



Boston Harbor Geographic Response Plan (GRP) Project

**April 27, 2010, 10:00 a.m.
New England Wildlife Center
Weymouth, Massachusetts**

Attendees

Marc Albert – National Park Service	Steve Lehmann – NOAA, SSC Boston
Kurt Bornheim – Hull Harbormaster	Justin Myers – Weymouth Fire Department
Chris Bresnahan – MassDEP, ER	William Meyer – Boston Fire Department
Richard Bryan – Quincy Fire Department	Paul Milone – Weymouth Harbormaster
Chris Busch – Boston Con Comm	Kingsley Ndi – MassDEP Northeast Region
Richard Carroccino – Chelsea Fire Department	Rich Packard – MassDEP
Abigail Childs – Hingham Conservation	Karen Pelto – Mass EOEA
Eric Davis – Conoco/Phillips	Kelly Phelan – Braintree Con Comm
Elise DeCola – Nuka Research	Mike Popovich – USCG District 1, Boston
Mike Foley – Quincy Police Marine Unit	Arthur Powers – Exxon/Mobil
Pamela Garcia – USCG	Caleb Queen – Nuka Research
Robert Gillan – Quincy Police Marine Unit	Tony Rodolakis – AMEC
Damian Guzman – Exxon/Mobil	Sanne Schneider – Nuka Research
Susan Kane – DCR	Alex Shunda – USCG
Ron Kenny – Global Oil	Heather Warchalowski – DCR
Jim Lally – Global Oil	

Welcome & Introduction

Rich Packard of the MassDEP welcomed the group and pointed out that it is the seventh anniversary of the Bouchard oil spill in Buzzards Bay. This event precipitated the Oil Spill Act of 2004, which has since been amended twice and has led to significant enhancements to local oil spill response capacity. Through the funding provided by the Act, 76 oil spill response equipment trailers have been delivered to coastal communities throughout Massachusetts. The MassDEP has also provided training in the use of this equipment. Packard described the Geographic Response Plans (GRPs), which have also been funded through the Act, as the third tool in the toolbox, to designate how/where to best use that equipment. The Boston Harbor GRP project is the fourth in a series of six that the MassDEP will undertake. Packard thanked everyone for coming and sharing their experience and expertise, which will help make this project a success. He introduced Elise DeCola of Nuka Research and Planning Group, the contractor who has been hired to facilitate and develop the Geographic Response Plans.

Group introductions were made.

Project Overview

DeCola began by sharing a brief overview of the project. A list of goals included having a common terminology, understanding how GRPs fit in to oil spill responses, determining a communities' priorities in terms of oil spill response, learning how the GRPs are implemented, and identifying the processes that will be used to develop GRPs for Boston Harbor. She explained that GRPs are a map-based strategy to protect sensitive areas from oil spills. These plans are developed by consensus, in a non-emergency setting, and are a tactical plan for use by responders in the field. GRP are not a mandate, a performance standard, or a substitute for professional judgment and experience. They do not designate the only sites that should be protected and they are not final until they are tested in the field.

DeCola explained that GRPs are based on standardized tactics and terminology, to provide a common language for responders. GRPs are extremely useful as a training tool for local responders as they provide a measurable testing objective. Developing GRPs with local expertise and input also fosters local buy-in and creates realistic expectations for protecting sensitive areas from oil spill impacts.



Once it is understood that every area cannot be protected from an oil spill impact, it becomes much clearer how to prioritize within a community.

Packard noted that the MassDEP has an ongoing project to utilize (test) tactics in the GRPs by conducting field exercises of completed GRPs. DeCola stated that GRPs in Wareham, Martha's Vineyard, and Hyannis have already been exercised. MassDEP plans to sponsor 6 additional GRP field exercises during 2010.

DeCola explained that Nuka Research has been developing GRPs for many years, and she personally has been at it since the late 1990s. She stated that group diversity is valuable, in order to get a wide range of experience and insights. In some regions, GRPs are called GRS (with Strategies replacing Plan). Whatever the name, the project objectives are the same. GRPs are designed to be responder oriented, to reflect the protection priorities of the participants, and to keep the strategies flexible and dynamic. Nuka Research follows a standard format used in the Cape & Islands, Buzzards Bay, and the North Shore GRP projects, and incorporates the finished product into MassGIS to make them easy to use and update. The completed GRPs are posted to the internet and publicly accessible.

