Resource Advisor Guide

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The *Resource Advisor Guide* establishes NWCG standards for Resource Advisors to enable interagency consistency among Resource Advisors, who provide professional knowledge and expertise toward the protection of natural, cultural, and other resources on wildland fires and all-hazard incidents. The guide provides detailed information on decision-making, authorities, safety, preparedness, and rehabilitation concerns for Resource Advisors as well as considerations for interacting with all levels of incident management. Additionally, the guide standardizes the forms, plans, and systems used by Resource Advisors for all land management agencies.

The National Wildfire Coordinating Group (NWCG) provides national leadership to enable interoperable wildland fire operations among federal, state, tribal, territorial, and local partners. NWCG operations standards are interagency by design; they are developed with the intent of universal adoption by the member agencies. However, the decision to adopt and utilize them is made independently by the individual member agencies and communicated through their respective directives systems.

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Section One: Resource Advisor Defined

Introduction

When disaster strikes, people pitch in to help the response effort. One of the key positions in this effort is the Resource Advisor (READ). They provide professional knowledge and expertise for the protection of natural, cultural, and special management areas. This guide will familiarize you with various aspects of Resource Advising and serve as a general reference aid for Resource Advisors (READs).

> **MISSION:**
>
> The Resource Advisor provides professional knowledge and expertise for the protection of natural, cultural, and other resources within an emergency incident environment.

Incidents and incident responses can impact natural, cultural, wilderness and other resources. READs work on small local responses or with Incident Management Teams (IMT) to develop practical strategies and tactics that meet agency administrator and incident objectives and to avoid, minimize, or mitigate impacts during and after these events. In short, the READ advocates for the resources.

This guide addresses all types of incidents such as fire, search and rescue, law enforcement, natural disasters, etc. Although the basic tenets or functions of Resource Advising should be the same regardless of the nature of the incident, the roles and responsibilities of a READ are broad ranging and diverse – as are the incidents to which the READ may be called upon to respond. Even within an incident, the role of a READ may change as the response efforts change over time. The READ may perform the same duties during an incident that they perform in their regular job or they may be expected to assume the role of a generalist. Also, the READ may be called upon to provide input on resources outside of their area of expertise so they need to know how to seek information or advice.

The READ is responsible for identifying and evaluating potential effects resulting from the incident or incident response on natural, cultural, wilderness, and other resources, as well as possibly evaluating social and political considerations. READS use knowledge in their primary function to ensure that incident management teams have informed recommendations from resource professionals.

> **STRATEGIC PRIORITIES:**
>
> - Provide for safety first
> - Provide management recommendations to protect and serve natural, cultural, and other resources
> - Be sensitive to the objectives of managing the incident

Resource Advisors have specialized resource management skills gained through educational degree programs, industry training of established standards, or on-the-job experience. They have supplemental incident response and resource training in order to use their specialized skills in the incident environment.

READs need to be conversant in the protection of cultural and natural resources held in trust for the American people. For the purposes of this guide, the text box on the following page describes a definition of "trust resources"; the details or nuances of this definition may shift based on the incident type, location, and host unit.

Responsibilities for protection of these trust resources will be significantly influenced by who is responding and their legal mandates, policies, and guidance. Again, READs need to know when to ask

for help, and where to go to find it. Finally, it is critical that READs be trained in incident response in order to operate effectively within the incident management structure.

The Resource Advisor may use local understanding and familiarity to integrate issues and concerns into management strategy and tactics. This understanding can assist the Incident Management Team (IMT) in developing mitigated actions which can satisfy the mutual objectives of incident management and resource protection. However, there are times when the responsibility for protecting people will outweigh resource concerns. In either situation, the READ plays a crucial role of "advisor" by becoming familiar with local resources as well as the safety, social, political, environmental, or cultural context in order to prioritize, communicate, and document impacts.

Trust Resources Defined:

Use of the term "trust resource" has evolved into a shorthand reference for a broad suite of natural and cultural resources where protection falls to a Federal, State, or Tribal Trustee. No one individual "owns" these resources; rather, they are "held in trust for the public" or for tribal nations (Example: Endangered Species Act Trust Resources guidance)   The concept of "trust resources" for public lands differs from the Federal government's "Tribal Trust" responsibility, which is of particular importance in "Indian Country" (Example: Secretarial Order #3206, American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act). Correspondingly, "trustee responsibilities" may vary widely based on the specific trustee and the laws and regulations being considered.

Natural Resources Defined:

Natural resources are physical and biological resources including wildlife, botanical, hydrological, or geological. They may be grouped into ecosystems.

Cultural Resources Defined:

Cultural resources can be defined as physical evidence or place of past human activity: site, object, landscape, structure; or a site, structure, landscape, object or natural feature of significance to a group of people traditionally associated with it. They can be archeological sites, historic structures, cultural landscapes, ethnographic resources and museum objects.

Special Management Areas:

Special management areas include: Designated Wilderness, Recommended Wilderness and other classifications of Wilderness, National Monuments, National Conservation Areas, National Historic Landmarks, Areas of Critical Environmental Concern, Research Natural Areas, and Wild and Scenic Rivers (See Appendix H).

Resource Advisor Roles and Responsibilities

The Resource Advisor provides a key role during the management of an incident by providing professional knowledge and expertise for the protection of natural and cultural resources. A READ speaks for the resources, but must also realize that the incident response – what he or she has been sent to assist with – is controlled by the Incident Management Team. A READ supports the IMT by providing information about impacted resources or potential hazards that allow the IMT to proactively craft response and mitigated actions that are sensitive to resources. Trained Resource Advisors can help IMTs reduce effects on resources and lower overall response costs.

The responsibilities of a Resource Advisor include:

Ensure Safety

Safe operations are first and foremost in all incident management activities (Also see Appendix A: Safety).

- The READ may be required to enter a dangerous environment while management actions are taking place. READs should base their actions on a critical assessment of their own abilities, knowledge, experience, and training and should understand relevant policy and standards. For work on a fireline, READs will meet all fireline standards and qualifications described in the Read Skills, Abilities, and Qualifications section and in the Interagency Standards for Fire and Fire Aviation Operations Guidebook.

- Situational awareness and operational leadership is necessary. Be aware of dangerous situations turning into hazardous situations and monitor your environment (e.g., severe weather, changing fire or spill behavior conditions, downed power lines, changes in road or bank stability, etc.).

- Stay informed of incident activity, especially emerging incidents and development of incidents within the incident.

- Work within the incident structure and ensure accountability. In most cases there are safety officers assigned to incidents. READs should check with them on protocols and safety issues, as well as looking at the Incident Action Plan.

Be Prepared

- Maintain pre-incident preparedness. Time is of the essence in an incident response, preparedness is essential. Keep a fully stocked Resource Advising Kit (See Appendix D which includes examples and guidance). If you are in a unit with several professionals trained as READs, it may be practical to assemble one or more kits for all to have available. Make sure you have copies of important documents (e.g., training certificates, prescriptions, etc.) easily accessible and take hard copies with you.

- Being prepared requires that you and others are trained in incident response and resource advising.

- Host or attend a Resource Advising Training.

- Take required preseason training (e.g., RT-130 Fire Fighter Refresher).

- Have updated qualifications data entered into dispatch and qualifications systems.

- Prepare your personal gear and ready bag.

Home Unit Preparedness Guidelines

If you are local to the incident, you may serve as a READ within the scope of your regular job or you may be the "go to" person for READs deploying from other areas. You can maximize your effectiveness, and that of deployed READs, by being prepared. You should obtain the appropriate training and qualifications to anticipate needs of deployed staff. Contact procedures should be established through the dispatch system, or any other way practical, so that a local incident or visiting team may reach you outside of business hours.

Developing a programmatic, or "team" approach in the form of a local Resource Advising program can add to an already full workload, but there are tremendous efficiencies to be gained through preparedness and sharing that burden across many READs. Try to put yourself in the role of a READ from outside of your region responding to an incident at your home unit. What information would you want? What would be some of the barriers to the availability of that information? Some of the ways that you can take a programmatic approach to home unit preparedness include:

- Develop a local cadre of READs that practice and train by taking advantage of walk-through, tabletop, sand table, or scenario planning exercises.

- At the training, ask critical and involved questions of local resource managers that will provide proactive responses to possible incident-related scenarios and get them thinking about what an incident might mean for them. Include actionable responses into planning documents.

- Prepare a READ reference package that includes key documentation that you may use or hand over to a local incident or visiting incident management team. Elements of this package may include:

  o Annually updated local plans (at the beginning of each season) for fire, hurricane, tornado, and even special event scenarios as appropriate to your home unit.

  o Key mitigation requirement summaries in the form of short documents that can be handed to an incoming incident commander or READ. These summaries will benefit from having been considered and crafted in the off-season.

  o Compiled geospatial data to support the resource information needs of the incident while providing for protection of sensitive datasets. Talk to your GIS expert to develop geospatial layers.

  o An in-house computer common drive or SharePoint Site to store management plans geospatial data and resource documents. You may need to lead in the development of this.

  o A collection of all applicable local policies and guidance. Make sure that these flow logically from regional and national guidance. Are prescribed protection measures appropriate and feasible? Can these measures be provided with clear and concise instruction for implementation? What has worked in the past?

  o Compile lists of contacts. These may include local and university experts to contact about resource issues. There should also be a contact list of available local READs for incoming Incident Management Teams. This list should include READs with specific knowledge of local resource issues.

Deployment Preparedness Factors

As discussed in the introduction of this guide, the basic tenets of resource advising remain the same regardless of location or incident type. However, preparedness for deployment may be a more specific

task undertaken in the pre-season or as a READ departs for an off-unit assignment (Also refer to Appendix D, Preparation for Deployment).

If you are deploying to a fire, update your understanding of fire policy changes. Check local plans to determine the most vulnerable resources and their locations. Are prescribed protection measures appropriate and feasible? Ask similar types of questions for other kinds of incidents. Get familiar with the local hurricane evacuation plan or other incident plan. Is it up to date? Check the local area contingency plan against the list of Threatened and Endangered species. Does it adequately describe the location of trust resources in the event of a spill?

- Prepare a READ Supply Kit (examples and guidance are in Appendix D: Preparation For Deployment.

- Refresh your contacts. Look for new ones for the area to which you're being deployed.

- Investigate possible sources of local information prior to arriving.

- Be prepared to operate with no logistical support for up to 72 hours (minimal office supplies, power strip, computer, digital data storage devices, etc.).

Gather Information

- Receive a briefing by your incident supervisor immediately upon arrival. The person giving this briefing will depend on where you are placed within the incident management structure. Together, set expectations for your involvement with incident operations and your relationship with your incident supervisor and the incident management team. If there is an Agency Administrator or Agency Representative assigned to the incident, also make contact with them and have them brief you on agency objectives. If objectives conflict or are outside the scope of the duties set by your incident supervisor, be sure to discuss with your incident supervisor and get concurrence. There may be a delegation of authority that defines roles and objectives.

- Poll local resource experts, and gather relevant land management plans or other guidance.

- Assess and analyze the gathered information, documents, and intelligence, and identify preferred alternatives for protecting or minimizing the effects of the response on sensitive resources. Weigh the consequences of environmental, cultural, social, economic, and safety values.

Communicate

- Be available and involved in supporting the incident response. Work within the confines of the incident command system by following dispatch procedures, resource ordering, incident communications, incident business management, planning, and operations. Always use established communications contact points and times, and participate in scheduled meetings. Be a significant part of team briefings, as appropriate or as requested.

- Provide resource management recommendations to protect and serve the resource while being cognizant and sensitive to the objectives of managing the incident. Inform, involve, and prepare.

- Ensure that key personnel and other READs are aware of what is going on and how they may be involved.

- Visit work sites and monitor where crews are working or preparing to work. It is important that the READ proactively provides alternatives in planning stages, rather than documenting damages after the fact.

- Be sure that READ operations in transition are being properly managed. Plan for transition to arriving READs or back to local management. Monitor and ensure that resource concerns, mitigations, and documentation are consistent through transitions.

Document

- Practice good record keeping and documentation. Identify sensitive resources, potential threats to those resources posed by the incident or response actions, and actual impacts caused by these. Your observations, reports and recommendations are being made to help others – those in incident command – to make decisions. Keep the documentation up to date.

- Please note that most documentation becomes part of the official record and is retained by the incident. Keep copies for your personal records.

- While keeping and sharing records, keep in mind that the locations of some sensitive natural and cultural resources may be protected from release to the public (e.g., endangered species nesting locations or specifics of some cultural resources).

- Keep documentation factual, professional, and clear.

- Plan for post-incident rehabilitation or restoration, as appropriate. If you are on a fire, consider the need for a burned area emergency response (BAER) team or an individual to conduct a rapid post-fire needs assessment. If you are on a spill, check to see what information might be needed for a Natural Resource Damage Assessment and Restoration activities. A FEMA assignment may require coordination with Recovery Support Function staff.

Provide Feedback

- Participate in incident planning meetings and depending on the complexity of the incident, work closely with either the Planning, Resources, or Operations Unit Leaders, to meet resource objectives.

- Go to the closeout meetings and participate in team evaluations.

- Within the READ organization, conduct or participate in After-Action Reviews.

Read Positions

Resource Advisors can be enlisted and dispatched with different names and roles depending on the request of the receiving jurisdiction and the nature of the incident. In various qualifications systems, you will see four basic types of Resource Advisors:

- Resource Advisor (READ),

- Fireline Resource Advisor (REAF),

- Resource Advisor Coordinator (REAC) or Lead READ, and

- All-Hazards Resource Advisor (READ)

This Resource Advisor Guide is not intended or should be interpreted to establish or supersede standards for these positions. The standards can be found in the following guides. Also, individual agencies and bureaus have the option to establish agency-specific positions and standards based on missions and needs.

READ QUALIFICATION GUIDES

READ	READ Fireline	READ Coordinator	READ – All-Hazard
Federal Wildland Fire Qualifications Supplement	Federal Wildland Fire Qualifications Supplement	DOI Incident Positions Qualification Guide	DOI Incident Positions Qualification Guide

Qualifications Guides

ALL-HAZARD QUALIFICATIONS GUIDE:

The DOI All-Hazards Incident Positions Qualification Guide (https://www.doi.gov/sites/doi.gov/files/migrated/emergency/upload/DOI-Incident-Positions-Qualification-Guide.pdf) describes the minimum standards for technical specialists, including the Resource Advisor position for All-Hazard responses. It includes qualifications to maximize the functionality of the Resource Advisor position. Additional requirements may be established by your Bureau or Agency.

WILDLAND FIRE QUALIFICATIONS GUIDE:

The National Wildfire Coordinating Group publishes the Wildland Fire Qualification System Guide (https://www.nwcg.gov/publications). This guide establishes minimum requirements for training, experience, physical fitness level, and currency standards for wildland fire positions. It should be noted that the National Wildfire Coordinating Group has no formal minimum qualifications or training requirements for the Resource Advisor position or for Technical Specialists within their system. When criteria for inclusion in the guide are not met for a position, wildland fire agencies have the option to establish agency-specific positions and standards for those positions based on unique missions and needs. Therefore, the five federal agencies with wildland fire management responsibilities have set their own standards in the **Federal Wildland Fire Qualifications Supplement**

(https://www.nwcg.gov/publications/310-1 Click on supplement). Resource Advisors responding to fires should be able to obtain an Incident Qualifications Card (informally known as a Red Card) under their agency process in order to deploy to a fire.

The Fireline Resource Advisor

On a wildfire in a federal or federal trust jurisdiction, there may be a need for a Fireline Resource Advisor (REAF) as established in the Federal Wildland Fire Qualifications Supplement (https://www.nwcg.gov/publications/310-1). Please check the Federal Wildland Fire Qualifications Supplement for updates for the position requirements and standards. The Supplement is the definitive source because this Resource Advisor's Guide cannot set or imply policy.

The REAF position is expected to have a deeper understanding of the hazards of the fire environment. To become better accomplished at the position, it is suggested that the REAF develop their skill sets by continuing their fire education through taking training courses in fire suppression, fire behavior, and fire safety. For a REAF to perform unescorted on the fireline please refer to the fireline visitor requirements defined in Chapter 7 of the Interagency Standards for Fire and Fire Aviation (https://www.nifc.gov/policies/pol_ref_redbook.html). Keep in mind that the incident commander has the decision space to approve or deny the REAF to be on the fireline.

The Role of Lead READs and the Resource Advisor Coordinator

In complex situations with the deployment of multiple READs, the incident may assign a Lead Resource Advisor or Resource Advisor Coordinator (REAC). The REAC is a Department of Interior all-hazards response position. The position description may be found in the DOI Incident Positions Qualification Guide: (https://www.doi.gov/emergency/ipqg).

The REAC position provides leadership and/or supervision as needed to coordinate a team of Resource Advisors (READ) and/or Technical Specialists (THSP). Functioning as the lead READ, the REAC serves as the primary point of contact to the Incident Management Team (IMT), working closely with the Planning Section Chief, Operations Section Chief, Safety Officer, and others to integrate recommendations and alternatives for the protection of resources into the Incident Action Plan (IAP). The REAC must stay informed, prepared, available, and involved in the incident response.

Depending on the incident structure, the REAC may or may not have official supervisory responsibilities. However, the REAC should expect to coordinate the activities of the various READ and THSPs deployed to the incident, regardless of supervisory function or assignments within the incident structure.

The REAC makes recommendations to the IMT regarding the need for technical specialists and/or READs to support incident objectives. The REAC should have sufficient breadth of knowledge of natural and cultural resource management to identify the appropriate subject matter expertise needed to address specific needs during the incident.

WILL YOU WORK WITH AN AGENCY ADMINISTRATOR OR AGENCY REPRESENTATIVE?

In wildland fire responses, the Resource Advisor works for the Agency Administrator, within the incident management team structure, to provide direction for meeting land and resource objectives during an incident. Ideally, the READ is appointed and briefed by the agency administrator before the incident management team is in place and assumes direct management of the objectives set for the fire. The READ should be involved in the preparation of management objectives, decision support tools, the agency administrator's briefing to the IMT, preparing agency input into incident action plans, and turning the incident back to the unit.

Roles and Responsibilities of the Agency Administrator or Representative
- Assist in preparing the Delegation of Authority. Set the specific objectives you expect the incident commander and the Incident Management Team to meet in managing the incident.
- Work with staff to prepare the Agency Administrator's briefing package for the incoming Incident Management Teams.
- Quickly notify and assemble key people to assess, analyze, and make decisions.
- Plan for post-incident turn-back to the unit, emergency stabilization, and rehabilitation. Consider the need for a burned area emergency response (BAER) team.

Recommended Knowledge, Skills, and Abilities

Each bureau may have different protocols and policies for choosing READs, whether on wildland fire or all-hazard assignments. Each incident will require different skill sets, time commitments, training, and qualifications from READs.

Determine the incident response training and resource advising training that you will need to be qualified as a READ (see the following section) and any specialized training for your profession. You will want to consider other training that could be helpful to you, such as fire safety training, HAZWOPER (Hazardous Waste Operations and Emergency Response) and other all-hazard response training, fixed or rotary wing aviation training, wildland fire, and others. Wildland fire training is important to better understand working in the hazardous fire environment and to better understand fire behavior, fire suppression, and fire safety. You will then need to follow agency protocols to enter your training and qualifications data into the incident qualifications system. Please note that your supervisor's permission will be required to activate your availability in the resource ordering system and to provide approval for each deployment. Therefore, it is vitally important to talk with your supervisor to make sure that they know that you are interested in becoming qualified and possibly deployed as a Resource Advisor.

Desired READ Knowledge, Skills, and Abilities

<u>General</u>

- Ability to communicate individual specialized resource management knowledge and skills to incident response personnel and the public in dynamic and often fluid situations.

- Ability to perform the same duties during an incident that are performed during their regular job and to apply these specialized skills in the incident environment.

- Able to function as a generalist when not an expert on a topic. Although individual specialties will likely play a role during your deployment duties, it will be essential that the READ is able to provide input on resources outside of a narrow area of expertise by knowing how to contact subject matter experts, or rapidly investigating the topic, or resource ordering appropriate personnel.

- Knowledge and experience in guidelines, policies, laws, and implementation for natural and cultural resource management, including mitigation and protection measures (e.g., Minimum Impact Strategies and Tactics and Leave No Trace practices).

- Oral and written communication skills.

- If possible, deploying as a trainee will provide valuable experience and a structured framework for an experienced READ to guide and review your performance.

<u>Resource Management Knowledge</u>

- Ability to acquire knowledge of local politics and Land Use Plans (e.g., local community, county, state, tribal, interagency, general management plans, Wilderness Plans, Natural/Cultural Resource Management Plans, Area Contingency Plans, and Fire Management Plans, etc.).

- Ability to acquire knowledge on the affected area including, but not limited to, topographic features and vegetation types, critical areas, types of visitors and inhabitants, improvements, roads, hazards, etc.

- Working knowledge of the federal Endangered Species Act requirements and concerns.

- Working knowledge of State Historic Preservation Office (SHPO) and/or Tribal Historic Preservation Office (THPO) requirements and concerns.

- Knowledge of information sources for National Register and National Register-eligible properties and protection strategies.

- Knowledge of Federal interest land boundaries, e.g., for private lands, for special management areas (wilderness, etc.).

- Ability to identify resource management concerns related to "Traditional Use" and "Traditional Cultural Properties."

- Ability to identify potential effects to natural and cultural resources as a result of the hazard and/or incident vs. those that may be/might have been caused by response activities.

- Map reading and handheld Global Positioning System (GPS) navigation skills.

- Ability to plan for rehabilitation/restoration treatments.

- Ability to anticipate the needs of both the resources themselves and of the incident responders. You may need to anticipate the need for materials to protect a threatened species, or perhaps

identify additional personnel needed to complete a task.

- Knowledge of incident response, mechanisms of damages from types of incidents for example fire behavior and fire suppression.

Incident Management Skills

- Working knowledge of incident command system and the ability to work effectively within the incident management team framework.

- Must be able to establish and maintain working relationships.

- You must be able to communicate the needs of the resources within appropriate ICS channels. Effective communication is a vitally important skill for the READ, but that does not mean the best speaker or the loudest voice. With many different people to interact with think creatively about different ways to get them to understand the needs of the resources. A variety of communication methods (e.g., verbal, written, graphic, analogies, etc.) must be employed to reach different types of people and decision makers assigned to the incident.

- Ability to communicate with all off-site stakeholders during and after normal business hours.

Work Environment

- Able to work in challenging work environments which may relate to weather extremes, arduous terrain, potentially hazardous assignments, and remote locations.

- Be realistic about your fitness and your ability to work in the environment to which you are being deployed. Stress and fatigue can diminish one's ability to perform at peak levels for extended periods of time. At best you won't work to your full potential if you cannot tolerate the physical demands of the incident; and at worst, you could put yourself and/or someone else in danger. The administrative unit or the specific requirements of the incident may, at their discretion, raise requirements depending on the situation at hand. An example of this would be the need to periodically conduct long hikes in 100 degree heat with high humidity. Extreme work environments, chaotic situations, makeshift office conditions, shared lodging, tent camping, and on the job stress, are just a few factors that can degrade top performance. It is important to mitigate stress and remain aware of proper work rest regimes.

Effective Resource Advising

The role of Resource Advisor is an important and challenging one. This section builds upon the past experience of READs to delve deeper into strategies for effective advising. It is organized upon the responsibilities laid out in the beginning of this chapter: safety, being prepared, gathering information, assessing that information, communicating that assessment, documenting the assessment and results, and providing feedback into the system.

An effective Resource Advisor must have a good attitude and work cooperatively with others. You are working for an incident management team that has requested support, unless you have been appointed directly by the Agency Administrator. In either case, you have the same obligation to the IMT as you would to any other member of your regular organization with respect to the protection of natural, cultural, and other resources.

The READ is an advisor, not the decision maker. Your role is to provide information for the decision making process rather than actually making operational decisions. The best opportunity to do the READ job is before strategic and tactical decisions are made. But remember that the READ, as an advocate for the resources, is one of many voices at an incident. Those making strategic and tactical decisions are weighing countless other factors and the consideration for protecting life, health, and safety (both

responder and public) takes precedence over all. The READ's role is to provide high quality, concise and consistent guidance that allows the IMT to take actions that are sensitive to natural, cultural, and other resources. Although do no harm and protect the resources are READ priorities, when that can't be accomplished, then try to reduce, minimize, and then lastly mitigate. The process of decision-making and critical analysis is further explored in an upcoming section on Critical Analysis.

The READ must advocate for sufficient staffing based on incident size and complexity in order to work safely at full strength, with all key positions staffed or in route. If not, help the team get the qualified personnel they need by exercising your influence through proper channels. Find out what other specific needs the team may have or anticipate, and help make those resources available to them.

Be Prepared

Preparedness may look different for the deployed READ versus one at their home unit as described below.

Being prepared and ready, seeking out help, and taking care of yourself can reduce stress and make you more effective.

- Don't be afraid to ask for help.

- Manage your time effectively.

- Get your rest, eat well, and drink plenty of water.

- Know and respect your limitations.

- Strive towards a better understanding and clear communication of the resource concerns.

- Use this opportunity to develop yourself and to address your training needs as well.

Resource Advisors need to reach out to subject matter experts when they need expert advice. If you are a biologist that needs a toxicologist to answer a question or you find an eroding arch site, seek advice from experts.

Critical Analysis and Decision Making

While a READ is an advisor and does not make operational or strategic and tactical decisions, a READ may be asked to make decisions about prioritizing resources or best methods for protecting resources. Your assessments as a READ will need to include both short- and long-term actions to be taken to protect or stabilize resources. Critical analysis is essential to making good assessments; in the case of a READ, it can be thought of as a three-legged stool:

Resource knowledge forms the first leg. This includes fact gathering about the resources present or possibly present in the incident area. This also includes your own knowledge about resources present and your ability to contact others about resources that you are not as knowledgeable about. It also includes knowledge of the mechanism of damage from the cause of the incident and the response. For example fire behavior and fire suppression techniques.

Understanding the actions needed to stabilize or protect these resources form the second leg. This may not be immediately apparent to you, even if you've collected a great deal of information about the resources present. You will likely need to develop several solution options to present to the IMT. As the incident response evolves, the actions needed to protect resources may change your solution options and you'll need to adapt to these.

Effective communication skills for the READ are like the third leg on a stool. The third leg is built on communicating your knowledge of the resources and your assessment of actions needed in the form of

protective strategy options that can be presented to the IMT. Without this vital communication the needs of the resources may not be recognized.

There will be times that other response needs may override the ideal needed action. Your critical analysis skills will help you to respond to these changing needs by working your way back through knowledge of the resources, a revised understanding of needed actions and additional communication with the IMT on new solution options.

