



**Testimony of the National Wildlife Federation, Great Lakes Regional Center
House Transportation and Infrastructure Committee
Hearing On Enbridge Pipeline Oil Spill: Marshall, Michigan**

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Mr. Chairman, members of the Committee, thank you for the opportunity to testify before you today regarding the worst oil spill in Midwest history. On behalf of the National Wildlife Federation (NWF), the nation's largest conservation advocacy and education organization, and our more than four million members and supporters, we thank you for the opportunity to provide our first-hand observations, comments and recommendations on the Enbridge pipeline oil spill in Marshall, Michigan. The National Wildlife Federation's mission is to inspire Americans to protect wildlife and the habitat they depend on, like the Great Lakes and their tributaries, for our children's future. Our Great Lakes Regional Center, located in Ann Arbor, Michigan, focuses on wildlife and habitat in the Great Lakes region.

Your hearing today is vitally important because we have witnessed an economically and environmentally fragile region being devastated by an oil spill that never should have occurred and which was likely made worse by delays in reporting and response. But this is not just a 'local' or 'regional' issue. The decisions made today have the power to better protect every American.

Before getting into the details of our testimony, we would like to extend our sincere condolences to the families who have already lost homes, pets, or health, or have been indefinitely displaced due to this disaster. Those lives have been severely disrupted and for many, those disruptions will continue for months, years, and in some situations, forever. We share their frustration and anger over Enbridge's failure to maintain its pipeline adequately and the government's failure to make sure that the company conducted adequate maintenance.

In our testimony today, we will focus on the Enbridge oil spill's impacts on wildlife and on the local community. We will also provide recommendations to address those impacts and help reduce the chances that such a spill could happen in the future - here, or anywhere else. We have documented these impacts through first hand observation,

through conversations with residents and responders, and through reviews of reports and studies.

NWF's Great Lakes office in Ann Arbor had multiple staff at the site within 48 hours of the pipeline rupture. During the overnight hours of July 29, NWF staff alongside Talmadge Creek and the Kalamazoo River witnessed dozens of tanker trucks rumbling in and out of what would become "Division A" south of Marshall, Michigan. Oil strainers worked either side of Division Drive, just steps away from the pavement. Bright, piercing industrial spotlights illuminated efforts to lay boom and demarcate oil soaked lawns of private homes. Oiled and dying geese, turtles and muskrats were already showing up on the banks with no rescue efforts in sight. And this was just the beginning. That night and over the course of the next 10 days, NWF made repeated stops in Comstock, Morrow Pond, Galesburg, Fort Custer State Park, Battle Creek, Ceresco and various sites in and around Marshall. We made observations, took photos, talked to residents, and interviewed emergency personnel (volunteers and government) on the scene. The images and stories were heartbreaking. Out of respect for both space and time, this testimony includes only a fraction of those.

We can draw several conclusions from what we saw, what we heard, and what we have read and learned since:

- The Enbridge pipeline rupture never should have happened. Enbridge failed to adequately monitor and maintain its pipeline, and the federal agency charged with overseeing pipeline operations did not require Enbridge to take the actions that were necessary.
- Within days of the official 'acknowledgment' by the company of the spill, it became very clear the company was grossly under-resourced and unprepared to handle or manage the rapidly growing disaster.
- Public safety authorities within the affected communities did not have adequate knowledge of the pipeline. During early detection of the spill, this lack of knowledge and understanding lead to confusion and delays in discovering the disaster at hand thus adding to the delay in response.
- Many of the people and wildlife near the thirty miles of rivers that have been contaminated have suffered devastating (and in the case of wildlife, fatal) impacts and those impacts are likely to continue.
- Ineffective and delayed communications and lack of organization by Enbridge and many of the agencies have significantly increased public frustration and anger over the spill. Lack of transparency and the inability to obtain basic information – a problem that continues even today for some areas – has enraged local citizens and made it impossible to assess how bad the damage really is.
- Changes in procedures and policy reforms can help remedy these impacts and prevent many spills (and we discuss them below), but as long as our nation remains so dependent on oil and other fossil fuels for energy, pipeline disasters are bound to occur. Unfortunately, the Enbridge oil spill on July 26 was not a unique or isolated occurrence – even for Enbridge. Just last week, another

