

## Introduction to the Incident Command System

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The following provides an **Introduction to the Incident Command System (ICS)** used as a basis for emergency response planning and incident management by many government agencies and industry in British Columbia, Canada. The ICS is the foundation for the [BC Emergency Management System](#) (BCERMS) and the provincial (site level 1001) response plans prepared by the Ministry of Environment. The focus of this introduction is on environmental emergencies. (Updated: July, 2002).

### Preface

The Incident Command System (ICS) is an organizational structure employed by many companies and government agencies in British Columbia, Canada, in order to manage major emergencies, such as an oil spill or railway accident.

The Incident Command System origins stem from the 1970 California "wildfires" that, in 13 days, burned over 1/2 million hectares, destroyed 772 buildings, killed 16 people and cost \$233 million. Since then and after many other multi-agency incidents, the ICS has been widely adopted by both industry and government. Following the Exxon Valdez oil spill in 1989, the Alyeska Pipeline Service Company adopted the ICS. The Canadian Petroleum Association Task Force on Oil Spill Preparedness trains their members based on ICS. The Government of British Columbia has adopted ICS as a standard for site management of a large incident within the Incident Command Post.

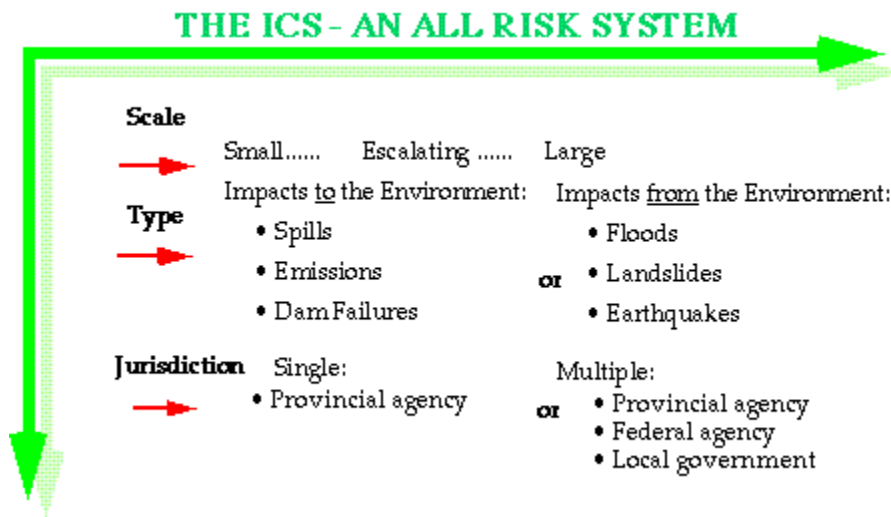
The use of the ICS and preparation of response (contingency) plans addresses several timeless tactical truths:

- effective emergency response needs effective organization;
- use a proven system;

- small emergencies need a small organization - big emergencies need a big organization.

## Introduction

The Incident Command System can address a variety of threats, such as floods, dam failures, fires, spills, incidents of various sizes (small to large) and various levels of agency participation (single or multiple). It is often referred to as an "all risk system".



For most environmental emergencies, such as spills, the onus is on the perpetrator (i.e. spiller or responsible party) to be prepared and to respond. Government involvement is often required either to monitor the situation (i.e. oversight), or support the spiller's response (i.e. augment) or, if in the government interest, to take operational responsibility over from the spiller. A high degree of organization is required for successful incident management regardless of who is responding, and for what role.

## Incident Command System - Getting Organized

The Incident Command System (ICS) provides a management system which organizes the functions, tasks and staff within the overall emergency response. It transforms the confusion of an emergency into a well-managed response by recognizing "people" as the primary assets and providing them the

critical answers to "Who's in Charge" and "What's my Job". The ICS promotes communications and coordination. However, for the ICS to work all responders must understand the system and their role in it. Such an understanding can only be gained through training, experience, and team work.

The ICS is a useable, adaptable and well-tested approach to emergency management, that is gaining increasing acceptance by government and industry. The success of the ICS rests with its:

- modular organization;
- the use of common terminology;
- unified command structure;
- span-of-control; and
- resource management

These features of ICS are explained in more detail.

## **Emergency Response - An Attitude**

The majority of all environmental emergencies, effective response coordination and delivery can be achieved under the ICS, assuming there are trained responders and a clear understanding of shared (unified) command with other jurisdictions.

