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## South Shore Geographic Response Plan (GRP) Project

March 31, 2011, 9:00 – 11:30 a.m.  
Plymouth Town Hall, Plymouth, Massachusetts

### Attendees

Sean Baker – USCG, Sector SENE  
Daniel Batchelder – MassDEP Intern  
Dean Belanger – Mass. Environmental Police  
Bob Murphy – MassDEP, Emergency Response  
Jason Burtner – Mass. Coastal Zone Management  
Neil Churchill – Mass. Division of Marine Fisheries  
Dan Crafton – MassDEP, Emergency Response  
Elise DeCola – Nuka Research  
Mike DiMeo – Marshfield Harbormaster  
Pine DuBois – Jones River Landing Environmental Heritage Center  
Stanley Eldridge – Plymouth Fire Department  
Joe Grady – Duxbury Conservation Commission

Chad Hunter – Plymouth Harbormaster  
Ross Kessler – Mass. Division of Marine Fisheries  
Kim Michaelis – Plymouth Environmental Dept.  
Rich Packard – MassDEP  
Mike Popovich – USCG District 1, Boston  
Caleb Queen – Nuka Research  
Sanne Schneider – Nuka Research  
Tom Shields – Mass. Division of Marine Fisheries  
Paul Taber – Marshfield Emergency Management Agency  
Maureen Thomas – Kingston Conservation Commission  
Aaron Wallace – Plymouth Dept. of Emergency Management  
Michael Young – Plymouth Fire Department

### Welcome & Introduction

Rich Packard of the MassDEP welcomed the group. He began by noting that this (the South Shore Geographic Response Plan or SSGRP project) is the 5<sup>th</sup> in the series of oil spill response plans developed for the state of Massachusetts. He said that though this project was begun several years ago, the recent Deepwater Horizon blowout has brought plans like this to the forefront. One of the lessons learned from the Gulf blowout was that pre-planning projects like GRPs can help to make local oil spill response more effective. This project teams up federal, state, and local response personnel and helps people to understand both the protection priorities and the practical limitations of spill response (equipment, feasibility, etc.). He stressed the importance of having input from all participants: federal, state, local, and industry. He thanked the group for taking time to attend and participate in this project and introduced Elise DeCola of Nuka Research and Planning Group.

Following group introductions, DeCola introduced Nuka Research as a term contractor to MassDEP who has facilitated the development of Geographic Response Plans (GRPs) statewide. Nuka facilitates the process by organizing meetings, doing



technical mapping work, and coordinating work groups, but always recognizing that the decision-making and prioritization come from the participants in the group.

### **Project Overview**

DeCola provided a brief overview of the project. Project goals include having a common terminology, understanding how GRPs fit in to oil spill responses, determining a community's priorities in terms of oil spill response, learning how the GRPs are implemented, and identifying what processes will be used to develop GRPs for the South Shore. DeCola explained that GRPs are a map-based tactical field document used to protect sensitive areas from oil spills. The GRPs are created in a non-emergency, controlled environment; a pre-planning opportunity prior to an actual event. She emphasized that GRPs are not a result of the Deepwater Horizon event, but have been in use for years. She explained that for this project, the group will develop GRPs for different parts of the South Shore coastline, choosing sites based on various criteria. A GRP is not a mandate, a performance standard, or a substitute for professional judgment and experience. Since the tactics used are transferrable, information from a GRP developed for one site could be useful at another.

DeCola mentioned another program (GRP Testing) that the MassDEP has undertaken. Packard explained that MassDEP has started a program where they use the equipment trailers given to coastal communities to provide an opportunity for local responders (fire departments, harbor masters, etc.) to deploy boom as depicted in the GRP to gather experience and evaluate how well the tactics work at that particular site. This helps to develop the capacity at a local and state level to treat an oil spill. In response to a question from Jason Burtner of the Coastal Zone Management, Packard stressed that while oil spills scenarios are discussed during GRP development, GRPs are not written for one specific scenario.