Enbridge pipeline near Chicago ruptured, spewing almost as much oil onto land and into the sewer system. An Enbridge pipeline rupture in Minnesota caused an explosion that killed two workers in 2007. As an NWF report documents, in the past decade there have been over 2,554 “significant incidents” from pipeline accidents, 161 fatalities, and 576 injuries in the United States.¹ Our nation needs to end subsidies to these dirty energy sources and embrace, promote and fund clean energy – energy sources that do not emit pollution and that do not require pipelines to transport dangerous materials.

Background

The Kalamazoo River watershed is located in the southwest portion of Michigan's Lower Peninsula and drains about 2,020 square miles from 10 counties including Allegan, Barry, Calhoun, Eaton, Hillsdale, Jackson, Kalamazoo, Kent, Ottawa, and Van Buren. The watershed is approximately 162 miles long and varies in width. There are approximately 400,000 watershed residents across 19 cities, 11 villages, and 107 townships between Hillsdale County and the City of Saugatuck. Communities in the watershed are connected by human infrastructure, green infrastructure, surface water, and groundwater.

For more than 100 years, the Kalamazoo River has played an historic role in highlighting the need for greater environmental stewardship to better protect public health. The river's first hydroelectric dam, actually providing power to nearby residents, went online in 1900. More hydroelectric dams were built, which attracted industrial development, including paper mills. Most factories and city sewer systems simply dumped their waste into the Kalamazoo, which led to severe habitat degradation and devastating effects on wildlife. As the Kalamazoo Watershed Council points out, in 1953, *Life Magazine* put a picture of a massive fish kill on its cover. The public reaction contributed to the awakening of the U.S. environmental movement, and led to state and federal legislation culminating in stretches of the Kalamazoo River being listed as a U.S. EPA Superfund site. Despite some progress in cleaning it up, PCB contamination remains in the river and removal activities continue to this day.

The Oil Spill

On July 26, 2010, Enbridge Energy Partners L.P. reported that an oil spill had occurred and had reached Talmadge Creek, a tributary of the Kalamazoo River, near Marshall, Michigan. We now know that around 12 hours earlier there had been 911 calls complaining about odors likely caused by the spill. Those calls confused officials and residents as the source could not be determined until mid day, on July 26, when a Consumers Energy employee notified Enbridge of contamination in the area. But by that time around one million gallons of oil had spilled into the Creek.

¹ See *Assault on America: A Decade of Petroleum Company Disaster, Pollution and Profit*, National Wildlife Federation 2010, page 3

That same day, oil from the rupture reached the Kalamazoo River. A wide, thick and dense plume flowed down the river, accelerated by heavy rains that day and the day before. The oil blew by the booms set to capture it, eventually reaching 30 miles downstream before it was stopped by booms just before it reached Marrow Lake near the city of Kalamazoo.

The swollen waters of the river washed the viscous oil high up on the shoreline, coating trees, wetlands and other vegetation along with the turtles, frogs, birds and other wildlife that were present. The fumes from the oil were physically overpowering, making your eyes water and your nose burn, even a quarter mile or more from the river. The fumes forced nearby residents to evacuate and impaired the efforts of first responders.

Community Impacts

Community members who braved the fumes collected on bridges and shorelines to witness the devastation of the river that is an intimate part of their lives. We saw many tears on the faces of mothers and fathers who several days earlier had been playing with their kids in the river, taken them fishing, or walked along the shoreline. And we saw those tears turn to frustration and anger when many of them were forced to leave their homes.