To respond to an emergency situation is both a personal challenge and a team effort. As with industry, the government also relies on personnel with daily work duties other than emergency response such as managers, administrators, field employees, scientists, etc.

The qualities of a good responder are a positive attitude and a willingness to accept a different way of working and a different work environment. It also requires commitment and responsibility. This is why people assigned to response teams are provided with a specific purpose and a set of tasks in the form of checklist that outlines their mission and initial duties (explained in more detail below). People are the most valuable asset during an emergency. Emergency response makes some people apprehensive, especially if one feels alone and overwhelmed. It is important to realize that you are one of a "team of people". Responders are not expected to undertake duties that they are unfamiliar or uncomfortable with.

The Incident Management Team (ITM) is the "team of people" that employs the the Incident Management System's organization. The Incident Command Post (ICP) is the facility in which response management is done at or neat the site. The ICP/IMT is characterized by three fundamental elements: 1) first direct-line of supervision to field personnel than have the "hand-on" work (e.g. beach cleanup, waste handling, wildlife rescue, field reconnaissance, equipment staging, etc), 2) where the response strategy and tactical (operational) decisions and plans are formulated, and 3) where unified (shared) command is established with other jurisdictions.

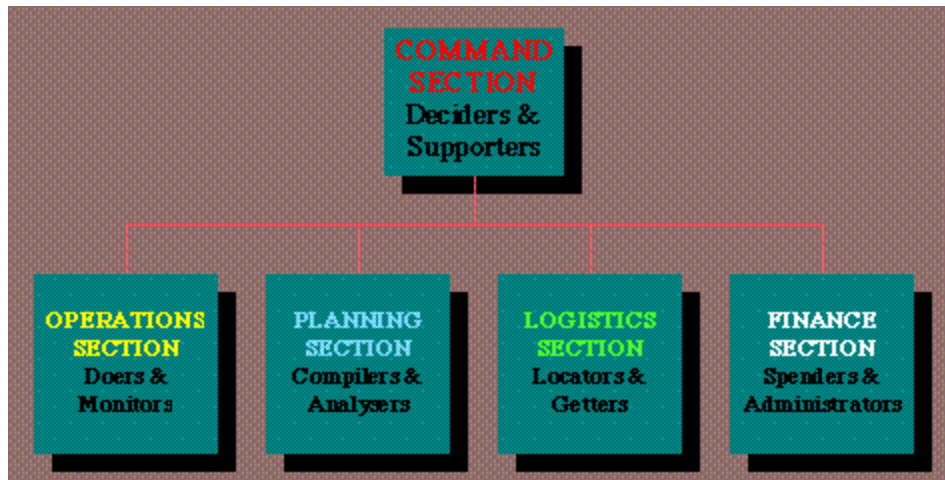
The objective of the ICS is to maximize team efficiency by defining lines of communications, delegating responsibilities, expanding with new people and duties to ensure no one exceeds their capabilities. mentally or physically. The ICS organization builds from the ground up, with the management of all major functions initially being the responsibility of just a few people. Functional units are designed to handle the most important incident activities, and as the incident grows, additional individuals are assigned.

It is important for an Incident Management Team — whether government or industry — to understand that they are not alone, but have the entire resources (equipment, personnel, expertise, etc.) of their government, or industry associations at their disposal. The ICS ensures that such resources are received by an organization capable of handling and deploying them. It also ensures, when government agencies and the responsible party are working together in a unified/integrated manner, that limited resources are pooled.

Effective responders foster a team identity, rather than that of their originating agency or company. That is a primary alliance to the team and its mission — public safety and environmental protection — galvanizes actions. The ICS promotes such a focus as it is "function" based (i.e. coordinate.. operate.. plan... acquire... etc.).