Rational Decision-Making

The critical analysis guidance above includes many of the components of the rational decision making process typically used in complying with the National Environmental Policy Act (NEPA) and other laws. It is also the appropriate process for a READ to use when developing resource recommendations. Its steps include:

- Gather facts,
- Establish evaluation criteria (is the action reasonable, practicable, and prudent?),
- Establish and analyze options,
- Choose the best implementable option,
- Implement the chosen option,
- Document rational and analysis for all decisions made regarding resource protection, and
- Monitor the results

As a READ you may employ all of these steps, or may take on some portion of them depending upon your time at the incident, the work of other READs, or the needs of incident command. While these do form a good structure to the process of decision making, keep in mind that you are there to recommend options to the incident management team so that they can carry out the decisions.

Decision Errors

Finally, in any decision making process, decision errors can occur. As a READ you will be providing information to the incident management team for them to determine actions to be taken. While you may not be making decisions about the incident response, you will be making decisions about resource recommendations and it is important to know some of the ways that errors can occur in this process. Decision errors are most common when the person(s) responsible for the decision is/are:

- Uninformed of their responsibility to make the particular decision,
- Uninformed of critical information relevant to the issue to be decided,
- Distracted by other events, tasks, sense of priority,
- Troubled as a situation degrades, or critical decision gates increase, stress mounts; tunnel vision sets in and begins to focus on what they know, what is familiar, tending to miss important things, or at the worst, ignoring things that are important, and
- Also although it is important to be calm and level headed, the READ cannot possess too casual of an approach to the importance of inputs relevant to the issue to be decided, or to the seriousness or importance of the overall situation that requires a decision (frequently results when duties or information is overloaded).

Any of the above can begin or aggravate the error chain that may ultimately lead to a process failure when decisions are not made, or are poorly made. Mitigating a potential or emerging error chain can be

accomplished by:

- Knowing it is there, be aware of it; practice your experience.
- Optimize the decision making process with appropriate level of detail in communication; consider the widest range of alternatives and weigh consequences associated with potential risks.
- If you don't have experience, surround yourself by those who do.
- Delegate, use team decision making.
- Be assertive yet respectful. If you see an error, yours or someone else's, acknowledge it, speak out, and consider the consequences of other actions.

Once an assessment or analysis of a situation has been completed and the READ has made a decision about what to recommend to the IMT, that recommendation must be effectively communicated at many different levels.

Communication skills are a life-long learning process. Seek out leadership and communication courses that focus on these critical skills. Develop what the military calls "Command Presence." Meet personally with as many of the incident management team and responders as possible. Give them your resource message and your expectations. Communicating these expectations and your guidance to incoming READs helps ensure a consistent message. Make sure you keep your unit leader and the incident management team informed of your availability and unavailability. Pass out lots of thanks, praise, and compliments when deserved.

- Introduce yourself to the Incident Commander asking "What can I do for you?"
- Develop relationships with the entire team.
- Follow-through on all requests if possible, or let incident command know when you cannot meet deadlines.
- Be sure that READ operations in transition are being properly managed. Plan for transition to arriving READs or back to local management. Monitor and ensure that resource concerns, mitigations, and documentation are consistent through transitions.
- Keep issues in context relative to the incident.
- Avoid adding stress.
- Be available.

Address Conflicts with Care

Many perceive this position as one fraught with conflict. While conflict is possible, this position can be one of opportunity. Few incident management teams are seeking to harm resources and there are techniques that can minimize the potential for "collateral" conflict that draws attention away from the more important resource issues. When it becomes obvious that you may need to do something, do it, don't expect a deteriorating situation to fix itself. Understand the big picture; do the best you can with what you have. Increasingly, your incident may not be the only response effort in town, and the conventional wisdom of asset management (maintain surplus resources) may not apply.

- Be Proactive.
- Use diplomacy before authority.
- Resolve disagreements at the lowest appropriate level.

- Never just "say no." Suggest suitable alternatives and provide a risk analysis of the alternatives.

- Use the Incident Command System chain of command.

- If you and the incident commander are at an impasse, go back through your incident chain of command.

- Document issues.

- Use the Authority of the Resource.

Simply by developing an understanding of the resource concerns and explaining the effects of actions, we can motivate others to adopt a course of action that minimizes effects to natural and cultural resources.

Documentation

Keep your documentation to the facts that you see or understand at that time, not opinions of how things came about or should be handled. Incident documentation may be subject to scrutiny during legal proceedings. Documentation needs to be factual, professional, and clear.

Provide Feedback

While the role of the READ has become more recognized and embraced, it continues to evolve. The responsibilities are complex and feedback into trainings and team evaluations are important to developing a professional, effective Resource Advising cadre.

- Resource Advising depends on building and maintaining relationships in and outside of the incident. Attending IMT evaluations and After Action Reviews to provide measured, relevant and insightful feedback into process and communication can help grow those relationships.

- Experienced gained during incidents should be shared with new READs at trainings and refresher meetings.

Section Two: Incident Response

READ Responsibilities

The Resource Advisor is primarily responsible for working within an incident for the protection of cultural and natural and other resources such as wilderness. This section walks the Resource Advisor through the incident to define their roles at each stage of an event. The Resource Advisor must follow agency specific procedures during mobilization, the assignment, and demobilization.

The Resource Advisor has responsibilities before and during all phases of the incident. They have several opportunities to insert their resource concerns and management objectives before, during, and after the incident.

Incident responder and public safety is our first priority. All response activities must reflect this commitment. The commitment and accountability for safety is a joint responsibility of all responders, managers, and administrators. Every supervisor, employee, and volunteer is responsible for following safe work practices and procedures, as well as identifying and reporting unsafe conditions.

Generally, incidents are driven by pre-plans such as operational Fire Management Plans, Area Contingency Plans for spills, etc., and follow a logical progression of events, although there will be some variation from incident to incident. A typical incident will flow through the following milestones. A Resource Advisor may participate in many of the steps:

- General management planning such as natural resource management plans, NEPA, etc.,

- Incident planning and pre-incident preparedness,

- Initial response,

- Notification of key personnel,

- Complexity analysis and assessment of needs,

- Preparation of the Delegation of Authority,

- Dispatch and mobilization,

- Incident Activities,

- Resource ordering, such as additions to an incident management team,

- Assigning and briefing READs,

- Preparation of Agency Administrators briefing,

- Conduct in-briefs for staff and teams,

NO READ RESPONSE PLAN?

While there may be plans in place that guide incident responses, it isn't likely that a concise plan will specifically guide the protection of all of the natural and cultural resources following an incident. Many pre-plans will have detailed information on how to evacuate and close a unit, to secure material and equipment, and how to attend to numerous other logistical issues. In these situations, use the portions that serve your core mission as a READ; to provide professional knowledge and expertise for the protection of natural and cultural resources.

Start with what you have. Review existing plans (regardless of what type of incident they were developed for) to look for clues to understanding the resources available and the ones that may be at risk. As examples, area contingency plans may list resource specialists that can be called upon to point you to resource inventories. Or there may be another area of special management concern that is similar or nearby that may have specialists or plans that you can use to gain knowledge of the key resources at the incident site.

- Provide support to incident operations,

- Plan for post-incident activities and rehabilitation, as requested or appropriate,

- Transition back to local management,

- Demobilization, and

- Participate in the after action review.

It is important to define resource management protection strategies, tactics, and objectives prior to an incident. This is done though management planning and the details need to be stated in the planning documents.

Incident responder and public safety is our first priority. All response activities must reflect this commitment. The commitment and accountability for safety is a joint responsibility of all responders, managers, and administrators. Every supervisor, employee, and volunteer is responsible for following safe work practices and procedures, as well as identifying and reporting unsafe conditions.

Pre-Incident Preparedness

Well before the initial response, resource professionals at the local unit provide the resource stewardship strategies and objectives. This can be done in several ways:

- Many emergency events should have pre-planned responses to use as a guide. For example, wildland fires typically follow a planned response. The fire management organization should hold regular meetings with resource staff to define resource stewardship strategies. Area Contingency Plans are developed primarily for oil spill response affecting coastal or inland resources. These plans are maintained by Area Committees (led by US Coast Guard or US EPA) and ensure that first responders will have informed intent when they arrive at an incident.

- As an incident evolves and an incident management team is in place that brings control to chaos, a managed effort emerges and incident planning takes over. The Resource Advisor provides resource objectives through the incident management planning process. This management direction is fundamental to formulating strategies and tactics used in a response. This guide will describe other ways that the READ provides resource protection strategies during the management of an incident.

Depending on the complexity of an incident and which agency has authority for managing the incident, who orders the Resource Advisors and who staffs the position(s), may vary. Agency Administrators should evaluate the specific skills needed by a Resource Advisor Coordinator (experience, knowledge of local policy and plans, management) and other READs (line experience, communication skills.)

Often the READ may be from the local unit. Therefore, each unit should establish criteria for utilizing this position and implementing this guide. READs may also be deployed from outside the local unit. In this instance, the local unit should be prepared to provide the READ with as much information as possible to support the READ's ability to make good recommendations on how the incident can best minimize effects to natural, cultural and wilderness resources.

Note that the Appendices present a variety of options for incident organizational charts and potential lines of communication.

Assembling a READ Kit

Obtain and assemble information and materials needed for a READ kit. There are two types of READ kits, a personal kit and a unit kit.

- Personal Kit: A sample checklist for your personal items is found in Appendix D: Preparation for Deployment. The personal kit should include items for your personal well-being and comfort, and for your professional duties while deployed. Prepare enough materials for deployment up to 14 days. Do a little investigating before you pack. Are you deploying to a hurricane zone where power is down? Local stores may not be open to pick up last minute supplies. Be prepared for no internet connectivity and have electronic files of pertinent environmental legislation, guidebooks, and forms. If deploying to a spill, will there be adequate access to supplies? You can pack lighter. Always be prepared for agency firewalls to be an issue for computer access. Either have an incident computer that has the firewalls removed, or have your IT specialist remove any user access restrictions on your laptop. Check your deployment paperwork (your resource order) to see what government equipment you are approved to bring. If you take personal equipment (e.g., phones, cameras, computers, etc.) and they are damaged on the incident, you may not be reimbursed for the loss of your property.

- Unit Kit: If preparing a home unit kit, assemble all unit management plans including general management plans, fire management plans, resource plans, etc. In addition to at least one hard copy, it is helpful to have these in electronic format so they can be searchable and available to hand off to incident management teams. These plans should include resource management objectives. Prepare handouts or briefs with summaries of key resource objectives, environmental issues, or sensitive areas to distribute to incident management teams. Be sure to include tribal consultation protocols or plans, and NAGPRA comprehensive agreements. Gather all maps, GIS layers and other pertinent geospatial data into a central clearing house where it can be readily accessed. It is a good strategy to have as much electronic information available backed up on portable computer media in case there is no internet connectivity or if agency firewalls are an issue. This also makes it easier to hand off to an incoming incident management team. The Resource Advisor should be aware of what data is already loaded into decision support tools such as the Wildland Fire Decision Support System (WFDSS) for that unit, and how the unit plans to incorporate data (e.g., archeological) not loaded into the system. Finally, print out several copies of safety information (e.g., maps to the nearest hospital, emergency phone numbers, etc.) and have them prominently posted so that someone can grab them quickly should the need arise.

Host or Attend a Resource Advising Training

In order to be prepared, Resource Advisors should attend Resource Advisor and any appropriate response training. There is a more detailed READ training discussion with a sample training agenda in Appendix B. Required response training is in the Qualifications Section earlier in this guide.

The US Department of the Interior has an on-line course available through DOI Learn. (https://gm2.geolearning.com/geonext/doi/coursesummary.CourseCatalog.geo?id=115401 or for non-Department participants, https://nctc.fws.gov/courses/doi/read-basic-olt-101/content/home.html. Note that you must be a DOI employee and be on a DOI server to have access to DOI Learn).

If developing a course, it is a good idea to bring in an incident commander that has experience with Resource Advising and can discuss lessons learned from an event. If you have had a recent incident, you may want to include a field trip in your training. One field trip model is the staff ride. In a staff ride, you are walked through a progression of events on site as they happened and discuss the decision points made by the Resource Advisor and the incident management team. It is good to bring up success stories but also failures so the students can learn from real world experiences. This needs to be objectively conducted without placing blame or shame on individuals.

Home units should host an annual refresher or interdisciplinary READ meeting. It is suggested that

home units include a table top exercise or walk through of a scenario to discuss READ elements and how they can be prepared for an event. Typically, table top exercises include cooperators. These cooperators may include adjacent jurisdictions, utility companies, tribal representatives, county and state law enforcement, etc. Contact information is verified for emergency responders, hospitals, cooperators, and resource experts. Sand table exercises and table top exercises are similar to tactical decision games.

Mobilization

Obtain complete information from dispatch upon initial activation. This should be provided on an "Order" form, generated by the resource ordering system.

- Incident name,
- Incident order number,
- Request number,
- Reporting location,
- Reporting time,
- Transportation arrangements/travel routes,
- Contact procedures during travel (telephone/radio),
- Authorized equipment such as cell/satellite phones, laptops, electronic equipment such as GPS units (note that claims for loss or damaged equipment brought to an incident may not be allowed unless the equipment is authorized on a resource order), and
- Accounting instructions or information, if appropriate.

Incident Activities

The following bullet lists are suggested thought processes and procedural tasks to be accomplished early in the Resources Advisor's assignment and carried out for the duration of an incident.

- Arrive at incident.
    - Check in according to agency and incident guidelines and within acceptable time limit.
    - Locate assigned work and sleeping areas.
- Locate work supervisor(s) and obtain briefing(s).
    - Agency Administrator.
    - IC or designated liaison.
    - Unit leader.
    - Determine the planning cycle and appropriate meetings.
- Obtain local reference materials and location-specific tools/documents (prior to deployment wherever practical).
    - Enabling legislation.
    - Forest/Park/Refuge management plans.
    - Obtain Briefing Packet:
        - Management Plan,

- Delegation of Authority,
- Decision support documentation such as the Wildland Fire Decision Support System (WFDSS), best management practices for endangered species, cultural resources protection strategies, museum management plans, facility evacuation plans, etc.,
- Incident Action Plan (IAP) and included safety plan, and
- Wilderness maps/Sensitive area descriptions, traditional use sites, land boundary data.

- Secure Communications.
  - Obtain appropriate communication supplies and apparatus (radio, telephone, ICP/IMT phone list, etc.) from communications unit, if the incident is large enough to have one,
  - Ensure working communications with established contact points,
  - Understand use of radio or phone and know how to program it, and
  - Understand Incident Communication Plan.

- Daily Incident Planning—Provide input to the planning process and/or briefing packet through the planning cycle of key meetings (Further described in the Daily Operations and Documentation section below).

- Lead Resource Advisors or Resource Advisor Coordinators (REAC) brief and debrief with READ(s) daily or as needed.

- Communicate with operational resources through briefings or direct contact.

> The Wildland Fire Decision Support System (WFDSS) is a web based system that assists fire managers in making strategic and tactical decisions to determine a wildfire response. It uses pre-loaded data about the landscape such as management requirements, strategic objectives, and geospatial data. Analysts use this data to inform decision makers and the decisions are recorded in the system. READs at their home units can contribute to framing management strategies and objectives that are imported into WFDSS by being involved in local management planning processes. Decision Support Systems are further explained in Appendix I.

A Resource Advisor's Assignment Checklist has been placed in Appendix F. to further help the Resource Advisor during the assignment.

Daily Operations and Documentation

The Resource Advisor anticipates effects to resources as incident operations evolve; communicates requirements for resource protection to the Incident Commander (IC) or Incident Management Team (IMT); ensures that planned mitigation measures are carried out effectively; documents effects and provides input in the development of short- and long-term natural resource and cultural rehabilitation plans.

The responsibilities of the Resource Advisor, as defined in this guide, involves contact with the Agency Administrator, the Incident Commander, the Planning Section Chief, and incident personnel at all levels. The Resource Advisor helps to implement the directions and standards that the Agency Administrator or Federal On-Scene Coordinators sets for the IMT. While on the incident, operational direction comes from the Incident Commander or IMT as demonstrated in the figures in Appendix C.

The READ should be available to the Incident Commander or Agency Administrator for quick consultation and decision making on an arranged basis through established communications, contact points and times, and scheduled meetings.

If the incident complexity requires an overhead resource advisor to oversee a group of READs, a Resource Advisor Coordinator (REAC) may be assigned. Many of the following tasks will be delegated to the Resource Advisor Coordinator. In these cases, resource advisors may be relegated to delivering direct field input to operational resources. Both roles will still be required to complete necessary documentation.

The daily operations of a Resource Advisor or Resource Advisor Coordinator on complex incidents may be as follows:

- Attend daily operational period briefings and planning/strategy meetings. Present information at operational period briefings on resources, priorities, and issues of concern. Provide input to the daily management objectives. Provide input to the Incident Action Plan. A fixed schedule of meetings, called the planning cycle will be implemented.

- Maintain communication with the Agency Administrator, Incident Commander, and Incident Management Team, or incident supervisor, as appropriate. Methods may include face-to-face, telephone or conference calls, radios, and cell phones.

- May serve as an Agency Administrator Representative, when directed by the Agency Administrator; to the IMT; resource users; and other agencies, local, and state governments; and affected parties.

- Provide recommendations in the development of decision making tools (such as WFDSS for fire) and amendments to Agency Administrator.

- Coordinate with Resource Specialists and solicit appropriate information.

- Make visits to the field as necessary to assess resource issues and concerns in order to communicate effectively to the responders.

- Gather and document damage to resources (e.g., range/forest improvements, cultural sites, and trails).

- Report and/or monitor any miss-application of fire retardant as described in Appendix J: Minimum Impact Strategies and Tactics.

- Make recommendations for post-incident site stabilization, restoration, or recovery needs such as Natural Resource Damage Assessment (NRDA) Process or mobilizing Burned Area Emergency Response (BAER) teams.

- Complete daily Unit Log, ICS-214, and other required documentation to capture important information and submit it to the planning section. (If possible, keep a copy for your records).

- Complete daily time records.

- Demonstrate consideration of all necessary resource types.

Further details on operating procedures for the Resource Advisor can be found in Appendix F: Resource Advisor Assignment Checklist.

Data Gathering and Reconnaissance

A READs primary responsibility is to gather data in order to assess and share to accomplish natural and cultural resource protection. This includes, but is not limited to, the following areas of concern:

- Land Ownership including Land Survey Corner Monuments and Line Markers,

- Hazardous Materials,

- Water Sources and Ownership,

- Watersheds,

- Species Habitat,

- Noxious Weeds and other Invasive Species,

- Species of Concern (e.g., Rare, Threatened, Endangered, Proposed, Sensitive to Disturbance Type),

- Wildlife,

- Fisheries,

- Fire Retardant Avoidance Areas,

- Poisonous Plants, Insects, and Snakes,

- Mineral Resources (e.g., Oil, Gas, Mining Activities),

- Prehistoric and Historic Archeological Sites, Historic Trails, and Paleontological Sites,

- Historic Structures, Features, Cultural Landscapes, Museums, and Archives,

> There are times when a specialist is needed, not a general READ. At those times, an expert technical specialist should be ordered. For example, when evaluating an archaeological site for historic significance. It requires a qualified archaeologist that meets specific professional qualifications such as a Tech Specialist Architectural Historian (THSP ARHS).

- Traditional Cultural Properties and Traditional Use Sites,

- Riparian, Springs, Wetland Ecosystems,

- Military Issues,

- Utility Rights-of-way (e.g., Power, Communication Sites),

- Permanent and Temporary Structures,

- Soundscapes, Night Skies and Air Resources,

- Native Allotments,

- Grazing Allotments,

- Herd Management Areas (e.g., Wild Horses, Burros),

- Recreational Management Areas, and

- Special Management Areas (e.g., Designated Wilderness, Recommended Wilderness, other classifications of Wilderness, National Monuments, National Conservation Areas, National Historic Landmarks, Areas of Critical Environmental Concern, Research Natural Areas, and Wild and Scenic Rivers. See Appendix H).

Analysis, Planning, and Strategy

The analysis of resource issues and providing input into planning and strategic objectives is an important role of the Resource Advisor. Incident management teams seek input and may ask READs to perform the following duties:

- Analyze land management plans, policies, values, weighted priorities, and potential impacts and

benefits and develop recommendations.

- Develop incident management objectives, when appropriate.
- Accomplish incident planning and strategy development, when appropriate.
- Accomplish team transition, when appropriate.
- Gather and disseminate data for the development of the Incident Action Plan (e.g., resource maps and identification of areas of concern).
- Establish environmental restrictions within the incident area and appropriate minimization actions commensurate with resource protection and responder safety.
- Obtain necessary information through proactive discussions and meetings with the IMT.

Rehabilitation and Suppression Damage Repair

When the incident transitions into the rehabilitation phase, the Resource Advisor may be tasked to provide recommendations to protect and restore resource values. In some cases another stabilization and rehabilitation team may come in and the resource advisor will debrief to become a member of the team. In support of rehabilitation, the READ:

- Makes recommendations for incident activity rehabilitation and suppression damage repair,
- Makes recommendations for post-incident site stabilization, restoration, or recovery needs such as determining the Natural Resource Damage Assessment (NRDA) process or mobilizing Burned Area Emergency Response (BAER) teams,
- Monitors rehabilitation operations, and
- Demonstrates ability to explain rehabilitation actions.

ELEMENTS OF A TRANSITION OR TURN BACK PLAN
When an incident nears its conclusion, there should be a detailed turn back plan from the incident commander to the home unit agency administrator. The plan should include:
Reasonably accomplishment of all rehabilitation actions before the incident is handed back. If actions have not been completed, identify remaining items in the transition plan:

- Narrative of necessary transition and post transition activities.
- List of natural and cultural resources to be protected
- Resource Advisors needed for transition and post-transition activities.
- Remaining work days of current READS until end of assignment demobilization
- Resources and equipment to be left on the incident to complete post-transition activities including heavy equipment, transportation, aviation, personal protective equipment, medical, gloves, batteries, etc.
- Back haul of equipment no longer needed
- Maps
  - Damages
  - Progress
  - Work needed to be done
  - Briefing
- GIS Data
- Hazard mitigation and safety considerations
- Organization chart
- Communication plan
- All documentation such as ICS Form 214 Unit Log

Documentation

It is important to document significant events, actions taken, lessons learned and other information with long-term value for managing natural resources. These records may include operational actions taken in the management of the incident such as daily action plans, internal briefings, reports, inspection

checklists, unit logs, worksheets, safety narratives, photos, claims, and litigation support. To contribute to documentation, the READ:

Completes daily Unit Logs (ICS Form 214 found in Appendix Q)

- Provides all written documentation developed during the incident to the documentation unit,

- Provides documentation of all effects,

- Completes appropriate forms to document management decisions, and

- Completes READ final report (an example is in Appendix G: Sample Resource Advisor Final Report).

Check-Out and Demobilization

At the completion of an assignment, the Resource Advisor will follow a transfer of duties process. Or if the incident is being closed-out, the READ will follow an incident termination and closure process. If another READ is going to transition with the departing READ, the outgoing READ should outline tasks or work that needs to be completed, local safety hazards and considerations, location of facilities and equipment, resource values to be protected and mitigation concerns. To check out and demobilize at the end of an assignment, the READ:

- Receives demobilization instructions from supervisor,

- Ensures that incident and agency demobilization procedures are followed,

- Provides written narrative or READ report, as appropriate,

- Provides other written materials for efficient transition for replacement, and

- Obtains performance evaluation.

Incident Management Principles and Standards

Scaling a Response Effort

The makeup and duration of a Resource Advising support team always depends on the specific circumstances of the incident. Along with the Incident Command System (ICS), the number of Resource Advisors is scalable. For a minor incident, the response may only consist of one individual or technical information may be conveyed by phone contact. A slightly more complex incident is likely to involve a technical expert responding on-scene to the incident. Major incidents will present a range of resource management issues that change over the first days and weeks of the incident. There may be several resource advisors to cover separate areas of the incident and to address various areas of expertise. They may be coordinated by a Resource Advisor Coordinator (REAC) or supervised in the field by Division Group Supervisors. The Resource Advisor may be involved in incident trajectory analysis to determine future Resource Advising needs. Over the course of a response, the Resource Advising team must change based on the needs of a dynamic incident.

Appropriate Response Strategies

Any managed incident must have an appropriate response. The appropriate response will be based upon pre-planning considerations (i.e., objectives found in general management plans, fire management plans, Area Contingency Plans, etc.) The response will be commensurate with these stated incident management principles and the threat to life, property, and resource values. These strategies will include:

- An appropriate response that results in curtailment of identifiable threats,

- A progressively developed assessment and operational action plan that documents the analysis and selection of strategies and describes the appropriate responses during the management of an incident, and

- An assessment and decision making process that evaluates alternative management strategies against selected safety, environmental, social, economic, political, and resource management objectives.

Cost Effective Incident Management and Resource Protection

Appropriate response actions must be planned and executed to minimize resource loss consistent with approved land use plan management objectives in a cost effective manner. Agency Administrators or the Federal On-Scene Coordinator (FOSC) will ensure that a complexity analysis is prepared to determine the most appropriate incident organization and management strategies for a response action.

Other Considerations

When choosing a Resource Advisor Coordinator, emphasis should be on finding someone with understanding of policy and comfort in highly politicized situations.

READs working in field operations should be physically fit, and have an understanding of tactics.

A Resource Advisor who meets the criteria for Entitlement to Hazard Pay Differential shall receive it. The criteria are listed in the *Interagency Incident Business Management Handbook*. Be aware that these criteria differ across incident types.

CONTAMINANT AND POLLUTION RESPONSE

- Identify the toxin
- Identify the human effects both chronic and acute
- Identify the emergency response protocols for the toxin and safe zones
- Identify the Environmental Effects
- Identify the Origin and Spread
- Identify Remediation

Always wear proper personal protective equipment

OIL AND HAZARDOUS MATERIAL SPILLS REFERENCE MATERIALS

- **U.S. Coast Guard Incident Management Handbook (IMH)**
  https://www.uscg.mil/d9/D9Response/docs/USCG%20IMH%202014%20COMDTPUB%20P3120.17B.pdf
- **Bureau of Safety and Environmental Enforcement**
  https://www.bsee.gov/newsroom/partnerships/interagency
- **Migratory Bird Treaty Act**
  https://www.fws.gov/birds/policies-and-regulations/laws-legislations/migratory-bird-treaty-act.php
- **NOAA Office of Response and Restoration**
  http://response.restoration.noaa.gov/
- **EPA Oil Spill web page**
  https://www.epa.gov/oil-spills-prevention-and-preparedness-regulations

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Appendix A: Safety

Public safety and incident responder safety are ALWAYS our first priorities. All response activities must reflect this commitment. The commitment and accountability for safety is a joint responsibility of all responders, managers, and administrators. Every supervisor, employee, and volunteer is responsible for following safe work practices and procedures, as well as identifying and reporting unsafe conditions.