Our first interactions with the impacted community members quickly showed us that even the basic information was not being communicated properly or in a timely way. Residents were unsure if it was safe to breathe the air in and around their homes or drink the water. As a result basic health and safety needs were not being met.

In the days and weeks to follow, frustrations reached an unbearable level as the affected communities scrambled to cope with the severity of the situation. Homes and places of business, front and back lawns became parking lots for tankers and pumpers and work trucks. What was once a flower garden is now a pile of oil booms and pads and mountains of toxic waste bags. All up and down the 35 miles of destroyed river there are stories - and families whose concerns and needs are not being met.

In the early days of the disaster, and even today, state and federal officials continue to defer to Enbridge for most, if not all, decision making. When asked who was 'in charge' the answer was always the same, 'The oil company, Enbridge.' When residents and local animal rescue groups tried to take matters into their own hands, Enbridge followed with legal warnings and threats of suit. Retired Red Cross nurses and licensed and certified volunteer wildlife rescue and rehabilitation groups from across the state were told their services were not wanted or needed.

And for some, the help that Enbridge did offer came with unacceptable strings attached. In exchange for clean drinking water and respirators, Enbridge reportedly required some residents to waive their legal rights for any additional relief. Low-income families in many of the trailer parks that dot the banks of the river in the affected area were offered checks to cover relocating their families to a motel. In doing so they were asked to 'sign

away' any future rights - in exchange for a motel room and a hot meal for their family because they lacked any other resources or options.

Hunting and fishing along the river and adjacent millponds in Battle Creek provides an important alternative food source for many families especially as incomes continue to be cut. According to the Bureau of Labor Statistics, the City of Battle Creek currently has a 13 percent unemployment rate. Just in the past week local homeless shelters have seen a spike in the number of homeless experiencing symptoms from exposure to toxic benzene. The homeless camps in this area are under the overpasses and along the river. They fish the river for food. They use it to drink and bathe. And now many of them are very ill.²

And now waterfowl hunting season has started. Many families in the area depend upon the harvest of geese and venison for food. It's not uncommon to see elderly, retired gentlemen along with many young kids fishing off the Riverside Bridge every day - rain or shine. They do it because it brings them pleasure, and in some cases it puts food on the table. While traveling to the Marshall Public Speaks meeting, we noticed a young man fishing just a few hundred yards upstream from where Talmadge Creek and the river connect. When asked how he felt about his fishing hole being closed to recreation, he politely expressed his frustrations but made note that he will continue to catch and release until the fish advisory has been lifted, even if it takes years.

On September 5th, just over a month after the spill was reported and weeks after the EPA reported the river mostly free of oil, Tim Havlock of Galesburg, Michigan was interviewed describing his riverfront home by Chris Killian of the *Kalamazoo Gazette*. Here is an excerpt from that story:

Oiled vegetation and trees sit in a wooded area just upstream of his property. Wildlife would use the area for cover, but they haven't been seen for some time, Havlock said.

"The ground here is absolutely polluted," he said. "And it's going to be here to stay."

Havlock, 50, said that workers with the U.S. Environmental Protection Agency told him that his land would likely not be cleaned up.

"They said that Mother Nature would take care of it".

Now oil has returned to the stretch of river as it passes his property. Behind an orange containment boom tied to a tree in his backyard and stretching across the river, ribbons of oil can plainly be seen.

Once in a while, the smell of oil wafts into the air.

² B.C. homeless suffer oil effects
<http://www.battlecreekenquirer.com/article/20100813/OILSPILL/8130312/B-C-homeless-suffer-oil-effects>

...

“They’re leaving us stretched out in the cold,” he said.

Enbridge has offered twice to purchase Havlock’s home at its appraised value. He declined both times.