## **Modular Organization - Expanding to Meet the Requirements**

The ICS organization is comprised of five functional sections: **Command, Operations, Planning, Logistics** and **Finance**. The "basic" structure is as follows:

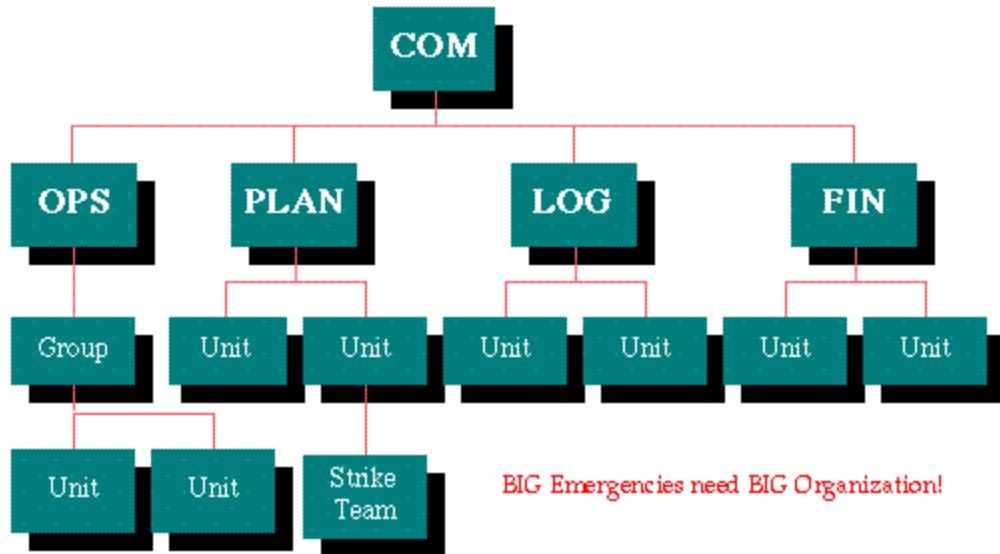


The Command Section has an Incident Commander (the boss) and command staff (the helpers). Each of the other four sections is managed by a Section Chief (the general staff) and supported by other functional units. The Sections have specific functions, as follows:

- **COMMAND** - Setting Response Objectives and Undertaking Coordination
- **OPERATIONS** - Undertaking Tactical Response Actions
- **PLANNING** - Investigating and Establishing Technical Basis for Action Plans
- **LOGISTICS** - Providing Equipment and Services
- **FINANCE** - Managing Finances and Administration

The ICS organization structure develops in a "modular" fashion based on the type and scale of emergency. The organization's staff "builds" from the bottom up, with responsibility and performance placed initially with the 1st competent responder on site. If this individual can simultaneously manage all major functional areas, no further organization is required. However, as the need exists to handle an escalating incident, an Incident Commander is designated (which may or may not be the 1st responder) and separate sections, as described above, can be invoked to handle multiple functions.

The ICS is capable of expanding to meet an escalating situation by invoking Sections, Groups, Branches, Units, Strike Teams, and Resources as required and by ICS protocols. This adding of functions, with staff assigned, recognizes that a small emergency need only a small organization, but a big emergency needs a big organization. The specific organizational structure of any given incident will be based on the management needs of the incident.



Each Section is generally supported by Units and Strike Teams (field crews). The number and purpose of each Unit depends on the nature and scale of the emergency. Each Unit reflects a specific and readily manageable emergency function. In turn, each team member has a specific mission and tasks to fulfill, which is provided as a "Checklist of Duties Responsibilities".

| Chief, Operations<br>(Operations Section) |  |
|---|--|
| <b>Mission:</b>                           | Assists in the preparation of initial action plan, and provides for the overall tactical operation and management of shoreline treatment, waste disposal and wildlife rescue according to Shoreline Work Plans.  |
| <b>Location:</b>                          | (Command Post)   |
| <b>Duties:</b>                            | <p>(Office)</p> <p>Report to the Provincial Incident Commander for situation briefing</p> <p>Meet with Unit Leaders (Protection, Disposal and Wildlife Rescue) to determine deployment needs and problems</p> <p>Invoke duties of Unit Leaders to undertake initial preparation for deployment of staff and resources</p> <p>Liaise with Section Chiefs to delineate duties and responsibilities</p>   |
| <b>(Field)</b>                            | <p>Report to the Provincial Incident Commander for situation briefing and assist in preparation of initial response strategy</p> <p>Assemble and brief Unit Leaders on duties, safety and communication and other field requirements.</p> <p>Obtain initial Action Plan approved by the Incident Commander</p> <p>Liaise with Chief of Logistics to arrange for required manpower and equipment to meet Action Plan objectives and to establish transportation and accommodation requirements</p> <p>Contact Safety Officer to determine if safety requirements are being met prior to undertaking shoreline treatment/wildlife rescue activities</p> <p>Prepare daily reports for shoreline protection and treatment progress</p> |