DeCola reviewed the process that will be used for the Boston Harbor GRP project: first a work group is formed; next, work group participants will prioritize sites for GRP development. Once the candidate sites are identified, they will be surveyed and then tactics will be applied to the sites, developing the GRP. Once finalized, the GRP are incorporated into the state/federal Area Plan for oil spill response. Testing and modifying the GRPs will occur with training, exercises, and responses. Paul Milone, Weymouth Harbormaster, asked how the GRPs fit into the Area Contingency Plan. DeCola explained they are an annex, and said that his question would be addressed in more depth shortly by LCDR Garcia.

Role of GRPs Within Area Contingency Plan

LCDR Pamela Garcia, Sector Boston, explained how the GRPs fit into the Area Contingency Plan, answering Milone's earlier question. Garcia brought up the recent SONS (Spills of National Significance) exercise, which is a simulation of a major oil spill that impacts multiple states. One of the challenges of such a spill is the sharing of equipment between states and regions. The SONS program was developed as part of the US oil spill planning process after the 1967 Torrey Canyon spill (37 million gallons) off the coast of England. Under federal statutes (Clean Water Act and Oil Pollution Act of 1990), fifteen federal agencies join to make a National Response Team (NRT). Regional Response Teams (RRT) exist for various regions of the US. The RRT for Region 1 (which includes MA) meets twice a year. Under every RRT there are several Area Committees that publish Area Contingency Plans (ACP), which provide the state/federal planning for oil spill prevention and response. Boston Harbor is part of the Plymouth to Salisbury Area Contingency Plan. GRPs are one of the tools in the ACP, to be applied during an oil spill. Garcia emphasized that consensus is an important concept to GRP planning, noting that decisions at the local level could have national impacts. She closed with an anecdote about the importance of local first responders and citizens to all types of emergency response.

Establishing Oil Spill Priorities

Steve Lehmann, who is the National Oceanic and Atmospheric Administration (NOAA) Scientific Support Coordinator (SSC) for New England and the Persian Gulf, spoke about prioritization of sites for oil spill protection. He began by discussing Environmental Sensitivity Index (ESI) Maps that NOAA publishes for all regions of the US to quantify sensitivity to oil spill impacts. He spoke about the difference between priority and sensitivity, noting that while sensitivity to oil impacts is an objective measure, the priority for protecting areas from an oil spill are a subjective decision.

Lehmann described GRPs as shock absorbers for responders, saving valuable decision-making time. They can use the plans as a tool to layout protection strategies quickly. Another tool are the ESI maps, which cover all of the United States and other countries as well (e.g. Kuwait, Saudi). Lehmann explained that the ESI maps provide information about shoreline types, habitats, and users of those habitats (i.e. wildlife, human use). He emphasized that the information in the ESI maps is quantitative, in that it describes the types and concentrations of wildlife and habitat that are sensitive

to oil, and provides information about seasonality. However, responders and response managers must still make decisions about prioritizing these resources.

Lehmann noted that setting protection priorities is a qualitative process, and that the communities involved in GRP planning must identify their priorities. He urged stakeholders (e.g. resource managers, etc.) to use this opportunity to describe their priorities. He related a story in which he was working on a spill response in the Persian Gulf, and despite the presence of many sensitive resources – marine mammals, mangrove areas, and coral reefs – the number one protection priority of local communities was the water intake for their desalinization plants. This is an example of the difference between sensitivity and priorities, and a need for local input.

Robert Gillan, Quincy Police Marine Unit asked how far south the ESI map for Boston Harbor extended and it was clarified that there are two ESI maps that encompass the GRP region for Boston Harbor. Another question was raised regarding how far inland the ESI maps extend, and Lehmann explained that the charts usually focus on the coast and wouldn't go to far inland into rivers. He concluded by noting that all the ESI maps are available online and can be downloaded as PDFs, and DeCola stated that there is a link to these maps on the project website.

DeCola then noted that the agenda would be adjusted slightly, with the GRP Implementation agenda item moved until after the discussion of site surveys and tactics. There was no objection.

