Incident Command System
Environmental Unit Leader (EUL)

Overview

User

The user of this job aid will be anyone who is assigned as Environmental Unit Leader within the Incident Command System. Personnel assigned to this position should have response experience and a strong understanding of how environmental issues can affect an incident. This position requires scientific or engineering expertise in environmental affairs. The user should also have an understanding of Planning Section and Situation Unit responsibilities.

When to Use

This job aid should be used to assist the Environmental Unit Leader whenever an incident has occurred that requires the Incident Command System Organization to respond.

Major Accomplishments

Below is a list of the major accomplishments:

- Assess spill hazards.
- Predict movement and dispersion of products through:
- On-water spill trajectory modeling and mapping.
- Shoreline assessment and mapping.
- Provide expertise on living marine resources and their habitats and information on associated clean up and mitigation methods.
- Develop strategies to minimize environmental impact of the spill that is based on consensus of stakeholders.
- Develop environmental monitoring strategies that will help decision-makers understand the impact of response countermeasures that have been implemented.
- Provide information on meteorological, hydrological, ice, and oceanographic conditions.
- Assemble and coordinate environmental stakeholders to reach consensus on protection priorities and cleanup strategies and endpoints.
- Assemble and coordinate trustees and stakeholders for Natural Resource Damage Assessment.
- Provide timely and complete status reports to Planning Section Chief
- Prepare environmental data for Situation Unit
- Ensure succession for 24/7 coverage or as needed
- Demobilize Section/Unit.

References

National Contingency Plan (40CFR part 300.175)

Overview (cont'd)

Materials

Ensure that these materials are available to the Environmental Unit Leader during an incident, if not already provided in a unit or section specific support kit. Submit order request for supplies to Supply Unit Leader via the Planning Section Chief.

- ☐ Field Operations Guide
- ☐ Local Charts and Maps
- ☐ Area Contingency Plan (ACP)
- ☐ ESI Maps
- ☐ Mylar sheets
- ☐ Flip charts
- ☐ Clipboards
- ☐ Camera
- ☐ Photo Scale
- ☐ Shovel
- ☐ White out
- ☐ Notebooks (some waterproof)
- ☐ Paper, sticky notes
- ☐ Masking tape
- ☐ Pencils (lead and grease)
- ☐ Scissors
- ☐ Stapler
- ☐ Push pins
- ☐ 3 or 6 part folders
- ☐ 2 hole punch

General Information

Use clear text and ICS terminology (no codes) in all radio transmissions.

All radio communications to Incident Communications Center will be addressed "(Incident Name) Communications".

Initial Actions

General Tasks

Below are the initial actions to be taken by the Environmental Unit Leader (EUL).

STEP	ACTION	✓
1.	Receive assignment	
2.	Upon arrival at the incident, check-in at designated check-in locations. Check-in locations may be found at: ▪ Incident Command Post ▪ Base.	
3.	Obtain an initial brief from Planning Section Chief: ▪ Size and Complexity of incident ▪ Expectations of the IC ▪ Incident objectives ▪ Agencies/Organizations/stakeholders involved ▪ Incident activities/situation/current status ▪ Special concerns	
4.	Review ICS 201 or IAP.	
5.	Begin/maintain Unit Activity Log (ICS 214).	
6.	Establish work location within the ICP. ▪ Ensure adequate space for possible expansion. ▪ Locate Unit in the Planning Section adjacent to the Situation Unit. ▪ Assess and establish communications capabilities (e.g. phone, fax, modem).	
7.	Acquire work materials listed on page 2.	
8.	Calculate staffing requirements for Environmental Unit and determine technical specialists needed. *Example: Trajectory Analysis Specialist, Shoreline Cleanup Specialist, Resources At Risk Specialist*	
9.	Submit resource order form/request for personnel and/or equipment required to PSC.	
10.	Brief Environmental Unit Staff on responsibilities as noted in FOG (Chapter 9 – Section 11).	
11.	Complete forms and reports required of the assigned position and send through PSC to Documentation Unit.	