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Personnel assigned to manage at each level of the organization will have a distinct title. The person responsible to manage:

- **COMMAND** is called...Incident Commander
- **COMMAND STAFF** are called...Officers
- **GENERAL STAFF** are called...Section Chiefs
- **BRANCH STAFF** are called...Directors
- **GROUP STAFF** are called...Supervisors
- **UNIT STAFF** are called...Unit Leaders

The Command Staff can include: the Information Officer, Safety Officer and Liaison Officer. Command staff members are not aligned to any particular Section, but provide an overall support to the Commander and the Team.

Section Chiefs report directly to the Commander. As mentioned before, each response personnel will have their own "Checklist of Duties and Responsibilities" to guide them through initial deployment and activities (e.g. mission, reporting location, initial tasks). Each responder is, however, responsible for applying their own expertise (hazmat, communications, finance, public information, enforcement, etc.) and that of their supporting branch (fisheries, wildlife, environment protection, etc.), agency (health, fire control, social services), or corporate office (plant manager, communications, etc.).

## Common Terminology - Communications Among the Responders

It is important for any management system, and especially one which will be used in joint operations such as with industry and government, that common terminology be established for: organizational functions; resource elements; and facilities.

- **Organizational Functions:** refer to naming of the components of the ICS such as the key functional sections: Command, Operations, Planning, Logistics and Finance and Administration and the titles provided to the responders, or terms such as "Area Command Authority".
- **Resource Elements:** refer to the combination of personnel and equipment used in tactical operations, such as Single Resources, Task Resources, Strike Teams.
- **Facilities:** refer to those key facilities used in and around the incident site, such as: Incident Command Post, Staging Area, Camps, Helibase, Communications Centre.

## Incident Action Plan - Where to Start

Emergency response must be guided by an action plan. For small incidents of short duration or for very initial response, the plan needn't be written. An action plan should be written when resources from other supporting agencies and contractors are being used; several jurisdictions involved; or an incident requires changes in shifts of personnel or equipment.



The Commander, in consultation with the Section Chiefs and Command Staff, will establish response objectives and strategy and schedule regular meetings to up-date the action plan. The action plan for the incident should cover all tactical and support requirements for the operational period (e.g. one-shift rotation). Where other jurisdictions, such as local and federal governments, and industry are involved, the action plan should be jointly prepared (see Unified Command).

Other "operational" plans can include:

- **Safety Plan** - Identifies incident specific hazards, safety practices and procedures.
- **Medical Plan** - Provides medical emergency procedures, transportation, methods, medical facilities, etc.
- **Radio Communication Plan** - Establish electronic communication protocols and procedures.

## **Span-of-Control - Limits to Personnel Management**

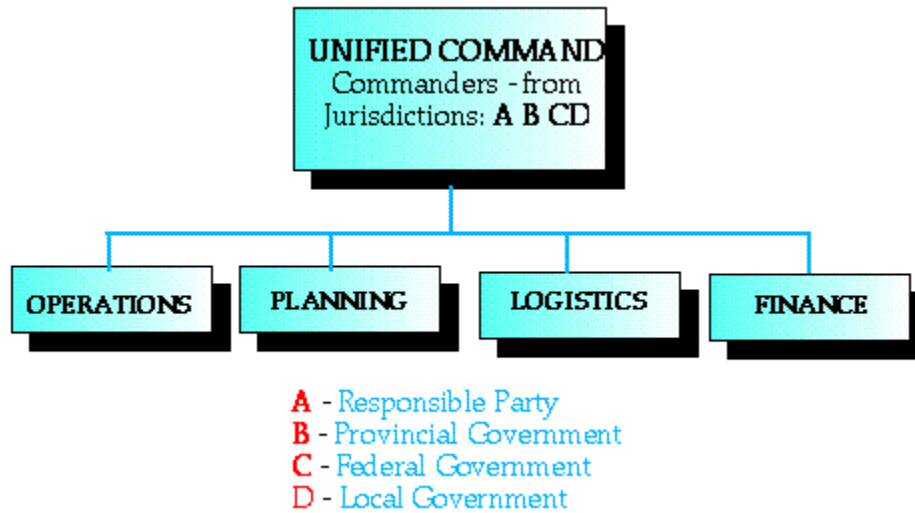
There are limits to the number of response personnel that can be adequately supervised during an emergency by a single individual, such as the Unit Leader or Team Leader. This limit is referred to as "Span-of-Control". In general, the span-of-control of any individual with incident management responsibility (e.g. Officers, Chiefs, Leaders), generally ranges from three to seven personnel. The kind of incident, the nature of task, hazard and safety factors, distances between resources (equipment) and facilities will influence span-of-control considerations. It is important for response managers at all levels of the ICS organization to recognize when their "supervisory" capabilities are about to be exceeded. At that time, the addition of another functional Unit or Strike Team may be required, managed by additional personnel.