Management controls, engineering controls, equipment guards, and administrative procedures are the first line of defense against exposing an employee to a hazard. The most effective mitigation is avoidance. Personal Protective Equipment (PPE) will be used to protect employees against hazards that exist after all management controls are exhausted.

The primary means by which we prevent accidents in incident operations is through aggressive risk management.

A five step Risk Management Process provides responders and managers a simple, universal, and consistent way to practice risk management by:

- Identify Hazards (Situational Awareness),
- Assess Hazards,
- Develop Controls and Make Risk Decisions,
- Implement Controls, and
- Supervise and Evaluate.

It is the responsibility of every responder to be familiar with the incident priorities, objectives, and strategies as outlined in the Incident Action Plan, to attend safety briefings, to follow safety requirements as outlined in the Health and Safety Plan (HASP) and Job Hazard Assessments (JHAs) or other risk management tools, and to immediately notify your supervisor or safety officer of unsafe conditions.

Safety can be complex and this section only provides basic incident safety information. Responders are encouraged to take additional training in safety and incident response which supports your development of knowledge and skills.

Standard Orders and Watch-Out Situations

The wildland fire response community developed a set of standard orders and watch-out situations to prompt situational awareness and support a safe work environment. We present a similar list for all-hazard response situations that can be adapted to the specifics of your incident conditions.

ALL-HAZARD STANDARD INCIDENT ORDERS:

1   Keep informed on incident weather conditions and forecasts.
2   Know what your incident is doing at all times.
3   Base all actions on current and expected behavior of the incident.
4   Identify escape routes and safety zones, and make them known.
5   Post lookouts when there is possible danger.
6   Be alert. Keep calm. Think clearly. Act decisively.
7   Maintain prompt communications with your forces, your supervisor, and adjoining forces.
8   Give clear instructions and be sure they are understood.
9   Maintain control of your forces at all times.
10 Respond decisively, having provided for safety first.

Adapted from Firefighting 10 Standard Orders

ALL-HAZARD WATCH-OUT SITUATIONS:

1   Incident not scouted and sized up.
2   Area of response not seen in daylight.
3   Safety zones and escape routes not identified.
4   Unfamiliar with weather and local environmental factors.
5   Uninformed on strategy, tactics, and hazards.
6   Instructions and assignments not clear.
7   No communication link with crewmembers or supervisor.
8   Managing a hazardous area without multiple escape routes.
9   Cannot see main hazards; not in contact with someone who can.
10 On a hillside where rolling material can spread fire or hazardous materials.
11 Weather changes that affect responder performance (becoming hotter, colder, drier, wetter).
12 Weather changes that affect how the incident reacts (wind increases and/or changes direction; precipitation spreads contaminants and destabilizes land masses, etc.).
13 Hazardous situation is unstable and escalating.
14 Terrain or water bodies makes escape to safety zones difficult.
15 Taking a nap in or near hazard area.

Adapted from Firefighting 18 Watch-Out Situations

STANDARD FIREFIGHTING ORDERS:

1.   Keep informed on fire weather conditions and forecasts.
2.   Know what your fire is doing at all times.
3.   Base all actions on current and expected behavior of the fire.
4.   Identify escape routes and safety zones, and make them known.
5.   Post lookouts when there is possible danger.
6.   Be alert. Keep calm. Think clearly. Act decisively.
7.   Maintain prompt communications with your forces, your supervisor, and adjoining forces.
8.   Give clear instructions and be sure they are understood.
9.   Maintain control of your forces at all times.
10. Fight fire aggressively, having provided for safety first.

FIRE WATCH-OUT SITUATIONS

1.   Incident not scouted and sized up.
2.   In country not seen in daylight.
3.   Safety zones and escape routes not identified.
4.   Unfamiliar with weather and local environmental factors.
5.   Uninformed on strategy, tactics, and hazards.
6.   Instructions and assignments not clear.
7.   No communication link with crewmembers or supervisor.
8.   Constructing line without safe anchor point.
9.   Building fireline downhill with fire below.
10. Attempting frontal assault on fire.
11. Unburned fuel between you and fire.
12. Cannot see main fire; not in contact with someone who can.
13. On a hillside where rolling material can ignite fuel below.
14. Weather becoming hotter and drier.
15. Wind increases and/or changes direction.
16. Getting frequent spot fires across line.
17. Terrain and fuels make escape to safety zones difficult.
18. Taking a nap near fireline

Personal Protective Equipment

Personal Protective Equipment (PPE) refers to both clothing and equipment used to shield or isolate individuals from chemical, physical, radiological, biological, or other hazards that may be encountered at an incident. No single type of PPE can protect a responder from all-hazards. Incorrect use of PPE can cause harm to the wearer or increase the risk of exposure or injury. Responders must recognize that some particular and necessary PPE can cause restricted movement and interfere with communication; it can also contribute to heat and cold stress concerns. In general, the greater the amount of protection needed, the greater the associated risks. Therefore, the level of PPE selected should be the one that can provide adequate level of protection.

Using personal protective equipment is often essential, but it is generally the last line of defense after mitigation and engineering controls, work practices, and administrative controls. Engineering controls involve physically changing a machine or work environment. Administrative controls involve changing how or when responders do their jobs, such as scheduling work and rotating workers to reduce exposures. Work practices involve training responders how to perform tasks in ways that reduce their exposure to incident hazards.

Using personal protective equipment requires hazard awareness and training on the part of the user. Responders must be aware that the equipment alone does not eliminate the hazard. If the equipment fails, exposure and/or injury could occur. Proper selection of PPE for individual responders must be based upon a careful assessment of two factors: (1) the hazards anticipated to be present, or are present, at the scene and (2) the probable impact of those hazards, based upon the mission role of the individual.

The Incident Commander and Safety Officer have the responsibilities to analyze the incident related hazards and provided guidance on PPE. At smaller incidents, this role may be delegated. Regardless, you are required to follow incident guidance regarding the use of PPE. Further, you should always maintain situational awareness and assess your role in the incident to determine if additional hazards are present that require the use of PPE.

To maximize the safety benefits of PPE, you should do the following:

- Be aware of the need and requirement for PPE or seek assistance if uncertain,
- Understand the limitations of personal protective equipment in protecting yourself from injury or exposure,
- Appropriately put on, adjust, wear, and take off PPE,
- Properly use protective equipment, and
- Maintain protective equipment.

OSHA has divided PPE into four categories based on the degree of afforded protection (see text box below); distinction in these levels primarily focus on respiratory protection but takes into account proper dermal (skin) protection. Site specific conditions and work requirements should be considered when selecting the appropriate level of PPE. At times, it may be appropriate to "modify" PPE levels of protection identified in the following chart. For example, modified level D may include disposable splash protection (chemical resistant suit) where there is no respiratory threat. Also be aware, that your agency may prohibit the use of some PPE (e.g., respirators) without a waiver from the agency.

Wildland fire field attire and PPE is detailed in the Interagency Standards for Fire and Fire Aviation (https://www.nifc.gov/policies/pol_ref_redbook.html). It includes requirements for:

- Wildland fire boots,

- Fire shelter,

- Hard hat with chinstrap,

- Ear plugs/hearing protection,

- Eye and Face Protection,

- Yellow long-sleeved flame resistant shirt,

- Flame resistant trousers, and

- Leather or leather/flame resistant combination gloves. Note that flight gloves are not approved for fireline use.

PERSONAL PROTECTIVE EQUIPMENT SELECTION

OSHA (29 CFR) Personal protective equipment is divided into four categories based on the degree of protection afforded. Levels A, B, C, and D based on the hazards, or suspected hazards, a responder is likely to encounter.

Level A – To be selected when the greatest level of skin, respiratory, and eye protection is required
1. Positive pressure, full face-piece self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA, approved by the National Institute for Occupational Safety and Health (NIOSH).
2. Totally-encapsulating chemical-protective suit.
3. Coveralls*.
4. Long underwear*.
5. Gloves, outer, chemical-resistant.
6. Gloves, inner, chemical-resistant.
7. Boots, chemical-resistant, steel toe and shank.
8. Hard hat (under suit)*.
9. Disposable protective suit, gloves and boots (depending on suit construction, may be worn over totally-encapsulating suit).

Level B – The highest level of respiratory protection is necessary but a lesser level of skin protection is needed
1. Positive pressure, full-face piece self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).
2. Hooded chemical-resistant clothing (overalls and long-sleeved jacket; coveralls; one or two-piece chemical-splash suit; disposable chemical-resistant overalls).
3. Coveralls*.
4. Gloves, outer, chemical-resistant.
5. Gloves, inner, chemical-resistant.
6. Boots, outer, chemical-resistant steel toe and shank.
7. Boot-covers, outer, chemical-resistant (disposable)*.
8. Hard hat*.
9. Face shield*.

Level C – The concentration(s) and type(s) of airborne substance(s) is known and the criteria for using air purifying respirators are met
1. Full-face or half-mask, air purifying respirators (NIOSH approved).
2. Hooded chemical-resistant clothing (overalls; two-piece chemical-splash suit; disposable chemical-resistant overalls).
3. Coveralls*.
4. Gloves, outer, chemical-resistant.
5. Gloves, inner, chemical-resistant.
6. Boots (outer), chemical-resistant steel toe and shank*.
7. Boot-covers, outer, chemical-resistant (disposable)*.
8. Hard hat*.
9. Escape mask*.
10. Face shield*.

Level D – A work uniform affording minimal protection used for nuisance contamination only
1. Coveralls.
2. Gloves*.
3. Boots/shoes, chemical-resistant steel toe and shank.
4. Boots, outer, chemical-resistant (disposable)*.
5. Safety glasses or chemical splash goggles*.
6. Hard hat*.
7. Escape mask*.
8. Face shield*.
_____
 *Optional, as applicable.

Right To Refuse Risk

Every individual has the right to "turn down" unsafe assignments. When an individual feels an assignment is unsafe, they also have the obligation to identify, to the degree possible, safe alternatives for completing that assignment. The following questions may be asked at various levels of an assignment such as at dispatch, before a daily assignment, or during an operational field assignment.

Ten Questions Every Responder Must Ask and Answer Yes To Before Engaging in Incident Response

1 Do you understand the organization for this incident and your place in it?

2 Is there a plan and do you understand it?

3 Do you know that it is OK to ask questions and ensure that the instructions you are given provide for your safety and the safety of your fellow responders?

4 Do you know the weather forecast?

5 Have you followed the five steps of Risk Management, then assessed hazard behavior, and made a prediction?

6 Are you practicing situational awareness and safety protocols as outlined in the incident documentation such as the Incident Action Plan, Job Hazard Analyses etc.?

7 Do you have Lookouts, Communications, Escape Routes, and Safety Zones in place?

8 Do you understand that it is both your responsibility and your right to say No to orders that cannot be accomplished without compromising one or more of the Standard Response Orders or without mitigating each of the Watch-Out Situations?

9 Can you describe the hazardous environment you are operating in?

10 Are you prepared to engage, monitor the hazard environment, be proactive, and make adjustments?

TURNING DOWN AN ASSIGNMENT

Turning down an assignment is one possible outcome of managing risk. A "turn down" is a situation where an individual has determined they cannot undertake an assignment as stated and they are unable to negotiate an alternative solution. The turn down of an assignment must be based on an assessment of risks and the ability of the individual or organization to control those risks. Individuals may turn down an assignment when it is determined to be unsafe whereby:

1. There is a violation of safe work practices.
2. Environmental conditions make the work unsafe.
3. They lack the necessary qualifications or experience.
4. Defective equipment is being used.

The individual will directly inform their supervisor that they are turning down the assignment. They will use the criteria outlined in the Risk Management Process (Firefighting Orders, Watch-Out Situations, etc.) to document the turn down.

Upon being informed, the supervisor will notify the Safety Officer immediately of the turn down. If there is no Safety Officer, the appropriate Section Chief or the Incident Commander should be notified. This provides accountability for decisions and initiates the communication of safety concerns within the incident organization.

If the supervisor asks another resource to perform the assignment, they are responsible to inform the new resource that the assignment was turned down and the reasons why it was turned down.

If an unresolved safety hazard exists or an unsafe act was committed, the individual should also document the turn down by submitting a SAFENET (ground hazard) or SAFECOM (aviation hazard) form in a timely manner. These actions do not stop an operation from being carried out. This protocol is integral to the effective management of risk as it provides timely identification of hazards to the chain of command. It also raises risk awareness for both leaders and subordinates, and promotes accountability.

Safety For The READ

Resource Advisors assigned to a wildfire may be directly deployed to the fireline. At the other end of the spectrum, they may be giving their advice through meetings and briefings. An example of a READ being assigned to the fireline is a cultural resource specialist that is identifying archeological sites ahead of a crew building fireline. This type of line READ may be imbedded in a fire fighting crew and should meet a higher standard of qualifications and such as Fire Fighter Type II or a Resource Advisor Fireline (REAF). With this type of qualification, the fireline READ can work unescorted with the approval of the Incident Commander.

> For more information on Fire Incident Safety, refer to the Safety and Risk Management chapter of the *Interagency Standards for Fire and Fire Aviation* also known as the Red Book (https://www.nifc.gov/PUBLICATIONS/redbook/2017/Chapter07.pdf).

Other READs that do not meet this higher standard can still visit the fire to assess resource concerns by meeting these requirements.

Minimum Requirements for Visits to the Fireline and Prescribed Burns

Visits (such as field assessments, media visits, or political/administrative tours) to hazardous areas of the fire or areas that pose a fire behavior threat will be managed by meeting the requirements below. These requirements are defined in the Interagency Standards for Fire and Fire Aviation also known as the Red Book (https://www.nifc.gov/PUBLICATIONS/redbook/2017/Chapter07.pdf). Please check the site for up to date requirements.

- Visits to the fireline must have the approval of the Incident Commander/Burn Boss.
- Visitors must maintain communications with the Division Supervisor or appropriate fireline supervisor of the area they are visiting.
- Visitors will have the required Personal Protective Equipment:
  - Wildland fire boots,
  - Fire shelter (M-2002),
  - Helmet with chinstrap,
  - Goggles/safety glasses (as identified by JHAs/RAs),
  - Ear plugs/hearing protection,
  - National Fire Protection Association (NFPA) 1977 compliant long-sleeved,
  - flame resistant shirt,
  - NFPA 1977 compliant flame resistant trousers,
  - Leather or leather/flame resistant combination gloves. Flight gloves are not approved for fireline use, and
  - Additional PPE as identified by local conditions, Safety Data Sheet, 12 or Job Hazard Analysis/Risk Analysis.
- Visitors will have required field attire:
  - Undergarments made of 100 percent or the highest possible content of natural fibers or flame-resistant materials.
- Visitors will have required equipment/supplies:

o Hand tool, and

o Water canteen.

Visitors to the Fireline and Prescribed Burns may be "Non-Escorted" or "Escorted" depending on the following requirements:

Non-Escorted Visits

Visitors must have an incident qualification with a minimum physical fitness level of "light" to visit the fireline unescorted.

- Must have adequate communications and radio training.

- Completed the following training:

    o Introduction to Fire Behavior (S-190),

    o Firefighter Training (S-130), and

    o Annual Fireline Safety Refresher Training, including fire shelter training.

- Deviation from this requirement must be approved by the Incident Commander or Burn Boss.

The law enforcement physical fitness standard is accepted as equivalent to a "light" Work Capacity Test work category.

Escorted Visits

All visitors lacking the above training and physical requirements must be escorted while on the fireline.

- Visitors must receive training in the proper use of Fireline PPE,

- Requirement for hand tool and water to be determined by escort,

- Visitors must be able to walk in mountainous terrain and be in good physical condition with no known limiting conditions,

- Escorts must be minimally qualified as Single Resource Boss, and

- Deviation from these requirements must be approved by the Incident Commander or Burn Boss.

Aviation Safety

The US Department of Interior (DOI) has training and equipment requirements and policies that must be followed whenever a READ uses aviation assets to achieve their mission. When a READ is on a multi-agency response, DOI's requirements may differ from those of partner agencies, but still apply to DOI employees. It is the READs responsibility to understand and comply with these requirements, which are typically updated annually. The latest Interagency Aviation Training guidance can be found at https://www.doi.gov/aviation/safety/training.

Helicopter Observation Flights

Visitors who take helicopter flights to observe incidents must receive approval from the Incident Commander. They must also receive a passenger briefing and meet the following requirements:

Required Personal Protective Equipment:

- Flight helmet,
- Leather boots,
- Flame-resistant clothing, and
- All leather or leather and aramid gloves.

Occasional passengers/visitors have no training requirement but a qualified flight manager must supervise loading and unloading of passengers.

> **STANDARD AVIATION QUESTIONS**
>
> 1. Is this flight necessary?
> 2. Is there a better way to do it?
> 3. Who is in charge?
> 4. Are you deviating from the assigned operations of the flight?
> 5. Should you stop flight operations due to changes in communications, weather, confusion, turbulence, personnel, or conflicting priorities?
>
> Anyone can refuse or curtail a flight when an unsafe condition may exist. Never let undue pressure influence your judgment. Avoid mistakes; don't hurry!

Fixed-Wing Observation Flights

No Personal Protective Equipment is required for visitors and agency personnel who take fixed-wing flights to observe incidents. However, a passenger briefing is required, and the flight level must not drop below 500 feet Above Ground Level.

Appendix B: Resource Advisor Training and Sample Agenda

Resource Advisor training is an important component for developing a professional and ready workforce. It is required for federal wildland fire READs and All-Hazard assignments for the US Department of Interior (National Wildfire Coordinating Group Course Number N-9042).

If developing a course, the use of local case studies or a scenario based format is an effective teaching tool that allows the student to visualize how an incident is actually managed and their role within the incident. Practice and train by taking advantage of walk-through, desktop, or sand table exercises. It is a good idea to bring in an incident commander that has experience with Resource Advising and can discuss lessons learned from an event.

If you have had a recent incident, you may want to include a field trip in your training. One field trip model is the staff ride. In a staff ride, you are walked through a progression of events and discuss the decision points made by the Resource Advisor and the incident management team. It is good to bring up success stories but also failures so the students can learn from real world experiences. This needs to be conducted objectively without placing blame or shame on any individuals.

Home units should host an annual refresher or interdisciplinary READ meeting.

The Department of the Interior has developed a series of on-line courses for Resource Advisors. These courses are available on the Department of the Interior's learning portal, DOI Learn: https://gm2.geolearning.com/geonext/doi/coursesummary.CourseCatalog.geo?id=115401 and through the web for non-Department participants (https://nctc.fws.gov/courses/doi/read-basic-olt-101/content/home.html). Successful completion of the Basic On-Line Course (or equivalent) is required to qualify as a DOI All-Hazard READ.

At minimum, local training must meet the same objectives and goals as the Basic DOI On-line Course that is described below. Local training should also address as many of the Intermediate On-line Course objectives as possible. The On-line Course objectives and goals are provided below to help guide local course development. A sample agenda is included as a starting point.

DOI On-Line READ Training Course Guidance

Overall Course Objectives

1. Provide resource management professionals with knowledge, skills, and information to serve in the capacity as a Resource Advisor in support of an Incident Command relative to the protection, treatment and stabilization of cultural and natural resources.

2. Prepare resource professionals to apply their knowledge in the context of emergency response.

3. Prepare resource professionals for their response to a range of incidents and the effects on a diversity of resources so that they may respond to a range of incidents and their effects on a diversity of resources.

Course Goals – Basic (2 hour overview)

1. Define the roles and responsibilities of a Resource Advisor.

2. Prepare responders from multiple disciplines to serve as advocates for natural, cultural and other resources such as wilderness, in their role as a Resource Advisor.

3. Provide responders with an orientation to the deployment experience.

4. Cross-train responders from multiple disciplines to serve as advocates for natural and cultural resources in their role as a Resource Advisor.

5. Provide Resource Advisors the information necessary to recognize and explain appropriate regulatory frameworks relevant to Incident Command planning and decision-making.

6. Provide an introduction to critical analysis, strategic thinking, and communication skills.

Course Objectives – Basic Level

At the end of this course the student will be able to:

1. Explain the potential roles of a Resource Advisor within the context of the Incident.

2. Briefly describe the range of applicable regulatory frameworks.

3. Identify range of natural, cultural, and other resources a Resource Advisor may encounter at an incident.

4. Describe/identify what steps you need to take and things you need to do before deployment.

Course Learning Objectives – Basic Level

1. Define roles and responsibilities of a resource advisor.

2. Review a Resource Advisor's reporting and communication structure within an Incident Command System.

3. Recognize the limitations of authority of a resource advisor and determine the mechanisms for obtaining assistance.

4. List and briefly describe relevant regulatory frameworks and their application.

5. Briefly define natural, cultural, and other resources such as wilderness, and give examples of each.

6. List natural, cultural, and other resources at risk and the potential sources of risks.

7. List/describe pre-deployment steps.

Course Goals – Intermediate Level (4-6 hr. total for 3 modules)

1 Cross-train responders from multiple disciplines to serve as advocates for natural, cultural, and other resources in their role as a Resource Advisor.

2 Provide Resource Advisors the information necessary to recognize and explain appropriate regulatory frameworks relevant to Incident Command planning and decision-making.

3 Provide an introduction to critical analysis, strategic thinking, and communication skills.

Course Objectives – Intermediate Level

At the end of this course the student will be able to:

1 Identify a broad spectrum of natural, cultural, and other resources such as wilderness, that are typically relevant to an incident.

2 Know how to identify and locate the information you need to make resource condition assessments.

3 Identify and explain relevant regulatory and compliance frameworks to inform Incident Command decisions.

4 Provide resource condition assessments (evaluations) and/or recommendations in a time-sensitive scenario.

Course Learning Objectives – Intermediate Level

1 Introduce and describe a comprehensive list of natural, cultural, and other resource conditions typically associated with an incident.

2 Explain considerations for determining the need for additional expertise and the mechanisms by which a Resource Advisor can seek this expertise.

3 Identify potential issues related to natural, cultural and other resources such as wilderness, by category and risk level.

4 Describe roles and responsibilities of other federal agencies that may be present at the same incident (FEMA, NOAA, U.S. Army Corps of Engineers).

5 Explain how to recognize regulatory and compliance frameworks and apply these to a specific type of incident.

6 Explain potential implications of relevant laws in order to provide a recommendation.

7 Compare the likelihood of harm to the degree of consequence with respect to the applicable regulations.

8 Consider time-sensitive priorities in developing a recommendation.

9 Document and communicate recommendations as appropriate.

READ TRAINING
SUGGESTED AGENDA ITEMS

- Opening Remarks (Introductions, Course Expectations, Logistics, etc.).
- Local Case Studies or a Created Scenario Format.
- Roles and Responsibilities of a Resource Advisor and Agency Representative.
- Qualifications.
- Social Engineering and Being an Effective READ.
- Incident Management Input (Expectations, Team Meetings, Inserting Yourself into the Process, Transitioning, etc.).
- Knowing Your Way Around an Incident and Incident Command Post.
- Delegation of Authorities and the Agency's Role.
- Decision Support Tools.
- Incident Action Plan Input.
- Minimum Impact Strategies and Tactics.
- Regulatory Framework (Resource Laws, Regulations, Policies, and Guidance).
- Planning Guidance (Land Use Plans, Fire Management Plans, etc.).
- Local Resource Issues (Endangered Species, Cultural, Wilderness, etc.).
- Critical analysis, strategic thinking, and communication skills.
- Incident Business Management (Dispatching, Timekeeping, etc.).
- Field Kit Contents.
- Incident Type Specific Information (e.g., Suppression Damage Repair, Burned Area Emergency Response, Chemical Toxicity, etc.).

Appendix C: Incident Organizations and Lines of Communication

READs may communicate with or provide orientation to any responder on the incident or a member of the public. Needs of the incident may vary. For the following example organizational charts, the following lines of communication are illustrated:

———	Direct lines of communication
– – –	Indirect lines of communication

FIGURE 1: SIMPLE SCENARIO
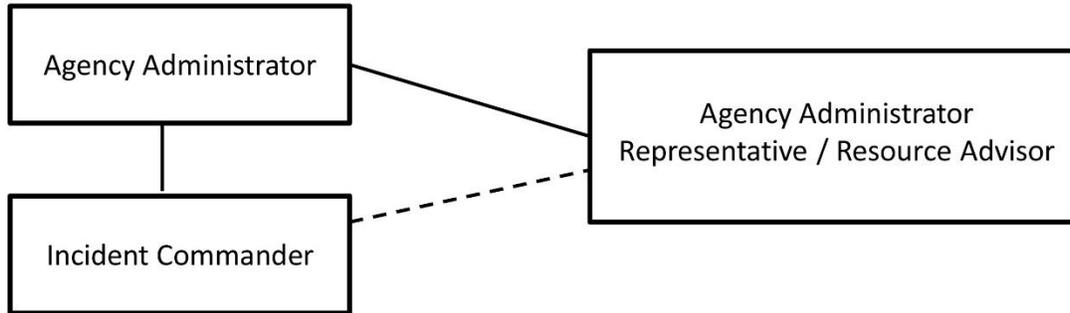
FIGURE 2: COMPLEX SCENARIO
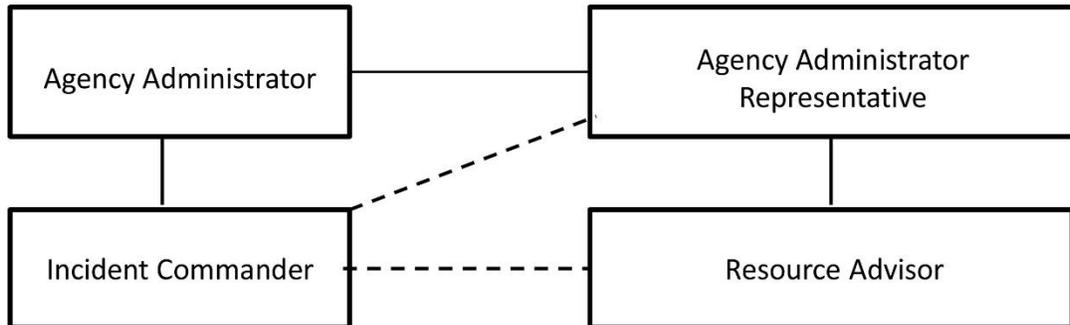
Note: There may not always be an Agency Administrator or Agency Representative assigned to an incident. A FEMA-led response is one example.