Responsibilities - Hazard Assessment

Safety Awareness

The Environmental Unit Leader should assist the Unit Safety Officer and support the development of the Site Safety Plan**.** The normal focus of the Environmental Unit Leader is to continually assess the risks to the environment and to natural/cultural and historic resources. The assessment of risks, however, to response personnel and to the public from spilled material remains a priority concern of all of the members of the response organization.

STEP	ACTION	✓
1.	Acquire information on spilled product and environmental conditions that will affect the response. *Example: Product information, Weather Forecast, Tides/Currents, Trajectories, Bathymetric Data, Ice Conditions,*	
2	Utilizing expertise from technical specialists, stakeholders, and product experts participate in the site safety and monitoring programs to assure response personnel safety and environmental protection.	
3.	Participate in the development and implementation of strategies to: ▪ Protect response personnel and the public ▪ Protect sensitive resources ▪ Enhance recovery of spilled material	
4.	▪ Evaluate site safety plan to ensure adequate protection of the environment. • Diking and containment for decontamination area. • Collection mechanism for wash water.	

Responsibilities - Strategic Assessment

Developing Strategies

The Environmental Unit Leader is responsible for assessing the environmental conditions or impacts related to an incident and develop strategies to minimize those impacts.

STEP	ACTION	✓
1.	Acquire information on environmental conditions that will affect the response. ▪ Instruct field observers on type of data needed. Example: Weather Forecast, Tides/Currents, Trajectories, Bathymetric Data, Ice Conditions,	
2	Utilizing expertise from technical specialists, stakeholders, and local experts, develop incident-specific analysis of environmental conditions.	
3.	Determine a primary strategies to: ▪ Protect sensitive resources (e.g. wildlife, sensitive habitats, etc). ▪ Enhance recovery of spilled material through: ▪ Maximize efficiency of mechanical equipment by providing operators with information on trajectory of spilled product ▪ Identify appropriate spill response countermeasures: ▪ Dispersant use and monitoring options ▪ In-situ burn use and monitoring options ▪ Other Applied Technologies. ▪ Minimize waste generated.	
4.	▪ Evaluated impact of various strategies on wildlife, ecosystem and historical/cultural areas.	
5.	▪ Evaluate all strategies from the point of view of evidence preservation.	
6.	▪ Develop alternative response strategies, including timing and implementation. ▪ Advise Command, through Planning Section Chief, of impacts from all alternative strategies.	

7.	▪ Finalize recommendations for response options	
8.	▪ Develop assessment strategy with Trustees for Natural Resource Damage Assessment	
9.	▪ Develop disposal plan. ▪ Evaluate recovery/reuse options ▪ Work with Responsible Party(ies) to determine best disposal or reuse option. Include transport to RP sites for storage pending disposition.	
10.	▪ Provide input for Planning and Tactics Meetings	
References: Mechanical Protection Guidelines Options for Minimizing Environmental Impacts of Freshwater Spill Response ("Freshwater Manual), Environmental Considerations for Oil Spill Response ("Marine Manual") Characteristic Coastal Habitats, A Guide for Spill Response Planning RRT III-IV Selection Guide for Oil Spill Applied Technologies, Volume 1 – Decision Making		

Responsibilities - Modeling

Analyze Available Models and Databases

The EUL must ensure that applicable models and databases are utilized and analyzed for the specific conditions of the incident. Analysis of results and use of modeled data for decision making should include input from safety, fire, police, LEPC and other key stakeholders. The EUL must understand the limitations and assumptions associated with models and be able to communicate those limitations to stakeholders.

STEP	ACTION	✓
1.	Determine what models are appropriate for use in this incident (e.g. trajectory, dispersion model, pollutant weathering, etc. Use information available from NOAA, EPA and other sources.)	
2.	Request model analysis based on incident type (may include requesting Technical Specialists)	
3.	Ensure environmental data necessary for analysis has been collected (e.g. on-scene winds and weather, pollutant type, etc.)	