“I’ve lived here for over 20 years,” he said. “I hunt here, I fish here. I feel like I’ve lost my river but I’m not moving away.”³

Mr. Havlock’s story is not uncommon. In conversations with residents and response officials over the past six weeks, we have heard many of the same frustrations. Enbridge’s ‘solution’ of acquiring the properties of local residents is, for many, part of the problem. Enbridge has already purchased a handful of homes, is in the final stages of purchasing around a dozen others and is appraising around 50 other properties. But many residents want the river cleaned up so they can stay in their homes; they do not want to move away.

Wildlife Impacts

We do not know the full magnitude of impacts the Enbridge oil spill has had or will have on fish and wildlife. Even today, we do not know how many birds or turtles or frogs or muskrats or fish have already died, or even how many have been reported as impacted or dead. The lack of reliable information from Enbridge and the federal agencies has been a source of frustration for residents who see and report injured or dead wildlife and for organizations like the National Wildlife Federation, who are trying to assess the magnitude of the impacts and the effectiveness of the response.

The reports we receive from the U.S. Fish and Wildlife Service and from other government agencies are only what Enbridge has provided them. Enbridge is in charge of the wildlife rescue and rehabilitation efforts. It has hired a private firm, Focus Wildlife, to run the operations. All calls from residents reporting wildlife problems go to Enbridge’s toll-free number – the same toll-free number that residents call when they report any problem or have any question about any topic, such as evacuations, response actions, and public health issues. Enbridge says it routes these calls to the appropriate agency, but it claims that it does not keep track of how many calls it receives on any issue or whether there is an adequate response to those calls.

We do know that the number of deaths of fish, birds and other animals that Enbridge has reported to the agencies are much lower than have occurred, and that there has been far more damage than has been reported. Our staff attempted to report several personal interactions with oiled wildlife and experienced firsthand the lack of response and confusion regarding emergency contacts, or lack thereof. They reported seeing many

³ For Galesburg man, Kalamazoo River oil spill is all too real:
http://www.mlive.com/news/kalamazoo/index.ssf/2010/09/for_galesburg_man_kalamazoo_ri.html

oiled turtles, birds and an oiled muskrats that returned to the river or hid on the shoreline. These animals were never delivered to Enbridge and so would not be part of their “count.”

So it is with some skepticism we provide the numbers Enbridge reported to the U.S. Fish and Wildlife Service as of September 11, 2010:

Animals that died in care: 22
Animals that were euthanized: 17
Animals that were dead on arrival: 38, plus 16 fish
Animals released after cleaning: 897
Animals still in care: 269

The number of animals that were cleaned and released is certainly good news. By far the largest population of animals recovered is turtles. Snakes, muskrats, beaver, Canadian geese, mallards, and great blue herons also were also rescued.

Beyond the many roadblocks in trying to determine how many animals have died or are damaged, the wildlife recovery efforts have been challenging. Many private citizens and public agencies are working to identify and collect damaged wildlife, but the oily waters make such efforts difficult and sometimes hazardous, and we have seen a lack of organization by Enbridge that further hurts the effort.

The following first-hand account by Jason Dinsmore, a wildlife specialist with National Wildlife Federation’s Great Lakes office, illustrates the difficulties in recovering wildlife:

On August 6 I had the opportunity to accompany a team of biologists and technicians from Michigan’s Department of Natural Resources and Environment (DNRE) on one of their daily animal rescue operations on the Kalamazoo River. The exercise was a heroic one, but in the end it could only be described as frustrating and inefficient. The DNRE staff was professional in every manner and took to their duties with all the dedication that one would expect of civil servants. However, inefficiencies in their available methods of rescuing the oiled turtles led to more than a little bit of frustration on the boat.

Enbridge, the company responsible for the nearly one million gallons of oil that spilled into the river the last week of July, had officially claimed that the main channel of the river was “clean” of oil earlier in the week. However, there was still enough oil in the main channel to make it unsafe for teams charged with recovering oiled wildlife to enter the water. How a company can say that the water is clear of oil while it is still too oiled to allow for remediation and recovery teams to enter it is beyond my abilities to comprehend. With this limitation at hand, teams attempting to recover oiled turtles were required to use speed and a fair amount of agility to attempt to net the turtles with ten foot pole nets while they were on logs or resting at the surface.

