

## Environmental Unit During Transboundary Spill Response: A Model for Training ICS Implementation During International Spills

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### #396

#### ABSTRACT

The Environmental Unit (EU) is an important central function in the Incident Command System (ICS) within which key decisions are made and timing of certain critical response decisions is driven or influenced. Examples include such issues as managing waste, determining divisions, sharing data on resources at risk, establishing a shoreline assessment program, setting response treatment priorities, and determining treatment endpoints which in most cases sets the timing for when an active response is considered complete. Additionally, the EU serves as a central hub or nexus for many of the key sections and units within ICS, as many of the issues and work done within the EU are cross-cutting and involve components from the Operations Section, Planning Section, Logistics, Command Staff (Liaison and Safety Officers), etc. The unique nature of the EU provides a prime opportunity to train ICS concepts and good practices of implementation by focusing training on the EU and how it functions. The primary structural elements of ICS, including the Planning P cycle, the development of an Incident Action Plan, management by

Objectives, development of Strategies and Tactics from those Command Objectives, making recommendations based on command priorities, and many more can be illustrated through targeted EU training. In the Salish Sea region of North America, there is close interaction between the key response agencies at the Federal and State/Provincial levels to prepare for transboundary responses by aligning response methods and practices. This coordination focuses to a great degree on cross-training on ICS: its structure and functions and more importantly its implementation. To that end, several Canadian and U.S. agencies have been coordinating for a number of years on providing joint, international ICS EU training for its responders on both sides of the border, with the goal of aligning ICS implementation. This joint international EU training program started in 2011 and has progressed since. This paper will examine other examples of this training program and identify some of its benefits, such as helping drive policy development on both sides of the border; and will highlight some case studies of responses where this training facilitated EU functions. This paper will also identify some challenges remaining in the differences between how ICS is implemented between these two nations, in particular the concept of the Science Table in the Canadian ICS implementation, and some suggestions for improvements moving forward.

## **BACKGROUND**

The Environmental Unit (EU) is an important central function in the Incident Command System (ICS) within which key decisions are made and timing of certain critical response decisions is driven or influenced. Examples include such issues as managing waste, determining divisions, sharing data on resources at risk, establishing a shoreline assessment program, setting response treatment priorities, and determining treatment endpoints which in most cases sets the timing for when an active response is considered complete. Additionally, the EU serves as a central hub or

nexus for many of the key sections and units within ICS, as many of the issues and work done within the EU are cross-cutting and involve components from the Operations Section, Planning Section, Logistics, Command Staff (Liaison and Safety Officers), etc.

The unique nature of the EU provides a prime opportunity to train ICS concepts and good practices of implementation by focusing training on the EU and how it functions. The primary structural elements of ICS, including the Planning P cycle, the development of an Incident Action Plan, management by Objectives, development of Strategies and Tactics from those Command Objectives, making recommendations based on command priorities, and many more can be illustrated through targeted EU training. Additionally, a properly functioning EU, within itself and with other key sections and units in the ICS structure, can help unify the entire incident management team. Proper training on the EU as this unifying key role can help ICS practitioners to develop a fluency in the overall system that drives their thinking through the successful completion of the daily planning cycle, but also beyond the daily IAP into longer range planning, to a successful completion.

This approach of thoroughly understanding and knowing how to successfully implement an EU becomes even more evident during transboundary incidents where the functions and responsibilities within the EU must somehow include strong engagement with agencies, trustees, first nations, and key stakeholders from another country.

While a number of response objectives, strategies and tactics in a transboundary response can be confined to either side of the international border, to each nation's "stand-alone" command post, many of the natural resource issues that are addressed in the EU must include close coordination

with cross-boundary counterparts, as many of the natural resources of concern do not limit themselves to one side of the border.

In order to prepare for such situations, a very active international training program has been developed between key agencies in the BC province and the NW region of the U.S. to target successful EU functioning within command posts on either side of the border as well as their counterparts across border.

## **MANAGING ENVIRONMENTAL UNIT FUNCTIONS IN AN INTERNATIONAL TRANSBOUNDARY REGION**

In the Salish Sea region of North America, there is close interaction between the key response agencies at the Federal and State/Provincial levels to prepare for transboundary responses by aligning response methods and practices.

This coordination focuses to a great degree on cross-training on ICS: its structure and functions and more importantly its implementation. To that end, several Canadian and U.S. agencies have been coordinating for a number of years on providing joint, international ICS EU training for its responders on both sides of the border, with the goal of aligning ICS implementation.

