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FEDERAL GUIDANCE ON WETLANDS DELINEATION CREATES POCKETS OF OPPORTUNITY, CONFUSION

In June 2006, the U.S. Supreme Court issued a series of split rulings in *Rapanos v. United States* and *Carabell v. United States* (widely referred to as “*Rapanos*”), a pair of cases involving the destruction of wetlands as a result of development activities. The controversial rulings— one plurality decision, two concurring opinions, and two dissents— left all those parties who have anything to do with wetlands, from property and infrastructure developers to regulatory agencies and the engineering firms with wetlands delineation and restoration practices, wondering how the **Environmental Protection Agency (EPA)** (Washington, DC; www.epa.gov) and the **U.S. Army Corps of Engineers** (Washington, DC; www.usace.army.mil) would handle the implications of the various *Rapanos* findings in the development of new guidance on how to determine when a wetland is, legally speaking, a wetland.

On June 5, 2007, EPA and the Corps issued guidance purporting to clarify Clean Water Act (CWA) Section 404 jurisdiction over wetlands. “Purporting” is the key word. In fact, the guidance has been subject to much interpretation within the regulatory agencies. The result as far as the wetlands delineation and restoration market is concerned has been a patchwork of opportunity and confusion, as some Corps jurisdictions move forward on wetlands decisions while others are in a state of suspension.

CWA Section 404 regulates the discharge of dredged or fill materials into U.S. waters, including wetlands. Any party engaging in an activity that could lead to the impairment of a wetland that is deemed by a delineation to be under Section 404 jurisdiction must first obtain a Corps permit and take steps to mitigate any losses.

The EPA/Corps guidance drew heavily from Justice Antonin Scalia’s plurality decision in *Rapanos*, which claimed that wetlands are subject to Corps jurisdiction if they bear a “continuous surface connection”

to traditional navigable waters— such water bodies being the limit of CWA regulatory authority, Scalia has long argued. The guidance, however, also took into account Justice Anthony Kennedy's dissent, which argued that wetlands are subject to Corps jurisdiction if they have a "significant nexus" to navigable waters. According to *The Wire*, a quarterly publication of the environmental science-focused consulting firm SWCA Environmental Consultants (Salt Lake City, UT; www.swca.com), the upshot of all this has been that Section 404 rulings on wetlands must take into account chemical, physical, and biological effects "that were not significant factors in previous jurisdictional decisions."

In light of these new and not entirely clear requirements, the various Army Corps of Engineers' jurisdictions are taking their own idiosyncratic approach to Section 404 jurisdictional determinations. "There's lots of variability across the Corps of Engineers," says SWCA CEO John Thomas. In Arizona, for example, "there's still not a clear set of guidance," he says. By comparison, Texas has "implemented a slightly different approach to the documentation of wetlands," albeit a conservative one.

Tim DeGraff, senior vice president at the environmental consulting firm WRA (San Rafael, CA; www.wra-ca.com), provides a succinct description of the situation in California, WRA's primary source of business. The state has three Corps districts— Los Angeles, San Francisco, and Sacramento— and "depending on which jurisdiction you are in, you are working with a different Army Corps office," DeGraff says. "Each office manager has a different interpretation of the regulations, and that affects how the process moves forward or slows down."

DOUBLING TIME FOR RULINGS

Prior to the *Rapanos* decision and the issuance of the EPA/Corps guidance, "we would go out in the field and delineate a wetland, or map it, and ask the Corps to come out and verify the work," DeGraff says. The Corps then would issue a legal letter, known as a jurisdictional determination, specifying whether the mapping is accurate and requires a permit.

Following the issuance of the guidance, however, the delineating consulting must compile the same information as before, along with additional information, DeGraff

says. In addition, "depending on the type of wetland and the location, the Corps may have to consult with EPA before the jurisdictional determination is issued. Before, they rarely consulted with EPA. The process takes time, and then the amount of information required is at least doubled. Given all of that, the Corps had a significant workload before, and now that workload has increased, with another step added by involving another agency.

"Prior to *Rapanos*, it usually took the Corps about two to three months to issue a jurisdictional determination for small sites," DeGraff says. "Post-*Rapanos*, we have noticed the time has essentially doubled to four to six months. The Corps' review time can extend beyond six months if the site is large."

Further out on the horizon is the construction of wetlands for buffering and absorbing floodwaters, as "part of a climate change adaptation strategy," says Galya. "There's interest being shown, although people are not spending money to do anything right now."

A more recent EPA/Corps guidance offers the option for anyone whose project may affect wetlands to go through a "preliminary jurisdictional determination" process. By doing so, the project developer is effectively conceding the requirement for a permit, in exchange for relief from having to go through the time-consuming, information-heavy EPA oversight process.

Even in this case, however, "there are different interpretations of the process from different Corps managers," DeGraff says. Historically, there have been two types of Section 404 wetlands permits— the nationwide and the individual, with the latter applying to damages of more than half an acre— and the preliminary jurisdictional determination process in theory applies only to nationwide permits. However, "some Corps managers can interpret that differently," DeGraff says. "That's what we find when we are dealing with the Corps."

For those delineation processes that move forward, the increased workload just means more work for the consultants. In those jurisdictions, however, that have put their jurisdictional determination process

on hold while they develop their own interpretations of the guidance, there has been a hold-up in available work.

One other development in wetlands regulation has had a more positive outcome. In an April 2008 guidance unrelated to *Rapanos*, EPA and the Corps made changes in the preferred approach to mitigating for any damages to wetlands— a change for the better, say wetland specialists. Previously, the Corps' preferred option was mitigation "on site and in kind"— that is, undertaking the restoration "really close to the impact itself, and replacing the functions and values as best you could," DeGraff says.