Responsibilities – Spill Trajectory Modeling and Mapping

Open Water Surveillance and Mapping

Utilize all available methods to observe the incident and the response in order to develop response strategies and determine if they are valid and working.

STEP	ACTION	✓
1.	Determine what types of surveillance/observations are appropriate for the incident (e.g. helo/fixed wing overflights, remote sensing, SCUBA, etc.)	
2.	Based on Step 1 determine equipment and personnel (including technical specialists) needs to accomplish appropriate surveillance	
3.	Prepare methods to present observation information (e.g. overflight maps, imagery photos, situation maps, etc.)	
4.	Working with the Situation Unit, ensure trained staff is also available to collect information from spill observers, develop in a graphic a characterization of the location of the spilled material, and distribute this product.	
5.	Establish a system of debriefing and capturing the observations of others involved in overflight operations.	
References: NOAA Open Water Oil Identification Job Aid, NOAA standards for oil observations graphic		

Inland Spill Surveillance and Mapping

Utilize all available methods to observe the incident and the response in order to develop response strategies and determine if they are valid and working.

STEP	ACTION	✓
1.	Determine what types of surveillance/observations are appropriate for the incident (e.g. helo/fixed wing overflights, remote sensing, ground observation, etc.)	
2.	Based on Step 1 determine equipment and personnel (including technical specialists) needs to accomplish appropriate surveillance	
3.	Prepare methods to present observation information (e.g. overflight maps, imagery photos, situation maps, etc.)	

4.	Working with the Situation Unit, ensure trained staff is also available to collect information from spill observers, develop in a graphic a characterization of the location of the spilled material, and distribute this product.	
5.	Establish a system of debriefing and capturing the observations of others involved in overflight operations.	

Responsibilities – Wildlife/Historical/Cultural Resources

Wildlife/Historical/ Cultural Resource Assessment and Rescue

Wildlife rescue and rehababilitation resides in the Operations Section of ICS. The EUL must work closely with this group and with local, state and federal fish and wildlife specialists who have the responsibility to establish protocols for keeping unoiled wildlife away from an oil spill and for dealing with oiled wildlife. Evaluation of cleanup options (i.e. mechanical removal, in-situ burning, pressure washing, biremediation) must also consider damage to historical and heritage sites and artifacts.

STEP	ACTION	✓
1.	Determine what types of surveillance/observations are appropriate for the incident (e.g. helo/fixed wing overflights, remote sensing, SCUBA, etc.)	
2.	Based on Step 1 determine equipment and personnel (including technical specialists) needs to accomplish appropriate surveillance	
3.	Prepare methods to present observation information (e.g. overflight maps, imagery photos, situation maps, etc.)	
4.	Working with the Situation Unit, ensure trained staff is also available to collect information from spill observers, develop in a graphic a characterization of the location of the spilled material, and distribute this product.	
5.	Establish a system of debriefing and capturing the observations of others involved in the evaluation operations.	
6.	Work with wildlife, historical/cultural resources and volunteer coordinators to establish appropriate training for professional and volunteer staff that will be engaged in this activity.	

Reference: Best Practices for Migratory Bird Care During Oil Spill Response, USFWS, Draft March, 2001

RRT III-IV Selection Guide for Oil Spill Applied Technologies, Volume 1 – Decision Making

Responsibilities – Shoreline Assessment and Mapping

Shoreline Assessment and Mapping

Utilize all available methods to document and display to the response organization the current status of oil on the shoreline.