The circus acts necessary to rescue the oiled wildlife were nothing short of impressive. The “netter” at the bow of the boat was required to be sure-footed as the boat was thrust toward shore at the resting turtle. Once the turtle was within reach the netter would attempt to scoop the turtle into the net while simultaneously bracing himself for either a full reversal of the boat to keep from colliding with the log the turtle was previously resting on or the boat running up onto the shore. Either way, without a wide and balanced stance, one could easily find himself getting wet. Once the turtle was caught (yes, we did catch a few), GPS coordinates and the turtle’s measurements and species were logged into a data card for each turtle rescued.

Many turtles were sighted along the stretch of river assigned to the team that I was shadowing, but only a few made it into the boats collection buckets. Once the river is cleared for wading, collection efficiency should improve with the ability to use seine and hoop nets to retrieve turtles attempting to escape into the muddy waters.

The sight of so many oiled turtles was disturbing, but I was similarly concerned regarding the amount of oil that I could still see floating down the channel and mired in the many snags and stumps found in the river channel. One would hope that this is not indicative of what those charged with cleaning up the river in the aftermath of the state’s worst oil spill consider to be “clear of oil.”

Our staff also observed public confusion about wildlife rescue and response protocols in the days immediately following the spill. Well over a week passed before Enbridge’s animal rescue efforts were fully up and running. Although Enbridge and state and federal officials publicized a toll-free rescue phone number to report oiled wildlife, the phone went unanswered, or calls were sent to voicemail. To our knowledge, Enbridge and the agencies did not return or acknowledge those calls to the callers. During those first few weeks, wildlife was going unrescued, unreported, suffering and dying.

That confusion persisted for several weeks, at least. The media reported on the efforts of a private non-profit, Circle-D, to rescue and clean animals. The combined Enbridge-FWS Wildlife Rescue Facility did not clean its first goose until almost two weeks after the spill occurred. NWF staff gave business cards to people we encountered during the first week after the oil spill, asking that if injured or oiled wildlife were discovered to contact us. Three separate calls came into our Ann Arbor office, which promptly alerted both Circle-D and the Enbridge wildlife telephone hotlines and by e-mail. Repeated inbound calls were received by NWF about Canadian geese in Battle Creek. Circle-D took 10 days to acknowledge the receipt of NWF’s email communication, and Enbridge never acknowledged those calls and emails.

Just as with response actions and community impacts, the problems with disorganization, lack of response, and secrecy stem primarily from the designation of Enbridge as the entity in charge of wildlife rescue, rehabilitation and reporting. Enbridge should certainly pay for the wildlife response activities, and under proper supervision, should be able to

hire the contractors (like Focus Wildlife) who rehabilitate the wildlife. But the government delegated too much control to Enbridge. Enbridge should not direct the wildlife recovery efforts; it should not be the point of contact for the public; it should not control the information that the agencies and the public receive. Because Enbridge caused the disaster, it has strong incentives to downplay bad news – especially wildlife death and damage. The government agencies – the U.S. Fish and Wildlife Service or the state Department of Natural Resources and Environment – need to take a much more active role.