Site Selection, Surveys & Tactics Development

DeCola continued with a PowerPoint presentation (available on the project website with meeting materials). She explained that Nuka Research had done some preliminary delineation of candidate sites for the Boston Harbor GRP project. These were chosen based on information in the ESI maps, clustering together areas with a high density of sensitive areas (marked in red). The areas are lettered, and a corresponding Site Selection Matrix (SSM) has been developed, summarizing the sensitive resources at each site as identified in the ESI maps. The SSM shows the different uses for each area, creatures that inhabit the area, and shoreline types. The ESI maps don't capture every single resource and the information is eight or nine years old but it is still beneficial. Any additional information is very helpful, and she encouraged the participants to review the maps and to provide any additional information they may have about resources present in the area. Lehmann stated that ESI maps are developed using a process similar to the GRPS where local resource managers are brought in for their knowledge and expertise.

DeCola noted that this (the SSM) is the first step in trying to assess and compare resource density at potential GRP sites. Another meeting will be held (now set for May 20) to solicit input from agencies, stakeholders, locals, the industry, and responders regarding the geographic distribution of resources as well as the protection priorities. Then smaller teams from the work group will survey candidate sites, finalizing site selection and delineation based on field surveys.

DeCola explained that site survey teams are usually made up of four to six people and include representatives from the MassDEP and the USCG, local representatives (e.g. harbor masters, police, fire), stakeholders, resource agencies, and OSROs (oil spill removal organizations, or response contractors). Surveys can be done from shore but are most often done from a vessel. She noted that the goal is to complete the site surveys before the summer starts and the group agreed that next month would be good. Paul Milone offered that Weymouth has vessels of varying size to support the surveys. DeCola agreed that smaller vessels (like Carolina skiffs) would be good for shallower water. Gillan noted that southern Boston Harbor has ROVs and side scanning moorings that could be used. The group discussed the fact that these technologies would be interesting to use during future exercises.

DeCola explained that site survey teams typically collect data about water circulation, tides and currents, resources-at-risk, recreational and commercial use, and seasonality. The teams also identify potential tactics: boom configurations, anchor points, shoreside collection areas, and local response resources. Working in a true, working, industrial waterfront like Boston Harbor will be a new experience.



In Massachusetts, we have the benefit of having boom available to towns through the state-funded response trailers, so that the towns do not have to rely on contractor resources to deploy the GRPs during the initial hours of a spill. Trailers may also be shared among towns. Milone asked Packard if there is larger boom available and Packard indicated that MassDEP is working on trailers with larger boom, to be stored in the Buzzards Bay area but easily portable. The response contractors have larger boom available in the harbor and in other areas. Lehmann reminded the group that it is important to remember that large boom is used more offshore. He noted that it is tricky and hard to deploy. DeCola said that the GRPs are focused on coastal areas and usually use smaller boom. Milone talked about the Hull/Nantasket area in regard to larger boom. The group discussed how OSROs are plugged into the GRP process. Packard explained that the OSROs are invited to participate in the GRP meeting process and that during a spill, it may work that local harbor departments do the initial deployments, then response contractors come in and take over as the spill progresses. MassDEP is currently meeting with the City of Boston and other nearby communities to figure out what kind of equipment is needed and if there are gaps between what the Co-op has and what is needed. He reiterated that we do try to utilize them and invite them to participate in the process. DeCola said it is important to remember that the OSRO typically focuses first on source control and containment, which is different than the GRPs – they are protection strategies for before the oil reaches an area. She also suggested that the local responders can be effective with some training and instruction. Gillan replied that they had had an exercise but were looking further out; 48 hours after a spill. Packard said this would help to determine what would be the strength of the local response. Lehmann noted that the expectation would be that local responders only work in areas where boom deployment was more straightforward. He noted that in areas like the Piscataqua River in New Hampshire, high currents make deployment very tricky.

Milone brought up the issue of mutual aid, which some communities have and some don't. He wondered if there was a mutual aid agreement between fire departments, would it automatically transfer to oil spill response. Packard said he is drafting a policy to work with the USCG and MEMA (Mass Emergency Management Agency) to address giving local communities the autonomy and flexibility to deploy their equipment without asking permission for small incidents (like a fishing vessel sinking at a dock) and to have any resources deployed at a larger incident be managed under Unified Command. The policy will try to address the issue of when mutual aid is needed from a larger area and will bring results to the local communities during the Area Committee Meeting, training exercises, GRP tests, etc. The policy has been drafted but not finalized.

