EQUIPMENT RESOURCE INVENTORY FOR OIL SPILL RESPONSES

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ABSTRACT

This paper will describe the online cataloging of oil spill equipment that has taken place on the West Coast of the United States. A collaborative effort, the cataloging project was developed as a Northwest ad hoc undertaking to meet the equipment-listing requirement of the Area Contingency Plan. The intent was to assemble Oil Spill Response Organizations' (OSROs) equipment lists into an Excel® spreadsheet format. Project participants in Washington and Oregon began equipment listing and over time, the process expanded to new members in California and Canada.

Individual owners of equipment keep the data up-to-date. All equipment-location moves and acquisition changes are posted to the Internet site, yielding a current resource inventory that can be easily accessed 24/7. The computer allows this equipment to be displayed, sorted by type, location, and tracked by date/time. The Excel® spreadsheet data can easily be manipulated to accurately tabulate, among other things, how much boom is available or in use, how much oil can be recovered, and how much oil storage is available. Hard copy equipment lists, which soon became outdated, are a thing of the past. The spreadsheets are used on a weekly basis for drill and spill applications as a tool to assist the Incident Command System's (ICS) Operation, Planning and Logistic sections to assemble, track and order specialized response equipment. The states of Washington and Oregon are using the list as a "database of record."

This is a great tool for the ICS Situation Unit when filling out the Incident Status Summary (ICS Form 209). In addition, individual lines of equipment or equipment systems can easily be printed onto ICS T-cards from Excel® by using a mail-merge program.

A uniform Excel®-formatted response-equipment list is flexible, simple to use and easy to access. Undoubtedly, it has contributed to improving response management in the Pacific Northwest.

DISCUSSION

In March 1997, the NW equipment list was in its infancy, borne out of an oil spill response drill in which the tracking of equipment was done with handwritten Post-it notes stuck onto a large nautical wall-chart. Early in the drill, the Post-it notes floated to the floor en masse when an outside door was opened. Quickly, the scattered notes were collected and tabulated onto an Excel® spreadsheet. As the drill progressed, the crude equipment list increased in size and usefulness. The columns of boom, skimmers and storage could be totaled to provide information for the public affairs staff and others. The equipment was also sorted by divisions and task forces and the spreadsheet was posted with the other status boards.

On the second day of the drill, the drill design team abruptly stopped the drill to test the concept of demobilizing, and the spreadsheet of equipment was the first thing the demobilization unit leader asked for.

Upon reflection after the drill, there was no doubt an Excel® spreadsheet with equipment lists could make the resource-tracking job easier. The problem was that all the oil-response equipment in Washington and Oregon was owned by a multitude of private companies, cooperatives and government agencies, the listing of which was in different places, in different formats. Something had to be done to collect all of the equipment information in one place, in one format, useable by everyone. The equipment list had to be in a format that met all of the stakeholders' equipment needs, including planholders. In fact, format uniformity and universal usability was the sole reason for the genesis of the NW Area Equipment List.

The USCG D13 was approached by OSROs to chair an ad hoc group that brought together all the equipment and logistical experts from the sources of equipment in the Northwest and some planholders. The kick-off meeting was, to put it mildly, rocky. In fact, update meetings continue to be vocal sparing matches, and that, in a way, is what makes the experience and the byproduct of the effort so remarkable. To bring so many groups together with their own self-interests and agree that all equipment lists will look alike is unique.

During the initial meetings, it became evident that the group wanted an inventory of equipment, not a tool to mange spills. They sought a collection of data that would include common identifiers to spell out equipment specifications. They saw no need

to list equipment under tactical headings, such as "Firefighting," "Oil Spill Response," or "Salvage." Listing equipment in tactical categories, they believed, would almost assure an over-counting of the same piece of equipment. For example, a pump could be in oil spill, salvage and firefighting tactical lists. Tactical listings could provide a false sense if double or triple counting of resources occurred when only one piece of equipment was available.