Government leadership will be even more important going forward. It is clear from extensive studies from previous spills that the wildlife impacts have the potential to be far-reaching and last for decades. For example, more than 20 years after the Exxon Valdez spill, oil can still be found on Alaska's beaches, and many species have not completely recovered. The pigeon guillemot (a pelagic bird) has shown few signs of recovery, in part because of lingering oil in habitats used by the bird. The once abundant herring population, an important link in the food chain that previously supported a commercial fishing industry in the area, has also not recovered. While the oil spill is strongly implicated in the population crash, it is likely that multiple factors continue to stress the herring population, preventing its full recovery. Two orca (killer whale) pods affected by the Exxon Valdez lost 40 percent of their numbers and have not fully recovered; the pods reproductive success appears to have suffered long-term damage. Finally, although some species have demonstrated significant recovery, they are still not at pre-oil spill population levels. These include sea otters, clams, mussels, goldeneyes, black oystercatchers, and harlequin ducks.⁴

One reason for the lengthy period of damage from oil spills is the potential bioaccumulation by organisms of oil components. Oil is made up largely of hydrocarbons – some of the key chemicals of concern are lighter straight-chain hydrocarbons and some are polycyclic aromatic hydrocarbons (PAHs). As the oil weathers, the lighter components tend to evaporate and/or degrade more quickly, leaving the oil concentrated in the heavier (i.e., higher molecular weight) compounds – including PAHs – which in turn can dissolve to some extent in water. PAHs (and to a lesser extent some other oil components) can bioaccumulate in organisms over time. Once inside an organism, PAHs can cause toxicity in various ways, including through edema and deformities in embryos. Research has also shown that exposure to light can lead to the transformation of PAHs into chemicals that are even more toxic to organisms.

Birds that come into contact with oil can be damaged right away or over time. Birds that frequently land and float on the water can experience deadly hypothermia when oil destroys the insulating quality of their feathers. The birds natural line of defense is to desperately groom their feathers with their bills, consuming some oil, which may lead to serious effects, some of them delayed: ulcers, diarrhea, kidney and liver damage, anemia and even death. Breathing in oil can lead to pneumonia, neurological damage, and

⁴ 2008 Status of Injured Resources & Services. Exxon Valdez Oil Spill Trustee Council.
www.evostc.state.ak.us/Recovery/status.cfm

eventually cancer. Furthermore, the toxic chemicals can accumulate in their bodies, weakening them and making them more prone to disease and predation. There is also evidence that even small quantities of residual oil can reduce the reproductive success of birds.

Finally, wildlife impacts translate into human impacts. The Kalamazoo River is a thriving area for fishing and hunting, as well as boating. But the Enbridge spill has put the river off-limits to both; just as the waterfowl hunting season begins. The state DNRE has advised hunters to stay away from the river and so far they have done so, although many waterfowl hunters are using nearby fields where birds fly over. The state also has issued fish consumption advisories warning people not to fish in the river and certainly not to eat any fish they catch of find. DNRE staff estimate that the fish advisories could be in place for up to a year.

Recommendations

As noted above, changes in procedures and policy reforms can help remedy these impacts and prevent many spills. But more fundamentally, as long as our nation remains so dependent on oil and other fossil fuels for energy, pipeline disasters are bound to occur. Our nation needs to end subsidies to these dirty energy courses and embrace, promote and fund clean energy sources – energy sources that do not emit pollution and that do not require pipelines to transport dangerous materials.

We also need to continue overhauling the federal laws that govern pipeline safety, such as the Oil Pollution Act of 1990 and the Pipeline Inspection, Protection, Enforcement and Safety (PIPES) Act of 2006, which is now under consideration for reauthorization.

We also have several recommendations that apply specifically to the Enbridge pipeline rupture in Michigan:

1. Require more effective, monitoring, maintenance, and reporting on existing pipelines by companies like Enbridge. The law should require companies to assess the integrity of their pipelines every year via in-line means (e.g., cameras or “pigs”) and then conduct maintenance measures if anomalies are found. Such monitoring is required now only every five years, and then only in “high consequence areas” whose identities are secret. Federal standards for repairing pipelines should also be more protective; Enbridge’s own monitoring before the pipeline rupture revealed flaws in its pipeline near Marshall, but (according to the company) those flaws did not meet the federal threshold for repairs. Pipeline companies should report the results of this monitoring fully and quickly to federal *and* state agencies, and it should be available to the public. When incidents do occur, they should be reported immediately to federal and state agencies. The Department of Transportation should maintain a database of all reportable incidents that is searchable by operator.
2. The government- run oil spill command structure needs to be more directly engaged in the response and recovery efforts. The responsible party (here,