STEP	ACTION	✓
1.	Determine objectives of the shoreline assessment process. i.e. A minimal assessment would require that a field crew mark on a map/chart those locations where oil is stranded and that can be cleaned up. A more complex assessment would require the completion of shoreline assessment forms by an experienced staff collecting information on the length/width/ depth of stranded oil, shoreline type, access to the site by cleanup personnel, and recommended cleanup strategies.	
2.	Coordinate the assembling of stakeholders and/or trustees to determine shoreline clean up priorities and strategies and clean up end points. After clean up is complete, coordinate the sign-off of cleaned area, if possible, by the same group.	
3.	Evaluate SCAT for evidence preservation.	
4.	Determine what types of surveillance/observations are appropriate for the incident (e.g. helo/fixed wing overflights, remote sensing, boat, vehicle, walking, etc.)	
5.	Based on Step 2 determine equipment and personnel (including technical specialists) needs to accomplish appropriate surveillance	
6.	Provide for selection and training of a shoreline assessment staff. Training would include site safety and characterization and the development within the staff of a systematic approach that uses standard terminology.	
7.	Divide the shoreline into units, called segments, for recording and tracking data, making cleanup recommendations, and tracking progress.	
8.	Working with the Situation Unit**,** prepare methods to collect, document and present the shoreline assessment data that is collected.	
References: NOAA Shoreline Assessment Job Aid NOAA Shoreline Assessment Manual		

Responsibilities – Environmental Monitoring

Collect data

The EUL will ensure that incident-specific environmental monitoring strategies are implemented to systematically collect~~ed~~ data to aid in response decision-making.

STEP	ACTION	✓
1.	Determine monitoring objectives, data to be collected, and why you need it (e.g. health and safety, characterize threat to environment, quantitative and qualitative assessments, etc.)	
2.	▪ Develop a sampling and analysis plan for collecting and analyzing data. ▪ Identify resources needed to collect data (e.g. equipment and personnel) ▪ Determine availability of laboratories or other facilities for sample analysis ▪ Establish chain of custody procedure for samples and monitoring data. ▪ Follow rules of evidence preservation in all monitoring activities.	
3.	▪ Assess monitoring data quality to ensure accuracy	
4.	▪ Use monitoring results to assess response objectives	
Reference: Special Monitoring for Applied Response Technologies (SMART)		

Responsibilities - Environmental Permitting

Acquire Necessary Permits

The EUL must ensure that all necessary environmental permits are acquired and adhered to. By working closely with federal and state representatives EUL can determine what permits and procedures are in place or pre-approved for use in emergency situations.

STEP	ACTION	✓
1.	Determine whether any response actions require permits (e.g. waste disposal, crowd control, event planning, etc.)	
2.	Working closely with the Branch/Division Directors, communicate permitting issue/needs to the Operations Section	
3.	Acquire permits	
4.	Ensure that permit requirements are adhered to.	

Section/Unit Demobilized

Demobilization Tasks

Below are demobilization responsibilities applicable to all personnel assigned to this section/unit?

STEP	ACTION	✓
1.	Receive Demobilization Plan from Demobilization Unit Leader/Planning Section Chief	
2.	Brief subordinates regarding demobilization	
3.	Supervise demobilization of unit, including storage of supplies	
4.	Provide Supply Unit Leader with a list of supplies to be replenished	
5.	Forward all Section/Unit documentation to Documentation Unit	
6.	Complete Check-out Sheet	

Information Exchange Matrix

Information Exchange Matrix

Inputs/Outputs Below is an input/output matrix to assist the Environmental Unit Leader with obtaining information from other ICS positions and providing information to other ICS positions.

MEET With	WHEN	EUL OBTAINS	EUL PROVIDES
Incident Commander	Initial incident brief	Incident objectives	Requested environmental information and recommendations
Planning Section Chief	Check-in brief Tactics meeting Planning meeting	Initial briefing Objectives (ICS 202)	Requests for more personnel and resources. Environmental information Recommendations for response options Current and Future priorities and actions
Operations Section Chief	Tactics meeting Planning meeting	Incident situation status during initial phase and throughout entire incident	Recommendations for response options Information for displays (maps, charts, tides, weather, etc.)
Information Officer	Press briefings		Environment-specific Information
Environmental Unit Personnel	Tactics meeting Throughout incident	Information from tech specialists Display processors Weather observations	Situation status reports passed by incident personnel to the situation unit