Figure 3: Incident Command Structure - Low Complexity Wildfire Incident (Example, Type 3)
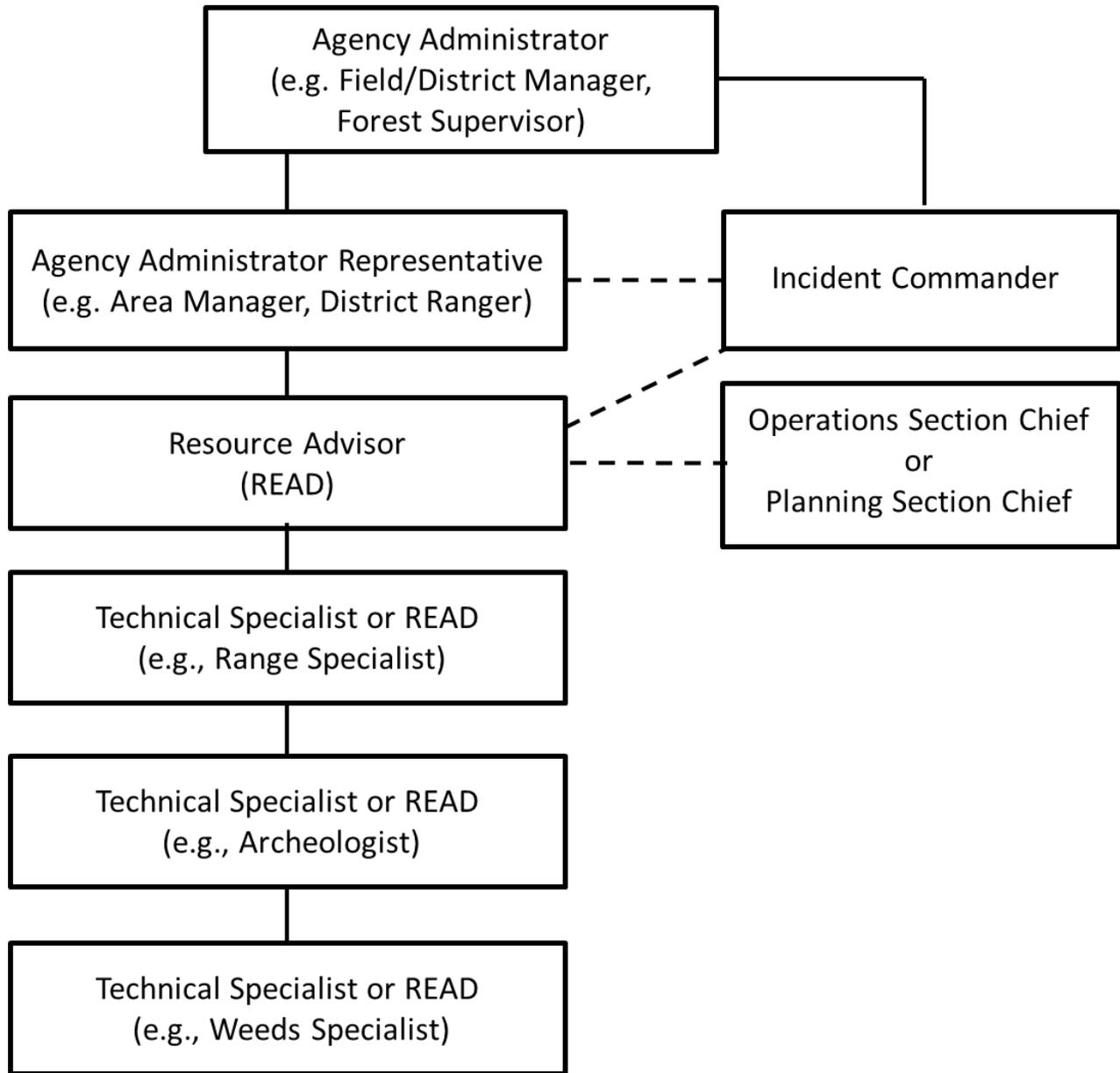
Figure 4: Incident Command Structure – High Complexity Wildfire Incident (Example, Type 1)

```
                              ┌─────────────────────────┐
                              │    Agency Administrator  │
                              │ (e.g. Field/District     │
                              │  Manager,                │
                              │   Forest Supervisor)     │
                              └─────────────────────────┘
              ┌──────────────────────────────┴──────────────────┐
  ┌────────────────────────────────┐              ┌──────────────────────┐
  │ Agency Administrator            │              │  Incident Commander  │
  │ Representative                  │              └──────────────────────┘
  │ (e.g. Area Manager,             │                          │
  │  District Ranger)               │            ┌─────────────┴──────────┐
  └────────────────────────────────┘      ┌────────────┐      ┌────────────┐
              │                            │ Operations │      │ Planning   │
  ┌────────────────────────────┐           │ Section    │      │ Section    │
  │ Lead Resource Advisor or   │- - - - - -│ Chief      │      │ Chief      │
  │ READ Coordinator (READ)    │           └────────────┘      └────────────┘
  └────────────────────────────┘                  │
              │                           ┌────────┼────────┐
  ┌────────────┐                       ┌──────┐ ┌──────┐ ┌──────┐
  │ Assistant  │                       │ DIVS │ │ DIVS │ │ DIVS │
  │ READ       │                       │ DIV A│ │ DIV B│ │ DIV C│
  └────────────┘                       └──────┘ └──────┘ └──────┘
```

READ DIV A Coordinator	READ DIV B Coordinator	READ DIV C Coordinator
READ or THSP (e.g., Hydrologist)	READ or THSP (e.g., Heritage Specialist)	READ or THSP (e.g., Fisheries Specialist)
READ or THSP (e.g., Archeologist)	READ or THSP (e.g., Wilderness Specialist)	READ or THSP (e.g., Range Specialist)
READ or THSP (e.g., Botanist)	READ or THSP (e.g., Soil Specialist)	READ or THSP (e.g., Archeologist)

*THSP: Technical Specialist.

*DIVS: Division/Group Supervisor

Figure 5: Incident Command Structure—Small Oil or Hazardous Materials Release

```
┌─────────────────────────┐         ┌─────────────────────────┐
│   Incident Commander    │         │  Agency Administrator / │
│                         │         │       Executive         │
└───────────┬─────────────┘         └─────────────────────────┘
            │                                    ╲
┌───────────┴─────────────┐                       ╲
│ Operations Section Chief│                         ╲
│           or            │                          ╲
│  Planning Section Chief │                           ╲
└───────────┬─────────────┘                            ╲
            │                                            ╲
┌───────────┴─────────────┐                               ╲
│ Resource Advisor Coordinator                             ╲
│          (REAC)         │─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ╲
└──────┬──────────┬───────┘
       │          │
┌──────┴──────┐  ┌┴──────────────┐
│ READ /      │  │ READ /        │
│ Technical   │  │ Technical     │
│ Specialist  │  │ Specialist    │
│ (e.g.,      │  │ (e.g.,        │
│ Archeologist)  │ Invasive      │
│             │  │ Species       │
│             │  │ Specialist    │
└─────────────┘  └───────────────┘
```
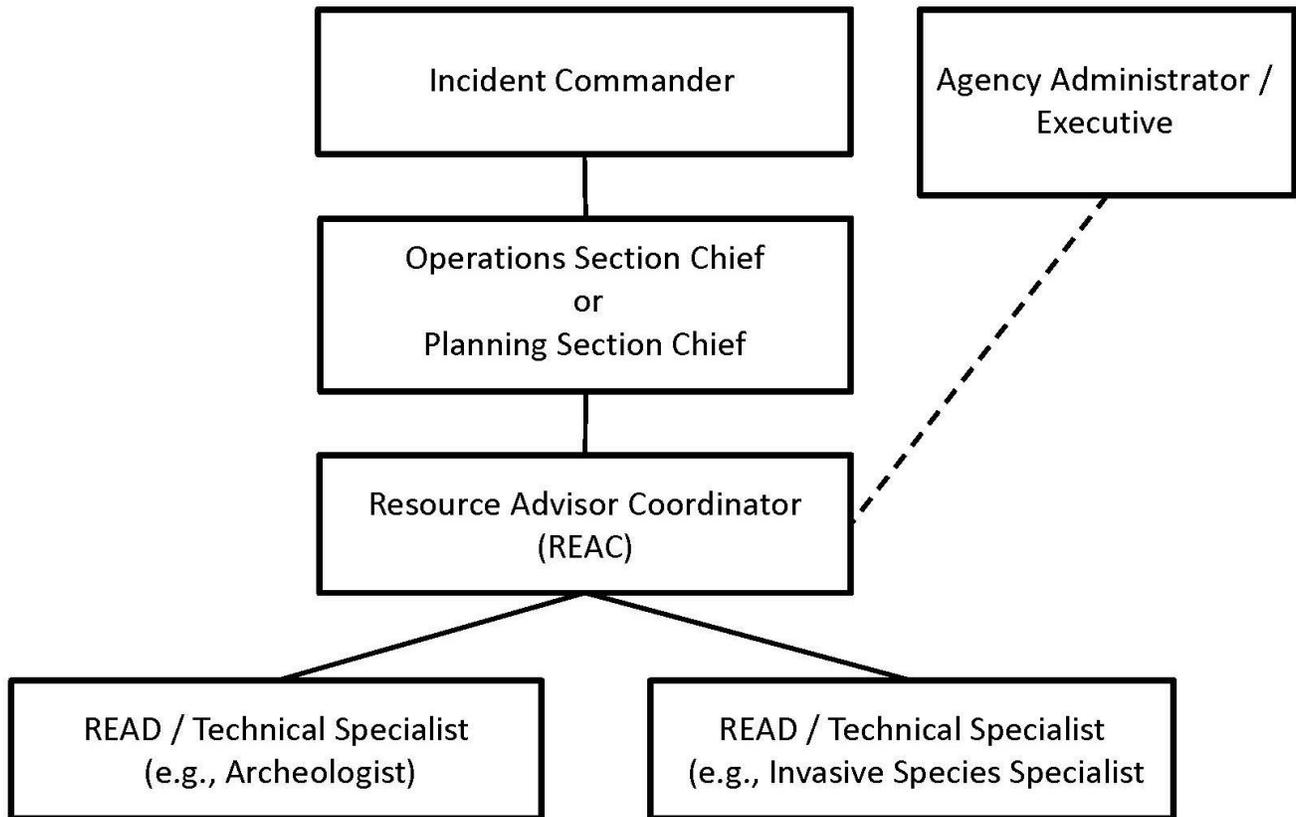
## Figure 6: Incident Command Structure—Major Oil or Hazardous Materials Release
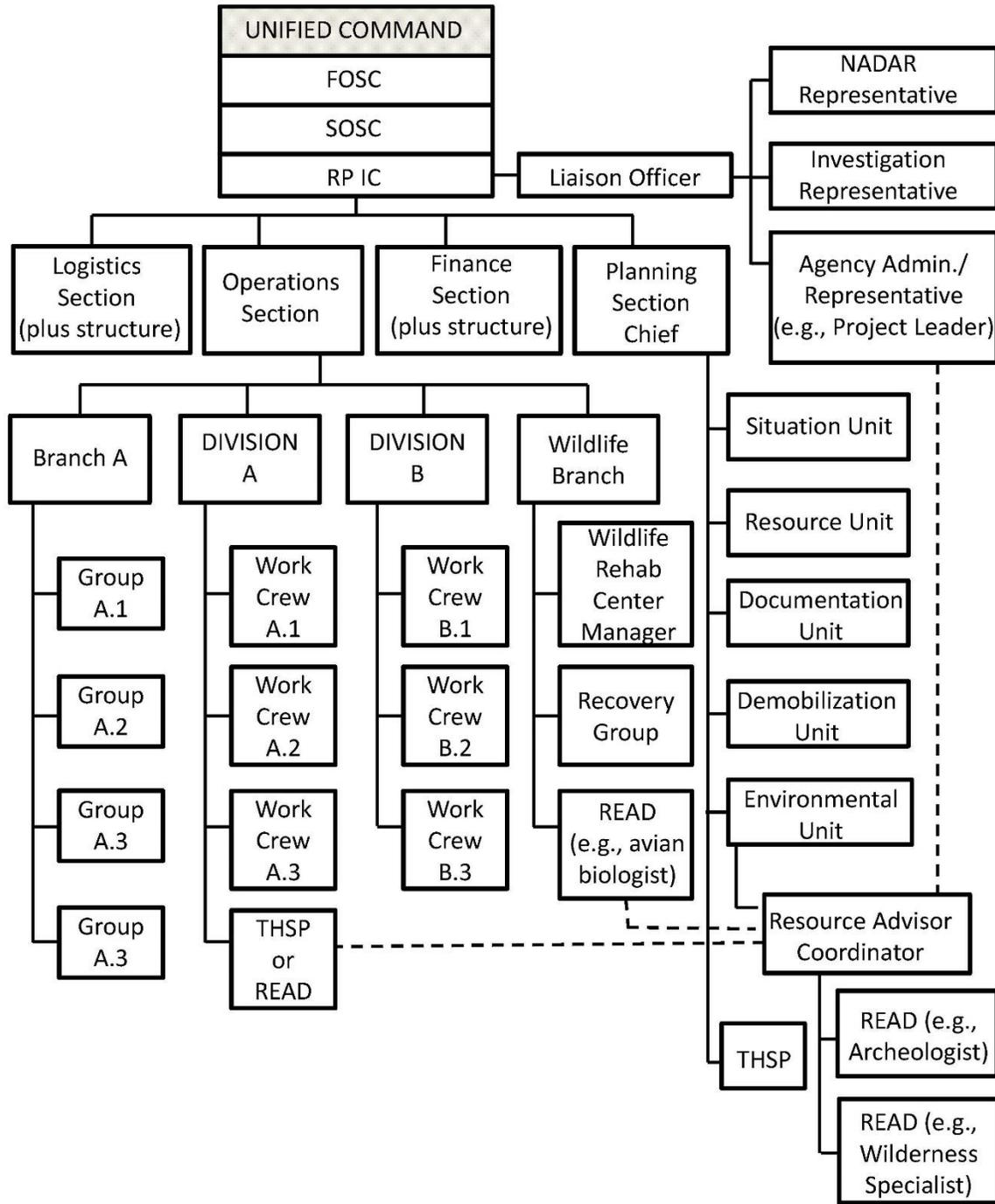
*THSP: Technical Specialist.

Figure 7: Incident Command Structure—Small Hurricane
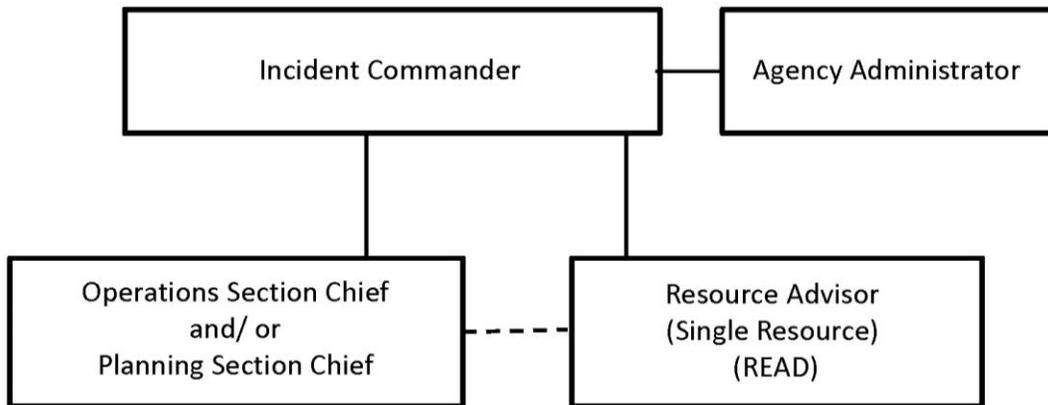
Figure 8: Incident Command Structure—Major Hurricane
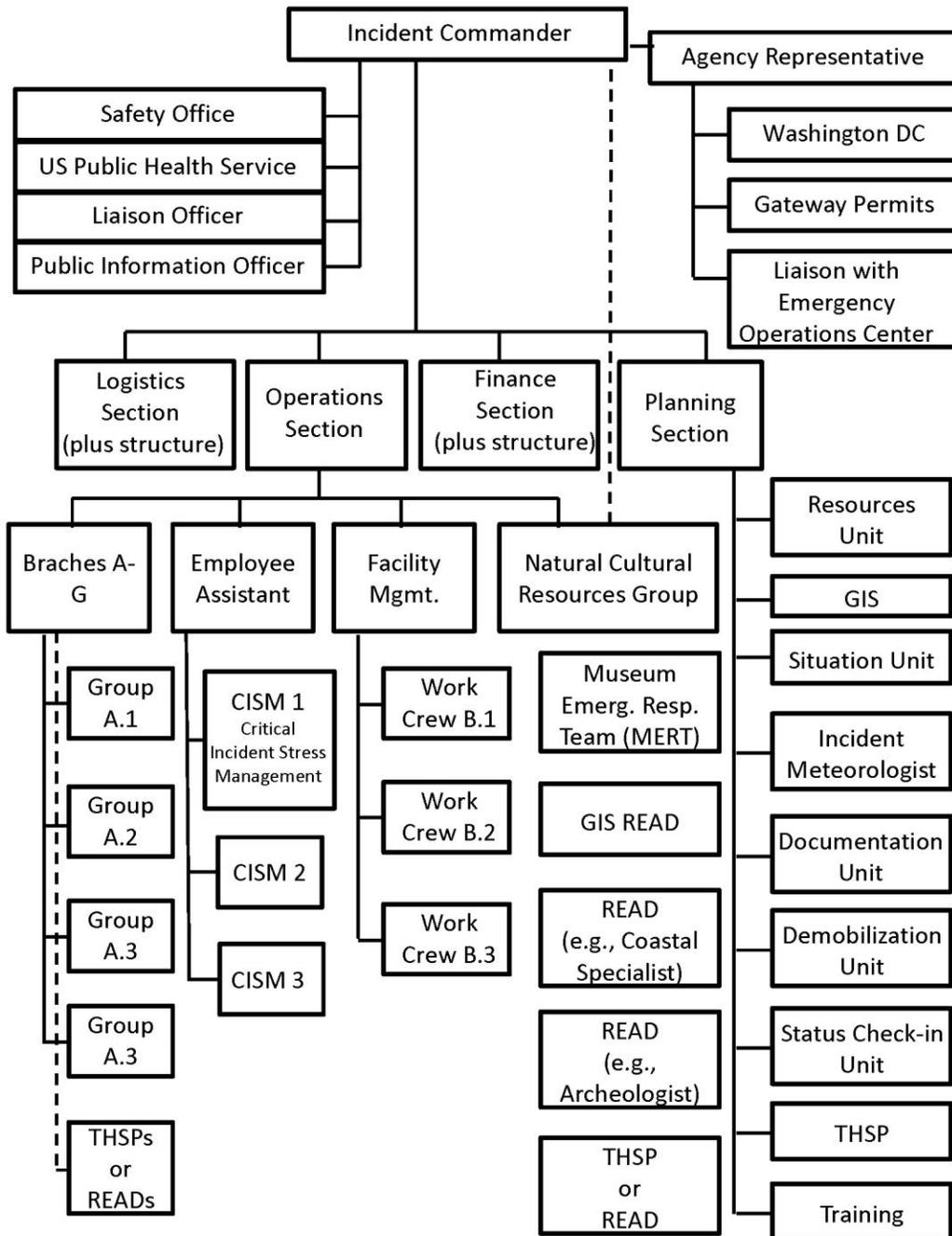
*Incident Command Structure-Major Hurricane

*THSP: Technical Specialist.

*+/- depending on the incident, the Agency Administrator/Representative can have an indirect or direct line of communication with the liaison officer.

Appendix D: Preparation for Deployment

There are times when you will be summoned with very little time to prepare for deployment. Sometimes you may get only a day or two to deploy. The following guidance and sample packing lists are intended to help you think about being well prepared before your deployment. However, every incident and every person have different requirements, so you will need to consider the context of the incident and your own personal and professional needs as you prepare for incident response. After-Action-Reviews and annual meetings with other READs can be a source of ideas.

Professional Responsibilities

Your deployment as a READ is a voluntary one and your availability should be cleared with your supervisor well in advance. With any READ assignment there needs to be the understanding that you will be leaving your home unit duties behind for the duration of your deployment, which may last over two weeks. Working as a READ will take all of your time and mental energy, and then some. Before you leave, make sure to notify your supervisor, co-workers, and those with whom you may have active projects. They may have to shoulder some of the load while you're gone, but they should understand the importance of the job you've been called to do.

- Plan to be away for over two weeks
- Notify supervisor, colleagues, and co-workers
- Don't bring your "day job" with you

Personal Preparation

Gather Vital Documents

Prior to a READ assignment, make sure that critical documentation is readily available. This may include:

- Incident qualifications card and resource order,
- Personal identifications such as Federal ID, passport, driver's license,
- Addresses/Emergency Contact information,
- Health insurance card and physician information,
- Immunization records, prescription drug documentation, and
- Power of Attorney/Living Will.

This information may take time to assemble and could be difficult to pull together prior to deployment. So it is worthwhile to prepare in advance. You will need to take some of these documents and you may even wish to leave copies in a safe location at home in case they are lost during your deployment. Be sure your emergency contact person knows where to find the documents in your absence.

Update Your Training

Well before a deployment is also the time to work on training beyond the ICS courses or Basic Resource Advisor courses you may have already taken. Advanced READ courses or specialized courses such as HAZWOPER (Hazardous Waste Operations and Emergency Response) and aircraft training may be important to carry out your duties. You will likely be required to present training credentials upon arrival at the incident so bring paper copies.

READ Ready Bag (Kit)

What equipment you need will depend on the specific assignment and deployment location. However, as a READ you will have basic personal and work related gear. It will be beneficial to develop a "Ready Bag" and add items as you think of them rather than trying to pack one immediately before an assignment. What are "Ready Bags?" They are gear bags that contain almost EVERYTHING you will likely need to use when responding to the incident. A more detailed list follows below to help you get started, but it is by no means all-inclusive. Generally, the Ready Bag (or Kit) will contain materials used to protect you and protect, document, and salvage the resources:

> **READY BAGS**
>
> - To PROTECT Resource Advisors
> - To ASSESS and DOCUMENT resources and damages
> - To CURATE or SALVAGE resources/artifacts
> - To SUPPLY READs

- Specialized Equipment,

- Support Equipment,

- PPE, and

- Reference Materials.

Put Your Personal Affairs in Order

Just prior to deployment, you will want to address personal and household matters. Pet care, bills, and other special arrangements will need to be put in place quickly. You should make arrangements that will cover your entire time of deployment. Remember, you may have limited ability to call home, either because of challenges with infrastructure in an impact zone or simply because of your workload during the assignment.

- Someone to feed the pets?

- Stop the paper and mail?

- Care for the yard?

- Are your bills paid?

- Medications packed?

- Special arrangements for family matters?

- Other considerations?

> **Basic Guidance:** If you are deploying to an area that has recently sustained significant damage to infrastructure, prepare to be completely self-sufficient for 3+ days (e.g., food, water, camping gear, etc.) until the supply chain is re-established.

What to Pack

Finally, you'll actually need to pack. This won't be the same as leaving for a family vacation. The nature and location of the incident (incident context) will dictate what you will need. You will be packing not only personal items, but also your READ Kit, and any local resource information that you have been able to gather. Again, sample lists are provided but are not intended to be exhaustive; some items listed may be wildly ridiculous for your specific assignment or professional responsibilities. One thing to remember is that assignments often change. You may originally be ordered for a field position and shifted to a command post assignment due to the needs of the incident or your specialized skills. At a minimum, you will need an assortment of:

- Personal clothing, items, and supplies,

- Sanitary items,

- Prescriptions,

- Personal Protective Equipment (PPE),

- Job-related equipment, and

- Training certificates.

You may have questions related to food and lodging availability or weather conditions at the incident. Fire camps may require camping in a tent or in the open on the ground, where there can be lines for everything including outhouses, food, and showers. You may want to bring along job-related supplies that would help you do your work. Most incidents will supply basic needs once a supply chain is established. However, if you need very specific items to fit dietary or other personal lifestyle needs, it is advisable to bring your own. Keep in mind that lodging may be in a camp and meals may be basic (i.e., canned food or even MREs). The resource order that notified you of your deployment is a great place to start for some basic information. This may list any specific instructions on what to bring, specific duties, working conditions, etc. If these are not listed, the phone number of the dispatch office should be listed and you can call for more information.

If you are replacing another READ at the incident site, you can work through the dispatch office to contact them with your specific questions provided you can establish communication. They are preparing for you to continue their work and should be happy to pass along information.

Along with your own personal preparations and communicating with colleagues on work-in-progress, it may be helpful to seek information on the incident site that will prepare you for arrival. Networks and telephone communications may be down near the incident. In these cases, whatever information you can gather prior to deployment will allow you to begin your resource assessments (or other incident assignments) more quickly. This information can include maps or resource inventories, local contacts, or other information specific to the federal unit.

If you have time before your deployment:

- Seek local information that will help you as you arrive at the incident site.

- Are site maps available?

- What Natural and Cultural resources are present?

- Who are the local contacts?

- Other pertinent issues?

Remember that access to agency-specific information may be behind a firewall and may be easier to access or request from your home location. If your resource order allows you to bring a laptop, request administrative rights so you can download printer drivers or other software once you arrive at the Incident Command Post. It is generally difficult for IT to grant those rights during an assignment.

And finally, here's a note of caution. Incident Management Business Practices may not allow for the replacement of damaged personally owned electronic devices. Each individual is responsible for their personal property and, as such, all deployed individuals should strongly consider leaving personally owned electronics at home. Should loss or damage occur, repair or replacement of personally owned items such as notebook computers, tablets, cell phones, cameras, radios, music players, or other electronic devices is not the responsibility of the government.

Resource Advisor Supply Checklists

Sample READ Ready Bag (Kit)

Following are examples of supplies and equipment that may be needed before leaving for an incident. It may be necessary to order supplies that cannot be obtained from your home office environment. The bag should be packed and ready for mobilization.