This joint international EU training program started in 2011, and has progressed since. The first training program, developed in 2011 to support a large-scale, worst case discharge international exercise between U.S. and Canada to test the Joint Contingency Plan and its CANUSPAC Annex, targeted participation from Canadian federal and provincial response and trustee agencies

such as Environment Canada, Canadian Wildlife Service, and BC Ministry of Environment, as well as First Nations. On the U.S. side, participants included WA Dept. of Ecology, U.S. Coast Guard, National Oceanic Atmospheric Administration (NOAA), U.S. Department of Interior, WA Dept. of Fish and Wildlife, among others. This initial training course was co-developed by experienced ICS/EU practitioners from WA Dept. of Ecology and U.S. Coast Guard, based heavily on the Incident Management Handbook, was specifically targeted towards implementation of the roles, functions and responsibilities of the EU, both within the U.S. and in a transboundary response with Canada with respect to the Planning P cycle and support of the IAP development.

Since that time, there have been somewhat annual transboundary joint EU training sessions, sponsored by BC Ministry of Environment and including instructors from WA Dept. of Ecology, U.S. Coast Guard and on occasion, the National Oceanic and Atmospheric Administration (NOAA). Each of these international training sessions included approximately 50 students, from a range of Canadian federal and provincial agencies as well as first nations and non-governmental organizations (NGOs). Each training session is modified to focus on particular issues of concern, which have arisen out of recent spills or other incidents, and are focused on practical implementation of ICS principles and issues within the EU, and include a large degree of class break-out sessions and mini process exercises. The teaching is implementation-based; with a focus on ensuring students leave the training with an understanding of how to perform the tasks and responsibilities.

Additionally, the NW Area Contingency Plan, serving the NW Region of the United States, has a very robust annual update cycle, during which new response tools are developed or old ones

updated each year. These new and updated tools are discussed and tried out at these international training sessions, as appropriate to the focus of each class, as well as new tools being developed within BC MOE. This type of practical cross-training by the members of the agencies and organizations who will actually be implementing them during a response, side by side with some of their cross-boundary partners, is a markedly effective training methodology which should help improve successful transboundary responses.

### **ADDITIONAL BENEFITS/EXPANSIONS TO JOINT INTERNATIONAL EU TRAINING PROGRAMS**

Lack of planning to manage complicated environmental issues across an international border can lead to avoidable damages, revenue losses and increased response costs. Without prior awareness of natural resource, cultural and economic databases and policy frameworks, there is a risk that a decision made on one side of the border could have an adverse impact on the other side. There is also a high possibility that public confidence will be lost. This type of cooperative, international training program drives alignment of policy development, implementation, and data sharing on both sides of the border. Joint training in such a forum allows sharing of key lessons learned to help smooth transboundary response challenges while improving responders and stakeholders recovery phase preparedness.

### **CASE STUDIES OF RESPONSES WHERE THIS TRAINING FACILITATED EU FUNCTIONS**

There are multiple examples of when this training helped ensure successful EU implementation

during a number of transboundary exercises, including a series of required exercises under the JCP and CANUSPAC Annex during 2011 in Oak Harbor, WA which focused on an orphan spill in the Salish Sea; and in 2014 in Bellingham, WA which focused on setting up a Joint Unified Area Command for a spill scenario near Blaine, WA; and in 2016 in Victoria, BC which focused on how best to integrate and fully engage Tribes and First Nations within the ICS structure, in addition to the Unified Command.

### **SOME REMAINING CHALLENGES IN DIFFERENCES BETWEEN ICS IMPLEMENTATION BETWEEN CANADA AND US**

Canadian response agencies are in the midst of continuing their transition to the use of the Incident Command System, and, are on the whole, are honing their skills as ICS practitioners. Also, as with responders in the U.S., fluency in ICS and in particular EU implementation can vary geographically and among different agencies and response organizations.

Additionally, in certain regions within Canada, a separate Science Table might be organized to provide key agency coordination and input to support response decisions and priorities. However because this structure is outside of the traditional ICS concepts including the unified EU, this type of set up could potentially cause some challenges in timely, well-coordinated scientific and environmental recommendations. This interaction between an agency-only Science Table and the UC-reflective EU (i.e. including Responsible Party representation) within a Canadian command post could benefit from further exploration, not only for Canadian only incidents but particularly in transboundary responses.

During a response, when many different agencies and organizations arrive to assume positions in the ICS structure, there can be a wide range of experience and ability to successfully function in the ICS system and in the EU. This variance in practicing ICS can promote some degree of confusion during the early, reactive stages of a response, however it can also provide a tremendous learning opportunity to enhance trust and coordination among agencies, responsible party representation, tribal and first nations members as well as NGOs and other key stakeholders.



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