DeCola explained that the GRPs are developed using standardized tactics and terminology to make a response run as smoothly as possible. GRPs are developed with the input of local expertise, which 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. DeCola stated that group diversity is valuable, in order to get a wide range of experience and insights during GRP development. GRPs are designed to be responder oriented, to reflect the protection priorities of the participants, and to keep the strategies flexible and dynamic. The South Shore GRP development will follow a standard format used in the Cape & Islands, Buzzards Bay, Boston Harbor, and the North Shore GRP projects, and will incorporate the finished plans into Mass GIS to make them easy to use and update. The completed GRPs for those regions are up on the web. They will all be available to access and download in the most recent revision from the MassDEP.

DeCola asked the attendees to identify other individuals who they believe would provide value to the process and to encourage them to participate in future meetings, which include site selection, field surveys, tactics development, and final



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plan review. DeCola introduced Mike Popovich, USCG, from District 1 in Boston to discuss the role of the GRPs in the Area Contingency Plan(s).

### **Role of GRPs Within Area Contingency Plan**

Mike Popovich explained that he is currently with First CG District staff and is involved with all things related to environmental response. He has extensive background in spill response and was recently part of the New Orleans Deepwater Horizon effort, primarily working in on-water skimming operations.

He noted that the South Shore region is unique because it encompasses two Coast Guard oil spill planning areas. Manomet Point is the boundary line between Sector Boston and Sector Southeast New England (SENE), each of which falls under a separate Area Contingency Plan (the state/federal plan governing spill response). The South Shore GRPs will be incorporated into both Area Contingency Plans (ACPs). Popovich emphasized that this project offers a unique opportunity for local people to have a voice in state and federal planning.

He stressed that GRPs are meant to be used by local responders, deployed using equipment in the state spill response trailers. They are like mini-contingency plans, and in Massachusetts the GRPs are strengthened by the fact that they are routinely exercised. He noted that we may not see a Deepwater Horizon level event here but that the lessons learned there can be useful. He spoke about the importance of maintaining and fostering local relationships and related that a problem in LA was that relationships weren't already established between local parishes, state, and the USCG. This adversely affected everyone's ability to respond. Popovich encouraged the group to get in touch with the local contact at Sector Boston and review the ACP and the National Contingency Plan as well. He suggested that this is an opportunity to have a personal impact on your community.

Mike DiMeo, Marshfield Harbormaster noted that it takes many and sometimes large vessels to set boom and stated the importance of towns having proper equipment to that end. Popovich explained that for the on-water cleanup during large spills, an Oil Spill Response Organization (OSRO) would be called in. Decola made the distinction between deploying GRPs ahead of a potential spill vs. ongoing on-water cleanup during a spill, explaining that the point of the GRP program is to give local responders some basic tools to mitigate spill impacts. Packard explained that the state has developed a process for mutual aid so that towns can access the 76 equipment trailers in Massachusetts coastal communities, each of which contains 1,000 feet of boom plus other response resources. He described local response as mostly nearshore booming, using smaller vessels, whereas offshore booming and skimming oil is more of an OSRO/contractor response. DiMeo asked if there was a contract for the trailers and equipment and Packard replied that the towns signed a contract when they accepted the state-owned trailers.

The group discussed the possibility for local response vessels to get oiled during a spill and Popovich stated that if a vessel becomes oiled, it would typically be decontaminated as part of the spill response. The group talked about the trailer contents and Bob Murphy of the MassDEP Emergency Response told the group that



there is a trailer inventory on the MassDEP website <http://www.mass.gov/dep/cleanup/os/index.html>. Packard added that as well as the trailer contents, the website shows the location of each trailer, the contact people, a training video on how to deploy boom, and links to other resources. Testing and modifying the GRPs will occur with training, exercises, and responses.

### **Practical Use of GRPs During Response**

DeCola introduced Chief Sean Baker, of the USCG SENE in Providence, currently working in Waterways Management. He related a recent event in which he had observed the use of GRPs during an actual incident. About a month ago, a freight vessel from the Netherlands lost propulsion off the coast of Massachusetts, and was being towed into the area south of Narragansett Bay when weather forced them to take temporary refuge in Buzzards Bay. The tow line parted, and there was concern that this disabled ship with several thousand barrels of fuel oil would drift into Cuttyhunk, hitting the shoal and possibly discharging oil. Baker worked with the vessel owners and their agents to prepare for a possible spill, and they began to review the GRPs that had been developed for the Buzzards Bay region. While the tow was re-established and no grounding or spill occurred, this incident served as a real-world example of how the pre-planning done during GRP development may influence a spill response or potential spill down the line.