- Enbridge) should pay for all the activities, but the company should not be in charge; that's too close to asking the fox to guard the henhouse. The designated government commander should not delegate too much control to Enbridge, as it has done here.
3. Establish a perpetual trust fund to pay for long-term damage to the river ecosystem and to wildlife: This is a different kind of trust fund. Enbridge by law is required to pay for immediate response costs through the Oil Spill Liability Trust Fund, and also to pay Natural Resource Damages through another federal account. Natural Resource Damages are set by an assessment by federal and state trustees and are used to implement a restoration plan developed by state and federal agencies. These payments are essential, but they are not enough. Much of the damage to wildlife and the habitat from the oil spill will unfold over a period of years, well after the immediate response actions and the restoration actions have ended. We need a trust fund to support the long term measures that will be necessary to bring wildlife and habitat in the area back to health. That trust fund should be administered by representatives of local communities, residents, and federal and state agencies, and should be funded so it can last for years. It should be financed by Enbridge and designed to act as a permanent foundation to support wildlife and habitat in the Kalamazoo River and Talmadge Creek watersheds affected by the oil spill. We have a model for such a fund in Michigan: the Great Lakes Fishery Trust, a \$20 million fund established by Consumers Energy to pay for damage to fish caused by its pumping station in Ludington, Michigan. Consumers Energy made an initial payment to the Trust and provides payments every year. The Trust is governed by independent agencies and organizations and relies on a science advisory team to recommend grants to people and organization working to repair or prevent damage to fish in Lake Michigan.
 4. The Pipeline and Hazardous Materials Safety Administration (PHMSA) should not allow Enbridge to restart line 6B until all previously identified anomalies are addressed, and any necessary maintenance/upgrades are undertaken. In support of this assessment, PHMSA should verify that Enbridge has produced a thorough integrity verification and remedial work plan as requested by the agency in July.

We also have three broader recommendations on federal pipeline regulation with respect to Michigan and the Great Lakes more broadly:

1. The regulations should be modified to redefine designation of "high volume areas," i.e. major rivers or other navigable waters with pipeline crossings for which more rapid response in case of worst case discharge is required (Appendix B of 49 CFR Part 194, on Response Plans for Onshore Oil Spills). The Maumee River is the only river in the Great Lakes region among the listed areas, and the listed areas do not include lakes, even though pipelines traverse the Great Lakes. Major Great Lakes tributaries and the lakes themselves should be included in this list.
2. PHMSA should publicly identify (both in the Great Lakes region and nationally) pipelines that traverse "high consequence areas" (as defined in 49 CFR Part 195.450). These are areas where there are additional protections from pipeline

- spills. Furthermore, PHMSA should publicly release risk analyses (including preventative and mitigative measures) completed by pipeline owners to protect high consequence areas.
3. Although there has been debate over whether the oil spilled into the Kalamazoo River was derived from tar sands, Enbridge pipelines are known to transport tar sands oil - and U.S. imports of Canadian oil will increasingly come from tar sands in the future. Inadequate information on the chemical characteristics tar sands oil and the diluents used for its transportation make it impossible to determine the effects on pipeline corrosion, as well as the impacts spilled tar sands oil would have on the aquatic environment. PHMSA should require companies transporting tar sands oil to do the analysis to provide this information, and implement additional safety measures if the results demonstrate they are needed.
 4. Congress should pass the Corporate Liability and Emergency Accident Notification (CLEAN) Act, (HR 6008), recently introduced by Congressman Schauer. This legislation would go a long way to ensuring that reporting of oil pipeline leaks and ruptures is prompt and accurate.

Photos from Great Lakes Regional Center (NWF) Staff:



