INLAND STRANDED OIL HABITAT FACT SHEET FOR RESPONSE:

Floodplain Forest

Indicator Species

Cottonwood
Populus spp.

Silver Maple
Acer spp.

Green Ash
Ulmus spp.

Noxious Species

Poison Ivy
Toxicodendron spp.

I. Habitat Description

Floodplain Forest (FF) represents areas on islands, near the shoreline, or around lakes, ponds, and backwaters that are >10% vegetated with seasonally flooded forests. These forests are predominantly silver maple (*Acer*), but also include elm (*Ulmus*), cottonwood (*Populus*), black willow (*Salix*), and river birch (*Betula*). Sedges (Carex), grasses (*Cinna*, *Elymus*, Leersia), and *Lianas* such as Virginia creeper, wild grape, and poison ivy are common understory plants. This general class is typically found growing at or near the water table where it becomes inundated from spring flooding and high-water events.

Inundated floodplain forest in Wisconsin. Image: Gary Shackleford

High water mark on a silver maple. Image: Larry Wade

II. Sensitivity to Oil Spills

Floodplain forest habitats are highly sensitive to oil spills. During spring and high water events oil could be deposited in areas that are typically dry for much of the year. This habitat is valuable to several songbird and colonial nesting water bird species, beaver, deer, and a variety of micro and macro invertebrates that constitute the base of the food supply. Significant loss of this habitat would greatly affect the populations of these animals and consequently, the local ecology.

References/Additional Information:

General Classification Handbook for Floodplain Vegetation in Large River Systems (http://pubs.usgs.gov/tm/2005/tm2A1/)
Inland Oil Spills: Options for Minimizing Environmental Impacts for Freshwater Spill Response (http://www.michigan.gov/documents/deq/deq-wb-wws-FreshwaterResponse_NOAA102706_265069_7.pdf)
NatureServe (natureserve.org)
Natural Wetland Inventory (http://www.fws.gov/wetlands/)
The U.S. National Vegetation Classification (http://usnvc.org/)
Wetland Plants and Plant Communities of MN & WI, 3rd Edition (http://www.bwsr.state.mn.us/wetlands/delineation/WPPC_MN_WI/index.html)

Information compiled by UMRBA staff from NOAA, USFWS, and U.S. EPA sources, March 2016.

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III. Sensitivity to Response Methods

The following text describes potential adverse impacts to this habitat resulting from various oil spill response methods and provides recommendations to reduce impact when these methods are implemented. This is not intended to preclude the use of any particular methods, but rather to aid responders in balancing the need to remove oil with the possible adverse effects of removal. More detail about the response methods themselves can be found in the Inland Response Tactics Manual.

Least Adverse Habitat Impacts

Natural Attenuation

- Least impact for small to moderate spills and lighter oils that coat or stain vegetation; avoids damage often associated with cleanup activities
- Some cleanup may be warranted where large numbers of wildlife are likely to become oiled during wetland use
- Seeding or planting may be used to assist in oil degradation; work with trustees on a seed mixture
- Use loose materials as a barrier (e.g. local soils, baggase) to contain the spill

Sorbents/Solidifiers

- Useful for recovering sheens.
- Physical removal rates of lighter oil will be fastest, so more oil will be mobilized for recovery by sorbents
- Forcing contact between pads and the oil drives the oil into the soil
- Appropriate approval required for chemical additives
- Overuse generates excessive waste
- Snare and pom-poms are used along shorelines or in light sheen situations
- Application of loose particulates may impede removal of oil mixed with, and adhered to, vegetation, litter, and debris
- Most effective on lighter oils, which have low viscosity and allow the product to mix into the oil or penetrate netting or fabric encasing the loose particulates

Flooding

- Appropriate for gentle banks where persistent oil has pooled, assuming that the released oil can be directed towards recovery devices or sorbents
- Can be used selectively to remove localized heavy oiling
- Local topography may limit the ability to control where the water and released oil flow and effectiveness of recovery
- This tactic can be used with flooding to prevent re-deposition of oil
- Effectiveness increases with lighter oils because less residual oil is left in the environment

Low-Pressure, Ambient-Water Flushing

- If water pressures are too high, the substrate and vegetation may be disturbed
- Effectiveness increases with lighter oils because less residual oil is left in the environment

Some Adverse Habitat Impact

Vacuum

- Most effective where access is good and substrate can support vehicles
- Only useful when oil is pooled

Debris/Vegetation Removal

- Degree of oiling that warrants debris removal and disposal depends on use by humans and sensitive resources
- May be required in areas used by wildlife. Grass plants are damaged by oil at the root structure, removal of stained or oiled vegetation is to protect users of the habitat
- Most appropriate for oils that form a thick, sticky coating on the vegetation, such as medium and heavy oils
- Minimal concerns where substrate is firm

Hand Tool Oil Removal/Cleaning

- Used where persistent oil occurs in heavy amounts and where sensitive resources are likely to be oiled
- Mixing of oil and trampling of vegetation may be reduced by controlling access routes, using boards placed on surface, or conducting operations from boats
- This includes removal of surface soil contamination not gross digging

Most Adverse Habitat Impact

Light Equipment Oil Removal

- Mixing of oil and trampling of vegetation may be reduced by controlling access routes or using boards placed on surface
- Needed to remove heavy debris and dead trees