## **Unified Command - Joining Forces**

Most environmental emergencies disregard jurisdictional boundaries - international, government, local authorities, etc. As such, it is important to develop a unified command structure whereby organizations who have jurisdictional responsibility, such as a local government, federal government, and provincial government, can contribute in:

- determining response strategy and objectives;
- planning and tactical activities; and
- sharing of resources.

For incidents that involve industrial spills, the company must also contribute to these important decisions as the onus rests with the company (i.e. responsible party) to cleanup the spill and mitigate damages.



It is important that working relations are understood and agreed upon for a specific type of emergency incident prior to having to establishing an Unified Command. Inter-agency agreements, followed by joint exercises, serve this need. In an ideal world, each responding organization (fire, police, federal agencies, local government) would employ the same type of organization to facilitate communications, to exchange resources, and to delineate specific response activities. It is the responsibility of the Incident Commanders to initiate and encourage unified command and to establish mutually agreed response strategy and objectives.

For additional reading on unified command, refer to: An Introduction to Unified Command: Joining Forces Under the Incident Command System.

## Incident Facilities - Where Responders Meet

There are several types of facilities (building, areas, etc.) to support an emergency response. The ICS facilities include:

- Incident Command Post
- Staging Area
- Camps
- Helibase
- Communications Centre

The number and kinds of facilities to support an emergency response in the field depends on the incident.

There should only be one Incident Command Post from which all incident operations are directed. In a unified command structure, where several organizations or jurisdictions are involved, the responsible individuals designated by their respective organizations co-locate at this Incident Command Post.

## **Resource Management - Handling People and Equipment**

Resources, (people and equipment) must be efficiently acquired, assigned and deployed during an emergency. In the ICS, there are essentially three different ways of managing resources:

- **Single Resources** - individual piece of equipment, such as a skimmer, vacuum truck, boat, etc. and the person required to operate it.
- **Task Forces** - any combination of resources that can be assembled to a specific purpose. All resource elements in a task force must have common communications and a leader.
- **Strike Team** - a specific combination of the same kind and type of resource with common communications and a leader (e.g. Haz-mat Control, Wildlife Rescue, Shoreline Assessment).

The use of Task Forces and Strike Teams is encouraged to maximize the use of scarce equipment and people, reduce the management control of single resources, and reduce the demand on communication.

## Conclusion

The Incident Command System is a proven organizational structure to manage all scales of emergency response. The ICS is rapidly being adopted by industry and governments.

The ICS is a "function" oriented approach to an emergency. This organization fosters clear recognition of a responder's purpose, duties and line-of-communications. Also by being function oriented, the ICS enables a rapid "modular" expansion of the response team to manage an escalating incident.

The primary function of an emergency response plan is to develop the incident specific details of the five functional components of the ICS - Command, Operations, Planning, Logistics and Finance/Administration. A response plan is not a "rigid" document, but provides only the framework for managing an emergency - common-sense still prevails.

The primary asset of an Incident Management Team (often referred to as an Emergency Response Team) is its members. Team members must harbour a healthy commitment and team attitude. Personnel attributes that members can contribute to the team should be recognized, including: general life-skills (e.g. out-door experience, vehicle handling ability), technical knowledge (e.g. wildlife, waste, water) and interests (e.g. coordination, hands-on).

## Additional Reading

For more comprehensive study of the ICS, the following documents are recommended reading:

- National Fire Service Incident Management System: Model Procedures Guide for Structural Firefighting, 1st ed. Oklahoma State University.
- California FIRESCOPE Incident Command System
- The BC Emergency Management Response System standards based on ICS principles currently being prepared by BC Intra-agency Emergency Preparedness Council work group.