowl (e.g., black brant, harlequin duck, coot, mallard, pintail), grebes, cormorant, and summer nesting common murre and marbled murrelet (federal listed species). It is at the end of the nesting season and the beginning of the migration period, so the actual numbers present in specific areas will have to be determined by surveys. These bird species are at risk of oiling because they spend the most time on the water surface and/or dive for food. Lummi Bay is important for shorebirds, but they are at lesser risk of direct oiling. Birds will attempt to preen any oil on their feathers, and ingestion of even a small amount of these light refined products can cause internal injuries.

### **Fish and Shellfish**

There are abundant fish and shellfish in the area, and Lummi Bay has a large oyster culture facility. Surf smelt spawn in the Birch Bay and Cherry Point area from June through September, so adults, eggs, and larvae will be present in the shallow, nearshore waters where exposure will be highest. Lummi Bay's eelgrass beds are important juvenile dungeness crab habitat, and the flats are important native Pacific oyster habitat. Crabs, particularly the early life stages, are very sensitive to the water-soluble, toxic fractions that can be high in light, refined oils. If sheens enter and become trapped in the shallow water in Lummi Bay, there may be impacts to the juvenile species of crabs, oysters, and other biota associated with the seagrass beds, because they are less able to escape.

The coho salmon runs on the Lummi River and Terrell Creek (in Birch Bay) are candidates for listing and fish should be present. The chum salmon runs on these rivers are not candidates. Cutthroat trout are present in Terrell Creek.

## **VI. Human-Use Resources**

Lummi Bay has a large commercial oyster farming facility, with water intakes in Lummi Bay. There will be special concerns about the potential for tainting and impacts to the marketability of the product. The Lummi Indian Reservation borders most of Lummi Bay.