Some on the committee wanted to have an Excel® spreadsheet so they could move equipment around to track it in a spill or drill situation. Others wanted the data to feed into programs such as Access® or special company-response software. Others just wanted to use the information to hand-write t-cards. In the end, the committee agreed on two things: to build an Excel® spreadsheet of inventory, and post it on the CGD13 Web site. All agreed that after that, the players could use the inventory list to suit their own needs. Directions to load data into the spreadsheet are contained in Table 1. An example of Coast Guard data that has been entered into the spreadsheet is provided in Table 2.

The committee did not start with a design premise to sell a computer program; it did not start with the idea of making money. It started with a group of equipment people that needed to do their everyday jobs better. The committee envisioned "equipment people" maintaining the list. Today, they believe this is why it works so well. They made it work on paper first, then let users do with it what they wanted with respect to their individual needs. What they created was a system everyone could understand, control and feel comfortable using.

Inventory systems such as the one described can potentially fail for a number of reasons. The greatest concern is the burden placed on one person or one organization to keep the list updated. The committee's approach was that each company would keep their part of the list current by sending their updates to the USCG for posting on the CG site. The CG, acting as the control point, would delete the outdated equipment list from the updater and paste in an entire new update. This made the process failsafe as the company's entire equipment list was removed and replaced with a new one.

Over time, the list format and how it was updated morphed many times. The committee added equipment from California and Canada. Yet one constant remains: There is still a single list of equipment that provides the opportunity for multiple purposes. Members use the equipment lists internally to do tasks such as maintenance, property control, accounting, billings for spills, in-house inventory control, business tax assessment and meeting of state and federal planning standards. In addition, the list is used everyday to plan for drills on the West Coast. If someone needs a company equipment list, the Web site is available 24/7/365 for downloads. The Excel® spreadsheet equipment list is online at http://www.rrt10nwac.com/.

This availability takes the pressure off the OSROs since they can meet their customers' needs for equipment listings by referring requestors to the Web page. The Web site address and its continually updated contents have also replaced the hard copy equipment list within the Area Contingency Plan.

It seems there is no end of uses for the online list. Today, both the states of Oregon and Washington recognize the NW equipment summary as the "list of record." The states are using the list to do planning. They use latitude and longitude coordinates listed on the spreadsheet to plot equipment movements within GIS programs to run response times. The USCG uses the list to feed a mail-merge program, which then prints T-cards from the database. Printing T-cards from the database provides a huge timesaving over writing them by hand.

The committee believes the list's versatility stems from its simplicity; it is no more than a list of equipment. Yet as more uses are devised, the desire to add columns and fields to the spreadsheet increases the burden on the ad hoc group for changes, which could possibly muddy the waters of the list's original intent. This has happened to so many national initiatives concerning equipment lists. They move away from the basic intent and try to do too much and ultimately implode. If our committee's list does not meet the equipment personnel's everyday needs, the long-term success of our project is in jeopardy.

The list indicates who has equipment, what equipment they have and how they can be contacted. Although the list could be used as an available list of equipment, most of the equipment is situated to meet individual planholder requirements. OSROs list 100 percent of the equipment in their stockpiles with this understanding.

Category column information uses nationally recognized "type" and "kind" formats. Even with this information, the group continually struggles with categorizing single pieces equipment, such as a vessel, which can skim oil, carry boom and has recovered-oil storage. They struggled to get all Lat/Long inputs into digital degree formats to easily sort and convert to GIS requirements. They are also working on making the categories translate easily into the right side of ICS 209 Form, which accounts for the equipment available and assigned during an emergency response.

Changes in the world since 9/11 have prompted the moving of the list from the Coast Guard Web site to a private business Web site. Genwest has volunteered to host the equipment site in future and this should make the list always available in times of the highest security, in all probability, a time when such equipment will be needed. Genwest will host the equipment on a Web site called the Western Response Resource List at *www.wrrl.us*.

CONCLUSIONS

An ad hoc group developed a regional equipment-listing system that allows users to check available equipment up and down the West Coast, a system that works right out of the box. The system is quick, intuitive, and designed for spill responders or almost anyone that comes to it with Excel® skills. It displays available equipment with specifications and locations, is driven by spill-responders' needs, and is basic yet flexible enough to meet regulator and planholder requirements.

