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Asian Carp Issues

The U.S. Army, Corps of Engineers (Corps) in early January proposed a number of alternatives designed to prevent the transfer of invasive species, including Asian carp, between the Great Lakes and Mississippi River basins. The eight options were detailed in the congressionally mandated "Great Lakes and Mississippi River Intersbasin Study" (GLMRIS). They range from taking no new federal action to hydrologically separating the two basins. The options include the following:

- Take no new federal action No cost.
- 2. Use non structural control technologies, such as removal of invasive species, chemical control and educational programs Cost \$68 million annually beginning immediately.
- 3. Maintain current operations on the Chicago Area Waterway System (CAWS) and construct a gate system, known as the GLMRIS Lock that would allow boat traffic to pass between the two bodies of water Cost \$15.5 billion and 25 years to complete.
- 4. Maintain CAWS operations and create a buffer zone with the system Cost \$7.8 billion and 10 years to complete.
- 5. Hydrologically separate the Great Lakes and Mississippi River basins at the Lake Michigan lake front by constructing physical barriers Cost \$18.3 billion and 25 years to complete.
- 6. Hydrologically separate the basins at two locations off the lake front Cost \$15.5 billion and 25 years to complete.
- 7. Combine open control technologies with hydrologic separation barriers at three locations off the lake front Cost \$15 billion and 25 years to complete.
- 8. Combine open control technologies with hydrologic separation, including construction of one physical barrier off the lake front Cost \$8.3 billion and 25 years to complete.

Any alternative other than the "take no action" alternative would require congressional authorization. How any of these

recommendations would be funded is still up in the air, officials said. Brig. Gen. Margaret Burcham, who oversees to the Corps' Great Lakes and Ohio River Division, noted that the report is meant to outline an "objective picture" of the alternatives. The report "does not make recommendations, nor does it prioritize plans," she said. But the lack of a single recommendation from the agency drew ire from members of Congress who have been focusing on stopping an Asian carp invasion of Lake Michigan. Sen. Debbie Stabenow (D/

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MI) said she had hoped there would be just one option presented by the Corps. She and Rep. Dave Camp (R/MI) worked together to pass legislation in 2012 that fast-tracked release of the study. "Now that the report is in, we need action," she said. "We don't need more studies."

Joel Brammeier, president and CEO of *Alliance for the Great Lakes*, said, "The bottom line is that the alternatives that do not prevent movement – the no-action and non structural options – are nonstarters as permanent solutions." "Voters of all political stripes recognize the importance and are calling for solutions from their lawmakers," said Cheryl Kallio, associate director of the group *Freshwater Future*. The separation solution is necessary because what's being done to address Asian carp currently, such as electric barriers, is "significantly flawed," said Robert Hirschfeld, a water policy specialist with the *Prairie Rivers Network*.

Critics of the Corps study's separation alternatives also say the bulk of the \$15 billion-plus cost estimates is connected to projects they contend have little to do with directly stopping invasive species. Included are some \$12 billion to build things like new reservoirs, sewer tunnels and water treatment plants, as well as remove contaminated river sediments. "The media has fixated on the \$15 to \$18 billion figure, and a number of politicians equate that with the price tag for (watershed) separation," said Tim Eder, executive director of the *Great Lakes Commission* (GLC). "We don't accept that. We think that's based on flawed assumptions...The assumptions used in the report create the impression that the Corps thinks this situation is not urgent. Well it is," Eder said. "We need action and we don't have 25 years to wait."

Problems with the plan also include the Corps' definition of pollution. First, the agency assumes that if Chicago's sanitary canals are dammed so that some portion of their flows enters Lake Michigan, the water leaving Chicago's sewage plants in that direction must be clean enough, essentially, to drink. "The anti-degradation regulations under the Clean Water Act restrict the addition of significant pollutant loads" to Lake Michigan, explained Corps study leader Dave Wethington. Then, because it would be wildly expensive – if not impossible – to use a sterilization process such as reverse osmosis to clean those sewer plant discharges to virtual drinking water

quality, the agency is proposing a costly labyrinth of tunnels to continue sending sewage discharges away from the lake and into the Mississippi River basin. Other tunnels would carry away from the lake the city's sewer overflows that currently go straight into the Mississippibound canals. Critics say, if Chicago were allowed to discharge a portion of its highly treated, if not Perrier-pure, effluent into the lake – as do Milwaukee, Toronto, Detroit, Cleveland and every other major Great Lakes city – the project's cost would plummet.

The Corps also ignored the fact that Asian carp are an added pollution load, one that could be far worse for the lake than highly treated effluent. The Corps didn't factor the carp into any future pollution load equation, because the carp cannot be considered a type of pollution, Wethington said. "The definition of 'pollutant' under the Clean Water Act does not include living organisms," he noted. But Great Lakes water law expert and Wayne State University law professor Noah Hall says that is nonsense. "The Corps' statement is flat-out wrong. The Clean Water Act definitely includes biological pollutants, and courts have consistently interpreted living and dead biota as pollutants," Hall said. "It really worries me that if the Corps got a simple legal fact like this wrong in this process, they are either inept or so biased that it's very hard to

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trust their work," he said.

The idea of invasive species as a pollutant is, in fact, the essence of a landmark lawsuit brought against the navigation industry more than a decade ago. A federal judge ruled in 2005 that ship owners must treat their invasive species-contaminated ballast water discharges like other pollutants under the Clean Water Act. Critics say that in choosing not to view Asian carp as a pollutant, the Corps backed itself into a corner when considering a range of potential solutions to the canal problem. "The assumption of 'no return flow' to the Great Lakes – no matter how clean and well treated – and the assumption that invasive species are not serious pollutants – no matter how dangerous – skews the analysis and limits the solutions to impractical and exorbitantly expensive proposals," said Henry Henderson, an attorney with the *Natural Resources Defense Council* who previously served as Chicago's commissioner of environment. "It's a deeply ironic – if not cynical – use of environmental principles to block an environmental solution," he said.

David Ullrich, former deputy regional director of the USEPA, now leads a group representing Great Lakes mayors. His group partnered with the GLC in 2012 to fund their own study exploring how to separate the two watersheds. That study (GLC study) concluded that the project could be done for as little as \$4.25 billion and that canal dams could be in place in a matter of years, not decades. Ullrich said his group's study was ordered to ensure that the Corps, an agency whose focus is on keeping cargo flowing and managing floodwaters, would give the concept of plugging the canals "fair consideration" in its own study. Ulrich stands by the GLC study estimates that the work could be done much quicker and cheaper than the Corps has stated.

Jim Ridgway, an environmental engineer and board chairman for the *Alliance for the Great Lakes* who worked on Ullrich's study, said the Corps' plan to stop the carp would not just subsidize an upgrade of Chicago's wastewater system to catch up with the rest of America, it would build a wastewater conveyance, storage and treatment system like no other on the planet. He notes that the Corps' proposed tunnel and reservoir system is designed to capture floods up to those triggered by a 500-year storm. That is a standard far beyond what other cities' wastewater systems are designed to withstand. Some see the proposal to build the exceedingly expensive, time-consuming tunnels and reservoirs as evidence the Corps flubbed its responsibility – perhaps intentionally. "If you actually wanted to solve the problem, you would not have gone about it this way," said Thom Cmar, an environmental attorney for the group *Earthjustice*.

The separation option that has attracted the most support from Great Lakes advocates calls for two dams several miles inland from the Lake Michigan shoreline. One dam would be located on the Sanitary and Ship Canal just southwest of downtown Chicago and the other would be built on the Calumet-Saginaw Channel that flows from Lake Michigan south of downtown. The GLC study's \$4.25 billion option offered a similar separation plan in 2012. That price tag included about \$1 billion to build cargo transfer stations to accommodate existing barge traffic (see sketch at right). Even at more than three times the cost of the GLC plan, the Corps plan includes no cargo transfer facilities.

Critics also say the Corps' study, as much as anything, just provides ammunition for cargo shippers and others who don't want dams in their way. "It could be read," said the *Natural Resources Defense Council's* Henderson, "as a laundry list of why this can't be done." That appears to be exactly how it has been received by the *Illinois Chamber of Commerce*, which argues that the Corps' separation plan "is not economical, that it takes too long, and that it will not solve the issue." "The wrong decision will negatively impact water quality and flood mitigation and result in irreparable economic damages to private sector interests while introducing billions of dollars in taxpayer obligations," said Benjamin Brockschmidt, director of federal affairs for the Illinois chamber. Representatives of the

shipping industry also said the costs of the proposed alternatives are not "economically feasible." "The Great Lakes and the Mississippi River are two of our nation's most important waterborne superhighways," Tom Allegretti, president and CEO of trade group *American Waterways Operators*, said in a statement. "Many of the building blocks of our economy move between them via the Chicago-area waterways... Severing a critical part of the nation's water transportation network is too high a price to pay for a solution that is not guaranteed to stop the spread of invasive species," he said.

In early February Rep. Candice Miller (R/MI) introduced H.R. 4001, the *Defending Against Aquatic Invasive Species Act of 2014*. If passed, this legislation would direct the Corps to create a physical barrier between the two watersheds. "...I believe total separation is the only way to make sure that Asian carp do not enter the Great Lakes," Miller said in a press release. "This project will require the buy-in of stakeholders from across the



Diagram showing how a hydrologic separation along the Calumet River (top) could still allow for transfer of cargo and shipping along the CAWS (bottom). Sketch taken from the GLC Study Report. (HDR, Inc. sketch).

country and significant resources, but we must have the political will to protect our magnificent Great Lakes." In fact, closure of this connection between the Great Lakes and Mississippi River basins is also in the best interest of both basins. The CAWS has provided a major pathway of invasion to the Mississippi River Basin for the zebra mussel, quagga mussel, round goby, spiny waterflea, etc., and until closed will provide a similar pathway for other such future invaders.

As part of ongoing efforts to monitor the efficacy of the existing electric barriers, the Corps and the U.S. Fish and Wildlife Service (USFWS) have conducted laboratory and field experiments to assess the potential impacts of barge tows traversing the electric barrier system and the resulting impacts to fish behavior. The experiments consisted of the following:

- Development of a scale physical model to evaluate the possibility of fish being inadvertently transported across the electric barriers by navigation operations in the Chicago Sanitary and Ship Canal;
- Instrumented barge testing to determine the effects of loaded and unloaded barges traversing the barriers on electric field strength;
- Observation of fish behavior during barge testing through the use of caged fish and tethered wild fish trials.

The Corps <u>report</u>, and the USFWS interim reports on <u>fish interactions with barges</u> and <u>fixed DIDSON evaluations</u> can be found online. Also online is a <u>video</u> produced by the Shedd Aquarium on the Asian carp issue

Sources: Jessica Estepa, *E&Enews PM*, 1/6 and 1/7/14; Jim Lynch, *Detroit News*, 2/5/14; Dan Egan, *Milwaukee Journal Sentinel*, 2/8/14; U.S. Army Corps of Engineers, *Chicago District News Release No. 122013-001*, 12/20/13; USFWS, *Carterville Fish & Wildlife Conservation Office Web Site*; and *Greenwire*, 2/6/ and 2/11/14

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Proposals for Overhauling the Endangered Species Act

A group of House Republicans in early February released a report with recommendations for updating the Endangered Species Act (ESA). These include emphasizing species recovery and delisting, reforming the settlements made between federal agencies and conservation groups, and improving cooperation with states, tribes and other stakeholders. Legislation containing these proposals will be introduced in the House Natural Resources Committee by early spring according to Committee Chairman Doc Hastings (R/WA). The proposed changes will not come in a giant overhaul, he added, but instead in piecemeal measures. "Strong support remains for conserving endangered species," he said at a press conference. "However, our findings show that there is room for improvements."

