Appendix 1

Advance planning for FEMA emergency actions: a list of measures to avoid and minimize effects on listed species in New England

These measures should be implemented only if they do not affect safety or hinder activities to secure human life and property. Any suggested measures for avoidance and minimization of impacts to listed species during the emergency response should be taken only when doing so does not delay or impede the emergency response.

For all species

1. Use existing access routes and previously disturbed areas to move and stage equipment. Avoid or minimize ground disturbance in undisturbed/undeveloped habitat.
2. Document the area affected by emergency response activities and, to the extent possible, effects on listed species and their habitat. This will be important information to inform post-response consultation, if it is necessary.

MAMMALS

Indiana bat and northern long-eared bat

1. Limit tree clearing to the minimum amount necessary, especially between April 15 and October 31.
2. Contact the State wildlife agencies to determine if any known hibernacula or roost trees are present in the action area.
3. Avoid or minimize clearing trees within 150 feet of roost trees and within ¼ mile of hibernacula.
4. For tree work between April 15 and October 31, cut trees in the evening after bats that may be present have exited the tree.

Canada lynx

1. Instruct vehicle operators to drive carefully, especially when travelling at dawn and dusk in remote areas in northern New Hampshire, and northern and western Maine, to minimize risk of lynx-vehicle collisions.

BIRDS

Piping plover, red knot, and roseate tern

1. Avoid or minimize work in coastal habitats including sandy or gravelly beaches, intertidal zones, and mudflats between April 1 and September 30.

2. If work must occur during this time window, minimize vehicles and machinery in these habitats and maintain speeds of 5 miles per hour or lower. Employ a qualified individual(s) to monitor bird behavior and impacts, identify nesting areas, and direct work vehicles and crews around nests/broods.
3. Avoid or minimize sand fencing in coastal habitats between April 1 and September 30.

TURTLES

Bog turtle and northern red-bellied cooter (Plymouth redbelly turtle)

1. Avoid or minimize work in bogs, fens, wetlands, ponds, lakes, streams, and riverine habitat.
2. Avoid or minimize ground disturbance within 400 meters of these aquatic habitats from late March to late October.
3. Implement measures to prevent discharge of sediment or other pollutants to aquatic habitat.

Sea turtles

1. Avoid or minimize ground disturbance in sandy coastal habitats of Cape Cod and southern Massachusetts islands.

FISH

Atlantic salmon and other migratory fish

1. Replace culverts, bridges, and other water conveyances with Stream Smart (maineaudubon.org/projects/stream-smart/) or Stream Simulation (https://www.fws.gov/project/usfws-programmatic-stream-crossing-consultation) alternatives. In Atlantic salmon habitat in Maine, replacement crossings should be a least 1.2 times the bankfull width of the stream.
2. Use standard erosion and sediment control measures for work in or adjacent to waterways to avoid or minimize sediment reaching streams, ponds, and lakes.
3. Conduct instream work between July 15 and September 30 during low stream flows to minimize impacts from instream sedimentation.
4. Conduct instream work in the dry (e.g., inside a dewatered cofferdam) to minimize impacts from instream sedimentation.
5. If a project with instream work is located within an area where juvenile Atlantic salmon are likely present, and work will occur when stream temperatures are between 6 and 22 degrees Celsius (43 and 72 degrees Fahrenheit), contact the Maine Field Office to discuss the possibility of fish evacuation before instream work begins.

INVERTEBRATES

Dwarf wedgemussel

1. Avoid or minimize work in riverine habitat in the Connecticut River watershed.

2. Implement measures to prevent discharge of sediment or other pollutants to aquatic habitat.
3. Employ a qualified individual to survey for, and relocate, dwarf wedgemussels that may be adversely affected.

Karner blue butterfly

1. Use existing access routes and previously disturbed areas to move and stage equipment. Avoid or minimize ground disturbance in undisturbed/undeveloped habitat.
2. Employ a qualified individual(s) to survey for wild blue lupine (*Lupinus perennis*), the host plant for the butterfly, prior to ground disturbance, mark occurrences of the species, and direct work vehicles and crews around occurrences.

Northeastern beach tiger beetle

1. Avoid or minimize ground disturbance in sandy coastal habitats of Cape Cod and southern Massachusetts islands.

Puritan tiger beetle

1. Avoid or minimize ground disturbance in sand bars, sandy beaches, cutbanks, and mud flats in the Connecticut River, including tidally-influenced areas.

American burying beetle

1. On Block Island, Rhode Island, and Nantucket, Massachusetts, use existing access routes and previously disturbed areas to move and stage equipment. Avoid or minimize ground disturbance in unforested, undeveloped, upland habitat.

Rusty-patched bumblebee

1. Avoid or minimize disturbance in vegetated areas in High Potential Zones, Low Potential Zones, and Uncertainty Zones depicted on this map: https://fws.maps.arcgis.com/apps/mapviewer/index.html?webmap=2716d871f88042a2a56b8001a1f1acae.

PLANTS

Eastern prairie fringed orchid

1. Avoid or minimize ground disturbance to Little Crystal Fen, Aroostook County, Maine. If disturbance cannot be avoided, coordinate with The Nature Conservancy in Maine (eben.sypitkowski@tnc.org) and the Maine Ecological Services Field Office (mael_glon@fws.gov).

Jesup's milk vetch

1. Avoid or minimize ground disturbance to rocky ledges along the Connecticut River in Claremont, NH; Plainfield, NH; Cornish NH; and N. Hartland, VT. If disturbance cannot be avoided, coordinate with the New England Field Office

(margaret_harrington@fws.gov) and the Native Plant Trust (bbrumback@nativeplanttrust.org).

Furbish Lousewort

1. Avoid or minimize disturbance to the banks of a 225-kilometer (km) section of the St. John River extending from the confluence of the St. John and Big Black Rivers in northern Maine to the confluence with the Aroostook River, approximately 10 km North of Perth-Andover, New Brunswick. If disturbance cannot be avoided, coordinate with biologists from the Maine Natural Areas Program (don.s.cameron@maine.gov) and the Maine Ecological Services Field Office (mael_glon@fws.gov).

Small whorled pogonia

1. For projects outside of Maine, employ a qualified individual(s) to survey for this species prior to ground disturbance, mark occurrences of the species, and direct work vehicles and crews around occurrences, when possible. For projects in Maine, coordinate with biologists from Maine Natural Areas Program (don.s.cameron@maine.gov) and Maine Ecological Services Field Office (mael_glon@fws.gov) to obtain survey data and guidance.

American chaffseed, sandplain gerardia, seabeach amaranth, and northeastern bulrush

1. Employ a qualified individual(s) to survey for these species prior to ground disturbance, mark occurrences of the species, and direct work vehicles and crews around occurrences.