Creation of this system stemmed from a situation where a diverse, competing group built a team, built consensus, had buy-in and met spill-responders' needs. The result was the production of a comprehensive, accessible list of available response equipment on the West Coast. Frankly, it may behoove any commercial interest to be on the list since it is visible worldwide.

BIOGRAPHY

John Crawford – Foss Maritime Company, Manager, Contingency Planning & Compliance, Foss Maritime Company–Seattle, WA. A 28-year Coast Guard veteran, John Crawford began working for Foss Maritime Company in 1990, responsible for contingency plan development, maintenance, training and implementation. His field experience includes assignment with Foss Environmental Services as a HAZWOPER trained spill responder and supervisor, and service in a wide variety of ICS (Incident Command System) roles, but most frequently as the Planning Section Chief.

REFERENCES

1. How to fill out a "Resource Inventory / Tracking for Spill Responses" sheet
2. EXCEL® Spreadsheet Example

TABLE 1 How to fill out a "Resource Inventory / Tracking for Spill Responses"
Revised: 1 March 2002

REVISED:	Please manually enter the date you update / submit the equipment list, e.g. 15 July 2001, or 7-15-01. **Use Arial font with a point size of 10 for entries.**
CONTACT / OSRO [person]	Please enter a name, telephone number and e-mail address, e.g. Joe Doe / (206) 555-1234 / doe@xyz.com
OSRO (6 spaces)	Abbreviate (limited to 6 letters), e.g. Clean Sound = CSCI; Foss Environmental = FES; MSRC, etc.
RESOURCE (12 spaces)	See attached "Standardized Resource Identification" The abbreviations are practically intuitive.
KIND & TYPE (6 spaces)	See Field Operations Guide (FOG), 2000 Edition – Chapter 13. http://www.uscg.mil/hq/g-m/nmc/response/index.htm#Guides
IDENTIFICATION (24 spaces)	See attached example sheet
SPECIFICATIONS (12 spaces)	See attached example sheet
BPD-EDRC (8 spaces)	Barrels Per Day – Efficiency Derated Recovery Capability, e.g. 20% (standard) of name plate capacity, converted to BPD
STORAGE (10 spaces)	Expressed in BARRELS only. Convert gallons (x 42) to barrels.
BOOM LENGTH (7 spaces)	Expressed in feet only. Convert meters (x 3.281) to feet.
PEOPLE OR OPERATORS (5 spaces)	Number of people or operators automatically included (required) for this equipment or function, when mobilized / activated.
HOME BASE (12 spaces)	Self-explanatory, i.e. city or region.... Tacoma, North Puget Sound (operating area),
STATE / PROVINCE (2 spaces)	Abbreviate, e.g. WA, OR, CA, BC -- 2 letters only
STAGED (13 spaces)	How equipment is stored / maintained in readiness, e.g. dock, warehouse (w-house), 20' container (cont.), trailer, yard, vessel (name)
LATITUDE (10 spaces)	Decimal degrees, e.g. 48.118N
LONGITUDE (10 spaces)	Decimal degrees, e.g. 123-941W
NOTE:	The following columns are reserved for resource tracking only -- if you elect to use the Excel® spreadsheet in lieu of T-cards, or some other tracking system.
ASSIGNED	Example: Task Force 1 (TF-1), Division A (DIV-A), Staging-1, Geographic Response Plan S23 (GRP-S23), Helibase, etc.
ETA (DATE / TIME)	You must use date and time, e.g. 14 OCT 1630 – or 14 / 1630. For long-term responses, the month is beneficial.
O/S (DATE / TIME)	You must use date and time, e.g. 14 OCT 1630 – or 14 / 1630. For long-term responses, the month is beneficial.
DEPARTED (D / T)	You must use date and time, e.g. 14 OCT 1630 – or 14 / 1630. For long-term responses, the month is beneficial.