The report recommends that the ESA, which turned 40 in December, be reformed to focus on recovering and delisting species. According to the report, there has been a "seeming fixation" on listing species instead of ensuring recovery. One recommendation calls for federal agencies to have recovery plans drafted and completed before endangered species listings are granted or critical habitat is designated. Another recommendation calls for more flexibility when it comes to meeting the 12-month deadline for issuing a ruling on whether to list a species and the 90-day deadline to respond to a listing petition. That relates directly to the litigation filed by conservation groups such as the *Center for Biological Diversity* (CBD) and *WildEarth Guardians* when the deadlines weren't met.

The report also called for more transparency for the mega-settlements reached with those two groups. The U.S. Fish and Wildlife Service reached agreements with them in 2011 that require the agency to within six years issue final listing decisions for more than 250 candidate species and initial listing decisions on hundreds more. In return, the groups agreed to limit new petitions and legal challenges. "Federal agencies should be required to disclose all details of consent decrees to Congress and an appropriate [National Environmental Policy Act] process should be applied for settlements to ensure public input in ESA decisions," the report said. Further, groups should be discouraged from filing such lawsuits "simply because they do not agree with the agency's decisions," such as delisting determinations or findings that listings aren't warranted, the report said. The report also called for the federal government to better involve state, tribal and local governments, as well as private property owners, in endangered species policy decisions and settlements.

The recommendations are the result of an eight-month effort by the *Endangered Species Act Congressional Working Group*, which is made up of 13 House republican lawmakers. The group, led by Hastings and Rep. Cynthia Lummis (R/WY), received hundreds of comments and heard from nearly 70 different people during forums and Natural Resources Committee hearings. But their process has not been without controversy. Natural Resources Committee minority ranking member Peter DeFazio (D/OR) criticized the report, saying the recommendations would not go anywhere in the Senate. "If this so-called report issued by a partisan task force is any indication, we will likely spend time debating legislation that will be cast as 'common sense' reforms, but will actually gut a law that has prevented the extinction of iconic American animals such as the bald eagle and the gray wolf," he said in a statement. Brett Hartl, endangered species policy director for the CBD, said "The reality is that the best way to save imperiled species is to protect them under the Endangered Species Act."

Source: Jessica Estepa, Greenwire, 2/4/14

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Estrogen in Rivers Could Affect Fish Hearts

Researchers studying zebrafish have found that estrogenic compounds in rivers could be changing how fish hearts develop. While previous research has shown that estrogenic compounds can affect a variety of wildlife, this study is the first to show estrogenic activity in heart valves. "This tells us that endocrine-disrupting chemicals could lead to improper heart development. We were quite surprised, since this is something that others hadn't observed before," said study co-author Luke Iwanowicz, research biologist with the USGS based in West Virginia. However, without analyzing the water, it's not possible to link the heart valve findings to any specific chemical. The potential effects on the fish are unclear, said Tamara Tal, a postdoctoral fellow with the USEPA who studies zebrafish. The research was published in the journal *Environmental Health Perspectives*.

The study exposed zebrafish embryos to water from 19 sites in the Susquehanna, Delaware, Allegheny and Shenandoah watersheds. The water from 16 of the sites activated estrogen receptors in the fish's heart valves. These receptors are attached to DNA, which turn genes on and off. While such activity is common in the liver, this is the first experiment to show estrogenic activity in heart valves. Water that triggered the receptors in the heart valves was from the Delaware River in Pennsylvania, and the Naked, Muddy and Linville creeks and Long Meadow Run in Virginia. Many hormone-mimicking compounds are found in sewage effluent and runoff that flows into waterways. Included are natural estrogens in people's urine, birth control pill hormones, soy, some pesticides and the plasticizer bisphenol A (BPA). There are "literally thousands of chemicals in the water at low concentrations," said Dan Gorelick, lead author of the study and an assistant professor at the University of Alabama. We don't know yet in this case what's in the water, what the bioactive ingredient is," Gorelick said. "But we know from the lab that if we add a synthetic estrogen like BPA, or a natural estrogen, both of those preferentially target the heart valves. It's not as simple as one class [of estrogens] or another."

The study is the latest using a novel test in which the cells of genetically engineered zebrafish turn fluorescent green when estrogen receptors are activated. Such research allows the researchers to see which cells respond to estrogens in embryos, and can give clues as to possible developmental problems spurred on by estrogen exposure. The fish were exposed to water from the rivers mixed with lab water, with dilutions ranging from 1 part river water per 100 parts lab water, to 1 part per 4,000. While most of the water samples activated estrogen receptors in both the heart valves and the liver, when the river water was more diluted, five of the samples activated them only in the heart valves, Gorelick said. Hormone-like chemicals often do not act in a typical way; they can have health effects at low doses but no effects or different effects at high doses.

The American Chemistry Council (ACC), which represents chemical manufacturers, was skeptical that the findings show anything meaningful. "The untested hypothesis of this study is that 'the activation of estrogen receptors in heart valves during development leads to the intriguing hypothesis that estrogen signaling influences valve formation," Steve Hentges, a representative of the ACC, said in a prepared statement. "If that is true, then similar to BPA, the stated hypothesis would also apply to genistein, a phytoestrogen commonly found in foods, such as soy, and also examined by these researchers," he said. Previous work by Gorelick showed that both BPA and genistein activate estrogen receptors in zebrafish hearts. Gorelick agreed that the potential effects are unknown. "Any relevance to fish or humans is potential, not actual, because the untested hypothesis is exactly that: untested," said Gorelick, who performed the experiments as a post-doctoral student at the Carnegie Institution for Science in Baltimore.

The next step is breeding the zebrafish to see if there are any heart problems. The researchers also are trying to tease out which of the estrogen compounds in the water are targeting the heart valves. Estrogen compounds previously have been linked to altered gene expression and reproductive problems in wildlife. In perhaps the most famous study, male fathead minnows became feminized and the entire population collapsed after a seven-year study in which researchers dosed an experimental lake area in Ontario, Canada, with a synthetic estrogen found in birth control pills.

Source: Brian Bienkowski, Environmental Health News, 2/4/14 and Greenwire, 2/4/14

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Controversial Blueways Program Terminated

Interior Secretary Sally Jewell in early January terminated the Department's *Blueways Program* that was established by former Interior Secretary Ken Salazar and was designed to recognize and promote the conservation of valuable watersheds. Though Jewell determined that the Program lacked funding and public support, she pledged to continue supporting local efforts to protect waterways and interagency coordination on a watershed scale. The decision came several months after Jewell told a House committee she had ordered a "pause" to the program so she could brief herself on the issues. While Salazar's *Blueways* order explicitly stated it was not intended to affect the use of private property or exercise any new regulatory authority, it still drew persistent attacks from some landowners and Republican lawmakers.

Under pressure, the Department of the Interior last summer withdrew the White River Watershed in Arkansas and Missouri from the *Blueways* program, even though it was once supported by a broad array of stakeholder groups. Jewell's decision last summer was followed shortly by the resignation of Rebecca Wodder (former environmental leader for *American Rivers* and onetime nominee

to become an Interior Department assistant secretary). Wodder had led the agency's *Blueways* effort. The original order sought "to recognize river systems conserved through diverse stakeholder partnerships that use a comprehensive watershed approach to resource stewardship." While no new watersheds will be designated as national blueways, the original designation conferred on the Connecticut River in May 2012 will remain, Jewell said. "The Connecticut River Watershed exemplifies coordinated stewardship of a river and its watershed with diverse partnerships of interested communities ... protecting over two million acres of habitat, environmental and education efforts aimed at urban and rural populations, and recreational access to the river," Jewell wrote.

Source: Phil Taylor, E&ENews PM, 1/3/14

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Land Management Effects on Runoff/Infiltration

Natural Resource Conservation Service (NRCS) scientists have developed a unique demonstration (posted on YouTube) showing how five different land management types (tall pasture, short pasture, conventionally tilled row crop, tillage with cover crop, and no till with cover crop) affect the amount of rain that soaks into the ground during a one inch rainfall event. During the rain simulation, water that soaks into the ground for each land management type is collected in a container that is placed beneath the soil to show the amount of water that soaks into the soil. Water that does not soak in is allowed to runoff and this water is collected in a separate container for each management type. The demonstration shows that more water runs off of short pasture when compared to tall pasture, and more water runs off of tilled soil when compared to no-till soil. In fact, there was very little (if any) water that runs off of the no-tilled soil with cover crop.

When it floods in an area, there are many factors that affect the volume of runoff and the severity of flooding. In the urban setting, the impervious pavement of roads and parking lots, and the short grass found on residential and commercial lots plays a role in reducing the amount of rainfall that is soaked into the ground. With less rain soaking into the ground, more water is available on the surface leading to greater flooding. The NRCS demonstration shows how soil managed in an agricultural setting can have some of the same effects on runoff and infiltration rates that we see in urban areas with pavement and short lawns

Sources: Ozark Waters, Vol. VII, Issue 52, 12/30/13; and YouTube, December 2013

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Oil Companies and LA Wetland Loss

On July 24, 2013, the state board that oversees flood protections for southeast Louisiana filed a monumental lawsuit against nearly 100 oil and gas companies, seeking to force them to pay for decades of damage to the coastal wetlands that serve to buffer the effects of hurricanes in the region. The lawsuit, filed by the *Southeast Louisiana Flood Protection Authority-East* (SLFPA-E), alleges that the named companies failed to live up to stipulations in their coastal use permits requiring them to "maintain and restore" wetlands damaged as a result of their activities over the past few decades. Gladstone N. Jones III, a lawyer for the SLFPA-E, said it is seeking damages equal to "many, many billions of dollars" Specifically, the SLFPA-E argues that the dredging of thousands of miles of oil and gas pipeline canals violated the federal *River and Harbors Act of 1899* by reducing the effectiveness of federal levees. The crux of the case is based on a centuries-old legal principle called "servitude of drainage" which stipulates that someone is liable for damages if he does something to increase the flow of water onto another's property, in this case, the levees run by the SLFPA-E. Servitude of drainage is an established principle of civil law going back to Roman times. Courts in Louisiana, a civil law state tracing its legal history back to Rome rather than England like most states, have regularly recognized this principle since people first started clearing wetland areas for development.

In attempting to demonstrate oil companies' liability, the suit claims that "oil and gas activities have transformed and continue to transform what was once a stable ecosystem of natural bayous, small canals and ditches into an extensive – and expanding – network of large and deep canals that continues to widen due to the Defendant's ongoing failure to maintain this network or restore the ecosystem to its natural state." Further, the SLFPA-E claims that the oil and gas activities cause saltwater intrusion, which weakens the root systems of the vegetation that hold the wetlands together, resulting in the loss of wetlands during even minor storms. The suit seeks to (1) repair the damage by bringing the landscape back to its original condition if possible, or (2) offset the SLFPA-E's rising costs associated with providing flood protection in the parishes under the levee board's jurisdiction.

For decades, researchers in the area have been documenting the relationship between canal dredging and Louisiana's loss of almost 2,000 square miles of coastal wetlands. The *Louisiana Coastal Protection and Restoration Authority*, using research from the USGS, claims almost 10,000 miles of canals have been dredged to facilitate oil and gas extraction and development. Many researchers believe the figure is considerably higher since the agency's numbers rely mostly on permits, and there was not a reliable permitting system until passage of the federal Clean Water Act in 1972. Scientists estimate that anywhere from 35 to 50% in most areas and as high as 90% in some areas of the state's catastrophic land loss can be traced to oil and gas canals. Regardless of the percentage, scientists

agree that there is an undeniable relationship between the number of canals in an area and the amount of land loss.

Another important scientific factor in the case deals with the relationship between rising storm surges and increased subsidence of the Louisiana coastal zone. Simply described, "subsidence" is the sinking of land. Research published by the *Louisiana Universities Marine Consortium* shows that the rate of subsidence in an area increased as the rate of oil and gas extraction rose, and fell when extraction stopped. Alex Kolker, a professor and researcher involved in the study, described the increased rate of subsidence as "a pretty straight correlation" based on the fact that when companies remove gas and oil contained in rocks under pressure deep below the earth's surface, a vacuum is created that is eventually filled by surrounding materials, causing the ground above to sink. However, there has been some scientific research that points to other activities as the main source of increased subsidence rates. Some scientists argue that subsidence in the area is more likely caused by pumping groundwater out of sandy aquifers for surface use, as opposed to the defendants pumping out oil and gas. Additionally, they argue that the clear-cutting of cypress forests in the early 1900s that were once abundant in the area south of New Orleans started the process of weakening Louisiana's coast, not the oil companies. Other objections to the suit allege that the levees themselves are the biggest cause of wetland loss because they prevent the flooding that used to dump sediment across thousands of square miles of southeast Louisiana.

At trial, the court will have to take all possible causes into account, especially since the suit only asks for the oil companies to pay for the damage that it is determined they specifically caused. Thus, the believability of scientists will be the key for the victor in this case, if the case does in fact make it to trial. In an effort to stop the case before it gets to court, Louisiana Governor Bobby Jindal and administration officials immediately spoke out in opposition to the suit, arguing the SLFPA-E overstepped its authority and that the contingency agreement for the attorneys working on the case is too generous. Governor Jindal additionally raised a claim alleging that the SLFPA-E needed permission from the governor and attorney general before it is allowed to hire special counsel to pursue such lawsuits. But the SLFPA-E itself is an "independent political subdivision" (not a state agency), set up in a way to shield it from political influence, which was found to be a reason why some of the local levee boards had done such a poor job prior to Hurricane Katrina. Based on this fact, the SLFPA-E's board argues it is bound by a different set of requirements that only call for the attorney general to sign off on lawsuits, authorization they already obtained from Attorney General Buddy Caldwell prior to filing.

The Jindal administration has also argued that the suit actually jeopardizes and undermines the state's ability to implement its \$50 billion, 50-year Master Plan for restoring the wetlands. Members of the SLFPA-E's Board said the lawsuit does not conflict with the state Master Plan; in fact, they see the suit as a means of trying to get the money needed to fund the plan. On August 13, 2013, one of the defendants in the suit, *Chevron U.S.A.*, filed a motion to remove the suit to federal court in New Orleans arguing that much of the SLFPA-E's claims require interpretation of federal law, and the SLFPA-E's right to relief under one or more causes of action asserted depends upon resolution of a substantial question of federal law, and therefore federal question jurisdiction applies. Hearings on the matter are ongoing.

Meanwhile, a recent *America's Wetland Foundation* (AWF) survey found that since 2003 the number of Louisianans who support restoring coastal wetlands has increased from 43 to 74 %. A fear of flood insurance increases contributed to the survey results, said Val Marmillion, managing director of AWF.

Sources: Casey Pickell, Louisiana Levee Litigation Brings the Importance of Wetland Loss to Light, Water Log 33:4, 11/8/13; Benjamin Alexander-Bloch, New Orleans Times-Picayune, 2/11/14; and Greenwire, 2/12/14

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MRGO Closure Lawsuit

The Louisiana state *Coastal Protection and Restoration Authority* in early December authorized two lawsuits against the U.S. Army Corps of Engineers (Corps) to get the agency (1) to pay for a \$3 billion restoration program to repair damage caused by the Mississippi-River Gulf Outlet (MRGO), and (2) to pay for operation and maintenance of hurricane levees along the Algiers Canal on the West Bank. The lawsuits followed negotiations lasting several years between the state and the Corps over both projects, said Assistant Attorney General David Peterson. "I want to be clear that some allege this is a big watershed lawsuit against the Corps," said Garret Graves, chairman of the authority. "But that's not what this is. We tried for four years to prevent getting to this point." Graves said state officials had argued their case at the Corps' district, regional, division and headquarters level, as well with top Army officials and the White House. Graves said they decided to file suit as a last resort. "We have a project that otherwise could be under construction right now, but it's not," he said. "We want the project built, the Corps wants the project built. We're now at an impasse."

The state contends that language included in federal legislation deauthorizing the 72-mile MRGO shipping shortcut between the Gulf of Mexico and the Industrial Canal in New Orleans after Hurricane Katrina required that the Corps complete a study of how to restore the area and complete any projects at full federal expense. But the Corps has insisted that a 1986 water resources bill requires that all restoration project costs be shared, with 65 percent paid by the federal government and 35 percent by the state. While the state had agreed to forward its share of costs for the project until the issue was resolved, the Corps refused to move forward with the project, citing the state's insistence that the full cost eventually be paid by the Corps. The issue involving operation and maintenance costs for

the levees along the Algiers Canal also arose in the aftermath of Hurricane Katrina, Peterson said. At stake is millions of dollars over the life of the levee, Graves said.

Until post-Katrina improvements to West Bank levees were completed, the Corps continued to pay the full cost of operation and maintenance of that levee segment, as required under several earlier water resources bills dating back to 1999, he said. But when a post-Katrina supplemental appropriation included language requiring a 65-35 percent share of the cost for most post-Katrina levee improvements, the Corps contended that provision also applied to the Algiers Canal levee. When the Corps recently announced that they're ready to turn over the Algiers Canal and other West Bank levees to the state and the Southeast Louisiana Flood Protection Authority-West as complete, it sent the state a letter "guidance" saying the agency was no longer responsible for operation and maintenance costs.



Construction of a rock dam closure for the MRGO channel. Photo taken in 2009 by Bob Marshall, The New Orleans Times-Picayune.

Sources: Mark Schleifstein, New Orleans Times-Picayune, 12/3/13; and Greenwire, 12/4/13

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Army Corps' Temporary Flooding is Ruled a Taking

A federal appellate court in early December picked up where the U.S. Supreme Court left off earlier in the year ruling that temporary government-induced flooding in Arkansas qualified as a unconstitutional taking of property because of the damage caused to trees. The case, *Arkansas Game and Fish Commission v. United States*, centers on the U.S. Army Corps of Engineers' (Corps) flooding part of the Black River Wildlife Management Area in northeast Arkansas. From 1993 to 2000, the Corps altered river flows from the Clearwater Dam into the management area. The commission claimed that the new water levels caused significant damage to oak trees in the management area that were used for timber sales. The incident was summarized in the January/February/March 2013, Vol. 22, No. 1 issue of *River Crossings*.

Last year, the Supreme Court considered the case and the narrow issue of whether a taking claim may be filed for a temporary action, such as the flooding in the case. Before the justices took the case, takings were generally considered permanent losses of property. The high court ruled unanimously that temporary government-induced flooding is not exempt from a takings claim. It did not, however, rule on whether a taking occurred in the Arkansas case, and the court sent it back to the U.S. Court of Appeals for the Federal Circuit for further proceedings. A three-judge panel of the Federal Circuit ruled that a taking had occurred. In so doing, the court reversed its previous holding but upheld the U.S. Court of Claims' 2009 ruling that awarded the commission nearly \$5.8 million – the value of the damaged trees, plus \$176,000 in damages for regeneration efforts.

Property rights and business groups applauded the decision. Karen Harned of the *National Federation of Independent Business* called the ruling "a victory for property owners whose land has been destroyed by government actions."

Source: Jeremy P. Jacobs, *Greenwire*, 12/4/13

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No Plans for Stricter Regulations for Pipelines Under Rivers

The U.S. Transportation Department (DOT) said late last year that it has no plans to implement regulations requiring underground pipelines to be buried deeper beneath rivers. Congress ordered the agency to evaluate pipeline policies after several pipeline ruptures spilled hazardous materials into waterways. The ruptures were caused, in part, by riverbed erosion disturbing the pipes. But the agency's *Pipeline and Hazardous Materials Safety Administration* said it found riverbed erosion was a factor in only one of every 200 significant pipeline spills. As a result, the agency said in a letter to Congress, "existing legislative authority is adequate to address the risks of hazardous liquid pipeline failures at major river crossings."

The erosion, or "scouring," is most harmful when major flooding or rapid currents strip away sediment covering underground pipelines. In 2011, the process ruptured three pipelines in six weeks along the Missouri River, spilling 2,275 barrels of hazardous liquids

and gases in Montana, Iowa and Nebraska. DOT's finding contradicts a 2012 congressional report that said the existing rule requiring pipelines to be buried 4 feet beneath waterways "appears to be insufficient"

Sources: Jack Nicas, Wall Street Journal, 12/22/13; and Greenwire, 12/23/13

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WI Sand Mining Lawsuits

Two Minnesota companies have agreed to pay \$80,000 to settle a pollution case at a sand mine in northwestern Wisconsin where sediments from the mine infiltrated a wetland, a creek and ultimately flowed into the St. Croix River. The settlement was announced in early January by Attorney General J.B. Van Hollen and involved *Interstate Energy Partners* and *Tiller Corp*. for their failure to stem the flow of sand and sediment from the mine in the Town of Grantsburg in Burnett County. The spill into the St. Croix River began with a citizen complaint on April 26, 2012. According to the settlement, the fine-grained sediments began to flow from the property sometime between April 19 and 22. Neither company reported the mishap when it occurred, according to court documents. Aerial

photos revealed a trail of polluted sediment from the mine to the St. Croix, which is a federally designated national wild and scenic river. The companies settled with Justice Department lawyers for failing to maintain dikes and berms to control runoff from the site.

The case is the third involving a sand mine since mid-December. Altogether, the parties have agreed to pay \$360,000 to settle. The sand mining industry has grown sharply in recent years with the surge in hydraulic fracturing or fracking where the sand is used. But with that growth, some companies have run afoul with state environmental laws, and the Department of Natural Resources has referred six pollution cases targeting the industry to the Justice Department, and three referrals have come since August. Western Wisconsin sand has the characteristics that the oil producers seek for fracking.



since August. Western Wisconsin sand has the characteris-*Typical large Wisconsin sand mine. Craig Schreiner, Wisconsin State*tics that the oil producers seek for fracking. *Journal Photo.*

Source: Lee Bergquist, Milwaukee Journal Sentinel, 1/6/14; and Greenwire, 1/7/14

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Historic Civil Penalty for Filling WV Wetlands

A subsidiary of *Chesapeake Energy* will pay a \$3.2 million penalty and spend \$6.5 million to restore 27 West Virginia sites where it allegedly discharged fill material into streams and wetlands as part of its natural gas drilling operations, USEPA said in mid January. The civil penalty is one of the largest ever levied by USEPA for filling wetlands, rivers or streams without a Clean Water Act permit. The agreement requires *Chesapeake*, the country's second-largest natural gas producer, to implement a plan to ensure compliance with federal and state water laws at its natural gas drilling sites in West Virginia – including many that involve hydraulic fracturing. "With this agreement, *Chesapeake* is taking important steps to comply with state and federal laws that are essential to protecting the integrity of the nation's waters, wetlands and streams," said Robert Dreher, acting assistant attorney general of the Justice Department's Environment and Natural Resources Division.

EPA and West Virginia alleged that *Chesapeake Appalachia LLC* funneled discharged sand, dirt, rocks and other fill material into streams and wetlands to construct well pads and other platforms for natural gas operations. The agency said the 27 sites affected 2.2 miles of streams and more than 3 acres of wetlands. Sixteen of the sites involved hydraulic fracturing, or fracking. *Chesapeake* will be required to fully restore the wetlands and streams where feasible under the settlement. It will also undertake other mitigation projects for areas that cannot be restored. Gordon Pennoyer, a spokesman for *Chesapeake*, called the settlement a "key milestone" in resolving claims relating to surface construction that occurred before November 2010. "The company is fully committed to regulatory compliance and is working with the Environmental Protection Agency, Army Corps of Engineers and West Virginia Department of Environmental Protection to restore the impacted sites," Pennoyer said.

USEPA discovered the discharges through public tips as well as routine inspections. *Chesapeake* also disclosed 19 potential violations after an internal audit. USEPA issued compliance orders for violations at 11 of the sites in 2010 and 2011, and since then *Chesapeake* has taken steps to restore those areas. USEPA's settlement comes a year after *Chesapeake* also pleaded guilty to three Clean Water Act violations at a natural gas site in Wetzel County. Last year, *Chesapeake* was sentenced to pay a \$600,000 penalty to the government for allegedly discharging crushed stone into a local stream.

Source: Jeremy P. Jacobs, E&Enews PM, 12/19/13

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Fracking and Water Usage Concerns

Oil and gas companies are increasingly using hydraulic fracturing in areas that are extremely drought-prone, which is further stressing local water supplies, a new report by *Ceres* found. The report looked at 39,294 wells drilled between 2011 and 2013 on eight major plays and examined the water usage by county. Overall, 97 billion gallons of water was used for fracking over this period. The data were derived from *FracFocus.org*. Half of these wells were in regions of high or extreme water stress, where industries and local users were already consuming at least 80 percent of the available supplies. Most of these regions are experiencing between 20 and 50 percent population growth, suggesting needs are not going to lessen over time. About 36 percent of the drilled wells were in regions already experiencing groundwater depletion. The report found that water stress was the worst in Texas, where two-thirds of the state continues to experience drought. North Dakota, Colorado and California were also regions of concern, said Monika Freyman, author of the report and senior manager at *Ceres* water program.

Freyman stressed that the problem with fracking water usage is that its impact is felt disproportionally at the local level. That is because companies often concentrate their drilling in one or two counties of a state where reserves are highest. Dimmit County, Texas, saw the largest amount of water consumption for fracking, at 4 billion gallons between 2011 and 2013. Karnes County in Texas and Weld and Garfield counties in Colorado used more than 2 billion gallons of water for fracking over the years. These counties are already among the most water stressed. The problem could worsen in the future since precipitation patterns are expected to become more uneven with climate change. Extremes such as floods and droughts are already occurring more frequently and intensely, said Jay Famiglietti, hydrologist and a professor of earth system science at the University of California, Irvine. Satellite imagery has shown that the mid latitude regions of the world are drying out, which has huge implications for places like California, Texas and Colorado, he said. These regions already rely on groundwater supplies. "It points to the increasing competition for water and for the need for groundwater management and the need to balance the allocation of water amongst those competing environmental, ecological, energy, food, domestic and urban uses," he said. "We have a very complicated picture lying ahead of us."

Source: Gayathri Vaidyanathan, EnergyWire, 2/6/14

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Elk River (WV) Chemical Spill Issues

Investigations continue into a mid-January chemical plant spill into the Elk River, WV (tributary to the Kanawha River). Critics say the spill – and the fact that emergency responders seem to lack a thorough understanding of either the plant or the spilled chemical – highlights the inadequate supervision of the nation's chemical plants. A chemical leak was discovered in early January at a *Freedom Industries, Inc.* (FII) tank storing 4-methylcyclohexane methanol (MCHM), a chemical used to scrub coal of impurities. The tank is located just a mile north of the intake for a water treatment plant, and the estimated 7,500-gallon leak left nine counties without water for drinking or bathing. The *Charleston Gazette* reported that even though the state was aware that the FII plant was storing high levels of MCHM and other chemicals, the plant had not been inspected since 1991. The *Chemical Safety Board* (CSB) had recommended to West Virginia in 2011 that it create a program to prevent releases and chemical accidents in the Kanawha Valley, which hosts several chemical plants. But the state didn't start the program, saying it lacked the expertise and with supporting groups saying the state was best served with its own existing regulations.

Further confounding the situation is the lack of knowledge about MCHM. A *Material Safety Data Sheet* says that the substance can result in skin or eye irritation and that it could be harmful if inhaled or ingested but does not have any available information on chronic hazardous effects. "What is particularly maddening and outrageous is that no one – not local or state officials, not the company that owns the storage tank, not the federal government – can say anything even close to definitive about what risk the chemical poses to people, even in the short-term, let alone over time," said *Environmental Defense Fund* senior scientist Richard Denison in a post on his blog. Additionally, little is known about the chemical's <u>ecological effects</u>. About all that was known is that the chemical imparted a licorice smell to the drinking water.

At issue, Denison said, were the failures of the 1976 Toxic Substances Control Act (TSCA) that have left EPA without the ability to test and regulate most chemicals in commerce. MCHM was in commerce when TSCA was passed and was thus presumed to be safe and has not been subject to intense scrutiny. Heather White, executive director of the *Environmental Working Group*, said the "disastrous" spill is a result of the nation's weak chemical screening. "Chemical safety laws intended to protect us are instead giving priority to the interests of chemical companies and manufacturers," White said in a statement. "The real surprise is that disasters like this don't happen more often." "While accidents happen, of course, the tragedy is compounded by the fact that much of the impact of this spill could have been avoided had basic safety information on this chemical been available," Denison said. The *Sierra Club's Beyond Coal* campaign director, Mary Anne Hitt, said the spill "pulls the curtain back on the coal industry's widespread and risky use of dangerous chemicals and is an important reminder that coal-related pollution poses a serious danger to nearby communities." "Coal

mining communities are faced with the dangers of water pollution from coal mining and pollution every day," she said. "Americans, and the people of West Virginia, deserve greater accountability and transparency about coal industry practices," she added.

West Virginia Gov. Earl Ray Tomblin (D) ordered FII to remove its above ground storage tanks by March 15 after it announced that a previously undisclosed second chemical had leaked into the region's water supply. The company originally disclosed that it had only spilled MCHM, but the company knew it also had spilled PPH, a mixture of polygycol ethers. It did not release that information until late January. The second chemical made up about 7 percent of the contents of the tank that leaked into the Elk River. When FII officials failed to report the new chemical, no other agency detected it independently, nor did the local water utility. In part, that's because laboratories often test only for chemicals they know to look for, rather than for all chemicals, experts say. "To expect a water company to monitor for thousands of chemicals, it just is not practical and it would be cost-prohibitive," said Brent Fewell, the senior vice president of environment, health and safety at *United Water*, a different water utility that isn't involved in the spill cleanup. State officials said FII quickly emptied three tanks at its facility that contained crude MCHM and PPH. The company also agreed to remove another 14 tanks that contain different chemicals and not to contest the state's authority to regulate the cleanup.

Meanwhile, on January 21 representatives from the societies of *Professional Journalists* and *Environmental Journalists* decried the USEPA and the *Centers for Disease Control and Prevention* (CDC) for ducking media questions about the spill warning the agencies that their unresponsiveness risks fraying already-thin public trust in institutions. In a letter to USEPA Administrator Gina McCarthy and CDC Director Thomas Frieden, the two journalism groups urged more accountability for and communication about the science used to clear West Virginia water as safe to drink. But the lament was not limited to USEPA and CDC. "Other responsible agencies that owe the public an accounting in this and similar episodes include the *Occupational Safety and Health Administration*, the U.S. Department of Transportation's *Pipeline and Hazardous Materials Safety Administration* and the Coast Guard," the journalism groups wrote.

West Virginia scientists also criticized the USEPA and the CDC for putting up "barriers" between scientists and the public in the aftermath of the spill. "Your agencies have repeatedly failed to adequately respond to questions from the public and the press," said 24 area scientists in a letter. "We deserve to be told what is known – and what is not known – about the risks the chemical poses to human health as the disaster unfolds." "Only an informed citizenry can make informed choices," the letter continues. The scientists' letter, sent on January 24 to Frieden and McCarthy, was orchestrated by the *Union of Concerned Scientists' Center for Science and Democracy* and calls for CDC and USEPA scientists to be made more available to the public and press. The letter was signed by scientists from West Virginia University, Marshall University, the *National Institute for Occupational Safety and Health*, and other institutions.

The FII site was exempt from USEPA requirements that certain facilities develop emergency plans for spills and also appears to have fallen through cracks in the state regulatory process. House Speaker John Boehner (R/OH) told reporters, however, that "we have enough regulations on the books" already to address the risk of further incidents. "What the administration ought to be doing is actually doing their jobs," he added. "Why wasn't this plant inspected since 1991?" Officials at the West Virginia Department of Environmental Protection (WVDEP) said that the FII site was not overseen more closely because it did not produce emissions and MCHM was not on a federal list of particularly hazardous substances. After describing himself as "entirely confident" that existing regulations are sufficient to safeguard against future spills, Boehner said that "somebody ought to be held accountable here." Sen. Joe Manchin (D/WV) said state and federal legislators will work together on a bill to get more oversight of MCHM. Manchin said more needed to be done to make sure toxic substances are "in the purview" of regulators. West Virginia officials have promised to introduce their own bill to increase state regulation of chemical storage. Manchin said he was working with those state officials, and the two bills could come out on the federal and state levels in tandem. Sen. Jay Rockefeller (D/WV) said the dual effort was well worth it, even as he blasted his own state's regulatory record.

Bill Allmond, vice president of government and public relations for the *Society of Chemical Manufacturers and Affiliates*, said that officials should consider "a greater emphasis on accident prevention at the state and local level." "For example, revitalizing and perhaps improving the *Emergency Planning and Community Right to Know Act* presents the single greatest opportunity to drive chemical emergency risk reduction nationally because it puts local residents in every jurisdiction in a position to oversee and raise questions about emergency planning for hazardous chemicals," Allmond said. That act requires USEPA to publish a list of extremely hazardous substances (EHS) and improve coordination with state and local responders. Under its *Risk Management Program*, USEPA also requires facilities holding hazardous substances to develop a risk assessment plan, implement safety programs and analyze off-site consequences. Rick Hind, legislative director at *Greenpeace* said that federal regulators should explore more options under existing law to "ask these facilities to assess the availability of a risk-based performance standard" and have operators develop safety plans, since even with expanded authority, federal agencies might be stretched too thin to prevent all disasters. USEPA does require that plants with permits to discharge into water have spill-prevention plans, but because the FII tank was a storage facility, it did not have to draft a plan. In a statement, the *American Chemistry Council* (ACC) said it supported efforts to explore the circumstances that led to the West Virginia spill "and to examine any broader questions they raise about oversight, implementation, enforcement, coordination and information sharing among state, local and federal officials." "If careful examination suggests that new steps are needed, ACC said it will work with members of Congress to ensure any new rules are targeted and minimize unintended consequences."

Meanwhile, FII was cited for violations at a second chemical storage site. The company moved its remaining chemical stock to that site in response to the leak. But when WVDEP inspectors viewed the alternative facility, they promptly cited the company for five violations that could have resulted in another chemical leak. The site's secondary containment was "deteriorated or nonexistent," according to a report prepared by the WVDEP, describing problems similar to what caused the original MCHM spill. The company now may be forced to move the chemicals again. Faced with this, investigations from state and federal regulatory agencies, a class-action lawsuit, and at least two dozen other lawsuits; FII is now seeking protection under a Chapter 11 bankruptcy filing by its parent company, Pennsylvania-based *Chemstream Holdings Inc.* The class action lawsuit filed on January 13 in federal court in Charleston, WV also names the water company, *West Virginia American Water Co.*, and *Eastman Chemical Co.*, which manufactured the chemical. In court documents, FII officials said it suspected a water line break caused by cold weather led to "an object piercing upwards" that punctured a storage tank, resulting in the leak.

The chapter 11 filing will temporarily protect the company against the lawsuits, but the bankruptcy, complicated by charges of financial "sleight of hand" from the local water utility and affected residents, is also tainted by controversy over a loan of up to \$5 million from a newly formed company that – according to reports to the West Virginia secretary of state – appears steered by the same coal executive who also heads FII's parent company. That arrangement drew sharp challenges from local residents pursuing the lawsuit as well as from the *West Virginia American Water Co.* Since the proposed \$5 million financing entitles the lender to jump ahead of other creditors in line for repayment from the bankrupt FII, its parent company can use the maneuver to "cherry-pick the best assets," as the water utility's lawyers put it in their response. The parent company would then leave the resulting low-value shell of FII "and its many creditors 'holding the bag'," *West Virginia American Water's* counsels argued. The financing structure sought by FII, known as "debtor-in-possession financing", is a common tool in Chapter 11 aimed at allowing struggling companies to stay afloat during the resolution of outstanding obligations. Both the class-action plaintiffs and the water utility contested the validity of the company's claim to a viable future. "The proposition that this loan is necessary depends on nothing more than the Debtor's delusion that (just like the water) any day now things will be back to normal," the residents' lawyer wrote to the federal bankruptcy court.

In addition to the lawsuits, the company also owes more than \$2 million in unpaid taxes, the *Charleston Gazette* reported in late January. In early February a federal grand jury also launched a criminal investigation into the spill. Meanwhile, various politicians have returned donations from Pennsylvania coal executive and FII owner Cliff Forrest, who also runs *Rosebud Mining Co.* An Ohio group, *Carroll Concerned Citizens*, is also asking state regulators to halt and scrutinize coal mine permitting connected to Forrest.

Sources: Kevin Murphy, *Reuters*, 1/25/14; Elizabeth Shogren, *NPR*, 1/24/14; Michael Wines, *New York Times*, 1/29/14; *AP/London Guardian*, 1/15/14; David Zucchino, *Los Angeles Times*, 1/17/14; Griffin/Fitzpatrick/DiCarlo, *CNN*, 2/4/12; *ClimateWire*, 10/25/13; Elana Schor, *E&Enews PM*, 1/21/14; Jason Plautz, *Greenwire*, 1/13, 1/14, 1/17 and 1/24/14; Elana Schor, *Greenwire*, 1/14 and 1/21/14; Manuel Quiñones, *Greenwire*, 2/17/14; and *Greenwire*, 1/15, 1/20, 1/27, 1/30 and 2/5//14

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Coal Company Using 'Permit Shield' Held Liable for Discharges

A federal judge in late January said *Consol Energy Inc.* subsidiary *Fola Coal Co. LLC* was liable for discharges of the chemical element selenium from its West Virginia mining operations. U.S. District Judge Robert Chambers of the Southern District of West Virginia said the Clean Water Act's so-called "permit shield" and a 2012 West Virginia state law meant to reinforce it did not protect the company from liability. The shield is meant to protect companies from liability for discharging pollutants that are not specifically listed in their Clean Water Act permits but were somehow envisioned or considered during the permitting process. Earlier this year, Chambers ruled against *Alpha Natural Resources Inc.* in similar litigation and said he would not change his mind this time around. While the selenium limit was not outlined in the permits for the mine, he noted, companies were required to follow broader West Virginia Department of Environmental Protection (WVDEP) guidelines. "Although the WVDEP could have proposed to rewrite the rules to take out the water quality standards language if it believed that this provision was of no effect or should not be included as a permit condition, it has not done so," Chambers wrote. "Instead, the WVDEP has left [the rule] intact and continues to explicitly include it as a permit condition without alteration or limitation," he wrote.

The permit shield issue is also pending before the 6th U.S. Circuit Court of Appeals in a case where a lower court judge ruled in a company's favor. The 4th U.S. Circuit Court of Appeals is about to take up another case where the lower court judge ruled in favor of environmental groups. Earlier this year the *West Virginia Coal Association* threatened to sue USEPA in an effort to compel the agency to review West Virginia's 2012 Senate Bill 615 meant to reinforce the permit shield for coal operators. West Virginia may also change its guidelines for selenium, much as Kentucky has done.

Source: Manuel Quiñones, *Greenwire*, 12/20/13

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Western States Unveil Map to Ease Land-use Conflicts

The Western Governors' Association (WGA) in mid-December unveiled an online mapping tool that identifies important wildlife habitat and migration routes. The Crucial Habitat Assessment Tool (CHAT), is designed to help land-use planners, energy developers and conservationists incorporate wildlife into decision making. The governors hope it will steer developers during the planning stage away from sensitive wildlife, big game and candidates for Endangered Species Act (ESA) protections. The five-year project merges wildlife and habitat data from 16 states into a relatively seamless platform. The CHAT enables users to assess the conservation value of a particular location by overlaying maps with data such as species richness, recreational or hunting value, habitat connectivity, or riparian or wetlands habitat. Layers include "species of concern," "landscape connectivity," "freshwater integrity," "riparian and wetlands habitat" and "species of recreation or economic importance." Users can view the "focal areas and connectivity zones" that wildlife experts say must be protected to avert an ESA listing. The platform is designed to allow the addition of new layers in the future, such as invasive and nonnative species.

"Drawing largely upon the technical expertise and cooperative efforts of state wildlife agencies, the Western Governors have created a ground-breaking online resource and advanced the cause of sound land use planning in the Western United States," said Jim Ogsbury, WGA's executive director. Interior Secretary Sally Jewell praised the effort, saying it reflects her agency's commitment to vetting land values before they are developed. "What you're doing with CHAT is transparently showing what's going on on the landscapes," she said. Federal lands agencies including the Bureau of Land Management, U.S. Fish and Wildlife Service and U.S. Forest Service have agreed to use the tool in their planning efforts, WGA said. Robert Veldman, senior environmental adviser for *Noble Energy*, said the mapping tool offers a "one-stop shop" for the oil and gas industry to conduct environmental planning. "It will be instrumental in supporting *Noble Energy's* commitment to protecting wildlife and their habitats, particularly during project planning, infrastructure route selection and in doing due diligence for acquisitions and divestitures," he said.

The idea for the map began in 2008 when WGA created the *Western Governors' Wildlife Council* and asked it to identify crucial wildlife habitat and corridors across the West. A \$3 million Energy Department grant in 2010 helped Western state fish and game departments launch yearlong regional pilot mapping projects. The effort improved interstate coordination and data sharing. Montana was one of the first states to develop a habitat map in 2010 after collecting data from hundreds of sources to allow users to evaluate the potential effects of developments on critical fish and wildlife corridors. "We're not willing to put in pipelines and transmission lines or wind farms to help the rest of the country if we have to give up the quality of fishing and hunting and backpacking we have in all of our backyards," former Montana Gov. Brian Schweitzer (D) said at the time.

Source: Phil Taylor, E&ENews PM, 12/12/13

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Mitigation Banking Concerns

Mitigation banking (or buying off-site credits against development on another site) is becoming a popular option for developers, including oil and gas companies. A 2011 report from *Ecosystem Marketplace*, a nonprofit research group that tracks markets for ecosystem services, found that wetlands restoration credits averaged \$74,535 an acre. But in areas with high land prices, hefty demand and

a small supply, the cost could reach as high as \$653,000 an acre. Stream credits averaged \$260 a linear foot. So this is big business. And now, people who follow wetlands regulations and the oil and gas industry closely say that a looming federal regulation could create a lot more demand. USEPA and the U.S. Army, Corps of Engineers (Corps) are expected to propose a new rule to expand the number of streams, creeks, bogs and marshes that receive Clean Water Act protections. The regulation is aimed at clearing up a decade's worth of confusion about the reach of the law following two confused Supreme Court decisions. Environmentalists have lobbied hard for such a rule change, arguing that wetlands and streams provide vital habitat, filter pollution and help store water during storms.

Arguing in favor of mitigation banking, Tara Allden, regulatory manager with the Raleigh, N.C.-based mitigation banking firm *Restoration Systems LLC*, which has been working to set up a bank in northeast Pennsylvania, said the Corps can be reluctant to protect a resource if industry



Before, during and after views of the Grave Creek mitigation site east of Cameron, WV developed as mitigation for a construction project. Resource Environmental Solutions, LLC Photo.

doesn't have a structure in place for mitigation. "If there are good mitigation options available, the Corps of Engineers is going to be more apt to require mitigation, but they don't, in my opinion, feel they can say you have to do this if there's no available way for the permittee to meet it," she said. As such, mitigation banks provide one readily available restoration option.

But, Joy Zedler, an ecologist at the University of Wisconsin, Madison, who chaired the 2001 *National Research Council* panel on mitigation, said questions are being raised in the scientific community about the environmental benefits of mitigation. Emerging science is proving some long-standing assumptions about restoration wrong, she argued. For instance, having thick vegetation at a wetland site is considered a best management practice because it was assumed that all vegetation would help filter nutrient pollution and provide clean water, she said. But in a project she is working on with colleagues to measure six wetland functions over a two-year period, Zedler said they found that the most dense cattail wetland that they measured was the worst at filtering pollution.

"So, there's a big question mark there as to whether or not the kinds of wetlands that we're producing, which are often nutrient-rich or loaded with cattails or other invasive species, are actually functioning to clean water, or whether they are contributing in some way to poor water quality," she said. She acknowledged, though, that some regulators put limits on the amount of invasives a restored site can have. Mitigation banking can be a "very positive thing," Zedler said, but she stressed that it's also important to recognize the limits of our current understanding. "It's just too tempting to assume that we can compensate fully," she said. "By setting up these various mechanisms for compensation, we actually make it easier for there to be discharges of materials into wetlands because there's always that attraction of, 'Oh, I can fix that."

Source: Annie Snider, Greenwire, 2/12/14

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One Million Dollar Prize Offered for Dead Zone Solution

Tulane University is offering a \$1 million prize for the best idea to combat the "dead zones" plaguing the world's waters. The contest is the latest "grand challenge" offered in response to President Obama's call last year for organizations, philanthropists and universities to identify the country's most pressing problems and promote the hunt for solutions. The *Patrick F. Taylor Foundation* is funding the award for the Tulane challenge, which seeks innovative fixes to the dead zone problem. "Tulane has long been a leader in social innovation," Phyllis Taylor, president of the foundation said in a release. "This competition advances that mission while strengthening Tulane's leadership in water law and policy and coastal research," she said. The wining idea must be a testable, scaled and marketable model for efficiently and effectively reducing dead zones, the university said.

Source: Annie Snider, Greenwire, 1/18/14

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Climate Change Threatens North America's Freshwater Mussels

New research overseen by the U.S. Geological Survey (USGS) shows that juvenile mussels have difficulty surviving in higher water temperatures that may happen more frequently in North America's rivers and lakes as the planet warms. The authors of the study, published in the journal *Freshwater Science*, say that because these unassuming mollusks provide important ecosystem services like water filtration, their extinction could have ripple effects in river and lake ecosystems across the country. Freshwater mussels are already "the most imperiled group of animals in North America," said USGS biologist Teresa Newton, co-author of the study. "If we're not careful, they're going to wink out in front of our eyes." Of the 302 mussel species native to North America, a majority are either extinct or in serious trouble. Nearly 90 are classified as endangered. According to Tierra Curry, a biologist with the *Center for Biological Diversity* who works to secure federal protection for the animals, dams and pollution have been primarily responsible for the mussels' decline until now. Climate change, Curry said, "could be the straw that breaks the camel's back." Because of the numerous threats already facing mussels, "it really is important to understand their thermal sensitivity," said W. Gregory Cope, a professor in North Carolina State University's Department of Environmental and Molecular Toxicology who also researches the potential impacts of climate change on mollusks.

According to Newton, river temperatures in the southeastern United States, where many freshwater mussel species live, have already been recorded at close to 40 °C (104 °F) under drought conditions. To better understand how this might affect populations, Newton and her coauthors conducted laboratory tests on how the juveniles of three mussel species fared when their surrounding water temperatures were incrementally increased over 28 days. They found that temperatures between about 25 and 30 °C were enough to kill at least half the mussels in their samples, which were about 2 months old and less than a millimeter in length. Moreover, for two of the species in the study, the researchers peered through microscopes to observe that the mollusks' heart rates significantly slowed as the temperatures rose. "These data suggest that mussels are living near their upper thermal limits, if we can infer that from these laboratory studies," Newton said.

Newton has conducted other research indicating that some mussel species may cope with warmer waters by burrowing deeper into the sediments of rivers and lakes. But because habitats for different species are already highly fragmented, she guesses that other freshwater mussels will have difficulty adapting. "Some species are probably going to do much better with dealing with climate change than other species, but we don't quite know who those players are," she said. "If we can identify that these 10 species are exceptionally sensitive to thermal stress and maybe these 10 are not, you might expect down the road that you might see a shift in species composition." For those species that aren't able to survive the shift to higher temperatures, the ecosystems that depend on the "voracious filter feeders," as Newton calls them, will experience repercussions. Newton said, "If mussels indeed perish because of the effects of climate change and they perform these important services in our rivers, then that could have cascading effects on other animals that depend on mussels for their survival."

Source: Elizabeth Harball, *ClimateWire*, 12/4/13

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2013 - One of Warmest Years on Record

In late January the National Oceanic and Atmospheric Administration (NOAA) announced that 2013 tied for the fourth-warmest year on record, while NASA listed 2013 as tied for the seventh-warmest year on record, and the World Meteorological Organization (WMO) in early February ranked 2013 as the sixth-warmest year. According to NOAA, the annual global combined land and ocean surface temperature was 58.12 °F, 1.12 degrees warmer than the average during the 20th century. NASA found that the average temperature was 58.3 °F, which was 1.1 degrees warmer than the 20th Century mean. WMO noted that the global land and ocean surface temperature was 0.5 °C above the 1961-1990 average and 0.03 °C higher than the most recent 2001-2010 decadal average. "The warmth that we've seen in the last decade clearly makes this decade the warmest in the historical period," said Gavin Schmidt, deputy director of NASA's *Goddard Institute for Space Studies*. The differences among the separate rankings were more a result of data treatment than raw observations and the variations were small enough to be well within the groups' margins of error he said. Thirteen of the 14 warmest years on record have occurred in the 21st century. 1988, a former record holder, has now dropped out of the top 20 in the space of 25 years.

In terms of precipitation, the globe was about average in 2013, although portions of the United States experienced both extreme dry and extreme wet weather. It is difficult to know how climate change will affect precipitation in the United States, said Thomas Karl, director of NOAA's *National Climatic Data Center*, because of its location. "Normally, what we would expect as the world continues to warm is for the high latitudes to generally get wetter, the subtropics to get drier. And that puts a lot of us who live in the mid latitudes in between ... often making it difficult to say exactly what the long-term projection is," he said. Overall, the researchers said, regardless of the weather people have experienced recently in their locale, the trend is toward an increasingly warm world. "There is year-to-year variability, there is season-to-season variability. There are times such as today when we can have snow even in a globally warmed world," Schmidt said.

Sources: Jessica Estepa, *E&Enews PM*, 1/21/14; Stephanie Paige Ogburn, *ClimateWire*, 1/22/14; and Henry Gass, *E&Enews PM*, 2/5/14

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USGS Releases County-Scale Tool Quantifying Climate Change Impacts

In mid-December the U.S. Geological Survey (USGS) released an <u>online tool</u> to evaluate climate change impacts at the county level. Developed in collaboration with Oregon State University's College of Earth, Ocean and Atmospheric Sciences, the tool provides future temperature and precipitation projections for all counties within the contiguous United States. USGS scientist and project developer Steve Hostetler said, "In terms of what you can use it for, I would say it's the first step in getting some idea about the potential climate changes in the future for whatever county you're interested in, as described by a certain group of models." These data are based on the 33 climate models used in the latest IPCC assessment, which NASA down scaled onto an 800-by-800-meter grid. Hostetler and his colleagues then incorporated county-by-county averages into the data to produce the new tool.

Users are able to see projections from each of these climate models, comparing outcomes based on the IPCC's RCP 8.5, or business-as-usual, scenario with the RCP 4.5 scenario, which assumes a moderate cap on future radiative forcing. For example, a user in Flathead County, MT, can see that average August temperatures are expected to reach 30.1 °C (86.2 °F) by the end of the century, compared with the 23 °C (73.4 °F) average seen between the years 1980 and 2004, under the mean model and the business-as-usual scenario. Hostetler recommended that users examine the range of projections given by the 33 different climate models to get a better idea of the projections' uncertainty. Again looking at Flathead County, end-of-century August maximum temperature projections for the business-as-usual scenario range between 26.9 °C (80.4 °F) and 33.6 °C (92.5 °F), depending on the model used. USGS plans to release a similar map for U.S. watersheds early in 2014.

Source: Elizabeth Harball, *ClimateWire*, 12/11/13 BACK TO TOP

Meetings of Interest

- Apr. 24-25: Freshwater Mollusk Conservation Society 2014 Workshop *Mussel Studies and Regulatory Processes Associated with Dam Removals*, Portland, ME. See: http://molluskconservation.org/
- May 5-9: 2014 Water Microbiology Conference - *Microbial Contaminants* from Watersheds to Human Exposure, The Univ. of N. Carolina at Chapel Hill, See: http://watermicroconference.web.unc.edu/
- May 18-23: First Joint Aquatic Sciences Meeting, Oregon Convention Center, Portland, OR. Meeting will bring together the Society for Freshwater Science, (formerly NABS), the Association for the Sciences of Limnology and Oceanography, the Society of Wetland Scientists, and the Phycological Society of America. See: http://

- sgmeet.com/jasm2014/
- **Jul. 13-16:** 2nd North American Congress for Conservation Biology, Missoula, MT. See: http://www.xcdsystem.com/scbna/website/
- Jul. 27 -31: 69th Soil and Water Conservation Society International Annual Conference "Making Waves in Conservation Our Life on Land and its Impact on Water", Lombard, IL, See: http://www.swcs.org/index.cfm?nodeID=69027&audienceID=1
- **Jul. 28-Aug.1:** Conference on Ecological and Ecosystem Restoration, Hilton Riverside, New Orleans, LA. See: http://www.conference.ifas.ufl.edu/CEER2014/

- **Aug. 17-21:** 144th Annual Meeting of the American Fisheries Society, Quebec City, Quebec, Canada. See: http://afs2014.org/
- Sep. 30 Oct. 2: America's (Mississippi River) Watershed Initiative, Louisville, KY. See: http://www.conference.ifas.ufl.edu/awi/
- Oct. 26-30: Aquatic Resources Education Association, Traverse City, MI, Park Place Hotel. See: http://www.michigan.gov/dnr/0,4570,7-153-10369_45551-297681--,00.html
- **Dec. 8-11:** A Community on Ecosystem Services (ACES), Crystal Gateway Marriot, Arlington, VA. See: http://conference.ifas.ufl.edu/aces/

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Congressional Action Pertinent to the Mississippi River Basin

Climate Change

- **S. 7.** Reid (D/NV) and 21 Co-sponsors. Promotes investment to ensure resilience to extreme weather and disasters and ensures that the federal government is a leader in reducing pollution, promoting the use of clean energy sources, and improving energy efficiency.
- **S. 332.** Sanders (I/VT) and Boxer (D/CA). Addresses climate disruptions, reduces carbon pollution, enhances the use of clean energy, and promotes resilience in the infrastructure of the U.S., and for other purposes.
- **S. 376.** Pryor (D/AR) and 4 Co-sponsors and **H.R. 2431**, Hall (R/TX) and 2 Co-sponsors. Reauthorizes the National Integrated Drought Information System to better inform and provide for more timely decision making to reduce drought related impacts and costs.
- **S. 659.** Wyden (D/OR) and **H.R. 518,** Markey (D/MA) and 14 Co-sponsors. Reauthorizes and amends the *Reclamation States Emergency Drought Relief Act of 1991*, and for other purposes.
- **S. 1202.** Whitehouse (D/RI) and Baucus (D/MT). Requires establishment of an

- interagency Natural Resources Climate Change Adaptation Panel adopt the National Fish, Wildlife, and Plants Climate Adaptation Strategy and review and revise such strategy every four years.
- **H. R. 3988.** Huffman (D/CA) and 3 Co-sponsors. Supplements Corps of Engineers authorities to change reservoir operations in order to meet the needs of climate change.

