

Long Term Oil Movement Questions and Answers

Question: Why did NOAA choose 33,000 barrels per day?

Answer:

- The 33,000 barrels a day is based on the most recent estimate by the Flow Rate Technical Group and accounts for the amount of oil removed through skimming, burning, and the recovery of oil from the Top Hat mechanism
 - o The Flow Rate Technical Group (FRTG) currently estimates oil flow rate to be between 35,000 and 60,000 barrels per day. We started with the upper bound of the estimate of 60,000 barrels per day after the riser pipe was cut.
- We subtracted 7,000 barrels per day to account for oil burning, skimming and other mitigation efforts (based on daily averages to date).
- We also subtracted 20,000 barrels per day to account subsurface containment through the Top Hat system after it was put in place on June 5.
- As updated information becomes available, NOAA will update the analyses. These updates will be made available on our website.

Question: The flow rate has changed over time, why did you choose 60,000 barrels/day?

Answer:

- From the beginning all flow rate estimates have been estimated based on the best available information. On June 15 the Flow Rate Technical Team released its most recent estimate that the most likely flow rate of oil today is between 35,000 and 60,000 barrels per day. As described above, NOAA used the upper bound of this range to reach the number used in the model.

Question: How would a higher flow rate affect this analysis?

Answer:

- Based on many runs of the model using different flow rates, we have seen that a change in flow rate does not have much of an effect on the relative probabilities of where oil is likely to go. It will have an impact on how heavy the oiling is in any given place. A higher flow rate will lead to generally heavier oiling, and a lower flow rate will lead to generally less oiling.

Question: What does this mean for Florida?

Answer:

- There are some important points to remember when looking at the results of the analysis:
 - *A threat to shoreline doesn't necessarily mean oil will come ashore.* The model considers oil a threat to shoreline if there is enough oil to cause a dull sheen within 20 miles from the coast. It will still take onshore winds and currents to move the oil to the shore.
 - *Any impacts will be in the form of scattered tarballs, not a large oil slick.* The longer the oil travels in the water, the more it will degrade, disperse and lose toxicity. Miami and Ft. Lauderdale are approximately 800 miles from the spill. Any oil impacting southeastern Florida will have been on the water for weeks, maybe months. Over that time it will significantly disperse and degrade into tarballs.
 - *To date, there has not been any confirmed oil from the Deepwater Horizon spill in the Florida Straits.*
 - *The majority of the oil slick remains north of the Loop Current, and has remained north of the Loop Current for the first 60 day of the spill.* So oil would have to move farther south or the Loop Current farther north to come into contact with the oil.
 - *NOAA is closely monitoring the movement of the oil from the Deepwater Horizon spill with satellite imagery, aerial observations and ships.* If a significant amount of surface oil enters the Loop Current and begins to move toward the Florida Straits, NOAA will be able to see it, predict the movement, inform coastal communities, and help guide preparedness, response and cleanup efforts.

What are we doing to help prepare for potential impacts in Florida?

Answer:

- NOAA is being proactive in working with our Federal and State partners in the Florida Peninsula. Here are some of the things that are being done:
 - Command Posts have been set up in Miami and Key West to establish surveillance and response plans to ensure the area is properly prepared.
 - The Florida Peninsula Command Post (FPCP) has implemented a "Trigger Response" plan that will provide early, responsible and practical actions to ensure necessary monitoring is conducted, and that a proper response plan is activated to collect oil products offshore and protect sensitive shorelines and natural resources if weathered Deepwater Horizon-related oil products were to approach the Florida Peninsula or Florida Keys.

- NOAA's Scientific Support Coordinators (SSCs) are working closely with USCG, the State of Florida and local responders to review response plans to ensure we are properly prepared. NOAA continues to communicate the latest information on the spill the state and local responders.
- Response preparations include plans for the deployment of Shoreline Cleanup and Assessment Technique (SCAT) teams if oil does reach the Florida shores. SCAT teams are the first to survey and assess oiled beaches to collect information about impacts and make recommendations for cleanup crews. These teams help ensure the highest priority oiled areas are addressed first, and that appropriate cleanup techniques are used.
- NOAA is conducting SCAT and overflight observer training to increase the capacity to perform these duties.
- NOAA continues to closely monitor the movement of the oil from the Deepwater Horizon spill using satellite imagery and aerial observations. There are also vessels transiting continuously off the Dry Tortugas surveying for tarballs, and a vessel regularly going into the eastern edge of the Loop Current conducting oil and tarball surveys.

Question: How does this differ from the NCAR model?

Answer:

- The NCAR (National Center for Atmospheric Research) simulation shows the potential for tracers to reach the Atlantic at some point in the future, but doesn't project where oil could make landfall, or at what concentrations. There is no threshold for effects.
- The NCAR models the path of tracer dye, not actual oil. The model does not assume any flow rate—it just shows projected dilution of any constituent.
- The NCAR model represents a "big picture" look at how the oil could enter the Gulf Stream. It is useful to understand ocean circulation, but it is not designed to project impacts on a regional scale.
- The NCAR results are based on six scenarios. NOAA's model was based on 500 scenarios.

Question: What is the likelihood of oil impacting the Eastern Seaboard?

Answer:

- There is a very low probability of shoreline impacts from eastern central Florida up the eastern Seaboard. Potential impacts become increasingly unlikely north of North Carolina as the Gulf Stream moves away from the continental U.S. at Cape Hatteras.

- If oil does reach these areas, it will be in the form of tar balls or highly weathered oil after traveling a thousand miles or more through the ocean.

Question: What is the Federal Government doing to notify Cuba and Bahamas on potential impacts?

Answer:

- NOAA has provided information and briefed the Cuban and Bahamian government. We will continue to provide updated information to these governments so they can take adequate preparedness measures.

Question: What are the potential impacts from the sub-surface oil and how is NOAA monitoring the sub-surface oil?

Answer:

- Since the beginning of May, NOAA has been conducting and coordinating sampling of the sub-surface region around the well-head and beyond to characterize the presence of subsurface oil. The sub-surface search involves the use of sonar, UV instruments called flurometers, which can detect the presence of oil and other biological compounds, and collection of water samples from discrete depths using a series of bottles that can be closed around a discrete water sample.
- NOAA, federal partners, academics and others in the research community have mobilized to research and quantify the location and concentration of subsurface oil from the spill.
- In accordance with EPA requirements for the use of subsurface dispersants, BP contracted ships Brooks McCall and the Ocean Veritas have been collecting water samples in the area close to the wellhead.
- NOAA Ships *Gordon Gunter* and *Thomas Jefferson* have both conducted missions to collect water samples from areas near the wellhead as well as further from the wellhead and in the coastal zone.
- Water samples taken by researchers on the R/V Pelican and the Weatherbird II have also been analyzed for the presence of subsurface oil.
- The Unified Command has established a Joint Analysis Group (JAG) to aggregate and analyze all the relevant data from the many subsurface oil mission in order to have a comprehensive picture of the situation. This inter-agency federal group is made up of scientists from NOAA, EPA and OSTP.

- Water samples from many of these missions are still being analyzed and additional missions are in progress or being planned to continue the comprehensive effort to define the presence of oil below the surface and understand its impacts.

More information on the science and research NOAA and its partners are conducting in the Gulf is available at <http://www.noaa.gov/sciencemissions/bpoilspill.html>.