TABLE 2
EXCEL® SPREADSHEET EXAMPLE

Revised: 25-Mar-00 Contact Information: Scott Knutson/ (206) 220-7219/sknuson@pacnorwest.uscg.mil

OSRO (6)	Resource (12)	Kind - Type (6)	Identification (24)	Specifications (12)	Recovery BPD EDRC (8)	Liquid Storage bbls (10)	Boom Length (7)	People (5)	Home Base (12)	State (2)	Staging (13)	Latitude (10)	Longitude (10)	Assigned (10)	ETA Date/Time (10)	Onscene Date/Time (10)	Departed Date/Time (10)
USCG	R-PS	SOH-3	VOSS System	DOP 250, 55 g	1,700			2	Warrenton	OR	48 ft.Trailer	46.11898N	123.94185W				
USCG	S-PB	PS-2	VOSS System	Lancer Barge,	0	619			Warrenton	OR	48 ft.Trailer	46.11898N	123.94185W				
USCG	E-SP	TP-1	VOSS System	CCN-150 Pum	0				Warrenton	OR	48 ft.Trailer	46.11898N	123.94185W				
USCG	B-43	B-1	VOSS System	Flexi-Sweep B	0		100		Warrenton	OR	48 ft. Traile	46.11898N	123.94185W				
USCG	R-PS	SOH-3	VOSS System	DOP 250, 55 g	1,700			2	Warrenton	OR	48 ft.Trailer	46.11898N	123.94185W				
USCG	S-PB	PS-2	VOSS System	Lancer Barge,	0	619			Warrenton	OR	48 ft.Trailer	46.11898N	123.94185W				
USCG	E-SP	TP-1	VOSS System	CCN-150 Pum	0				Warrenton	OR	48 ft.Trailer	46.11898N	123.94185W				
USCG	B-43	B-1	VOSS System	Flexi-Sweep B	0		100		Warrenton	OR	48 ft.Trailer	46.11898N	123.94185W				
USCG	B-42	B-1	Boom System,	American Mari	0	0	5,000	2	Warrenton	OR	42 ft.Trailer	46.11898N	123.94185W				
USCG	R-PS	SOH-3	VOSS Single S	(2 ea.) DOP 25	3,400			2	Manchester	WA	48 ft.Trailer	47.56131N	122.54322W				
USCG	S-PB	PS-2	VOSS Single S	(2 ea.) Lancer	0	1,238			Manchester	WA	48 ft.Trailer	47.56131N	122.54322W				
USCG	E-SP	TP-1	VOSS Single S	(2 ea.) CCN-15	0				Manchester	WA	48 ft.Trailer	47.56131N	122.54322W				
USCG	B-54	B-1	VOSS Single S	(2 ea.) Fast Sv	0		124		Manchester	WA	48 ft.Trailer	47.56131N	122.54322W				
USCG	B-42	B-1	Boom System,	American Mari	0	0	5,000	2	Port Hadlock	WA	42 ft.Trailer	48.05514N	122.73812W				
USCG	R-PS	SOH-3	VOSS System	DOP 250, 55 g	1,700		100	2	Eureka	CA	48 ft.Trailer	40.78701N	124.17415W				
USCG	S-PB	PS-2	VOSS System	Lancer Barge,	0	619		2	Eureka	CA	48 ft.Trailer	40.78701N	124.17415W				
USCG	E-SP	TP-1	VOSS System	CCN-150 Pum	0				Eureka	CA	48 ft.Trailer	40.78701N	124.17415W				
USCG	B-43	B-1	VOSS System	Flexi-Sweep B	0				Eureka	CA	48 ft.Trailer	40.78701N	124.17415W				
USCG	R-PS	SOH-3	VOSS System	DOP 250, 55 g	1,700		100	2	Eureka	CA	48 ft.Trailer	40.78701N	124.17415W				
USCG	S-PB	PS-2	VOSS System	Lancer Barge,	0	619		2	Eureka	CA	48 ft.Trailer	40.78701N	124.17415W				