Conservation

- **S. 51.** Boxer (D/CA) and 11 Co-sponsors and **H.R. 263**, Grimm (R/NY) and Dingell (D/MI). Reauthorizes the *National Fish and Wildlife Foundation*.
- **S. 327.** Barrasso (R/WY) and 10 Cosponsors and **H.R. 2401**, Cotton (R/AR) and LaMalfa (R/CA). Authorizes the Secs. of Agriculture and Interior to enter into cooperative agreements with States authorizing State foresters to provide certain forest, rangeland, and watershed restoration and protection services.
- **S. 338.** Baucus (D/MT) and 39 Co-sponsors and **H.R. 2727**, McKinley (R/WV) and 10 Co-sponsors. Amends the *Land and Water Conservation Fund Act of 1965*

- to provide consistent and reliable authority and funding for it, and for other purposes.
- **S. 526.** Baucus (D/MT) and 19 Co-sponsors and **H.R. 2807**, Gerlach (R/PA) and 173 Co-sponsors. Amends the IRS Code to make permanent the tax deduction for charitable contributions by individuals and corporations of real property interests for conservation purposes, and for other purposes.
- **S. 741.** Vitter (R/LA) and 14 Co-sponsors and **H.R. 2208**, Whittman (R/VA) and 9 Co-sponsors. Extends the *North American Wetlands Conservation Act* through 2017.
- **S. 1441.** Bennet (D/CO) and 3 Co-sponsors and **H.R. 3023**, Gardner (R/CO) and 5 Co-sponsors. Amends the IRS Code to facilitate water leasing and water transfers to promote conservation and efficiency.
- H.R. 48. Bishop (D/NY) and Hanna (R/NY). Amends the IRS Code to allow installment sales treatment for land sold to a governmental unit or tax-exempt charitable organization for conservation purposes even though the purchase funds for such sale are held in a sinking or similar fund, as required by state law.
- H.R. 638. Fleming (R/LA) and 13 Co-

- sponsors. Amends the *National Wildlife Refuge System Administration Act of 1966* to require that any new national wildlife refuge may not be established except as expressly authorized by statute.
- **H.R. 910.** Fleming (R/LA). Reauthorizes Title 1 of the *Sikes Act* through 2019.
- **H.R. 1080.** Bordallo (D/GU). Amends the *Sikes Act* to promote use of cooperative agreements for land management related to the Department of Defense on military readiness activities.
- **H.R. 1611.** Ribble (R/WI). Authorizes use of Forest Service funds derived from conservation-related programs executed on National Forest System lands to utilize the Agriculture Conservation Experienced Services Program to provide technical services for conservation-related programs and authorities carried out on such lands.
- **H.R. 1788.** Bachmann (R/MN) and 9 Co-sponsors. Amends the *Migratory Bird Treaty Act* to delegate double-crested cormorant management authority to a state on the date the Interior Secretary approves a cormorant management plan submitted by such state, and for other purposes.
- **H.R. 1834.** Grijalva (D/AZ). Establishes the 21st Century Great Outdoors Commission to assess the use, value, job creation, and economic opportunities associated with the outdoor resources of public lands and other U.S. lands and water areas.
- **H.R. 2261.** Crawford (R/AR) and 6 Co-sponsors. Ensures continuation of successful fisheries mitigation programs by imposing charges for such mitigation on the federal agency developing an impacting project, and for other purposes.
- **H.R. 2714.** Meadows (R/NC). Amends the IRS Code to allow taxpayers to assign to another taxpayer the amount of the unused charitable deduction for qualified conservation contributions.

Endangered Species

S. 19. Cornyn (R/TX) and 17 Co-sponsors and **H.R. 1314**, Flores (R/TX) and 5 Co-sponsors. Amends the ESA to establish a procedure for approval of certain settlements.

- **S. 1175.** Feinstein (D/CA) and **H.R. 2280**, Calvert (R/CA). Requires that the Treasury Secretary establish a program to provide loans and loan guarantees to enable state political subdivisions to acquire interests in real property pursuant to habitat conservation plans approved under the ESA, and for other purposes.
- **S. 1233.** Inhofe (R/OK) and 13 Cosponsors and **H.R. 2511** Black, (R/TN) and 37 Cosponsors. Authorizes states to regulate leasing, permitting and regulating development of all forms of energy resources on available federal land in the state including meeting the requirements of the ESA and NEPA.
- **S. 1731.** Paul (R/KY) and 2 Co-sponsors and **H.R. 3533**, Amodei (R/NV). Amends the ESA to permit State Governors to regulate intrastate endangered and threatened species, strips the protection from many currently listed species and their habitats, and for other purposes.
- **H.R. 576.** Stockman (R/TX) and 2 Cosponsors Amends the ESA to provide for captive breeding and for other purposes.
- **H.R. 1866.** Young (R/AK). Amends the ESA to promote sustainable-use conservation to harmonize it with the *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (CITES), and for other purposes

Energy

- **S. 279.** Tester (D/MT) and 8 Co-sponsors and **H.R. 596**, Gosar (R/AZ) and 52 Co-sponsors. Promotes development of renewable energy on public lands, and for other purposes.
- **S. 545.** Murkowski (R/AK) and 12 Cosponsors and **H.R. 267**, McMorris-Rodgers (R/WA) and 9 Co-sponsors. Improves hydropower, and for other purposes.
- **S. 582.** Hoeven (R/ND) and 26 Co-sponsors. Approves the Keystone XL Pipeline.
- **S. 1234.** Inhofe (R/OK) and 18 Cosponsors and **H.R. 2513**, Gohmert (R/TX) and 11 Cosponsors. Gives States sole authority to regulate hydraulic fracturing on Federal lands within their boundaries.

- **S. 1482.** Hoeven, (R/ND) and 4 Co-sponsors. Prohibits the Interior Secretary from issuing or promulgating any guideline or regulation relating to oil or gas exploration or production on federal land in a state if the state has otherwise met the requirements under applicable federal law, and for other purposes.
- **S. 2010.** Barrasso (R/WY) and **H.R. 1963.** Daines (R/MT) and 4 Co-sponsors. Amends the *Water Conservation and Utilization Act* to authorize development of non-Federal hydropower and issuance of leases of power privileges at projects.
- **H.R. 334.** Poe (R/TX) and 42 Cosponsors. Approves a specified permit regarding certain energy-related facilities and land transportation crossings on the international boundaries of the U.S. for the Keystone XL pipeline project.
- **H.R. 1235.** Hartzler (R/MO) and 5 Cosponsors. Amends the *Federal Power Act* to prohibit FERC from considering public use and environmental purposes in issuing a license for a project in a state whose law expressly authorizes such a prohibition.

FWPCA and Water Quality

- **S. 496.** Pryor (D/AR) and 11 Co-sponsors and **H.R. 311**, Crawford (R/AR) and 73 Co-sponsors. Directs the USEPA to change the Spill Prevention, Control, and Countermeasure rule with respect to certain farms.
- **S. 802.** Hagan (D/NC) and 13 Co-sponsors and **H.R. 935**, Gibbs (R/OH) and 57 Co-sponsors. Clarifies Congressional intent regarding regulation of pesticide use in or near navigable waters, and for other purposes.
- **S. 830.** Manchin (D/WV) and 6 Co-sponsors and **H.R. 524**, McKinley (R/WV) and 11 Co-sponsors. Amends the FWPCA to clarify and confirm USEPA authority to deny or restrict use of defined areas as disposal sites for discharge of dredged or fill material.
- **S. 861.** McConnell (R/KY) and Paul (R/KY) and **H.R. 1829**, Capito (R/WV) and 20 Co-sponsors. Amends the FWPCA to provide guidance and clarification regarding issuance of new and renewal permits,

and for other purposes.

- **S. 890.** Paul (R/KY) and 6 Co-sponsors and **H.R. 3377**, Thornberry (R/TX) and 6 Co-sponsors. Prohibits FWPCA activities carried out by the USEPA or the Corps of Engineers from impinging upon states' power over land and water use, clarifies the definition of navigable waters, and for other purposes.
- **S. 1006.** Barrasso (R/WY) and 27 Cosponsors. Preserves existing rights and responsibilities with respect to waters of the U.S.
- **S. 1254.** Nelson (D/FL) and 18 Co-sponsors. Amends the *Harmful Algal Bloom and Hypoxia Research and Control Act of 1998* to revise the membership requirements for the *Inter-Agency Task Force on Harmful Algal Blooms and Hypoxia*, and for other purposes.
- **S. 1470.** Kaine (D/VA) and Warner (D/VA) and **H.R. 2937**, Hurt (R/VA) and 6 Co-sponsors. Amends the FWPCA with respect to the guidelines for specification of certain disposal sites for dredged or fill material.
- **H.R. 1175.** Cartwright (D/PA) and 63 Cosponsors. Amends the FWPCA to direct the Interior Secretary to conduct a study with respect to stormwater runoff from oil and gas operations, and for other purposes.
- **H.R. 1296.** Miller (R/CA) and 4 Cosponsors. Amends the FWPCA to clarify a maintenance exemption regarding the removal of sediment, debris, and vegetation from certain structures.
- **H.R. 1304.** Walberg (R/MI) and 18 Cosponsors. Permits the chief executive of a State to create an exemption from certain requirements of Federal environmental laws for producers of agricultural commodities, and for other purposes.
- **H.R. 1837.** Pallone (D/NJ) and 81 Cosponsors. Amends the FWPCA to clarify that fill material cannot be comprised of waste.
- **H.R. 1877.** Bishop (D/NY) and 38 Co-sponsors. Amends the FWPCA to authorize appropriations for State water pollution control revolving funds, and for other purposes.

- **H.R. 1948.** Mica (R/FL) and 2 Co-sponsors. Amends the FWPCA to preserve the authority of each State to make determinations relating to the State's water quality standards, and for other purposes.
- H.R. 2581. Hurt (R/VA) and 9 Co-sponsors. Replaces the need for an FWPCA permit for the discharge of dredged or fill material into navigable waters for projects which bring waters into uses for which they were not previously subject and where the flow or circulation of such waters may be impaired or the reach of such waters may be reduced with a requirement that a permit be obtained for any such discharge that is not currently exempted from permit requirements.
- **H.R. 2850.** Smith (R/TX) and 2 Co-sponsors. Oversees review and release of the USEPA study on the impacts of hydraulic fracturing.
- **H.R. 2948.** Matheson (D/UT) and Harper (R/MS). Requires analyses of the cumulative and incremental impacts of certain rules and actions of the USEPA, and for other purposes.
- **H.R. 4012.** Schweikert (R/AZ) and 22 Co-sponsors. Prohibits the USEPA from releasing a regulation or related action without publicly disclosing the technical backing.

Grazing

S. 258. Barrasso (R/WY) and 8 Co-sponsors and **H.R. 657**, and 15 Co-sponsors. Amends the *Federal Land Policy and Management Act of 1976* to improve management of grazing leases and permits, and for other purposes.

Invasive Species

- **S. 248.** Begich (D/AK) and 2 Co-sponsors and **H.R. 584**, Young (R/AK) and 23 Co-sponsors. Amends the Federal Food, *Drug, and Cosmetic Act* to require labeling of genetically engineered fish.
- **S. 365.** Klobuchar (D/MN) and Franken (D/MN) and **H.R. 709**, Ellison (D/MN) and 3 Co-sponsors. Authorizes the Corps of Engineers to take actions to manage the threat of Asian carp traveling up the Mis-

- sissippi River in the State of Minnesota, and for other purposes.
- **S. 1153.** Gillibrand (D/NY) and 2 Cosponsors and **H.R. 996**, Slaughter (D/NY) and 31 Co-sponsors. Establishes an improved regulatory process for injurious wildlife to prevent the introduction and establishment in the U.S. of nonnative wildlife and wild animal pathogens and parasites.
- **S. 1463.** Boxer (D/CA) and 2 Cosponsors and **H.R. 2856**, Fitzpatrick (R/PA) and 10 Cosponsors. Amends the *Lacey Act Amendments of 1981* to prohibit importation, exportation, transportation, sale, receipt, acquisition, and purchase in interstate or foreign commerce of any live animal of any prohibited wildlife species.
- **H.R. 985.** Rogers (R/MI) and 12 Cosponsors. Directs the Corps of Engineers to prevent the spread of Asian carp in the Great Lakes and the tributaries of the Great Lakes, and for other purposes.
- **H.R. 1823.** Heck (R/NV) and 22 Cosponsors. Amends the *Lacey Act* to prohibit the importation and exportation of quagga mussels.
- **H.R. 3105.** Crawford (R/AR) and 5 Co-sponsors. Amends the *Lacey Act* to exclude from the meaning of the term "fish and wildlife" any animal accidentally included in a shipment of an aquatic species produced in commercial aquaculture for human consumption, recreation or ornamental purposes.
- **H.R. 3280.** Fleming (R/LA) and 1 Cosponsor. Amends the *Lacey Act* to prohibit it from applying to any plant that was imported into the U.S. before May 22, 2008, and any finished plant product the assembly and processing of which was completed before May 22, 2008.
- H.R. 3324. Harris (R/MD) and 1 Cosponsor. Amends the *Lacey Act* to revise the rulemaking procedure applicable to the importation of any plant by authorizing the Secretary of the Interior, in consultation with the Animal and Plant Health Inspection Service, to: (1) distinguish among different species; and (2) limit the applicability of the Act to a particular class or type of species.