- Local planning documents (e.g., Land Use Plan, Wilderness Plan, Fire Management Plan) (in electronic format if possible),

- Resource Advisor's Guide,

- Rehabilitation Guidelines and Sample Rehabilitation Plans (in electronic format if possible),

- Implementation Guide for Aerial Application of Fire Retardant (For more information on retardant see Appendix J: Minimum Impact Strategies and Tactics),

- Examples on electronic portable storage devices (e.g., flash drives): Press releases, delegation of authority letters, decision support tools (e.g., Wildland Fire Decision Support System examples), Minimum Impact Strategies and Tactics (MIST) Guidelines, Leave No Trace principles, Incident Objectives, Minimum Requirements Decision Guide forms, Approval for Motorized Equipment forms,

- ICS forms (ICS-214, Unit Log; ICS-213, General Message),

- Office/field supplies (e.g., pencils, pens, felt tip markers, ruler, map scale, dot grid, flagging, paper, calculator, clipboard, tape, scissors, etc.),

- Maps (2 each)—topographic (1:24,000) and land status (1:100,000) that cover incident area and at least 6 miles around the perimeter,

- Maps showing: wilderness areas, significant or known cultural sites, threatened or endangered species, critical habitat areas, land boundary data, and other areas of concern,

- Reference list of resource specialists and important contacts with phone numbers,

- Laptop computer with necessary software, hardware, and cables,

- Handheld radio, and/or cell/satellite phone,

- Portable computer storage media,

- Specialized equipment for your discipline,

- Crew Time Report, NFES #0891,

- OF-288, Emergency Firefighter Time Report, NFES #0866,

- Interagency Standards for Fire and Fire Aviation Operations (Red Book),

- Incident Response Pocket Guide, NFES #1077,

- Field identification guides when applicable (noxious weeds, plants, birds, fish, etc.),

- Interagency Incident Business Management Handbook,

- Electronic References (Environmental Laws such as NEPA, Wilderness Act of 1964),

- US Coast Guard Incident Management Handbook (IMH),

- National Institute for Occupational Safety and Health Pocket Guide,
- DOT Emergency Response Guidebook,
- NIMS ICS Field Guide, and
- SCAT Field Guide (Shoreline Cleanup Assessment Technique).
- Cultural resource disaster books

SAMPLE PERSONAL BAG

Personal Supplies

Watch (waterproof, with alarm function)

Hand sanitizer

Toilet paper/tissues

Oral care (brush/paste/floss)

Soap/shampoo/moisturizer

Deodorant

Hair care products and devices

Medical prescriptions (w/spares)

Over the counter Meds

- Aspirin
- Allergy/ Sinus/nasal spray
- Anti-diarrheal
- Eye drops

Copies of prescriptions

Glasses/contacts (with solution)

Eyeglass repair kit

Razor/blades

Ear plugs (for sleeping)

Manicure kit

Laundry detergent

Baby wipes

Q-tips/cotton swabs

Travel towel

Shower shoes

Laundry bag

Clothing

One week supply (check climate) Uniforms (if appropriate)

Agency logo wear (always at least take a hat with your agency logo)

Pants/shorts for Incident Command Post

Extra underwear and socks

Rain/snow gear

Casual clothes (for off duty)

Multiple layers

Exercise clothes

Spare shoes/boots/laces

Shorts/swim wear

Warm gloves/socks

Bandana

Spare belt

Protective gear/supplies

Personal 1st Aid Kit

Cell phone/charger

Back-up phone numbers

Sunscreen/hat/lip balm

Sun glasses

Insect repellent

Safety glasses

Work gloves

Chemical protective gloves

Flashlight/headlamp

Fire/Aviation PPE

Safety shoes/work boots

Waterproof boots/waders

Reflective vest

Hardhat (w/splash shield)

Rubber apron/splash gear

Back support

Hearing protection

Respirator (spare cartridges)

Disposable Supplies for All-Hazards Assignments

Tyvek suits

Chemical protective suits

Nitrile/latex gloves

Boot covers

Dust masks

Trash bags

Incident Command Post / Office Supplies

ICS forms (paper copies)

ICS forms (electronic copies)

Crew Time Reports (timesheets)
Notepads/pens/pencils/sharpies

Pencil sharpener (manual)

Clipboard/bound log book

Thumb/external hard drive

Power strip/extension cord

Paper maps

Ruler/stapler/scissors/tape

Calculator

8-in-1 reader (digital photos)

Portable printer/scanner

Field Gear

Digital Camera (spare cards)

Disposable cameras

Binoculars

GPS unit (spare cards)

"Rite-in-the-Rain" notebooks

Inventory sheets and tags

Satellite phone/2-way radios

Weather radio

Tool kit/pocket knife

Multi-tool (Leatherman)

Safety whistle

Carabineers

Tie-wraps/string/rope

Flagging

Zip lock bags (multiple sizes)

Day pack/field gear bag

Specialized equipment for your discipline

Miscellaneous

Spare cash

Secondary credit card

Business cards

Spare batteries (all devices)

Chargers (all devices)

Lighter/waterproof matches

Postage stamps

Sleeping bag/pad/tent

Water purifier/tablets

MREs (3 day supply)

Travel receipt organizer

Collapsible pail

Items of comfort (for off duty)

- Family photos
- Personal music
- Reading materials
- Spiritual material

Appendix E: Cost Documentation

Incidents are funded in a number of different ways, each having their own limitations and requirements. It is important that you know how the incident is being funded. It might be helpful to talk with the finance officer in your bureau who understands the nuances of emergency response cost documentation to ensure that you provide the correct information for charging time, travel, etc. No matter the source of the funding, it is important that you practice good government by containing costs.

Be aware of:

- Where the money comes from,

- What it covers,

- How it is spent, and

- What will be required for reimbursement?

Depending on the nature and severity of an incident, funding can come from a variety of sources. Most natural disaster and All-Hazard response actions on federal properties must be taken out of existing Agency budgets unless a supplemental appropriation is approved by Congress. Even wildfire responses in severe years can impact agency budgets.

CONTAINING RESPONSE AND RECOVERY COSTS

No matter the source of funding, remember that emergency response is emergency stabilization. Your recommendations for minimizing the effects of the incident on natural and cultural resources should be fiscally responsible. This isn't the time to implement that long-term restoration plan you always wanted to do. But, that doesn't mean you can't recommend good alternatives for remedies, (e.g., using native vegetation for slope stabilization rather than exotic grasses) or recommend a less invasive removal method.

It is critical that you always practice good government no matter who is footing the bill, even if a Responsible Party will eventually cover the costs. Every incident will be audited at some level, and you or your agency could be responsible for covering costs that don't follow established guidelines.

Oil spills and hazardous releases incidents (See Appendix M) may be funded by:

- Responsible Parties (through agreements or cost recovery actions),

- Oil Spill Liability Trust Fund (OSLTF),

- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Superfund, and

- Disaster Relief Fund under the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

The Pollution Removal Funding Authorization (PRFA) is a tool available to Federal On-scene Coordinators (the FOSC) to quickly obtain needed services and assistance from other government agencies in oil spill and hazardous materials response actions. The PRFA and the associated work plan are approved by the FOSC and the National Pollution Fund Center (NPFC), and outline the scope of your duties. If you are deployed under this authority you need to restrict your work to those activities covered by the PRFA. Remember that in this instance you are in the Incident Command Post and working for the FOSC. If you get a request to do work outside the scope of the PRFA you should get written permission from your incident supervisor and include it with your cost documentation. If the request is coming from an affected DOI land manager the request should come through the agency representative or liaison to the incident command. In general a PRFA covers all costs incurred while providing services to the FOSC, including your base salary, incident approved overtime, and travel costs.

The National Response Framework is the guide for how the Nation responds to all types of disasters and emergencies. Federal government capabilities are organized into Emergency Support Functions (ESFs), the primary coordinating structure. The Federal Emergency Management Agency (FEMA) can request support from other federal agencies, such as DOI and its bureaus, through the mission assignment (MA) process. Funding for Presidentially declared disaster response operations comes from the Disaster Relief Fund that was established under the Robert T. Stafford Disaster Relief and Emergency Assistance Act. If you are deployed under a FEMA issued mission assignment, your bureau usually covers your "base 8" (regular) salary, while travel and approved overtime are likely reimbursed by the MA. Be sure your supervisor is aware of these funding specifics before they approve your deployment under the MA.

Appendix F: Job Aid – Recource Advisor Assignment Checklist

Upon Arrival

- Check in (Check in Desk, Incident Commander (IC) or Incident Management Team (IMT),
- Find your supervisor,
- Introduce yourself, provide information, and ask questions,
- Solicit briefing from Agency Representative (AREP) or other on-scene officials and gather specific data from local resource specialists, and
- Evaluate situation.

Operations

- Tool up for assignment (proper Personal Protective Equipment, etc.),
- Participate in developing and revising incident resource objectives as needed for incident planning, delegation of authority, and decision support tools,
- Identify high priority concerns and convey to IC, IMT, or Agency Administrator,
- Contact other resource specialists as necessary,
- Gather data from response resources,
- Participate in developing the Incident Action Plan (IAP),
- Provide input regarding natural, cultural, and other resources for choosing staging and facility locations and specifying containment requirements for tactical operations (e.g., remote fueling operations for both ground vehicles and for aircraft as needed),
- Monitor and provide input during response activities to protect resources,
- Monitor and document damages caused by the incident and the incident response,
- Collect data and document damage to resources (e.g., vegetation, range improvements, cultural sites, etc.),
- Participate in developing an incident map and identify critical areas of concern,
- Communicate daily with the Agency Administrator, Federal On-scene Coordinator, and the Incident Commander/Incident Management Team,
- Make recommendations for rehabilitation, and
- Maintain a Unit Log, ICS-214.

Post Incident

- Complete documentation on the Resource Advisor Final Report,
- Provide IC and Agency Administrator with final report,
- Assure that rehabilitation efforts are complete or have been assigned to a rehabilitation team/effort, and
- Participate in After-Action-Review.

Appendix G: Sample Resource Advisor Final Report

REPORT DATE_____

MEMO TO: _____, Agency Administrator

FROM: _____, Resource Advisor

- Incident Date(s):
- Incident Name:
- Incident Number:
- Incident Location (Legal Description):
- Incident Commander:
- Additional Resource Advisors:
- Date/Time Resource Advisor Arrived:
- Date/Time Resource Advisor Released:
- Date/Time of Containment: Date/Time of Control:
- Map(s) Used (Attach maps):
- Point of Origin:
- Incident Cause:
- Size of Incident:
- Land Status (Acreage):

RESOURCES THREATENED/DAMAGED/DESTROYED

- Infrastructure
- Cultural Sites
- Wildlife Habitat
- Threatened, Endangered, and Special Status Species
- Special Areas (wilderness, wild and scenic rivers)
- Range/Forest Improvements
- Vegetation and Soil Description (Give general description of vegetation present, slope, erosion potential, and soil texture; e.g., gravelly, sandy, etc.)
- Special Use Areas, Permitted Areas, Grazing Allotments
- Wild Horses
- Survey monuments (brass cap, stone, wood, etc.) and boundary line markers
- Water Sources
- Meadows
- Museum and archival collections and facilities

- Soundscapes, Night Skies and Air Resources
- Other

DAMAGES FROM INCIDENT ACTIVITIES THAT HAVE BEEN REHABILITATED OR NEED TO BE COMPLETED DURING THE INCIDENT

- Dozer lines
- Hand lines
- Pump sites
- Spike camps
- Helispots
- Safety Zones
- Booming
- Diversions
- Other

ADDITIONAL REHABILITATION AND REPAIR RECOMMENDATION(S) AND RATIONALE

- Revegetation
- Fences
- Roads
- Land survey monuments and boundary line markers
- Noxious weeds
- Water
- Other

OTHER INFORMATION

- Information discovered from the After Action Review
- Lessons Learned
- Accountability
- Other

Appendix H: Special Management Area Guidance

You may respond to an incident on a site that has a special designation that may affect your options for response actions. These designations may be executive, congressional, or administrative. Each of these areas may have specific local, regional or national requirements and guidance for dealing with response strategies and tactics.

These special areas may include Designated Wilderness, Wilderness Study Areas, National Conservation Areas, Wild and Scenic Rivers, World Heritage Sites, etc. Descriptions of some of the different types of special management areas you may encounter are listed at the end of this appendix. It is important to understand that these special designations exist, may be part of areas that are set aside for other protection/purposes (e.g., National Wildlife Refuge, National Park, National Forest, etc.) and have special factors to consider during a response to an incident.

In dealing with special areas, the Resource Advisor must have a clear understanding of restrictions or special provisions associated with the management of the areas prior to, or as soon as possible after, arriving at an incident.

> **This guide cannot adequately describe the intricacies of responding to each of these special areas, but rather uses designated wilderness as an example to introduce you to the kinds of requirements you may face and questions that you need to consider.**

Designated Wilderness - The Wilderness Act

"A wilderness, in contrast with those areas where man and his works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation;..."

The Wilderness Act of 1964
Section 2(c)

You can see from this definition that wilderness areas are designated to be different than any other land, where natural processes dominate and human influence should be minimal. This could largely affect how response actions may be conducted within a wilderness area during and following an incident.

Prohibitions of Certain Uses

The following actions are prohibited within a designated Wilderness area boundary per the Wilderness Act:

> *"Except as specifically provided for in this Act, and subject to existing private rights, there shall be no commercial enterprise and no permanent road within any wilderness area designated by this Act and, except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act (including measures required in emergencies involving the*

health and safety of persons within the area), there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area."

<div align="right">

The Wilderness Act of 1964
Section 4(c)

</div>

Special Provisions

In addition to the certain prohibited uses, the Wilderness Act has several special provisions. The one being most applicable to response actions is:

> *"The following special provisions are hereby made:*
>
> *(1) Within wilderness areas designated by this Act, the use of aircraft or motorboats, where these uses have already become established, may be permitted to continue subject to such restrictions as the Secretary of Agriculture (or Interior) deems desirable. In addition, such measures may be taken as may be necessary in the control of fire, insects, and diseases, subject to such conditions as the Secretary deems desirable."*

<div align="right">

The Wilderness Act of 1964
Section 4(d)

</div>

Subsequent Legislative Provisions

Endangered American Wilderness Act (PL. 95-237: 1978) House Report 95-540

> *"Fires, Insects and Disease—Section 4(d) (1) of the Wilderness Act permits any measures necessary to control fire, insect outbreaks, and disease in wilderness areas. This includes the use of mechanized equipment, the building of fire roads, fire towers, fire breaks or fire pre-suppression facilities where necessary and other techniques for fire control. In short, anything necessary for the protection of public health or safety is clearly permissible."*

These provisions do not provide blanket approval for all possible methods used in managing fire, but rather provide allowance of an otherwise prohibited use when demonstrated to be necessary and has the minimum impact as determined through a Minimum Requirements Analysis (MRA) that is described to the right.

Minimum Requirements Analysis (MRA)

STEP 1

Determine if administrative action is necessary for the administration of the wilderness area, to realize the purpose of wilderness.

STEP 2

Determine the minimum activity (method or tool) to accomplish the action (project) with the least negative impact to wilderness.

Wilderness Preservation Objectives

Wilderness is different from other public lands, by law and agency policy. Management activities in wilderness must be conducted to meet wilderness stewardship goals and objectives, and preserve wilderness character. You should be familiar with the definition of wilderness character, the five qualities used to monitor trends and what degrades wilderness character in order to preserve it, as mandated by the Wilderness Act.

Definition of Wilderness Character: Wilderness character is a holistic concept based on the interaction of (1) biophysical environments primarily free from modern human manipulation and

impact, (2) personal experiences in natural environments relatively free from the encumbrances and signs of modern society, and (3) symbolic meanings of humility, restraint, and interdependence that inspire human connection with nature. Taken together, these tangible and intangible values define wilderness character and distinguish wilderness from all other lands.

Qualities of Wilderness Character

Untrammeled

- Wilderness is essentially unhindered and free from the <u>intentional actions</u> of modern human control or manipulation

Natural

- Wilderness ecological systems are substantially free from the <u>effects</u> of modern civilization

Undeveloped

- Wilderness is essentially without permanent improvements or the sights and sounds of modern human occupation

Solitude or Primitive and Unconfined Recreation

- Wilderness provides outstanding opportunities for people to recreate in an environment that is relatively free from the encumbrances of modern society, and experience the benefits and inspiration derived from self-reliance, self-discovery, physical and mental challenge, and freedom from societal obligations

Other Features of Value

- Wilderness may also contain ecological, geological or other features of scientific, educational, scenic, or historical value

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Minimizing Impacts

However, given the broad legislative guidance, Resource Advisors must be guided by Minimum Impact Strategies and Tactics (MIST, see Appendix J for more information) and the completion of Minimum Requirement Analysis' (MRAs) for response activities, including fire are required. Resource Advisors must have a clear understanding of the Agency Administrator's latitude on response strategies and tactics. While the use of mechanical transport and motorized equipment may be authorized in response activities necessary to prevent effects from crossing wilderness boundaries and destroying property or resources on surrounding public or private lands, clearly the use of mechanical transport and motorized equipment in wilderness will be scrutinized and must be defensible as the minimum necessary to preserve wilderness character in response to hazards with a clear threat to public health and safety, including responder safety.

Management activities in wilderness are accomplished through preparation and implementation of unit wilderness stewardship plans, understanding of wilderness management techniques, use of the Minimum Requirements Analysis (MRA) and MIST concepts to determine appropriate management response and actions, and minimizing the need for restoration of response impacts. Some areas may have completed a programmatic Minimum Requirements Analysis (MRA) during a planning process. If so, you need to be familiar with it in order to be fully informed and provide proper advice.

Cost, convenience, and efficiency are not the key determining factors for response actions in wilderness.

Responder and public safety and risk to adjacent lands are key decision points for hazard response in wilderness.

Response Issues in Wilderness

Potential issues and questions to be answered in pre-incident planning and during an incident in or near wilderness areas:

- Incident Sensitivity (Pre-Incident Planning). Hazard response in a designated wilderness can be politically sensitive and a high-profile media event.
- How often does the Agency Administrator or Federal On-scene Coordinator require updates?
- Are there any specific agency reporting requirements?
- Are there any public notification requirements? (e.g., interest groups)
- What steps are being taken to preserve wilderness character?
- Are there Intrusion Authorization and Intrusion Tracking and Reporting requirements?

Staging areas/camp location(s) (Both Pre-Incident Planning and during the incident)

- Are staging area/camp locations permitted within a wilderness area boundary?
- Can staging areas/camps be located in existing or already developed sites?
- What special requirements are needed for staging areas/camps within wilderness?
- What are waste disposal and sanitation requirements within the wilderness boundary?
- What kinds of access may be needed?
- What actions/activities require Agency Administrator approval prior to implementation?

4(c) Prohibited Uses (i.e. mechanical transport and motorized equipment) (Both Pre-Incident Planning and during the incident)

- Minimum Requirements Analysis required - Necessity analysis with documentation of decision and rationale.
- What approval procedures are needed and by whom?
- Communication and delivery of the decision to the IC/IMT
- Under what circumstances can 4(c) prohibited uses (i.e., mechanical transport and motorized equipment) are used within the wilderness boundary?
- What are the trigger points for use of any of the 4(c) prohibitions?
- Is off-route travel permitted? Under what circumstances?
- Are chainsaws allowed?
- Are portable pumps/water tanks allowed?
- Is use of heavy equipment allowed?
- Is the landing of aircraft allowed?

Endangered Species Act requirements

- Obtain local unit Threatened, Endangered and Sensitive Species list and protection measures

- Known designated critical habitat areas; both aquatic and terrestrial
- Known occupied habitat and local limited operating requirements
- Emergency consultation requirements
- Retardant Mapped Avoidance Areas requirements (https://www.fs.fed.us/fire/retardant/ if on National Forest System Lands)
- State ESA requirements - each State may have additional requirements or protections for state listed species. Know how to contact local State resources.

Evacuations (Both Pre-Incident Planning and during the incident)

- By what means
- Designation or use of helispots
- Standard Operating Procedures for response personnel and medical emergencies
- Members of the public (private in-holders, permittees, and recreation users)

Rehabilitation Expectations, Methods, and Guidelines (Both Pre-Incident Planning and during the incident)

- Do you have a rehabilitation plan?
- Are 4(c) prohibitions allowed? Under what circumstances?
- What are the time frames?
- Are there specific local, regional or national guidelines for response rehabilitation available? More information on the Wilderness Act of 1964 and wilderness in general can be found on the web at https://www.wilderness.net/

Wilderness Wildfire Guidelines

Role of Wildfire

- Recognize that, in fire dependent wilderness ecosystems, fire is necessary in order to preserve the natural conditions of wilderness as mandated by law and agency policy.

- To the extent possible, allow fire to play its natural role in the ecological processes of wilderness.

Wildfire Management Activities

- Minimize the unnatural effects of fire suppression activities in wilderness.

- Conduct all fire management activities within wilderness in a manner compatible with overall wilderness management objectives. Give preference to using methods and equipment that cause the least:

- Degradation of wilderness character

- Alteration to the wilderness landscape

- Disturbance of the land surface or degradation of habitat or water quality

- Disturbance to visitor solitude

- Need for subsequent restoration or mitigation

- Complete Minimum Requirements Analysis'

Wildfire Retardant Use (Pre-Season Planning)

- Is retardant allowed?

- If used, what are the criteria (type, color, etc.) for use?

- Will temporary retardant dip sites be allowed?

Wildfire Suppression (Both Pre-Season Planning and during the incident)

- Minimum Impact Strategies and Tactics (MIST, see Appendix J)
- Others

Example of Special Considerations for Wildfire Incidents in BLM Wilderness Study Areas

Wilderness Study Areas are managed according to the Interim Management Policy for Lands under Wilderness Review H-8550-1 (1995). Fire management guidance includes:

J. Fire Management Paragraph 1. The BLM will conduct all prescribed fire and suppression activities in accordance with the fire management activity plans and subsequent operational plans (prescribed fire and pre-attack) for all WSAs, using caution to avoid unnecessary impairment of an area's suitability for preservation as wilderness. "Light-Hand-On-The-Land" fire suppression tactics will be used. Fire is a natural component of many wilderness ecosystems and fire plans need to give serious consideration to this fact before recommending one fire management technique over another. Resource area advisors will use the fire plans in making decisions during emergency fire situations and prescribed ignitions. All uses of earth moving equipment within a WSA require authorization. Priority for placement of large fire camps should be outside WSAs. Use of motorized vehicles and mechanical equipment during mop-up should be minimized.

Paragraph 2. The fire pre-attack plan covering the WSA will specify the fire management objectives and special considerations for each WSA, taking into account a number of factors including the existing wilderness characteristics of the area, the need to prevent impairing actions, historic fire occurrence, the natural role of fire, proposed degree of suppression, expected fire behavior, acceptable suppression techniques, adequate buffer zones, smoke management, effect on private or other agency in-holdings and on adjacent land owners, the limits of acceptable fire weather, fire behavior, fire effects, and the access requirements of other agencies. In planning firebreaks, the use of natural firebreaks and existing roads is encouraged. Emergency fire rehabilitation measures will continue to be carried out according to guidelines. Efforts should be made to rehabilitate any effects created by fire suppression activities prior to releasing the fire crews and associated equipment following containment.

Paragraph 3. To hold the fire to the desired level within WSAs, fire plans and procedures will rely on: (1) the most effective methods of suppression that are least damaging to the wilderness values (i.e., "Light-Hand-On-The-Land" techniques), other resources, and the environment, while requiring the least expenditure of public funds including the rehabilitation of the area; (2) an aggressive fire prevention program; and (3) an integrated cooperative suppression program by agencies of the Department among themselves or with other qualified suppression organizations. Present day suppression methods may be used, including the use of power tools, aircraft, motorboats, and motorized firefighting equipment while applying "Light-Hand-On-The-Land" techniques. Existing fire lookout towers and helispots may be used and maintained; new ones may be approved as part of the fire management activity plan if they are the minimum necessary for fire suppression in the WSA.

Paragraph 4. Fire managers should inform suppression personnel during dispatch that the fire is in a WSA and special constraints apply. Memoranda of Understanding with other agencies should contain stipulations reflecting wilderness interim management guidance. Fire managers should notify Area Managers of any unsuccessful initial attack action on a fire in a WSA before developing the Wildland Fire Situation Analysis.

Special Management Areas

Wilderness Classifications include, but are not limited to eligible wilderness, proposed wilderness, recommended wilderness, and potential wilderness. Each managing agency has specific policies and guidelines on how to manage each type of area.

https://www.wilderness.net/NWPS/landClassifications

https://www.wilderness.net/

Wilderness Study Areas (WSA) contain undeveloped lands that retain their primeval character without human habitation, and are managed to preserve their natural character until Congress acts to either designate these lands as wilderness or remove the protective management. They are managed by the U.S. Forest Service, Bureau of Land Management or U.S. Fish and Wildlife Service.

https://www.wilderness.net/NWPS/landClassifications

Research Natural Areas (RNA) are a national network of areas (land or water) that are managed by various agencies (i.e., NPS, FS, BLM, FWS) which contain important ecological and scientific values. NRAs support high quality examples of terrestrial or aquatic ecosystems, habitats, and populations of rare or endangered plant or animal species, or unique geological study or the features, and are manager in a way that allows natural processes to predominate, with no or minimal human intervention. RNAs are primarily used for non-manipulative research and baseline data gathering on relatively unaltered community types.

https://www.fs.fed.us/rmrs/research-natural-areas/

https://nature.nps.gov/rm77/specialdesignations/RNA.cfm

Biosphere Reserves (BR) are areas identified by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as part of the Biosphere Reserve Program to protect examples of major natural regions throughout the world, and provide opportunities for ecological research and education. In North America alone, there are 60 areas that have been identified as Biosphere Reserves.

https://www.unesco.org/new/en/natural-sciences/environment/ecological-sciences/biosphere-reserves/

Cultural Heritage Resources and Areas include a variety of types, sizes, and scales, and values. If a cultural heritage resource is listed as eligible to, or on, the National Register (NR) then the agency is required to take measures to protect it. If a resource has not been formally evaluated then it's considered 'potentially eligible' and protection measures also pertain until the resource is proven ineligible through legal processes. Below are some cultural resource area types that are commonly encountered, though this is not a complete list. Talk with your cultural resources specialist and see https://www.nps.gov/subjects/historicpreservation/index.htm for more information.

> **Archeological Sites (AS)** "…any material remains of past human life or activities which are of archaeological interest, as determined under uniform regulations promulgated pursuant to this Act. Such regulations containing such determination shall include, but not be limited to: pottery, basketry, bottles, weapons, weapon projectiles, tools, structures or portions of structures, pit houses, rock paintings, rock carvings, intaglios, graves, human skeletal materials, or any portion or piece of any of the foregoing items." Excerpted from 16 U.S.C. 470bb, Archaeological Resources Protection Act.

> **Historic Buildings and other Structures (HB)** Any building that is listed or eligible to be listed on the National Register (e.g., over 50 years old and in functional condition). For characteristics that qualify a historic building to the Register see https://www.nps.gov/Nr/national_register_fundamentals.htm.

Traditional Cultural Properties (TCP) A traditional cultural property can be defined generally as one that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community. http://www.nps.gov/nr/publications/bulletins/nrb38/nrb38%20introduction.htm#tcp.

National Register Districts (NRD) A significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development" and listed on the National Register of Historic Places. https://www.nps.gov/nr/publications/bulletins/nrb16a/nrb16a_appendix_V.htm.

National Historic Landmarks (NHL) National Historic Landmarks are nationally significant historic places designated by the Secretary of the Interior because they possess exceptional value or quality in illustrating or interpreting the heritage of the United States. Today, just over 2,500 historic places bear this national distinction. Working with citizens throughout the nation, the National Historic Landmarks Program draws upon the expertise of National Park Service staff who guide the nomination process for new Landmarks and provide assistance to existing Landmarks.

