On January 3, 2012, Secretarial Order 3188 established the Department of the Interior (DOI) Strategic Sciences Group (SSG) to support decision making regarding environmental crises affecting Departmental resources. This document provides general background about the SSG.

**INTRODUCTION**

Recent environmental crises of national significance, such as the Deepwater Horizon oil spill and Hurricane Sandy, have threatened the infrastructure, natural resources, and people of the US. In these and other environmental crises, the DOI has played a significant role in protecting people and resources and engaging in emergency response, recovery, and restoration efforts.

Science plays an increasingly important role in preparing for and responding to such complex environmental crises. Historically, deployment of DOI scientific expertise during crises has been *tactical* – solving immediate engineering or resource management problems, evaluating specific options for response, or assessing damage. However, it has become increasingly clear that there is also a need for *strategic science* – preparation for crises, analysis of long-term consequences, implications for policy, and the development of key interventions to accelerate recovery and restoration. The DOI Strategic Sciences Group (SSG) was established to bolster the Department’s strategic science capacity. Through the development and application of science-based scenarios, the SSG assists strategic response, mid-term recovery, and long-term restoration by providing valuable advisory tools to DOI decision makers.

**BACKGROUND**

As part of its response to the Deepwater Horizon Oil Spill, DOI leadership created a temporary, interdisciplinary Strategic Sciences Working Group (SSWG) composed of scientists from Federal, academic, and non-governmental institutions. The purpose of the SSWG was to develop science-based assessments of the long-term effects of the spill on the ecology, economy, and people of the Gulf of Mexico. To this end, the SSWG produced a series of scenarios highlighting the effects of this crisis and recommending critical intervention points to decision makers, resource managers, and emergency responders. The SSWG was led by Dr. Gary Machlis, Science Advisor to the National Park Service (NPS) Director, and reported to Dr. Marcia McNutt, then Director of the US Geological Survey (USGS) and Science Advisor to the Secretary of the Interior.

The SSWG conducted interdisciplinary scenario-building sessions during the Deepwater Horizon oil spill, resulting in two reports and multiple briefings outlining the oil spill’s direct impacts, cascading indirect impacts, and recommendations to improve long-term recovery. These recommendations were used by the Unified Command, DOI science planning teams, and policy and decision makers at the local, state, and federal levels, and the external scientific community. The SSWG reports and a follow-up article in *Science* included the recommendation that the DOI create a standing capacity to conduct strategic science activities during future environmental crises (Machlis and McNutt, 2010).

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THE SECRETARIAL ORDER
On January 3, 2012, Secretarial Order 3188 established the Strategic Sciences Group within the Office of the Secretary, replacing the SSWG. An operational plan was approved in December, 2012.

The mission of the Strategic Sciences Group is:
…to provide the DOI with the capacity to rapidly assemble trained teams of scientists to conduct science-based assessments and construct interdisciplinary scenarios of environmental crises affecting DOI resources, and provide the results of this work to DOI leadership as usable knowledge.

The order designated two SSG Co-Leaders: currently, the Science Advisor to the NPS Director and the USGS Associate Director for Natural Hazards. The SSG Co-Leaders are responsible for developing procedures and methods, managing activities, providing results to the Secretary and DOI leadership, and coordinating with other Federal agencies and the scientific community. The Co-Leaders report to the Science Advisor to the Secretary. Only the Secretary can deploy the SSG.

In addition to crisis deployment, the SSG also engages in “peace time” activities designed to improve the strategic science response capabilities of the DOI. These activities include: developing scenarios for future crises, continuous training, scientist rostering, research on crisis response, and evaluation of previous efforts to improve the effectiveness of future deployments.

RECENT ACTIVITY
In early 2013, then-Secretary Ken Salazar deployed the SSG to support the Department’s role on the federal Hurricane Sandy Rebuilding Task Force. In response, the SSG assembled a team of experts from DOI, other Federal agencies, industry, nongovernmental organizations, and academia to develop scenarios during a week-long session in March 2013. The scenarios included interventions that could improve the resilience of the region to the impacts of future major storms. The SSG briefed DOI leadership, Task Force representatives, White House staff, and officials in the affected region.

In May 2013, DOI leadership directed the SSG to develop an evaluation process to help prioritize projects proposed for $300M in DOI Hurricane Sandy supplemental mitigation funds. The SSG created assessment criteria using insights from its Sandy deployment and a technical review panel used these criteria to evaluate projects for their potential contribution to regional resilience. Over the last year, the SSG has forged partnerships with several scientific professional societies to develop and expand its roster of science experts from multiple disciplines and sectors to call on during deployment. This effort will expedite the formation of SSG crisis science teams.

CONCLUSION
The use of strategic sciences is critical to the Federal Government’s effective response to future environmental crises. While such events and their location, timing, or intensity may not be easily predicted, the DOI must prepare for the inevitable resulting challenges and strive to mitigate the effects of such crises. The Strategic Sciences Group will benefit the Department of the Interior, the resources DOI manages, and the nation.

FOR MORE INFORMATION
www.doi.gov/strategicsciences/index.cfm

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