- **H.R. 3994.** Bishop (R/UT) and Horsford (D/NV). Improves the control and management of invasive species on Federal lands, and for other purposes.
- **H.R. 4032.** Hall (R/TX) and 2 Cosponsors. Exempts from the *Lacey Act* certain water transfers by the North Texas Municipal Water District and the Greater Texoma Utility Authority, and for other purposes.

Mining

- **S. 222.** Udall (D/NM) and 3 Co-sponsors and **H.R. 488.**, Pearce (R/NM) and Lujan (D/NM). Amends the *Surface Mining Control and Reclamation Act of 1977* to clarify that uncertified States and Indian tribes have the authority to use certain payments for certain non coal reclamation projects and acid mine remediation programs.
- **S. 1443.** Udall (D/CO) and Bennet (D/CO) and **H.R. 2970**, Tipton (R/CO). Facilitates the remediation of abandoned hardrock mines, and for other purposes.
- **H.R. 526.** Yarmuth (D/KY) and 45 Co-sponsors. Places a moratorium on permitting for mountaintop removal coal mining until health studies are conducted by the Department of Health and Human Services, and for other purposes.
- H.R. 2467. Markey (D/MA) and 2 Cosponsors. Permits state or local governments or Indian tribes to petition for withdrawal of specific federal land from mining in order to protect specific values and instructs the Interior Secretary to ensure that mineral activities on federal land are carefully controlled to prevent undue degradation of public lands and resources.
- H.R. 2824. Johnson (R/OH) and 5 Cosponsors. Amends the Surface Mining Control and Reclamation Act of 1977 to implement the final rule on excess spoil, mining waste, and buffers for perennial and intermittent streams, and for other purposes.

Public Lands

S. 400. Boozman (R/AR) and Merkley (D/OR). Amends the *Federal Lands*

- Recreation Enhancement Act to include the Corps of Engineers as a Federal land management agency, and for other purposes.
- **S. 1966.** Barrasso (R/WY) and 2 Cosponsors. Provides for restoration of the economic and ecological health of National Forest System land and rural communities, and for other purposes.
- H.R. 916. Kind (D/WI) and 13 Co-sponsors. Directs the Interior Secretary to develop a multipurpose cadastre of federal real property to assist with federal land management activities, including, but not limited to, resource development and conservation, travel management, agricultural use, active forest management, environmental protection, and use of real property.
- **H.R. 1017.** Poe (R/TX) and Jones (R/NC). Directs the sale of certain BLM and Forest Service lands to reduce the Federal budget deficit, and for other purposes.
- H.R. 1021. Stivers (R/OH). Directs that there shall be no net increase in the acres of BLM, NPS, USFWS or FS lands unless the Federal budget is balanced for the year in which the land would be purchased.
- **H.R. 1526.** Hastings (R/WA) and 22 Cosponsors. Doubles logging on national forests.
- **H.R. 1633.** Amodei (R/NV) and 2 Cosponsors. Provides for the conveyance of small parcels of federal lands up to 160 acres in size to adjacent landowners, and for other purposes.

Public Works

- **S. 360.** Udall (D/NM) and 9 Co-sponsors and **H.R. 1351**, Grijalva (D/AZ) and 40 Co-sponsors. Promotes a new generation of young men and women with the desire to seek careers in resource stewardship and public service by working directly with professionals.
- **S. 994.** Warner (D/VA) and 9 Co-sponsors, and **H.R. 2061** Issa (R/CA) and 10 Co-sponsors. Puts limits on federal spending for and attendance at scientific

- conferences, and for other purposes.
- **S. 1262.** Nelson (D/FL) and 3 Co-sponsors and **H.R. 3451** Garcia (D/FL). Establishes a *Veterans Conservation Corps* to work on public lands.
- **H.R. 188.** Kaptur (D/OH) Authorizes reestablishment of the *Civilian Conservation Corps* to provide gainful employment to unemployed and underemployed citizens of the U.S. through the performance of public work, and for other purposes.

Recreation

- **S. 311.** Landrieu (D/LA). Directs the Interior Secretary to study the suitability and feasibility of designating sites in the Lower Mississippi River Area in the State of Louisiana as a unit of the National Park System, and for other purposes.
- **S. 421.** Alexander (R/TN) and 3 Co-sponsors and **H.R. 826**, Whitfield (R/KY) and 6 Co-sponsors. Prohibits the Corps of Engineers from taking any action to establish a restricted area prohibiting public access to waters downstream of a Corps dam, and for other purposes.
- **S. 1554.** Heinrich (D/NM). Requires publication of information on federal web sites of public lands available to public access for hunting, fishing and other recreational purposes.
- **S. 1996**. Hagan (D/NC) and 11 Co-sponsors. Amends several acts and addresses multiple issues related to resource management and hunting and fishing on public lands.
- **S. 2028.** Rockefeller (D/WV) and Thune (R/SD). Reauthorizes the *Sport Fish Restoration and Boating Trust Fund*, and for other purposes.
- **H.R. 1825.** Benishek (R/MI) and 108 Co-sponsors. Directs Federal public land management officials to facilitate use of and access to Federal public lands for fishing, sport hunting, and recreational shooting, and for other purposes.
- **H.R. 2799.** Latta (R/OH) and 7 Cosponsors. Amends the *Fish and Wildlife Coordination Act* to establish the *Wildlife and Hunting Heritage Conservation*

Council Advisory Committee to advise the Secretaries of the Interior and Agriculture on wildlife and habitat conservation, hunting, and recreational shooting.

- **H.R. 3492.** Lummis (R/WY) and Bishop (R/UT). Specifies certain regulations regarding vessels permitted on rivers and streams in Yellowstone and Grand Teton National Parks.
- **H.R. 3590.** Latta (R/OH) and 86 Cosponsors. Amends several acts with regard to hunting and fishing on public lands.
- **H.R. 3962.** Daines (R/MT). Amends the *Land and Water Conservation Fund Act of 1965* to ensure that amounts are made available for projects to provide recreational public access, and for other purposes.

Water Resources

- **S. 66.** Vitter (R/LA) and 2 Co-sponsors. Directs the Corps of Engineers to establish a pilot program to evaluate the cost-effectiveness and project delivery efficiency of non-federal sponsors as the lead project delivery teams for authorized Corps civil works flood control and navigation construction projects.
- **S. 407.** Casey (D/PA) and 6 Co-sponsors and **H.R. 1149**, Whitfield (R/KY) and 32 Co-sponsors. Provides funding for construction and major rehabilitation for projects located on inland and intracoastal waterways of the U.S., and for other purposes.
- **S. 565.** Durbin (D/IL) and 2 Co-sponsors and **H.R. 1152**, Enyart (D/IL) and 3 Co-sponsors. Provides for the safe and reliable navigation of the Mississippi River, and for other purposes.
- **S. 566.** Durbin (D/IL) and Kirk (R/IL) and **H.R. 1153**, Bustos (D/IL) and 7 Cosponsors. Establishes a pilot program to evaluate the cost-effectiveness of allowing non-Federal interests to carry out certain water infrastructure projects, and for other purposes.
- **S. 574.** Landrieu (D/LA) and **H.R. 1161**, Richmond (D/LA). Modifies the 50-foot

Mississippi River Ship Channel – Gulf of Mexico to Baton Rouge for navigation, and for other purposes.

- **S. 601.** Boxer (D/CA) and Vitter (R/LA) and **H.R. 3080**, Shuster, Bill (R/PA) and 47 Co-sponsors. *Water Resources Development Act of 2013*.
- **S. 732.** Paul (R/KY). Modifies the criteria used by the Corps of Engineers to dredge small ports.
- **S. 970.** Cardin (D/MD) and Boozman (R/AR). Amends the *Water Resources Research Act of 1984* to require research into new ideas that expand the understanding of water resources and for other purposes.
- **S. 996.** Landrieu (D/LA) and 2 Cosponsors and **H.R. 1035**, Moore (D/WI) and 2 Cosponsors. Improves the *National Flood Insurance Program*, and for other purposes.
- **S. 1630.** Barrasso (R/WY) and 7 Cosponsors and **H.R. 3189**, Tipton (R/CO) and 14 Cosponsors. Prohibits the Interior and Army Secretaries from conditioning the issuance, renewal, amendment, or extension of any permit or similar action on the relinquishment of any water right directly to the U.S., and for other purposes.
- **S. 1961.** Manchin (D/WV) and 3 Cosponsors. Protects surface water from contamination by chemical storage facilities, and for other purposes.
- **H.R. 123.** Holt (D/NJ) and Miller (D/CA). Establishes a *WaterSense* program to identify and promote water efficient products, buildings and landscapes, and services to reduce water use, conserve energy, and preserve water resources.
- H.R. 136. Matsui (D/CA) and Bera (D/CA). Authorizes the Corps to implement any flood risk management project for which the Defense Secretary has transmitted to Congress, before the date of enactment of this Act, a letter that is technically sound, environmentally acceptable, and economically justified; and consistent with the President's policy and programs.
- **H.R. 1268.** Palazzo (R/MS). Amends the IRS Code to allow qualified taxpayers a tax credit, up to \$5,000 in a taxable year,

for flood mitigation expenses and for other purposes.

- **H.R. 1460.** Graves (R/MO) and 5 Cosponsors. Directs the Corps of Engineers to revise certain authorized purposes described in the *Missouri River Mainstem Reservoir System Master Water Control Manual*.
- **H.R. 1489** Maloney (D/NY) and 2 Cosponsors. Amends the *National Dam Safety Program Act* to identify and ensure the safety of dams in need of repair and rehabilitation, and for other purposes.
- **H.R. 1662.** Richmond (D/LA) and Boustany (R/LA). Provides for liability for the Corps of Engineers in cases of damages caused by the gross negligence of an officer or employee of the Corps.
- **H.R. 1769.** Richmond (D/LA). Provides for a study to evaluate the National benefits of flood protection.
- H.R. 2741. Noem (R/SD) and Cramer (R/ND). Declares that states have authority to manage the waters of rivers located within their boundaries; and that states in which Missouri River mainstem reservoirs occur have the authority to allocate the quantity of water in the reservoir attributable to the natural flows of the Missouri River within its boundaries.
- **H.R. 2813.** Cotton (R/AR). Amends the *Water Supply Act of 1958* to permit an interested state or local interest to submit to the Army Secretary by January 1, 2016, a plan for the utilization of future use water storage under such Act.
- **H.R. 4001.** Miller (R/MI) and 2 Co-sponsors. Directs the Corps of Engineers to create a physical barrier between the Mississippi River System and Lake Michigan to prevent an Asian carp invasion of Lake Michigan.
- **H.R. 4029.** Smith (R/MO), Requires the Interior Secretary to transfer all Federal land and facilities associated with the *Ozark National Scenic Riverways* to the State of Missouri.

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