National Natural Landmarks (NNL) The National Natural Landmarks Program recognizes and supports the voluntary conservation of outstanding geological and biological sites, regardless of ownership. Ongoing partnerships with public and private landmark owners allow participants to share information, solve problems cooperatively, and conserve outstanding examples of our nation's natural history. Over 580 landmarks have been designated by the Secretary of the Interior since the program's establishment in 1962.

https://www.nps.gov/subjects/nnlandmarks/index.htm

Cultural Landscapes (CL) A Cultural Landscape is a geographic area (including both cultural and natural resources and the wildlife or domestic animals therein), associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values. There are four general types of cultural landscapes, not mutually exclusive: historic sites, historic designed landscapes, historic vernacular landscapes, and ethnographic landscapes.

https://www.nps.gov/tps/standards/four-treatments/landscape-guidelines/index.htm

World Heritage Sites (WHS) are identified by the United Nations Educational, Scientific and Cultural Organization (UNESCO) which seeks to encourage the protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity. There are currently twenty-three World Heritage Sites in the United States, with over 1,000 worldwide. https://whc.unesco.org/en/about/

Cultural

- Cahokia Mounds State Historic Site (1982),
- Chaco Culture (1987),
- Independence Hall (1979),
- La Fortaleza and San Juan National Historic Site in Puerto Rico (1983),
- Mesa Verde National Park (1978),
- Monticello and the University of Virginia in Charlottesville (1987),
- Monumental Earthworks of Poverty Point (2014),

- San Antonio Missions (2015),
- Statue of Liberty (1984), and
- Taos Pueblo (1992).

Natural

- Carlsbad Caverns National Park (1995),
- Everglades National Park (1979),
- Grand Canyon National Park (1979),
- Great Smoky Mountains National Park (1983),
- Hawaii Volcanoes National Park (1987),
- Kluane / Wrangell-St. Elias / Glacier Bay / Tatshenshini-Alsek (1979),
- Mammoth Cave National Park (1981),
- Olympic National Park (1981),
- Redwood National and State Parks (1980),
- Waterton Glacier International Peace Park (1995),
- Yellowstone National Park (1978), and
- Yosemite National Park (1984).

Mixed

- Papahānaumokuākea (2010).

Note: For the most up to date list of sites within the United States visit
https://whc.unesco.org/en/statesparties/us

National Wild and Scenic Rivers (NWSR) are designated by Congress as part of a system to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. Regardless of classification, each river in the National System is administered with the goal of protecting and enhancing the values that caused it to be designated. Visit https://www.rivers.gov/.

National Conservation Areas (NCA), and similarly designated lands (see below), are Bureau of Land Management areas designated by Congress to conserve, protect, enhance, and manage public lands for the benefit and enjoyment of present and future generations. These lands feature exceptional scientific, cultural, ecological, historical, and recreational values.

https://www.blm.gov/wo/st/en/prog/blm_special_areas/NLCS/National_Conservation_Areas.html

> **Cooperative Management and Protection Area (CMPA)** designation was established by Congress to conserve, protect, and manage the long-term ecological integrity of special landscapes for future and present generations. This designation seeks to maintain and enhance cooperative and innovative management projects, programs, and agreements between tribal, public, and private interests.

> **Outstanding Natural Area (ONA)** designation was established by Congress primarily to protect unique scenic, scientific, educational, and recreational values. Recreation activities center on those that foster education and interpretation of the ONA's unique resources.

Forest Reserve (FR) designation was established to protect and help recover populations of threatened and endangered species, as well as additional species that may become listed in the future. Scientific research is promoted to expand current knowledge of forest reserve resources.

National Trails System: National Scenic, Historic and Recreational Trails (NSHRT) are protected areas designated by Congress that consist of trails of particular natural beauty, contain historic trails and surrounding areas to protect the remains of significant overland or water routes to reflect the history of the nation, or existing trails that contribute to health, conservation, and recreation goals. Visit https://www.nps.gov/nts/nts_faq.html.

Appendix I: Management Planning and Decision Support

Federal resource management policy prescribes the development and implementation of management planning and environmental analysis. It is not practical to describe every type of incident and possible scenarios based on the unit's Land Use Plan, but these plans are foundational documents that guide management decisions. Response programs and activities are to support Land and Resource Management Plans and their implementation.

Plus, other authorizations may guide fire management activities. For example, many U.S. Forest lands have Section 7 ESA consultation Biological Opinions or Letters of Concurrence that identify strict suppression guidelines that are not captured in Land Management Plans.

To facilitate the decision process, response managers use decision support tools to develop alternatives and record management decisions. One of these tools is the Wildland Fire Decision Support System (WFDSS). Decision Support Systems such as WFDSS consist of progressively developed assessments and operational management plans that document the analysis and selection of strategies and describes the appropriate management response for an incident. These systems use a decision-making process in which the Agency Administrator or representative describes the situation, establishes objectives and constraints for the management of the incident, compares multiple strategic management alternatives, evaluates the expected effects of the alternatives, selects the preferred alternative, and documents the decision. The format and level of required detail and different levels of completion of the record are dependent on differing management strategies and complexities. For example, incidents of low complexity may only require a one-day response and may only have minimal documentation. The key is to document the decision.

Uses of Decision Support Systems (DSS) are integral to successful management of incident management. The process can be used to compare alternatives reflecting the full range of incident strategies and responses and can assess alternatives for realizing protection and/or resource benefit opportunities. The DSS process is vital when the incident overcomes response efforts, when management capability is inadequate to accomplish objectives, or when the incident response can no longer be implemented in accordance with the approved plan.

DSS may serve as contingency planning exercises for undesirable outcomes by providing a mechanism to quickly and thoroughly analyze new strategic alternatives for any type of response activity. Whether managed for the full range of management strategies and objectives or immediate responses or if actions are unsuccessful, the record will reflect the next set of management responses. If the alternative selected through the decision support process does not accomplish the objectives, the objectives and response can be amended. However, prior decisions cannot be altered. The Resource Advisor will play a key role in assisting in the preparation of documentation and records, and determining whether the unit's Land Use Plan and the associated National Environmental Policy Act (NEPA) analyses are adequate to manage an incident.

Role of the Resource Advisor During Development of Decision Support System Records

The Resource Advisor needs to be involved in the development of resource values and management objectives that drives decision support tools. The role of the Resource Advisor is to provide inputs to the criteria and identify areas of concern. The Resource Advisor may provide cost estimates for resources at risk, as well as costs of mitigation or rehabilitation of response efforts. It is the role of the Agency Administrator or Federal On-scene Coordinator (FOSC) to provide overall guidance and to provide input to the incident management team.

Resource damage costs and benefits are difficult to quantify and are where the Resource Advisor can provide valuable input. The value of water quality, fisheries, visual resources, and recreation visitor days are best quantified in advance by the proactive Resource Advisor and interdisciplinary team.

Common sense must be used in response actions when considering values to be protected, least cost, resource damages caused by response actions, and the first priority at all times, incident responder and public safety.

If possible, Resource Advisors should attend decision support training and participate in mock document preparations. All areas of special concern on a unit should be identified in advance of fire season. The proactive Resource Advisor can help raise the awareness of the Agency Administrator or FOSC and unit staff of the importance of advance incident response planning.

Potential questions to be answered in pre-season planning and during an Incident:

- Management Plans Resource Stewardship Strategies:
    - The Resource Advisor needs to have a copy and be familiar with the unit's planning documentation.
- Pre-season planning:
    - Have management plans been updated to comply with the current federal policy?
    - Do management plans identify any areas or resources in the administrative unit that have specific management concerns?
- During an incident:
    - Are the planning guidelines being applied within identified parameters?

NEPA documentation: The Resource Advisor needs to be familiar with the environmental analysis that was prepared for management plans, resource stewardship strategies, and the results of the decision.

- Pre-season planning:
    - Has the NEPA analysis for the management plan adequately addressed the potential effects of an incident?
    - What are the criteria or thresholds that will create the need for more NEPA analysis?
    - If further NEPA analyses are warranted, what type of analysis (Environmental Impact Statement, Environmental Assessment, or Documentation of NEPA Adequacy) is or will be needed?
    - Have all required consultations (e.g., ESA section 7 or NHPA section 106) related to the NEPA analysis been completed and if so, are they up-to-date?"
    - Will monitoring be required?
    - If monitoring is required, what type of monitoring is required?
    - What are the monitoring criteria?
    - What actions will be taken when the incident surpasses the criteria set forth in the NEPA analysis and decision?

- During an incident:
    - Is the incident within the parameters of the NEPA analysis; e.g., are the effects of the

incident within the scope of the predicted effects?

- o If the incident is not within the parameters of the NEPA analysis or has surpassed the criteria set forth in the NEPA analysis and record of decision, are your actions considered an emergency response under NEPA (see 40 CFR 1506.11, 43 CFR 46.150, and DOI Environmental Statement Memorandum 13-3)?"

- o Are the trigger points for management actions and subsequent additional NEPA analysis understood and being applied?

- o Are the approval procedures and necessary documentation of decision and rationale being prepared?

- o Have monitoring stations been established?

- o Has the incident escaped or surpassed the criteria set forth in the NEPA analysis and record of decision?

Appendix J: Minimum Impact Strategies and Tactics (MIST)

Sample Guidelines

Minimum Impact Strategies and Tactics (MIST) is the application of strategy and tactics that safely and effectively meet incident management objectives with the least environmental, cultural and social impacts. The principle of providing for safety first will not be compromised. For any wildland fire situation, protection of human life and property is the number one priority (after firefighter safety), and that the Incident Commander has the authority to implement ANY suppression tactic available when life and property are threatened, regardless of the presence of threatened and endangered or other sensitive species or cultural resources. When this happens, mitigation of the effects of those tactics must begin immediately after it is safe to do so.

Strategy is an overall plan of action which gives regard to the most cost efficient use of personnel and equipment in consideration of resource values threatened, nature and complexity of the incident, legal constraints, and objectives established for resource management. Tactics are the operational aspects. For example, determining exactly where and how to build a fire control line and what other suppression measures are necessary to extinguish a fire. Tactics must be consistent with the strategy.

MIST is an increased emphasis to do the job while maintaining a high standard of caring for the land. Actual ongoing conditions and your good judgment will dictate the actions you take. Consider what is necessary. It is important to consider probable rehabilitation needs as a part of selecting the appropriate response. Tactics that reduce the need for rehab are preferred whenever feasible. MIST is not intended to represent a separate or distinct classification of tactics but rather a mindset of how to manage an incident while minimizing the long-term effects management actions.

The selection of a MIST strategy and tactics can be relative based on urgency, complexity, and the values to be protected. For example on a wildfire, the situation may indicate that cold trailing or wet line can be a more appropriate approach than constructed hand line. If the fire is out of control and running towards a community, the use of heavy equipment may be necessary. Individual determinations will be dependent on the specific situation and circumstances of each fire.

Resource Advisor recommendations must be guided by Minimum Impact Strategies and Tactics. Keep this question in mind: What creates the greater adverse effect, the management effort or the nature of the incident?

Much of what is presented in this appendix was developed for response to wildland fire response, but has been modified to apply to all incident types. Become familiar with these guidelines and implement them according to the specifics of the response.

Always remember, Minimum Impact Strategies and Tactics are relative and must be safe.

Safety

- Remember that responder and public safety is the number one priority. Safety takes precedence over the protection and mitigation of resources.

- Apply principles of Lookouts - Communications - Escape Routes - Safety Zones (LCES) to all planned actions.

- Constantly review and mitigate all Watch-Out Situations found in Appendix A, Safety.

- Stay informed about issues and situations identified by the incident management team, safety officer, and those listed in incident action plans.

- Be particularly cautious when working near damaged infrastructure, trees, vegetation, and other damaged resources.

Escape Routes and Safety Zones

- The essential purpose for identifying or constructing escape routes and safety zones is to protect responders and fire fighters in deteriorating situations. In some cases it will not be possible to protect resources when identifying or constructing escape routes and safety zones. Yes, constructed escape routes and safety zones do have a greater impact, are more time consuming, and labor intensive but keep in mind the higher priority when damages cannot be mitigated.

- Identify escape routes that already exist. Identify existing roads, routes, trails, pathways, and natural openings.

- A safety zone should be large enough so that the distance between the firefighters and flames is at least four times the maximum flame height. For running crown fires on steep slopes and to accommodate large crews, the size of the safety zone can be large.

General MIST Considerations

- Select tactics, tools, and equipment that least impact the environment or identify other least damaging alternatives.

- Consider the potential for introduction of noxious weeds and mitigate by removing weed seed from vehicles, personal gear, cargo nets, etc. Equipment should be washed down before entering the incident and prior to leaving the incident in order to prevent the spread of noxious weeds.

- Consider effects to riparian areas when setting up mitigation operations.

- Ensure adequate spill containment at fuel transfer sites and pump locations. Stage spill containment kits at the incident.

- Report and protect any cultural resources discovered during incident activities.

Logistics, Camp Sites, and Personal Conduct

- Consider impacts on present and future visitors.

- Provide portable toilets at areas where crews are staged.

- Good campsites are found, not made. If an existing campsite is not available, select a campsite that is not likely to be observed by visitors.

- Select impact-resistant sites such as rocky or sandy soil, or openings within heavy timber. Avoid camping in meadows and along streams or shores.

- When there is a small group, try to disperse use. In the case of larger camps, concentrate, mitigate, and rehabilitate.

- Coordinate the layout of the camp components carefully from the start. Help to define cooking, sleeping, latrine, and water supplies areas.

- Prepare bedding and campfire sites with minimal disturbance to vegetation and ground.

- Personal Sanitation:
  - Designate a common area for personnel to wash up. Provide fresh water and biodegradable soap.

- Do not introduce soap, shampoo, or other chemicals (even bio-degradable) into waterways.
- Dispose of wastewater at least 200 feet from water sources.
- Toilet sites should be located a minimum of 200 feet from water sources. Holes should be dug 6-8 inches deep.

- If more than one crew is camped at a site, strongly consider portable toilets and remove waste.

- Store food so that it is not accessible to wildlife, away from camp and in animal resistant containers. Approved bear resistant food and garbage storage containers may be required in grizzly bear and/or black bear habitat.

- Do not let garbage and food scraps accumulate in camp.

- Monitor travel routes for damage and mitigate by:
  - Dispersing on alternate routes or
  - Concentrating travel on one route and rehabilitate at end of use.

- If a campfire is built, leave no trace of it and avoid using rock rings. Use dead and down wood for the fire and scatter any unused firewood. Do not burn plastics or metal. Consider using a fire pan or "mound fire" in sensitive areas.

- Use "scrim" (porous ground cloth) to protect high traffic areas from trampling.

Aviation Management

Minimize the effects of air operations by incorporating MIST in conjunction with standard aviation risk assessment processes. Balance aircraft size and efficiency with operational needs.

- Possible aviation-related effects include:
  - Damage to soils and vegetation resulting from heavy vehicle traffic, noxious weed transport, and/or extensive modification of landing sites.
  - Effects on soil, fish and wildlife habitat, and water quality from hazardous material spills.
  - Chemical and fuel contamination.
  - Biological contamination to water sources; e.g., whirling disease.
  - Safety and noise issues associated with operations in proximity to populated areas, livestock interests, wildland-urban interface, and incident camps and staging areas.

- Helispot Planning
  - When planning for helispots, determine the primary function of each helispot; e.g., crew transport or logistical support.
  - Consider using long-line remote hook (sling load) in lieu of constructing a helispot.
  - Consult Resource Advisors in the selection and construction of helispots during incident planning.
  - Estimate the amount and type of use a helispot will receive and adapt features as needed.
  - Balance aircraft size and efficiency against the impacts of helispot construction.
  - Use natural openings as much as possible. If tree felling is necessary, avoid high visitor-

use locations unless the modifications can be rehabilitated. Fall, buck, and limb only what is necessary to achieve a safe and practical operating space.

Post-Event Cleanup

- Restore areas to pre-incident or natural conditions.

- Pack out all garbage and dispose of in an approved facility.

- Remove all flagging.

- Check infrastructure such as roads, culverts, land survey monuments and boundary line markers damaged by incident activities. Blade any non-surfaced roads that have been impacted by activity. Clean and grade ditch lines.

- Restore helicopter landing sites.

- Camps, high use areas, and staging areas:

  o Remove signs of human activity.

  o Scatter unnatural features such as fireplace rocks and charcoal from fire, cover with soil, or blend area with natural cover.

  o Restore drainage features when sites are no longer needed.

  o Fill in and cover latrine sites.

- Walk through adjacent undisturbed areas and take a look at your rehabilitation efforts to determine your success at returning the area to as natural a state as possible.

Wildland Fire Specific Mist Considerations

Line Construction Phase

- Select tactics, tools, and equipment that least impact the environment.

- Give serious consideration to use of natural barriers, roads, trails, water or foam as a fire lining tactic.

- Use alternative mechanized equipment such as motor patrols, disks, rubber-tired skidders, etc., when available and appropriate rather than dozers when constructing mechanical line.

- When constructed fireline is necessary, use the appropriate width and depth to prevent the fire's spread.

- Monitor and patrol firelines to ensure continued effectiveness.

Ground Fuels

- Use cold-trail, wet line, or combination when appropriate. If constructed fireline is necessary, use minimum width and depth to stop fire spread.

- Consider the use of fireline explosives for line construction and snag falling to create more natural appearing firelines and stumps.

- Burn out and use low impact tools like swatters and gunny sacks.

- Minimize bucking to establish fireline: preferably move or roll downed material out of the intended constructed fireline area. If moving or rolling out is not possible, or the downed log/bole is already on fire, build line around it and let the material be consumed.

Aerial Fuels–Brush, Trees, and Snags

- Adjacent to fireline: limb only enough to prevent additional fire spread.

- Inside fireline: remove or limb only those fuels which would have potential to spread fire outside the fireline.

- Cut brush or small trees necessary for fireline construction flush to the ground.

- Trees, burned trees, and snags:

  - Minimize cutting of trees, burned trees, and snags.

  - Do not cut live trees unless it is determined they will cause fire spread across the fireline or seriously endanger workers. Cut stumps flush with the ground.

  - Scrape around tree bases near fireline if hot and likely to cause fire spread.

  - Identify hazard trees with flagging, glow sticks, or a lookout.

- When using indirect attack:

  - Do not fall snags on the intended unburned side of the constructed fireline unless they are an obvious safety hazard to crews.

  - Fall only those snags on the intended burn-out side of the line that would reach the fireline should they burn and fall over.

Retardant Chemical Use: Retardants, Foams, and Gels

- Whenever practical as determined by the fire incident commander, use water or other less toxic wildland fire chemical suppressants for direct attack or less toxic approved fire retardants in areas occupied by threatened, endangered, proposed, candidate or sensitive species, or their designated critical habitats.

- Retardant may be considered for sensitive areas when benefits will exceed the overall impact. This decision must take into account values at risk, agency specific direction, and consequences of expanded fire response and impact on the land.

- Communicate specific fire chemical sensitive and avoidance areas to fire operations, air attack, and pilots.

- Fire managers should weigh use of retardant with the probability of success by unsupported ground force.

- Consult the Wildland Fire Interagency Standards for Fire and Fire Aviation (commonly called the Red Book) chapter on suppression chemicals and delivery systems https://www.nifc.gov/policies/pol_ref_redbook.html for Use of Fire Chemicals and the Interagency Policy for Aerial and Ground Delivery of Wildland Fire Chemicals Near Waterways

> **AERIALLY APPLIED FIRE RETARDANT**
>
> Have incident provide resource advisors if the use of aerially applied fire retardant is expected. Ensure briefings include information and maps for avoidance areas such as waterways (which include 300 feet or larger buffers), critical habitat, and cultural resources. Resource advisors should emphasize that anyone on a fire can make the initial report of a misapplication into waterways or other areas of concern; resource advisors will complete additional assessment and monitoring requirements. Include reporting requirements in the briefing if a misapplication of fire chemical occurs (see https://www.fs.fed.us/fire/retardant/index.html).
>
> Avoid dipping from rivers or lakes with a helicopter bucket containing residual fire chemicals without first cleaning/washing down the bucket. Use only products qualified and approved for intended use by making sure all fire chemicals are on the Qualified Products List: https://www.fs.fed.us/rm/fire/wfcs/index.htm

and Other Avoidance Areas.

Water Bucket Use

- Consider biological and/or chemical contamination effects when transporting water.

- Limited water sources expended during aerial suppression efforts should be replaced.

- Consult Resource Advisors prior to extended water use beyond initial attack.

- Refer to Aquatic Invasive Species decontamination protocols in Appendix K: Invasive Species Management.

Mop-Up Phase

- Consider using "hot-spot" detection devices along perimeter (aerial or handheld).

- Use extensive cold-trailing to detect hot areas.

- Cold-trail charred logs near fireline: do minimal scraping or tool scarring. Restrict spading to hot areas near fireline.

- Minimize bucking of logs to check for hot spots or extinguish fire: preferably roll the logs and extinguish the fire.

- When ground is cool return logs to original position after checking.

- Refrain from piling: burned/partially burned fuels that were moved should be arranged in natural positions as much as possible.

- Consider allowing larger logs near the fireline to burn out instead of bucking into manageable lengths. Use a lever, etc., to move large logs.

- Use gravity socks in stream sources and/or combination of water blivets and fold-a-tanks to minimize effects on streams.

- Personnel should avoid using rehabilitated firelines as travel corridors whenever possible because of potential soil compaction and possible detrimental impacts to rehabilitation work.

- Avoid use of non-native materials for sediment traps in streams.

- Aerial fuels (brush, small trees, and limbs): remove or limb only those fuels which if ignited have potential to spread fire outside the fireline.

- Burning trees and snags.

- Be particularly cautious when working near snags. (Ensure adequate safety measures are communicated.)

  - The first consideration is to allow a burning tree/snag to burn itself out or down.

  - Identify hazard trees with flagging, glow sticks or a lookout.

  - If there is a serious threat of spreading firebrands, extinguish with water or dirt.

  - Consider felling by blasting, if available.

Suppression Damage Repair

- Firelines:

  - After fire spread has stopped and lines are secured, fill in deep and wide firelines and cup trenches and obliterate any berms. The berm material should be spread back into the

fireline or re-contoured to the fireline.

- o Be careful not to reignite or spread hot material hidden in berms across the fireline.
- o Restore drainages by removing fill or dams, reestablish crossings and return to natural configuration.
- o Use water bars only when necessary to prevent erosion or use woody material to act as sediment dams. Water bars should only be used on steep slopes and only when necessary. General guidelines for water bar spacing are listed in the table below. However, it is important to note that improper construction and inappropriate placement of water bars can create excessive erosion.
- o Ensure stumps are cut flush with ground.
- o Camouflage cut stumps by flush-cutting, chopping, covering, or using Fireline Explosives to create more natural appearing stumps.
- o Any trees or large size brush cut during fireline construction should be scattered to appear natural.
- o Discourage the use of newly created firelines and trails by blocking with brush, limbs, poles, and logs in a naturally appearing arrangement.

- Re-contour impacted areas to the existing slope of the hill. Blend berm materials (soils, rocks, brush piles) back onto the dozer line in a natural appearance. Brush or cut trees shall be spread back onto the dozer line, where practical. Be careful not to reignite or spread fire across dozer lines.

- Spread material from dozer piles. Spread this material back onto the dozer line only if there is no chance of fire re-ignition. If there is re-ignition potential, break up and spread cat piles to the outside of the fireline.

- Rubble the dozer lines with rock and debris to disguise the dozer line from road appearance. The entrance to the dozer line shall be blocked from vehicle travel, if possible, by placing slash, boulders, or erosion control devices in such way as to discourage motorized vehicle driving.

- Water bar where necessary on slopes needing water control. Water bars should be constructed so as to drain outside the burn. If possible, the water bar should curve slightly to follow the natural topography.

Appendix K: Invasive Species Management

Vegetation biologists assigned as Resources Advisors are predominantly concerned about four issues:

- Conservation and protection of threatened, endangered, or sensitive species,

- Conservation and protection of ecosystems and critical habitat,

- Loss of vegetation, and

- Prevention and control of invasive species.

This appendix focuses on the fourth item, the prevention and control of invasive and non-native species. The source for this material and further information may be found on the National Invasive Species Council website, https://www.doi.gov/invasivespecies/.

Invasive species are alien (non-native) species whose introduction does or is likely to cause economic or environmental harm or harm to human health (Executive Order 13112, Invasive Species, February 3, 1999). Management of invasive species helps to protect native ecosystems and ecological processes. By preventing their introduction or exacerbation during an incident response, the Resource Advisor can reduce damages and subsequent control costs.

Invasive species can be found in every type of habitat. For example, they are in oceans, lakes, streams, and wetlands. On land, they can be in croplands, rangelands, backcountry areas, parks, and forests. Some invasive species inhabit homes and urban environments. Incident responders need to be aware of invasive species issues and the role of the Resource Advisor is to inform them. Primarily, an incident response can transmit invasive species. Furthermore, the incident and the response might disturb desired plant and animal communities, making them vulnerable to invasions by introduced species.

The Resource Advisor's objectives are to mitigate actions that they believe are likely to cause or promote the introduction or spread of invasive species. Actions should be practical and reasonable in the context of emergency management. Measures need to be timely and fit the purpose. They should be proactive and take advantages of opportunities. Actions need to be environmentally sound. Cost of actions should be weighed against benefits. Strategies should be open and participatory involving experts, stakeholders, and cross jurisdictional boundaries. Broad-based involvement gives greater credibility for the finished product. Some control actions may be "site-based" and focused on a location. Other actions may be "species-based" and focus on the control of an invasive species such as the transport of aquatic invasive species by fire engines or boats. Keep in mind that even the best prevention efforts cannot stop all introductions. However, control and management efforts may slow and/or reduce their impacts.

Invasive species plans prepared before the incident should consider risk assessments of invasive species, sites, and pathways of introduction. It is recommended that they include predictive modeling of invasive species distributions, pathways of spread, and vulnerable areas. The plans should also include invasive species mitigation and integrated pest management strategies.

There are four general approaches that are used to minimize the impact of invasive species, each associated with a different stage in the invasion process (Source: National Invasive Species Council Management Plan):

1. Prevention (keep invasive species from entering a new ecosystem through prevention, detection, and interception);

2. Eradication (remove the entire population of a non-native species);

3. Control (contain or otherwise manage the population of an invasive species so as to minimize

spread and impacts; and

4. Ecosystem restoration (recover native species and ecosystems after the removal of invasive species in order to build resistance and resilience to future introductions of non-native species).

Prevention is not only the first line of defense, it is also the most cost effective strategy. Invasive plant prevention depends on the following:

- Maintaining desired plant communities through good management,

- Minimizing the disturbance of desirable plants,

- Limiting the introduction of invasive plant seeds, propagules, and other life forms through Best Management Practices (http://www.invasivespeciesinfo.gov/toolkit/preventionbmp.shtml),

- Surveying and detecting populations of invasive plants, especially in disturbed areas, and

- Responding immediately to new introductions.

What more can the Resource Advisor do about invasive species?