### **Establishing Oil Spill Priorities**

DeCola presented a PowerPoint discussion typically led by Steve Lehmann, who is the NOAA Scientific Support Coordinator for the Northeast region and who has considerable spill response experience in the U.S. and worldwide. DeCola reviewed the methodology that NOAA has developed to characterize shoreline types based on their sensitivity to oil spills. This system aids in selecting strategies and setting protection priorities. She pointed to ESI (Environmental Sensitivity Index) maps for the region and noted that they contain a lot of good information, but that through the SSGRP process, the work group would have an opportunity to augment this information. Copies of the South Shore GRP Site Selection Matrix (SSM) and keys were also distributed. The SSMs are populated with information from the ESI maps.

DeCola reviewed the ranking system that NOAA has established for shoreline sensitivity. Packard commented on the list, saying that from top to bottom, the top (sand and gravel) are less sensitive. So the sandy bathing beaches that everyone wants to protect are actually not that sensitive. He explained that part of understanding why decisions are made is that there may be trade-offs. DeCola noted that marshes are a more sensitive area and Packard related a story about a spill in Sippewisset Marsh in 1969, where the oil is still present in a discrete layer 42 years later. A copy of Mr. Lehmann's presentation, which includes details about the shoreline sensitivity ranking system, is available along with the meeting materials on the project website.

DeCola emphasized that sensitivity is a big part of the equation when setting priorities for spill response. The assignment of priorities is subjective, and priorities may vary based on local or stakeholder priorities. During the GRP development,



Nuka will facilitate the process, but ultimately the decision about which areas to prioritize for oil spill protection is made at the town level. DeCola noted, however, that some considerations are less obvious. DuBois named the intake structure at Pilgrim Power Plant as one such consideration. Murphy said that public safety should be foremost. Packard suggested three questions to ask as the prioritizing process progresses: 1) What areas are important? 2) Is this area protectable? And 3) Do we have the resources (boom, manpower, etc.) to protect it? Participating in this project provides an opportunity to represent what is important to your locality and a way to learn what the limits are. He noted that sometimes, within towns/areas there are competing priorities, and understanding how a decision is made and why something is selected is important to the process.

Popovich agreed, citing a spill that Lehmann worked in Kuwait. There was a biological resource that NOAA listed as a priority, but the government of Kuwait overruled them, as their main priority was the desalinization plant's water intake. They chose this because their need for fresh water was more important to them than saving a natural resource. This demonstrates the difference between sensitivity and priorities, and a need for a meeting of the minds. The difference between sensitivity and priority is that priorities are qualitative, which means that no one can tell you which area is most important to your community.

DeCola then took a few minutes to orient the group to the South Shore GRP website: <http://grp.nukaresearch.com/SSgroup.htm> and the MassDEP GRP website:

<http://www.mass.gov/dep/cleanup/os/Pages/grp.html>

Packard also noted that MassDEP has a lot of information on their marine oil spill website: <http://www.mass.gov/dep/cleanup/oilsprep.htm> The group is encouraged to explore these websites.

### **Site Selection, Surveys & Tactics Development**

DeCola explained that the site selection process for GRP development involves first delineating site boundaries and then prioritizing sensitive areas for protection within those sites. Nuka has initially broken up the South Shore into 4 sub-regions, with 21 possible sites. At the next meeting we will bring ESI maps to mark up and invite participants to bring atlases, maps and other information to identify and prioritize sensitive areas. Murphy suggested that local resource managers can often add another layer of detail to the ESI data, which is often quite broad or general. At end of the next meeting we will have an initial set of data that will feed the next phase, which is Site Surveys. Dean Belanger of the Massachusetts Environmental Police also mentioned seasonality as a factor for sensitive resources, which DeCola agreed was extremely important. DeCola also noted that sometimes it is better to keep responders out of a certain area during particularly sensitive times, such as bird nesting.