The group briefly discussed the dynamics of a large scale spill response, and Lehmann pointed out that boom is not usually a limiting factor during a major spill. It was emphasized that the state response trailers are intended primarily for smaller day-to-day incidents or for the initial 24-48 hours of a major spill response where resources are still being mobilized.

Returning to the subject of GRP development, DeCola explained that protective booming and recovery tactics are applied to each site based on best professional judgment of the survey team and the work group. Standardized booming and recovery tactics were developed during the first GRP project and provide a "menu" of options for GRPs. She passed around a copy of the Mass GRP tactics guide, and noted that it is available online through the GRP website. The format was borrowed from similar work done by Nuka Research in Alaska and then adapted to Massachusetts.

DeCola explained that the GRP tactics emphasize booming and recovery. Hard boom tactics include exclusion (EX), diversion (DV), and deflection (DF). Each tactic is based on the protection priority, feasibility of use, and available equipment. Exclusion boom may be used in calmer water near water intakes, marshy areas, and streams to keep oil out of a sensitive area. Diversion boom is used to redirect moving oil and send it to a collection site, typically up against a shoreline since we're working on the coast. Recovery at these collection sites can be a vacuum truck or a skimmer. On GRPs you will almost always see a DV icon near a shoreside recovery (SR) icon. Deflection is also about moving oil, but not necessarily with the expectation that it will be collected. She noted that you will see different DF boom on the GRPs based on ebbing/flooding tides, wind currents, tidal currents, etc.

DeCola reiterated that shoreside recovery is used primarily with DV booming, but you must consider access points to get recovery equipment in place. On-water, free oil recovery is seen less often and typically not a tactic used by local responders, but we show it on the GRPs because if you can collect



and recover oil out in open water first, this is always a top priority. On-water recovery and marine recovery is typically done by trained contractors.

DeCola showed a slide of a GRP layout. It is four to six pages with the first pages showing an overview map (sometimes two to three with breakouts labeled A, B, and C). Next are the tactic pages, listing tactics, locations in lat/long and simple driving directions, implementation directions, and what is being protected. The last page has photos from the site surveys and satellite photos, and contact information (local/federal, conservation, parks, etc.).

Implementing GRP During a Spill Response

Mike Popovich, equipment specialist for USCG District 1, discussed how GRP are used during a spill. He noted that a major benefit of this planning project is that it brings a number of different organizations and agencies together (e.g. fire departments, police departments, Oil Spill Response Organizations(OSROs)) for surveys, testing, and responding. He stressed the need to form relationships. He explained that we use practice deployments to become familiar with the resources necessary (boats, boom, etc.) He noted that once the process is complete, it's important to keep in mind that we have these GRPs to go to in the event of a spill.

Popovich spoke of focusing on smaller incidents rather than larger spills. On a smaller scale for harbor masters and OSRO, etc., they can decide which GRP to implement and how to go about doing it. They can discuss what equipment is needed and where will it come from. He pointed out that there is a need to continue these relationships because implementing GRPs is relational. Whether it's sharing equipment or mutual aid in terms of manpower, you must know how to use it and what resources you can pull from.

Popovich spoke of the need to test these tactics and practice deployments. He was enthusiastic about the MassDEP testing project supplying the opportunity to assess these GRPs. He encouraged everyone to try to participate in GRP tests once the Boston Harbor GRPs are completed, with the understanding of limitations such as people, money, and time.

The primary purpose of the GRPs is to protect areas before oil impacts them, said Popovich. They are also useful to identify strategic places to collect oil, if possible. You can use them to decide what tactics to deploy in an area the oil is heading to, before it gets there. Popovich admits that it takes practice to do deflection/diversion booming. Putting boom out is easy on paper, he noted, but not always in reality. With the complication of moving water, to make oil go where you want it to go, or keeping it from going where you don't want it is difficult. Exclusion boom is much easier but only applicable in calmer, protected waters.