- Learn what invasive species are in your area and what is being done about them,

- Become prepared by establishing invasive species plans prior to an incident to include operational procedures, risk factors, vectors, and mapping known populations,

- Share your knowledge with the incident management team, incident responders, and the affected land management agency,

- Report to the incident and incident responders known invasive species populations that may occur on the incident,

- Talk to the Agency Administrator, Federal On-scene Coordinator, and other response officials to support invasive species efforts,

- Intercept and detect invasive species by inspecting and cleaning boots, equipment, boats and trailers, waders, off-road vehicles, engines, water tankers, transported supplies and materials, and other pathways of spread to stop hitchhiking invasive species,

- Consider waste disposal as a vector of transport,

- Use certified "weed-free" materials for restoration and stabilization activities,

- It may be prohibitively difficult to obtain certified weed-free material so consider alternatives such as non-persistent cereal grains (oats, barley), wood chip, wood mulch or other commercially available products which are weed free and readily available,

- Note that the jurisdiction may have a policy to use locally collected seed or perennial grass or shrub species grown from locally collected seed wherever practicable when revegetation is prescribed,

- Volunteer for organized efforts to remove invasive species, and

- Learn about Best Management Practices (https://www.invasivespeciesinfo.gov/toolkit/preventionbmp.shtml).

Special attention should be given to vectors and pathways for invasions. Pathways should be re-evaluated periodically since risks associated with any particular pathway can change over time.

To reduce the transport, introduction, and establishment of noxious weeds or other invasive species on the landscape due to incident management activities, all vehicles, tools, and machinery should be cleaned at a designated area prior to arriving and leaving the incident. If practical, all visible material should be removed after each operational period, too. The cleaning area should be clearly marked to identify the area for post invasive species control treatments, as needed. Onsite equipment should be used to thoroughly clean the undercarriage, fender wells, tires, radiator, and exterior of the vehicle. If possible, use a power-wash with clean, hot water (ideally > 140 degrees F). Personnel should also clean boots, clothing, and personal equipment etc. of weed or other invasive species materials, including visible plant parts, soil, and other materials.

VEHICLE CLEANING TECHNOLOGY GUIDE

This publication summarizes the concepts for removing seeds from vehicles and equipment to control the spread of noxious weeds, invasive species, and disease.

https://www.fs.fed.us/eng/pubs/pdf/05511203.pdf

To minimize the potential transmission of aquatic invasive species, it is recommended that you:

- Consult with local biologists, Resource Advisors (READ) and other resource personnel for known aquatic invasive species locations in the area and avoid them,

- Avoid entering (driving through) water bodies or saturated areas,

- Avoid transferring water with water transport equipment such as engines between drainages or between unconnected waters within the same drainage,

- If drafting water from natural sources, use the smallest screen possible that does not negatively impact operations and avoid sucking organic and bottom substrate material into water intakes when drafting from a natural water body, and

- Avoid obtaining water from multiple sources during a single operational period.

GUIDE TO PREVENTING AQUATIC INVASIVE SPECIES THROUGH TRANSPORT DURING WILDLAND FIRE OPERATIONS

This publication is intended to help wildland firefighters avoid the spread of aquatic invasive species.
https://www.nwcg.gov/sites/default/files/publications/pms444.pdf

When prescribing rehabilitation or restoration measures, plan to use native plants appropriate to the site and site conditions. Many introduced plant species escaped cultivation and are now invasive, resulting in significant costs for their control. Keep in mind Best Management Practices when prescribing rehabilitation and restoration projects. Can the target population be reached? Can the efficacy of control be determined? Understanding factors that influence efficacy is important. Keep in mind that certain management efforts may have a high probability of initial success but senesce over time with the gradual deterioration of function. Ensure that seed mixes, mulch, and/or other agricultural products contain no federally or state designated noxious weeds and the products have been examined by a laboratory or have current weed free certification from a state seed laboratory or equivalent qualified testing agent.

It is recommend a follow-up survey monitoring and control plan be developed with site managers to carry out controls after the incident. The monitoring has two purpose. One to monitor invasive populations for retreatment. Two, to monitor the efficacy of the treatments for lessons learned and adaptive management.

Additionally, using the Early Detection and Rapid Response (EDRR) framework is a cornerstone for success (Source: The U.S. Department of the Interior. 2016. Safeguarding America's lands and waters from invasive species: A National Framework for Early Detection and Rapid Response). Early Detection is the process of surveying for, reporting, and verifying the presence of a non-native species before the founding population becomes established or spreads so widely that eradication is no longer feasible.

Rapid response is the process that is employed to eradicate the founding population of a non-native species from a specific location. A structured, strategic approach for EDRR, is necessary to effectively stop potentially invasive species before they can establish and spread and cause widespread, costly damage. The length of time for the plan is dependent on the invasive species found at the site or likely to occur after the incident. Some of these actions may have to be carried out using funds not tied to the incident response.

> Habitat suitable for invasive plants is greatly increased in a burned areas due to loss of vegetation, exposed bare soil, as well as firefighting efforts that include construction of dozer and hand-lines. Also, large number of firefighters responding from across the country increases the likelihood of novel species being introduced to the site and firefighters may move constantly between areas on the fire that have invasive plants. Keep in mind that due to the emergency nature of the fire, the values at risk, and the intensity of the fire, Resource Advisors may be unable to focus on invasive plant related issues.

It is not practicable to list all of the actions necessary to prevent and control invasive species. Many issues are context specific. So where can the Resource Advisor find specific information? The County Extension Office which is supported by the State Land Grant University System plus these websites:

- The USDA National Invasive Species Information Center

  https://www.invasivespeciesinfo.gov/index.shtml

- The U.S. Fish and Wildlife Service Invasive Species website

  https://www.fws.gov/invasives/

- The National Invasive Species Council website

  https://www.doi.gov/invasivespecies/

- The Association of Exotic Plant Councils such as the California Invasive Plant Council website, http://www.cal-ipc.org.

- Early Detection and Distribution Mapping System or EDDMapS

  https://www.eddmaps.org/

AQUATIC INVASIVE SPECIES

Everyone can make a difference in the fight against invasive species by learning about how to prevent their movement.

Prevention is the First Line of Defense

- Boats, Equipment, Pumps, Water Handling Apparatus (e.g. Fire Engines) and other Transport: Clean, Drain, and Dry. Learn the protocols for properly sanitizing your water handling equipment.

- Responders: Inspect and clean your gear. Remove mud from boots, gear and vehicles. Dispose of waste properly, and never move water from one body of water to another.

- All: Recognize and report invasive species.

Have you seen anything unusual? Contact the Aquatic Nuisance Species Task Force: http://www.anstaskforce.gov/

Clean, Drain, and Dry

Appendix L: Cultural Resources

This appendix focuses on providing guidance for managing and protecting cultural resources that may be affected by an incident and the incident response.

During and after an incident response, cultural resources are subject to many threats. For example;

- Direct incident impacts such as impingement from fire;

- Damages from incident actions like fireline construction;

- Damages from post-incident recovery and rehabilitation actions; and

- Post-incident effects such as erosion and exposure.

These threats may result in the loss of contextual integrity and there may be increased potential for looting and vandalism.

Cultural Resource Advisor Responsibilities

Cultural resource READs are responsible for taking care of cultural resources but must be mindful that employee and public safety is the first priority in every incident related activity. All cultural resource management and incident related responses must reflect this commitment. Consequently, an emergency response to protect life and safety may override the protection of cultural resources.

Credit: Excerpts for this section are from the National Park Service's NPS Archeology Guide for Cultural Resources and Fire: https://www.nps.gov/archeology/npsGuide/fire/overview.htm

The responsibilities include providing advice and recommendations to incident responders regarding the management of archeological sites, historic structures, cultural landscapes, museum objects housed in structures, and traditional cultural properties, sites, and natural resource features important to Native Americans. This may also include intangible resources such as lifeways, beliefs, social systems and legal rights, such as Native American treaty rights and sovereign rights. If a Subject Matter Expert is needed, such as a qualified historic structures person, then order as a Technical Specialist.

Protection of cultural resources is about establishing what's important, figuring out how to protect it, and passing along an appreciation for these resources. Avoidance of cultural resources or historic properties is the safest measure to ensure resource protection, but there are many circumstances that preclude total avoidance. As with all other aspects of being a Resource Advisor, the READ will be tasked with striking a balance between the protections of cultural resources while weighing the objectives of managing an incident. For example, an incident such as a wildfire may threaten life and property and the resource. In all cases, the safety of the public and the responders is the highest priority. Consequently, total avoidance and exclusionary tactics of the resource may not be feasible. A moderate approach such as Minimum Impact Strategies and Tactics (MIST, see Appendix J) may be the preferred alternative.

Cultural resource specialists assigned as Resources Advisors are predominantly concerned about three issues:

- Taking prompt action to assess and prevent damage and protect and stabilize cultural resources, whether the resources are impacted or potentially impacted by the incident or emergency response actions,

- Making cultural resources relevant to incident responders so that they see the need for preserving and protecting them, and

- Preventing looting and vandalism of cultural resources.

The Cultural Resources Advisor has a number of tasks and responsibilities:

- Coordinate with the local or home unit cultural resource specialist.
- Learn the locations and types of known cultural resources within the incident management area.
- Identify local cultural resource concerns and protection priorities.
- Document cultural resource activities and issues
  - Map site locations,
  - Complete site forms for newly identified and damaged resources,
  - Identify areas surveyed,
  - Rehabilitation recommendations beyond suppression, and
  - Keep in mind that, consistent with the National Parks Omnibus Management Act of 1998 Section 207 (54 USC 100707), the location and nature of certain cultural resources is to remain confidential and shared in confidence with incident responders.
- Develop strategies and recommendations for protection of critical/important cultural resources in projected incident management areas.
- Identify cultural resources that may be affected by ground-disturbing incident management activities.
- Develop/recommend cultural resource avoidance or protection measures for cultural resources at risk.
- Recommend measures to protect cultural resources from additional incident management actions.
- Identify cultural resources damaged during incident management activities.
- Prioritize survey work, as necessary.
- Work with the local unit cultural resource specialists on notifying and consulting State and Tribal Historic Preservation Officers (SHPOs and THPOs).
- Work with the local unit cultural resource specialists on notification of and consultation with Indian Tribes.
- Provide recommendations and facilitate a smooth transition to the post-incident teams.
- Ensure that cultural resources are not further damaged during demobilization.
- Ensure that local or home unit cultural resource specialists have documentation and necessary information regarding cultural resource locations, damage, applied treatment/protective measures, and recommendations for further protection..

The READs are responsible for gathering data, determining environmental conditions, and documenting impacts to these resources. They should be available to provide briefings and resource information. The cultural resources READ, may be tasked to perform compliance to regulatory statutes and acts. They should ensure that appropriate staff are available to meet regulatory requirements. This may include the pre-incident response preparedness and planning effort, development of incident response tactics, and the identification of emergency rehabilitation needs. They provide information on the location, nature and importance of known cultural resources. The protection of known important cultural resources is a high priority when protection is possible without endangering life, property, or the efficacy of the

incident management effort. The process of cultural resources evaluation, as followed under 36 CFR 800, can include fieldwork, analysis, reporting and SHPO/THPO consultation. This process can take months, and there is no such time during an incident response. Therefore in emergency responses, keep in mind that management decisions or historic preservation priorities often must be made immediately in order to protect life, property and important resources. Consequently, the immediate rescue and salvage operations conducted to preserve life or property are exempt from the provisions of Section 106 (36 CFR § 800.12(d)). This exemption applies regardless of whether there has been a declared disaster or emergency. For further clarification, see the Role of Section 106 in Disaster Response, http://www.achp.gov/sec106_disaster-responseFAQ.html.

The READ may also need to be knowledgeable about protection of Native American and Native Hawaiian human remains, associated funerary objects, unassociated funerary objects, sacred objects, and cultural patrimony [25 USC 3001 (3)]. Items of cultural patrimony are objects having ongoing historical, traditional, or cultural importance central to the Indian tribe or Native Hawaiian community, and which cannot be alienated, appropriated, or conveyed by any individual regardless of whether or not the individual is a member of the Indian tribe or Native Hawaiian organization.

Sensitive Information

Sensitive information must be kept confidential during an emergency response and withheld from the public when public disclosure about the location, character, or ownership may cause a significant invasion of privacy, risk, or harm, or impede the use of a traditional religious site by practitioners. However, the READ may share site locations with responders in order to protect cultural resources but this is discretionary based on the terms in the previous sentence.

Advance Planning

Although emergency incidents are unpredictable in extent and occurrence, the response to common types of incidents can be planned in advance. For example, a wildland fire management plan outlines the ways that a federal unit will respond to wildfires; the measures that will be taken to protect cultural resources; and the mitigation of efforts to manage fires.

Advance planning, cooperation, and coordination between cultural resources and incident response programs and activities are essential elements to produce robust and complete incident action plans and to successfully execute planned activities.

Local READs should also develop READ kits that identify values to be protected. The gathering in advance of spatial layers of key resources to be protected is important and should be made available to responders. Keep in mind that the location and nature of many types of cultural resources is to remain confidential and shared in confidence with incident responders.

Procedures should be established for notifying and consulting State and Tribal Historic Preservation Officers (SHPOs and THPOs). Responses that have been formally declared emergencies or disasters are still subject to NHPA Section 106, but an alternate compliance process may be used at the time of response (see the Role of Section 106 in Disaster Response, http://www.achp.gov/sec106_disaster-responseFAQ.html).

Incident Timeline

During the initial stages of an emergency response, the potential for damage to cultural resources can be substantial, since there is little time for their protection. However if an event spans multiple days, a daily operational plan is normally developed by the incident manager that incorporates site specific activities, equipment use, staffing, tactics, and constraints on operations among other information. Planning or modeling into the future may be conducted to anticipate potential effects and to plan needed actions. Resource Advisors can use this information to plan for the protection of cultural resources.

A Delegation of Authority is a formal agreement that transfers responsibility for management of the incident to the Incident Commander. The Delegation should include strategies for managing cultural resources. The daily Incident Action Plan should incorporate site specific activities, equipment use, staffing, tactics, and constraints on operations among other information. Consequently, the cultural resources READ should be involved or provide input through a READ Coordinator or Agency Representative in the development of the Delegation of Authority and be present in planning meetings to contribute to the incident action plan discussions and offer solutions to operational problems. It is also important that READs are available to be notified of cultural resources at risk and any impacts and damages that may have occurred during the incident.

Any post-incident documentation should incorporate reports of damages and recommend future strategies for the stabilization and rehabilitation of cultural resources. It is better to include more information than less in this report (within reason). Include areas surveyed on maps, and dimensions and acres. If sites were located, identify them on a map, and include completed site forms. Give copies of the report to the responsible person on the incident (usually the documentation unit leader and/or plans section chief), the Agency Representative, and post-incident teams, and the unit archeologist. In theory, the documentation unit will provide copies to the others, but there could be a time delay. Finish this task before you demobilize from the fire.

When you have the general idea of what kind of resources you're dealing with, consider your ability to manage them. If you need a Cultural Resource Technical Specialist who can deal with a specific class of resources (for example, cultural landscapes), consider ordering one. If a subject matter expert is needed, such as a qualified historic structures expert then order as a Technical Specialist. See the big picture: keep in mind that you are part of a team, and the goal of the team is to manage the incident in a safe manner, with the least amount of resource damage. If you see yourself as part of this team with this goal, your contributions are more likely to be valued by others on the team.

Safety is the overriding theme on every incident. Think about everything that you do, as the consequences of a mistake are magnified to a potentially fatal level. Be mentally prepared for your assignment.

Regulatory Framework

Laws such as the Archaeological Resources Protection Act and the Native American Graves Protection and Repatriation Act (NAGPRA) are not waived during incident management activities. It is prudent that agency administrators, response officials, cultural resource managers, and READs ensure that activities comply with laws, policies, and Executive Order 13175 at the planning and implementation stage.

The foundation for cultural resource protection was laid by the authorities and protections provided by the Antiquities Act of 1906, and the public policy of progressive archeological resource management that it initiated. The basic provisions of the Antiquities Act have been enhanced and expanded by subsequent laws, regulations, policies, and guidelines that describe and define activities to preserve, properly treat, and protect archeological sites and objects. Two significant laws passed in the wake of the Antiquities Act include the Archaeological Resources Protection Act (ARPA) and the National Historic Preservation Act (NHPA), especially Sections 106 and 110.

The National Historic Preservation Act (NHPA) Section 110 sets out the broad historic preservation responsibilities of Federal agencies. It requires that Federal agencies develop a program to inventory and evaluate cultural resources within a federal jurisdiction. Completing the inventory before incidents occur and making relevant information available to first responders for planning purposes is beneficial. Information sharing ensures full consideration of cultural resources while planning response activities. During an incident response, information about these resources is made available to cultural resource

specialists (CRS) or resource advisors (READ) working with incident managers.

The National Strategy for Federal Archeology, under federal policy, favors conserving sites in place. Excavation incurs expense as well as the responsibility for writing archeological reports and caring for the resulting collections. Once a site is stabilized, it can always be excavated later, after the incident is over.

Implementation of response protocols is considered a Federal undertaking. A federal agency should remember that its undertakings could trigger compliance issues with additional laws and should coordinate its compliance with impacted parties as appropriate. The Federal agencies have an obligation to engage with Indian Tribes on a government-to-government basis and the READ may provide input to the responsible federal official or Agency Administrator. The Cultural Resources READ may be asked to perform Section 106 review under the National Historic Preservation Act (NHPA) and consultation. The Native American Graves Protection and Repatriation Act (NAGPRA) is another important responsibility. NAGPRA comes into play during emergencies because of the potential for inadvertent discoveries in the field and impacts or risks to human remains, objects, records or archives that are subject to NAGPRA and housed in facilities, such as museums. Note NAGPRA is not the only historic preservation law that protects cultural resources of importance to Tribes, nor is it the only law that requires consultation (e.g., ARPA, NEPA, NHPA, etc.).

The National Environmental Policy Act (NEPA) of 1970 is a cornerstone of efforts to protect the environment. It mandates that Federal agencies and recipients of federal funding consider the effects of their proposed actions on the environment including effects on cultural resources, before implementation. NEPA emphasizes public involvement in government actions affecting the environment by requiring that the benefits and the risks associated with proposed actions be assessed and publicly disclosed. In accordance with NEPA, all pre-incident management plans must have an associated Environmental Impact Statements (EIS) or Environmental Assessments (EA). The appropriate level of compliance is determined in coordination with resource managers.

Even though NHPA Section 106 and NEPA compliance are two separate and distinct processes, the results of Section 106 consultation may inform the outcome of the NEPA process.

Cultural Resource Specialists serving as Cultural Resource Technical Specialists and specialized Cultural Resource READs shall be qualified professionals. The Secretary of the Interior's Professional Qualification Standards for Archeology and Historic Preservation serve as baseline qualifications for considering assignment as a Cultural Resource Technical Specialist or CR READ. The collection and compilation of information can be performed by persons who do not meet these standards, but recommendations to general Resource Advisors, Planning Section Chiefs, or other authorities within the Incident Command regarding the significance of resources the sensitivity of areas to contain cultural resources, or recommendations for the protection or treatment of cultural resources must be made by qualified Cultural Resource Technical Specialists.

Appendix M: Laws and Regulations

Law / Regulation	Acronym	Applicability to Action Entity	Regulatory Authority (for enforcement)	What it Covers (Succinctly and Clearly Described)	Primary Weblink	Secondary Weblink (if more appropriate to READ)
Abandoned Shipwreck Act		Federal, State, Tribal submerged lands		Protects historic shipwrecks from salvagers by transferring the title of the wreck to the state whose waters it lies in. Directs the NPS to develop guidelines for use by other Federal Agencies, States, and Tribal governments.		https://www.nps.gov/archeology/tools/laws/asa.htm
American Indian Religious Freedom Act	AIRFA	Federal Agency		Protects and preserves the traditional religious rights and cultural practices of American Indians, Eskimos, Aleuts, and Native Hawaiians. These rights include, but are not limited to, access of sacred sites, freedom to worship through ceremonial and traditional rights and use and possession of objects considered sacred. Governmental agencies must accommodate access to and use of religious sites to the extent that the use is practicable and is not inconsistent with an agency's essential functions.	https://www.nps.gov/history/local-law/fhpl_IndianRelFreAct.pdf	
Archaeological Resources Protection Act	ARPA	Federal lands defined as owned in fee by federal government. Indian lands defined as trust or restricted tribal or individual land. Potential or actual impacts to an archaeological site on federal or Indian lands.	Federal land Management Agency issues ARPA permits, can suspend permits, and access civil penalties for violations.	The Archaeological Resources Protection Act, 1979, 1988 which defines archeological resources as any material remains of past human life or activities that are of archeological interest and at least 100 years old; It protects archeological sites by: requiring ARPA permits for surveys, archeological investigations, excavation or removal of archeological resources, prohibiting the looting of sites, and establishing site locations as confidential.	Look at the guidance issued by the specific federal land managers for the incident.	https://www.nps.gov/archeology/tools/Laws/arpa.htm

Law / Regulation	Acronym	Applicability to Action Entity	Regulatory Authority (for enforcement)	What it Covers (Succinctly and Clearly Described)	Primary Weblink	Secondary Weblink (if more appropriate to READ)
Bald and Golden Eagle Protection Act		Anticipated disturbance to eagles	USFWS	The Bald and Golden Eagle Protection Act, like the MBTA and the ESA for other species, protects all bald and golden eagles from "take." If the READ thinks response efforts will be within one-half mile of eagle activity, they should discuss with the Fish and Wildlife Service's Migratory Bird program contacts.	https://www.fws.gov/birds/management/managed-species/bald-and-golden-eagle-information.php	https://www.fws.gov/midwest/eagle/protect/laws.html
Clean Air Act	CAA	Most	USEPA delegates to the States	The Clean Air Act is a comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, this law authorizes EPA to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare and to regulate emissions of hazardous air pollutants.	http://www.epa.gov/regulations/laws/caa.html	
Clean Water Act	CWA	Most	USEPA delegates to the States except for ID, MA, NH, NM	The Clean Water Act made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges.	https://www.epa.gov/laws-regulations	http://www.sac.usace.army.mil/?action=permits.clean_water_act_sec_404
Coastal Barriers Resource Act	CBRA		USFWS	The law encourages the conservation of hurricane prone, biologically rich coastal barriers by restricting Federal expenditures that encourage development, such as Federal flood insurance. Areas within the CBRS can be developed provided that private developers or other non-Federal parties bear the full cost. The Coastal Barrier Resources Act (CBRA) limitations and exceptions also apply for new expenditures or financial assistance made available under authority of the Stafford Act.	https://www.fws.gov/ecological-services/habitat-conservation/cbra/Consultations/Disaster-	

Law / Regulation	Acronym	Applicability to Action Entity	Regulatory Authority (for enforcement)	What it Covers (Succinctly and Clearly Described)	Primary Weblink	Secondary Weblink (if more appropriate to READ)
				There is an exception under Section 6 of CBRA (16 U.S.C. § 3505(a)(6)(E)) for emergency actions essential to the saving of lives and the protection of property and the public health and safety if those actions are consistent with the three purposes of CBRA. The Federal Emergency Management Agency's (FEMA) regulations implementing CBRA as that statute applies to disaster relief can be found at 44 CFR 206.340 through 206.349	Assistance .html	
Coastal Zone Management Act	CZMA		NOAA delegates to states	The Coastal Zone Management Act (CZMA) encourages the management of coastal zone areas and provides grants to be used in maintaining coastal zone areas. It requires that federal agencies be consistent in enforcing the policies of state coastal zone management programs when conducting, supporting, permitting activities that affect a coastal zone. It is intended to ensure that federal activities are consistent with state programs for the protection and, where possible, enhancement of the nation's coastal zones. The Act's definition of a coastal zone includes coastal waters extending to the outer limit of state submerged land title and ownership, adjacent shorelines and land extending inward to the extent necessary to control shorelines. A coastal zone includes islands, beaches, transitional and intertidal areas, and salt marshes. The CZMA at 307(c) (1) requires Federal agency activities to be fully consistent unless federal legal requirements prohibit full consistency.	https://coa st.noaa.go v/czm/act/	

Law / Regulation	Acronym	Applicability to Action Entity	Regulatory Authority (for enforcement)	What it Covers (Succinctly and Clearly Described)	Primary Weblink	Secondary Weblink (if more appropriate to READ)
Comprehensive Environmental Response, Compensation, and Liability Act	CERCLA		USEPA and USCG; Federal Land Management Agencies; Some state governments have CERCLA-analogue statutes and enforcement authority	CERCLA grants the President (and, by delegation, EPA, the Coast Guard, or the federal land management agency with jurisdiction over land on or from which a release or threatened release exists) broad discretionary authority to undertake any appropriate response to protect public health or welfare or the environment from risks posed by the release or threatened release. This includes authority to comprehensively investigate the nature and extent of the hazardous substances released and to take any action determined to be necessary to mitigate unacceptable risks to humans or ecological receptors.	https://www.epa.gov/superfund	
Department of Transportation Act		Section 4(f) applies to projects that receive funding from or require approval by an agency of the U.S. Department of Transportation.	Federal Highway Administration	Mitigate impact of transportation program projects on publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance. Section 4(f) of the Department of Transportation Act of 1966 provides significant authority to the Secretary of the Interior to seek the protection of public (federal and non-federal) recreational lands, including parks and wildlife refuges, in the planning of DOT proposals.	https://www.environment.fhwa.dot.gov/4f/index.asp	

Law / Regulation	Acronym	Applicability to Action Entity	Regulatory Authority (for enforcement)	What it Covers (Succinctly and Clearly Described)	Primary Weblink	Secondary Weblink (if more appropriate to READ)
Executive Order 13007 - Access and Use of Sacred Sites		Federal land managers		Federal land managing agencies must accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and to avoid adversely affecting the physical integrity of such sacred sites. It also requires agencies to develop procedures for reasonable notification of proposed actions or land management policies that may restrict access to or ceremonial use of, or adversely affect, sacred sites. (1) Accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and (2) avoid adversely affecting the physical integrity of such sacred sites. Where appropriate, agencies shall maintain the confidentiality of sacred sites-- to the extent practicable, permitted by law, and not clearly inconsistent with essential agency	https://www.gpo.gov/fdsys/pkg/FR-1996-05-29/pdf/96-13597.pdf	http://www.achp.gov/EO13007.html
Executive Order 13175 - Consultation and Coordination with Indian Tribal Governments		Federal agencies		Directs federal agencies to establish procedures to consult and collaborate with tribal governments when new agency policies or actions have tribal implications. Federal agencies are charged with engaging in consultation and collaboration with Indian tribal governments; strengthening the government-to-government relationship between the United States and Indian tribes; and reducing the imposition of unfunded mandates upon Indian tribes. (Consultation requirement also applies to Alaska Native Corporations.)	https://www.gpo.gov/fdsys/pkg/FR-2000-11-09/pdf/00-29003.pdf	