DeCola explained that field or site surveys are almost always done from the water from vessels. Site survey teams typically include at least one local representative, and personnel from the MassDEP, USCG, and local industry. At the next meeting we will ask for volunteers who would like to participate in this part of the process.



After the site surveys, Nuka will then take the strategies developed by the survey teams and map out and create the GRPs. A shifting may occur to some site boundaries during this process.

DeCola began to talk about tactical considerations, such as sensitivity, the risk that oil will impact an area, and feasibility to deploy. Packard added that the MassDEP Testing project will be conducting an exercise in the Fairhaven/New Bedford area in the spring. He noted that this area was not easy to protect during the spill in Buzzards Bay. DeCola showed the Massachusetts GRP Tactics Guide as a source document. She explained that it is a standard in coastal Massachusetts, pared down to the tactics we use in the GRPs. She indicated icons that are on the GRPs and explained the three booming tactics used in the GRPs. Exclusion booming (EX) keeps oil out of an area. You may be booming around a water intake or using it as a barrier, but you are not as concerned about where the oil goes. Diversion booming (DV) is when you take oil that is moving and manipulate its path toward a certain area. This will almost always be seen with Shoreside Recovery (SR), when you collect the oil and get it out of the environment. Land access is needed for SR (vacuum trucks, etc.) Deflection booming (DF) is a concept similar to DV, except you are trying to deflect the oil away from an area and you may not have the recovery piece. SR is an important consideration for GRPs, DeCola noted. Offshore recovery is the contractor layer of spill response, which requires expertise and practice to do effectively. We don't plan toward that at this level but employ active shoreline recovery as well as passive recovery techniques, such as using sausage boom or sorbent pads. The following is a link to the tactics guide: (note that this link will initiate download of a large pdf file).

<http://grp.nukaresearch.com/documents/MAGRPtacticsall.pdf>

When we gather information to create the GRPs, DeCola continued, we check water circulation, tides and currents, resources-at-risk, and recreational and commercial use. We identify potential tactics: boom configurations, anchor points, shoreside collection areas, and local response resources. She then showed an overview of GRPs: The photo on the front page; location (lat/long), deployment equipment list, where to stage, where to access, the resources being protected, special considerations on the second and third pages; with the final page containing pictures of site (satellite) and contact information. She then introduced Caleb Queen, the Nuka Research mapping specialist.

### **Overview of ArcGIS Mapping**

Queen gave a quick overview of the Geographic Information System (GIS) component of the GRPs. He uses ArcGIS mapping software to make maps for the GRPs, and explained that the GIS data can also be used during an actual spill response for spatial analysis to find how much boom is needed to deploy all the tactics within a given site or region. DeCola interjected that once the GRP is completed, the GIS data is managed by MassGIS and is available through MassGIS.

### **Comments and Suggestions**

DuBois raised the question of whether the GRPs are written for other types of fuel (like diesel or Bio fuel) and if there is something else that we could be planning for.



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DeCola and Popovich said that typically GRPs are written for floating oils, which may range from heavy bunker fuels to lighter refined oils like diesel or home heating oil. It is not safe or advisable to boom gasoline spills. DuBois asked whether basic oil chemistry could be discussed at the next meeting and Dan Crafton noted that there are several good references on this topic. DeCola offered that she would discuss with Steve Lehmann whether he could provide a discussion on fate and effect of marine oil spills at the next meeting.

**Timeline**

Initial meeting – March 31, 2011

Site Selection/Sensitivity Planning Meeting – April 28, 2011

Site surveys – late May, early June

Draft GRP tactics – June, July

Review/finalization of GRPS by Work Group – August/September

Publish GRPs in Area Plan - November/December

**Review Action Items**

- Get space for next meeting – Plymouth Town Hall, Mayflower Room
- Put various links/websites on next email and on project website
- Invite others – Note that we need to grow the group for the next meeting, so please seek out and invite people whose input would be valuable for the site selection process
- Check with Steve Lehmann regarding presentation materials about oil type and fate/effects and update his contact info on work group list
- Get date for next meeting- April 28<sup>th</sup>, Thursday, 9:00 am to 12:00 pm

**Adjourn**

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