Packard talked about the training that MassDEP has done and the equipment that is provided. He said that it is generally accepted that the local responders would use it in first 24-48 hours but that they would not be expected to do it beyond that time period. After that the contracting resources would arrive and take over. The GRP is most useful in the early hours of a spill or even when there is high potential that a spill is going to occur; get protective booming in place prior to impact. DeCola thanked Popovich and noted that during the site surveys, people like Mike are often involved with local responders, to impart knowledge that is reinforced with training.

Comments and Suggestions

Gillan remarked upon a recent emergency in which, due to flooding there was untreated sewerage discharged into Boston Harbor. He asked if Quincy could tap into the MassDEP for a spill trajectory in another case like this, since it was a Bio-HAZMAT release. Packard noted that MassDEP is notified by MWRA of these types of situations, and that public advisories are issued. However, sewage discharges do not fall under the state/federal oil spill planning regulations for oil and hazardous substances, even though sewage is certainly hazardous to human health. He clarified that the notification process for incidents like the sewage discharge are different than for oil spills. Lehmann reported that there is good modeling, in 3-D and offered that NOAA might be able to assist in any future incidents, if requested.



Milone voiced a concern regarding civilians on the water deploying boom. The group discussed assignment of personnel to vessel operations and response roles, and agreed that responders should be appropriately trained and participate in safety briefings before being expected to deploy equipment. DeCola stated that safety is a priority. Popovich said that most of the people involved in testing have experience on the water and Packard seconded that statement. Lehmann reiterated that there should be a co-operation between people with knowledge of boom and GRPs and people with experience on the water. DeCola reminded the group that any practices should use safety first, best judgment, with capable personnel.

Damian Guzman of ExxonMobil asked whether the GRPs focus more on the spill response tactics or the location of resources and equipment. Popovich replied that the GRPs will be specific as to tactics, locations, tides, currents, etc. but not necessarily where the boom will come from. They are specific on how a strategy should be implemented and provide information on how boom could be deployed regarding weather and other factors, but not the exact location of the equipment. The GRP tells you how much equipment you need but not necessarily where to get it from. He noted that the state has some equipment, some fire departments have it, and the OSROs have it. DeCola emphasized that the GRPs provide as much information as possible, but that responders implementing them must still apply their best judgment in consideration of the spill specifics.

Chris Busch of the Boston Conservation Commission asked if the type of oil spilled would affect the tactics. DeCola stated that a primary point was that if it is a gasoline spill you don't boom it. While the GRPs do not address the type of product, the tactics and strategies presume that you are dealing with floating oil. Busch asked if the same tactics apply with different materials. Popovich replied that they do, in a general sense. He said that having a scenario tells you how you would implement a strategy. Procedures and strategies still work, regardless of product. Packard noted that plans can be modified in the moment, depending on type of oil, on-scene conditions, and other factors.

Guzman asked how often the GRPs are updated and validated. DeCola replied that once a GRP is developed, finalized, and becomes part of ACP it becomes more static. Every time we do an exercise (test a GRP) it is updated in the Area Plan and on the website, and then work group may get an email. Packard explained that the MassDEP has a website that will host the GRPs but updates depend on 2 things: funding and testing. The GRP testing project is attempting to test six tactics each year and then update those GRPs. Guzman thought that was great and stated he would like a copy. Packard reiterated that they will be updated and available online. DeCola said that we can work on a notification process for people who were involved in developing those GRPs. Ndi remarked that a good way to be informed of any updates would be to attend an Area Committee Meeting.

Timeline

Initial meeting - April 27, 2010

Site selection meeting – May 20, 2010 at the Richard J. Koch Recreation Complex at 1 Merrymount Pkwy. In Quincy, MA

Site surveys – late May, early June

Draft GRP tactics – July/August 2010

Review/finalization of GRPS by Work Group - September/October 2010

Publish GRPs in Area Plan - November/December 2010

Review Action Items

- Finalize next meeting date location (May 20, Quincy Recreation Complex)
- Work group members pass along contact information for potential additional participants.
- Nuka Research develop base maps for proposed GRP site areas.
- Work group participants look at ESI maps, potential sites and compile any additional information or input they may have for the site selection meeting on May 20th.
- Meeting summary to be posted to website with meeting materials.

Adjourn

DeCola and Packard thanked the group for coming and reiterated how important local input is in making the GRP project a successful one.