Law / Regulation	Acronym	Applicability to Action Entity	Regulatory Authority (for enforcement)	What it Covers (Succinctly and Clearly Described)	Primary Weblink	Secondary Weblink (if more appropriate to READ)
Executive Order 13112 - Invasive Species		Federal agencies		To prevent the introduction and spread of invasive species, and to support efforts to eradicate and control invasive species that are established. The National Invasive Species Council is established to oversee implementation of the order, encourage proactive planning and action, develop recommendations for international cooperation, and take other steps to improve the Federal response to invasive species.	https://www.invasivespeciesinfo.gov/laws/execorder.shtml	
Endangered Species Act	ESA	Most	USFWS, NOAA Fisheries, and USCG. Some states have their own version of the ESA. Contact the state resource agency for further guidance.	The Endangered Species Act (ESA) protects all species listed by the Fish and Wildlife Service or NOAA Fisheries as threatened or endangered, and their habitat, from "take" or "adverse modification" respectively. Take is thoroughly defined in the ESA, but suffice to say that it is illegal to do anything that could interfere with an individuals' breeding, feeding or sheltering, without formally consulting with the Fish and Wildlife Service or NOAA and obtaining a permit to take from the agency responsible for protecting that species. You should also be aware that some states have their own version of the ESA, and species may differ from the Federal list. Be sure to contact the state resource agency for further guidance.	https://www.fws.gov/endangered/	https://www.fws.gov/endangered/esa-library/pdf/ESAall.pdf
Marine Mammal Protection Act	MMPA	Most	NOAA Fisheries and USFWS	The Marine Mammal Protection Act is similar to the Endangered Species Act, but protects all marine mammals, and their parts, from "take" and "harassment." Coordinate with NOAA Fisheries immediately if response efforts may affect marine mammals.	http://www.nmfs.noaa.gov/pr/laws/mmpa/text.htm	

Law / Regulation	Acronym	Applicability to Action Entity	Regulatory Authority (for enforcement)	What it Covers (Succinctly and Clearly Described)	Primary Weblink	Secondary Weblink (if more appropriate to READ)
Migratory Bird Treaty Act	MBTA	All	USFWS	The Migratory Bird Treaty Act protects all migratory birds, their nests, eggs, feathers, and all other parts from harm, take and physical collection. With few exceptions, nearly all bird species are covered under this act. READs should be particularly mindful of the time of year and what activities may affect birds at that time.	https://www.fws.gov/le/USStatutes/MBTA.pdf	https://www.fws.gov/birds/index.php
National Environmental Policy Act	NEPA	Every Federal Agency must comply with NEPA	Each federal agency is required to consider the environmental effects of proposed actions in accordance with the requirements of NEPA. While federal agencies also develop their particular agency procedures for compliance with NEPA (DOI has 43 CFR part 46), the Council for Environmental Quality (CEQ) promulgates the regulations for general NEPA compliance across the federal government and oversees NEPA implementation by federal agencies.	Procedural statute requiring that federal agencies provide public notice of agency actions that may affect the environment, and that federal agencies consider the environmental effects of proposed actions and evaluate alternatives to proposed agency actions based on environmental factors.	https://ceq.doe.gov/	https://ceq.doe.gov/laws-regulations/laws.html

Law / Regulation	Acronym	Applicability to Action Entity	Regulatory Authority (for enforcement)	What it Covers (Succinctly and Clearly Described)	Primary Weblink	Secondary Weblink (if more appropriate to READ)
National Historic Preservation Act	NHPA	Any federal undertaking that has the potential to affect historic properties, including actions on federal or tribal lands, that are federally funded, involve federal staff, or require a federal permit/license.	Advisory Council for Historic Preservation (ACHP) promulgates the Section 106 regulations, provides guidance, and mediation of disagreements during the consultation process between federal agencies, SHPO, THPOs etc. It however, is not an enforcement agency. NPS is lead agency for the National Register of Historic Places and the National Landmark Program.	The National Historic Preservation Act provides for Federal agencies avoid, minimize, or mitigate adverse effects of their undertakings may have to take into account the effects of their undertakings on historic properties that are listed in, or eligible for, inclusion in the National Register of Historic Places (NRHP) under Section 106 of the NHPA. Section 110 requires federal agencies to inventory and evaluate resources for their historic significance.	http://www.achp.gov/n hpp.html	http://www.achp.gov/wor k106.html
Native American Graves Protection and Repatriation Act	NAGPRA	Federal Land Management Agency	Secretary of the Interior (or AS-Fish and Wildlife and Parks); Department of Justice for trafficking provisions	Native American Graves Protection and Repatriation Act (NAGPRA) (1990) protects Native American cultural items (Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony) (1) Discovered inadvertently or intentionally excavated on Federal or Tribal lands or (2) In the possession or control of federal agencies or museums, and requires Federal agencies to comply with the act.	https://www.nps.gov /nagpra/A GENCIES /INDEX. HTM	

Law / Regulation	Acronym	Applicability to Action Entity	Regulatory Authority (for enforcement)	What it Covers (Succinctly and Clearly Described)	Primary Weblink	Secondary Weblink (if more appropriate to READ)
Oil Pollution Act	OPA		USEPA and USCG act as the On Scene Coordinators for certain response and cleanup actions.	The Oil Pollution Act of 1990 (OPA) amended the Federal Water Pollution Control Act, commonly known as the Clean Water Act. OPA prohibits the discharge of oil and hazardous substances into the waters of the United States. OPA requires that owners of onshore facilities, offshore facilities, and vessels submit response plans for federal review and approval prior to handling oil. The EPA reviews and approves response plans for onshore facilities; DOI/BSEE reviews and approves response plans for offshore facilities; and the USCG reviews and approves vessel response plans. OPA also authorized the federal government to undertake the containment, recovery, and removal of discharged oil in accordance with the National Contingency Plan.	https://www.epa.gov/laws-regulations/summary-oil-pollution-act	
Paleontological Resources Protection Act	PRPA	Federal lands defined as land controlled or administered by the Secretary of the Interior, except Indian land; or National Forest System land controlled or administered by the Secretary of Agriculture.	Secretary of the Interior its lands and Secretary of Agriculture for USFS lands.	Requires the Secretaries of the Interior and Agriculture to manage and protect paleontological resources on Federal land using scientific principles and expertise. Paleontological resources are any fossilized remains, traces, or imprints of organisms, preserved in or on the earth's crust, that are of paleontological interest and that provide information about the history of life on earth. Paleontological resources do not include any materials associated with an archaeological resource or any cultural item. (16 U.S.C. 470aaa(4)). Consistent with existing policy, the PRPA also includes provisions allowing for casual or hobby collecting of common invertebrate and plant fossils without a permit on Federal lands managed by the BLM and the U.S. Forest Service, under certain conditions.	https://www.blm.gov/wo/st/en/prog/more/CRM/paleontology/paleontological_regulations.print.html	https://www.nps.gov/subjects/fossilday/index.htm

Law / Regulation	Acronym	Applicability to Action Entity	Regulatory Authority (for enforcement)	What it Covers (Succinctly and Clearly Described)	Primary Weblink	Secondary Weblink (if more appropriate to READ)
				Casual collecting is not allowed within the National Parks or other lands managed by the National Park Service, or lands administered by the Fish and Wildlife Service.		
Presidential Memorandum on Government-to-Government Relationship with Indian Tribes		Federal Agencies		On April 29, 1994, a Presidential Memorandum was issued reaffirming the federal government's commitment to operate within a government-to-government relationship with federally recognized American Indian and Alaska Native tribes, and to advance self-governance for such tribes. The Presidential Memorandum directs each executive department and agency, to the greatest extent practicable and to the extent permitted by law, to consult with tribal governments prior to taking actions that have substantial direct effects on federally recognized tribal governments. In order to ensure that the rights of sovereign tribal governments are fully respected, all such consultations are to be open and candid so that tribal governments may evaluate for themselves the potential impact of relevant proposals.	https://www.gpo.gov/fdsys/pkg/WCPD-1994-05-02/pdf/WCPD-1994-05-02-Pg936.pdf	
Presidential Memorandum on Tribal Consultation		Federal Agencies		In recognition of that special relationship, pursuant to Executive Order 13175 of November 6, 2000, executive departments and agencies (agencies) are charged with engaging in regular and meaningful consultation and collaboration with tribal officials in the development of Federal policies that have tribal implications, and are responsible for strengthening the government-to-government relationship between the United States and Indian tribes. This was signed November 5, 2009.	https://obamawhitehouse.archives.gov/realitycheck/the-press-office/memorandum-tribal-consultation-signed-president	

Law / Regulation	Acronym	Applicability to Action Entity	Regulatory Authority (for enforcement)	What it Covers (Succinctly and Clearly Described)	Primary Weblink	Secondary Weblink (if more appropriate to READ)
Resource Conservation and Recovery Act	RCRA	Federal agencies	USEPA, Office of Resource Conservation and Recovery; State Governments with programs authorized by EPA	Regulatory functions of hazardous and non-hazardous waste: tracking the progress of hazardous wastes from their point of generation, their transport, and their treatment and/or disposal ("cradle to grave") for treatment, storage and disposal facilities handling hazardous waste; set standards for groundwater monitoring, release detection and prevention, disposal site lining, spill controls, overfill control for petroleum products, and disposal of untreatable hazardous waste	https://www.epa.gov/laws-regulations	
Wild and Scenic Rivers Act		any action that may affect a Designated river	USACE, BLM, NPS, USFS, USFWS	Preserves rivers or sections of rivers that possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values in their free-flowing condition and are not dammed or otherwise impeded	https://www.rivers.gov/wsr-act.php	
Wild and Free-Roaming Horses and Burros Act		any action that may affect protected animals	BLM, USFS	Requires the protection, management, and control of wild free- roaming horses and burros on public lands	https://www.blm.gov/wo/st/en/prog/whbprogram.html	
Wilderness Act		any action taken in designated wilderness area	BLM, NPS, USFS, USFWS	Provides criteria for determining suitability and establishes restrictions on activities that can be undertaken on a designated wilderness area; authorizes the acceptance of gifts, bequests and contributions in furtherance of the purposes of the Act and requires an annual report at the opening of each session of Congress on the status of the wilderness system	http://wilderness.net/	

Law / Regulation	Acronym	Applicability to Action Entity	Regulatory Authority (for enforcement)	What it Covers (Succinctly and Clearly Described)	Primary Weblink	Secondary Weblink (if more appropriate to READ)
36 CFR Part 79 Curation of Federally-Owned and Administered Archaeological Collections		Federal agencies actions under the Antiquities Act, NHPA, ARPA, the Reservoir Salvage Act		The regulations in this part establish definitions, standards, procedures and guidelines to be followed by Federal agencies to preserve collections of prehistoric and historic material remains, and associated records, recovered under the authority of the Antiquities Act (16 U.S.C. 431-433), the Reservoir Salvage Act (16 U.S.C. 469-469 c), section 110 of the National Historic Preservation Act (16 U.S.C. 470 h -2) or the Archaeological Resources Protection Act (16 U.S.C. 470 aa-mm).	https://www.law.cornell.edu/cfr/text/36/part-79	
36 CFR Part 1230 Unlawful or accidental removal, defacing, alteration, or destruction of records		Federal agencies	National Archives and Records Administration	44 USC 3106 states that heads of agencies must notify the Archivist (NARA) of the destruction of records and there are reporting requirements in 36 CFR 1228.104. In lieu of those standard reporting requirements, agencies may complete Section One of the Emergency Records Recovery/Disposal Form and under "Damage" indicate that the records have been destroyed by flood, fire, building collapse, etc. This report should also be forwarded to NARA (NWML) within 30 days of the discovery of the destroyed records. NARA must approve the emergency destruction of records, but to expedite approval agency officials can complete Sections One of the Emergency Records Recovery/Disposal Form or they can email or call NARA staff listed on the attached contact list. NARA will review the request and respond quickly to the request.		https://www.archives.gov/records-mgmt/vital-records/disaster-pocs.html

Law / Regulation	Acronym	Applicability to Action Entity	Regulatory Authority (for enforcement)	What it Covers (Succinctly and Clearly Described)	Primary Weblink	Secondary Weblink (if more appropriate to READ)
44 CFR Part 206.5	Federal Disaster Assistance			In any declared major disaster or emergency, FEMA may direct any federal agency to provide emergency assistance necessary to save lives and to protect property, public health, and safety by utilizing, lending, or donating to State and local governments Federal equipment, supplies, facilities, personnel, and other resources; and performing work or services to provide emergency assistance authorized in the Stafford Act.	https://www.law.cornell.edu/cfr/text/44/206.5	
Robert T. Stafford Disaster Relief and Emergency Assistance Act and Related Authorities	The Stafford Act			The Stafford Act prescribes circumstances for declaring disasters and emergencies and the types of assistance to be provided in such situations, among other things.	https://www.fema.gov/robert-t-stafford-disaster-relief-and-emergency-assistance-act-public-law-93-288-amended	
18 U.S.C. § 1858	Survey Marks	All		The law provides a penalty for the unauthorized alteration or removal of any Government survey monument or marked trees: "Whoever willfully destroys, defaces, changes, or removes to another place any section corner, quarter-section corner, or meander post, on any Government line of survey, or willfully cuts down any witness tree or any tree blazed to mark the line of a Government survey, or willfully defaces, changes, or removes any monument or bench mark of any Government survey, shall be fined	https://www.law.cornell.edu/uscode/text/18/1858	

Law / Regulation	Acronym	Applicability to Action Entity	Regulatory Authority (for enforcement)	What it Covers (Succinctly and Clearly Described)	Primary Weblink	Secondary Weblink (if more appropriate to READ)
				under this title or imprisoned not more than six months, or both" (108 Stat. 1796, 2146; 18 U.S.C. 1858). The willful destruction of monuments and corners of an official mineral survey is within the purview of this statute.		

Appendix N: Commonly Used Web Links

Policy and Regulations

- Wilderness Act
  http://wilderness.net/
- Endangered Species Act (ESA)
  https://www.fws.gov/endangered/
- National Environmental Policy Act (NEPA)
  https://ceq.doe.gov/
- National Historic Preservation Act (NHPA)
  http://www.achp.gov/nhpp.html
- Archaeological Resources Protection Act (ARPA)
  https://www.nps.gov/archeology/tools/Laws/arpa.htm
- Native American Graves Protection and Repatriation Act (NAGPRA)
  https://www.nps.gov/nagpra/AGENCIES/INDEX.HTM
- Traditional Cultural Properties (TCP) and Sacred Sites, as defined by National Register
  https://www.nps.gov/nr/publications/bulletins/nrb38/nrb38%20introduction.htm
- Comprehensive Environmental Response, Compensation, and Liability Act
  https://www.epa.gov/superfund
- Clean Water Act, Section 404
  http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/materials/cwa_sec404doc.pdf
- Wild and Scenic River Act
  https://rivers.gov/wsr-act.php
- Freedom of Information Act (FOIA) and the importance of the Administrative Record
  https://www.foia.gov/
- Civic engagement as it relates to the Federal Advisory Committee Act
  https://www.gsa.gov/portal/content/100916
- The Interagency Standards for Fire and Fire Aviation
  https://www.nifc.gov/policies/pol_ref_redbook.html
- Negotiated Rule Making
  https://www.doi.gov/sites/doi.gov/files/migrated/pmb/cadr/upload/regnegact-2.pdf

Incident and Resource Management

- DOI Office of Emergency Management:
  https://www.doi.gov/emergency
- DOI All-Hazard Responders:
  https://www.doi.gov/emergency/all-hazards-responders
- DOI All-Hazards Incident Positions and Qualifications Guide:
  https://www.doi.gov/sites/doi.gov/files/migrated/emergency/upload/DOI-Incident-Positions-Qualification-Guide.pdf
- Current fire activity from the National Incident Situation Report:
  https://www.nifc.gov/nicc/sitreprt.pdf
- For specific incident information, visit Inciweb:
  https://inciweb.nwcg.gov/
- National Interagency Fire Center:
  https://www.nifc.gov/
- Interagency Standards for Fire and Fire Aviation supplemental policy:
  https://www.nifc.gov/policies/pol_ref_redbook.html
- *Interagency Incident Business Management Handbook* (PMS 902):
  https://www.nwcg.gov/publications
- *Incident Response Pocket Guide* (PMS 461):
  https://www.nwcg.gov/publications
- National Wildfire Coordinating Group
  https://www.nwcg.gov/
- National Wildfire Coordinating Group Glossary of Wildland Fire Terminology:
  https://www.nwcg.gov/glossary-of-wildland-fire-terminology
- Wilderness.net Fire Management Toolbox
  http://www.wilderness.net/index.cfm?fuse=toolboxes&sec=fire3
- Joint Fire Science Program
  https://www.firescience.gov/index.cfm
- Fire Effects Information System:
  https://www.fs.fed.us/rmrs/tools/fire-effects-information-system-feis
- National Center for Landscape Fire Analysis:
  http://firecenter.umt.edu/
- Wildland Fire Lessons Learned Center:
  https://www.wildfirelessons.net/home
- *Fire Effects Guide* (PMS 481):
  https://www.nwcg.gov/publications
- ICS Form 213, General Message:
  https://training.fema.gov/EMIWeb/IS/ICSResource/assets/ICS%20Forms//ICS%20Form%20213,%20General%20Message.pdf
- ICS Form 214, Activity Log
  https://training.fema.gov/EMIWeb/IS/ICSResource/assets/ICS%20Forms//ICS%20Form%20214,%20Activity%20Log.pdf
- SF-261, Crew Time Report
  https://www.fws.gov/ndc/Crew%20Time%20Report.xlsx

Oil Spills

- U.S. Coast Guard Incident Management Handbook (IMH)
  https://www.uscg.mil/d9/D9Response/docs/USCG%20IMH%202014%20COMDTPUB%20P3120.17B.pdf
- Bureau of Safety and Environmental Enforcement
  https://www.bsee.gov/newsroom/partnerships/interagency
- Migratory Bird Treaty Act
  https://www.fws.gov/birds/policies-and-regulations/laws-legislations/migratory-bird-treaty-act.php
- NOAA Office of Response and Restoration
  http://response.restoration.noaa.gov/
- EPA Oil Spill web page
  https://www.epa.gov/oil-spills-prevention-and-preparedness-regulations

Appendix O: Incident Forms

Incident GPS Metadata Form (Field Log)

Incident name: _____Unit ID: _____

Metadata completed by: _____Date: _____

Date of data collection (mm/dd/yyyy): _____

Time of data collection: Start: _____Stop: _____

Data collector(s) name: _____

Collector's contact information: _____

Geographic location of GPS survey: _____

Park/Forest/Preserve/County: _____

State/Province: _____

Purpose of GPS survey: _____

GPS equipment: Make: _____Model_____

Differential Correction (circle):

    No   CORS   WAAS   Post Processing   Other: _____

    (e.g., Satellite Differential, Mobile Base Station)

Method of travel used to collect data (circle):

    Helicopter   Fixed Wing   ATV   Foot   Other:_____

    (e.g., Mountain Bike, Boat)

Number of waypoints collected: _____

Number of tracks collected: _____

Track Logging Interval (circle):   Time (Interval Value_____)

    Distance (Interval Value and Units_____)

Record Dilution of Precision (DOP) or estimated error (EHE/EPE) range of values:

    Min_____Max_____

Verbal (radioed) or Written Data Output (If Applicable)

    Units (circle):   N/A   Meters   Feet

    Coordinate system (position format) (check):

    _____Lat/Long - Degrees Minutes and Seconds (ddd°mm'ss.s")

    _____Lat/Long - Degrees and Decimal Minutes (ddd°mm.mmm')

    _____Lat/Long - Decimal Degrees (ddd.dddd□)

    _____UTM   zone_____

    _____Other:_____

    Datum (circle):   NAD27CONUS   NAD27AlaskaNAD83   WGS84

    Other:_____

Electronic Data Output

    File   information   contact   person:_____

    Machine or disk   name:_____

    Directory Path (e.g., c: /working/02252003/): _____

GPS Download Software: _____

ASCII Text Output File Name(s) (e.g., *.txt): _____

Incident GPS Metadata Form (Field Log)

Output Units (circle):N/AMetersFeet

Coordinate system (projection) (check):

_____Lat/Long (Geographic) - Decimal Degrees (ddd.dddd°)

_____UTM   UTM zone_____

_____Other:_____(e.g., State Plane, Albers Equal Area)

Datum (circle):   NAD27CONUS   NAD27AlaskaNAD83   WGS84

Other:_____

File Name(s) (e.g., *.shp, *.shx, *.dbf)

Describe GPS mission (provide any unique and useful information pertinent to the data collected during the GPS mission, or information about the mission itself): (How)

Map: General Course Diagram

⇧

Rehabilitation Tracking Checklist
Incident   **Division**

#	Lat	Long	Task	Completed Y	Completed Date	Documentation Photos	GPS	Filed	Comments
				☐	/ /	☐			
				☐	/ /	☐			
				☐	/ /	☐			
				☐	/ /	☐			
				☐	/ /	☐			
				☐	/ /	☐			
				☐	/ /	☐			
				☐	/ /	☐			
				☐	/ /	☐			
				☐	/ /	☐			
				☐	/ /	☐			
				☐	/ /	☐			
				☐	/ /	☐			
				☐	/ /	☐			

Name
Specifications
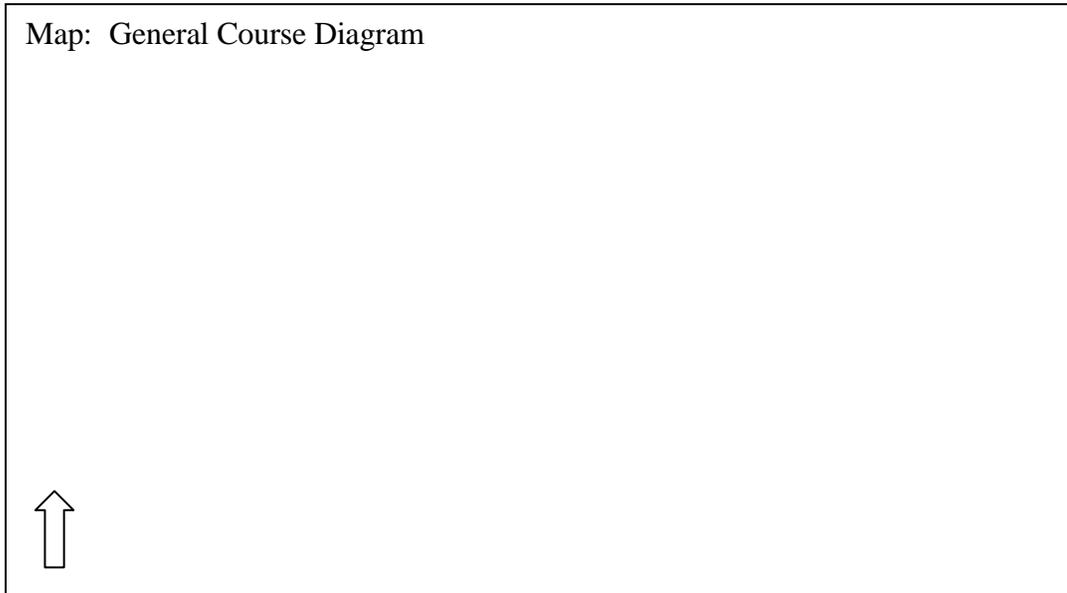
ARCHEOLOGICAL SITE INSPECTION RECORD
Attach completed form, map(s) and photo log to Site Form

SITE No._____ Date of inspection:_____

Recorder(s) Name:_____

SITE DESCRIPTION

Site Type:_____Prehistoric_____Historic _____Multi component _____Other

UTM (GPS) Z_____E_____N_____Elevation:_____USGS QUAD_____

New Features Present (not noted in site record):

_____

VANDALISM PRESENT_____Yes____No_____If yes, Recent_____Yes____No_____Unknown

SITE DAMAGE FROM THE CAUSE OF THE INCIDENT (e.g., Fire, Flood, Hurricane)___Yes____No

Other/Comments: _____

_____

_____

SITE BURNED _____Yes____No

SITE BURN SEVERITY

> Low (duff partially consumed, none to little ladder fuels burned, no canopy burned)
> Moderate (duff consumed, ladder fuels burned, isolated crown burn or torching)
> Severe (duff, ladder and crown completely consumed)

Note: Map, photograph and describe affected areas of site

EFFECTS AT SITE_____YES   NO

Cracking/spalling_____

Smoke/soot damage_____

Stump/root holes _____

Wood or organics site component(s) burned_____

Loss of architectural wood/ feature _____

Tree(s) on walls or rubble _____

Other/Comments: _____

_____

EROSIONAL THREATS TO SITE:_____Yes____No

On site slope_____°Aspect _____°

Slope above site _____°Aspect _____°

Erosion threat:_____Duff absent_____Stump hole(s) /burned log(s)_____Flooding

Note depth and extent for the following:____Active gully/ rilling/ scouring_____Erosion Pedestaling Other/Comments:

_____

_____

INCIDENT MANGEMENT ACTIONS IMPACTS TO SITE:_____Yes____No

Vegetation removal_____Tree falling_____Dozer line_____Hand line_____Safety Zone_____Drop point_____

Vehicle ruts_____Spike Camp_____Retardant drop impact/staining_____Mop up_____

Other/Comments: _____

_____

RECOMMENDED PRESERVATION TREATMENT

_____No Treatment Recommended

_____Monitor

_____Treatment Recommended: if so, describe: (e.g., Directional falling, Straw bale, Straw scatter, Excelsior, matting, sandbag, etc.): _____

_____

_____

Photos:_____Frame(s)_____GPS file:_____

Additional comments on back_____YES   NO

ROADS SUPPRESSION DAMAGE REPAIR CHECKLIST

Fire Name and Number: _____

Division: _____

Road Number: _____

GPS Unit #:_____

Repair Standard	Meets Standard	Needs additional work (describe)	Photo Numbers and GPS Waypoints
Road graded and rocked. No berms created by the road grading			
Inside ditch cleaned and free from fire suppression debris			
Berms created by fire suppression activities pulled back into the roadway and spread across the road prism or stockpiled at an authorized location.			
Did fire suppression activity remove or alter rolling dips or water?			
Roadway drainage features (e.g., rolling dips, water bars, road prism shape) in place and functional.			
Culverts inspected and cleaned of suppression activity debris			
Close road to public access to roadway by placing boulders or other barriers to prevent unauthorized use.			
Disperse unburned limbs, brush and other vegetation a			

Repair Standard	Meets Standard	Needs additional work (describe)	Photo Numbers and GPS Waypoints
specified distance (forest standard) away from roadside			
Disperse burned material into the black			
Scatter large material boneyards a specified distance (forest standard) away from roadside.			
Low-cut stumps to less than 12" height for all stumps visible from the roadway			
Repair sites adjacent to roads damaged by fire suppression activities			

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Previous editions: 2004.

While they may still contain current or useful information, previous editions are obsolete. The user of this information is responsible for confirming that they have the most up-to-date version. NWCG is the sole source for the publication.

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