The new guidance establishes a hierarchy of five options, the most preferred option being mitigation banking. Under this option, wetlands created or restored within a given project area can generate credits and sell them to a wetlands mitigation bank serving the area, and that bank can then sell credits to developers of projects that are disturbing jurisdictional wetlands elsewhere in the area.

In the absence of such a bank, the Corps requires payment of an "in lieu" fee to a government-run or non-profit entity, which can then use those fees to create or restore wetlands. After these two top preferred approaches are three other choices— using a watershed approach (which is "pretty vague," DeGraff says), or resorting to the traditional onsite, in-kind approach, or finally taking an onsite, out-of-kind approach.

With private-sector mitigation banking essentially moving from the bottom to the top of the list of preferred alternatives, "we have seen a flurry of new banks being proposed to the Corps within the past year or so," WRA President Tom Fraser says. "Especially in the high-growth areas, there are numerous wetland mitigation banks covering the same area, like the Sacramento Valley. But now they are going to the Bay area, and to southern California. New applications popping up all the time."

Despite the emergence of new mitigation banks, the wetlands delineation and restoration business in California has seen some recent shifts as a result of the slumping economy, DeGraff says. The residential market in particular has dropped off. "From 2005 through 2007, we had probably one or two new residential projects a week," he says. Now, however, "we probably haven't

had a new residential project in over a year. The shift in new projects is towards infrastructure development—highways, etc.—and to some commercial, industry and energy, and community planning work. We have ongoing, large residential projects, but the small subdivision project has gone for the foreseeable future.”

WRA has maintained a diverse project backlog, “so we’ve managed to remain fairly nimble,” Fraser says. “We’ve seen major cut-backs in engineering and biology firms that did 80% of their business in the residential market.” Despite the diversity in projects, however, “the current situation is uncharted territory,” he says.

LIMITED BANKING IN EAST

Moving eastward to the New York-New Jersey area, there’s less opportunity to mitigate wetlands impairment through the mitigation banking approach. “There’s limited land available, and that’s what limits mitigation banking,” says Terry Doss, a senior scientist for ecological design firm **Biohabitats, Inc.** (Baltimore, MD; www.biohabitats.com). “For awhile, mitigation banking was trying to compete with housing development for land, and couldn’t pay what the developers could pay.”

Biohabitats’ wetlands design work has remained steady, without disruption from the current economic situation to date, Doss says. “After 9/11, there was a downturn in federal funding, but since then it has been steady and building in small increments. If we’re able to pull out of the wars we’re involved in, I can see the federal funding increasing.” The projects that Biohabitats undertakes are typically related to mitigation for past contamination by oil spills, pesticide contamination, and the like, and those projects are largely funded by federal agencies like the Army Corps of Engineers and the **National Oceanic and Atmospheric Administration (NOAA)** (Washington, DC; www.noaa.gov). “That type of money continues to flow,” Doss says.

Don Galya, vice president for water and natural resources in the Westford, Mass., office of **AECOM** (Los Angeles, CA; www.aecom.com), says that his wetlands staff has continued to be very busy. “We do the full range of wetlands work, including delineations, characterization of functions and values, permitting and mitigation for any impacts on wetlands that are consumed

as part of a project, and then on to restoration,” he says.

Galya points to a combination of delineation work for permitting projects and some restoration that is currently keeping his wetlands staff occupied. “Most of the restoration is industry-driven, but some is from government agencies. We’re also seeing opportunities in mitigation banking.”

Some of the work is extensive, he adds. “Some of our natural gas projects involve hundreds and hundreds of miles of delineation and impact assessment, and those are very challenging.” New projects of this nature “are probably not as active right now,” he says. “However, existing projects continue; they’re not likely to stop because of this economy.”

Galya sees a couple of trends on the horizon in wetlands engineering. “We’ve done a number of treatment wetlands, where we designed and built a wetland for wastewater treatment. We had one done for a turkey processing facility, which had wastewater with high bacteria and nutrient content. The wetlands were used to get a cost-effective reduction in the pollutant load, and the client was very happy.”

Treatment wetlands have been around for awhile but have yet to take off as a popular solution, according to Galya. “We see this solution as environmentally attractive, not as replacing conventional treatment solutions, but augment them.” There’s even the potential to generate credits for trading on the carbon markets, he points out. “That’s not something that exists right now, but we’re seeing clients at least asking questions and showing interest.

Further out on the horizon is the construction of wetlands for buffering and absorbing floodwaters, as “part of a climate change adaptation strategy,” says Galya. “There’s interest being shown, although people are not spending money to do anything right now.”

As for the trend in hard-engineered wetlands creation solutions versus approaches that are more bound to enhancing or restoring natural processes and flows, the latter appear to be in the ascendancy. “I try not to call it ‘wetlands engineering,’” says Biohabitats’ Doss.

Doss points to a study, now a few years old but still relevant in her view, that evaluated the results of wetland mitigation projects and found that some 60% to 70% had

been unsuccessful. Of those, a majority consisted of the more hard-engineered solutions, “or were wetlands created where there hadn’t been wetlands before, making the water go where it wasn’t going already,” Doss says. “Early on, people were looking at wetlands creation. Today, we’re looking at restoring specific functions of the wetlands.”

According to Joe Berg, a senior ecologist at Biohabitats, wetlands and ecosystem restoration professionals in both academia and the private sector “are saying that the restoration projects that are working are those that are restoring function and process. The ones that aren’t working are replicating form or appearance.”

Indeed, Berg says, the restoration of a wetland today must be seen not as a project focused on the specific wetland but as a resource connected to other water resources and, as part of that network, providing a host of services. A wetlands restoration project thus becomes a more integrated project, aimed at fixing the groundwater table where necessary, restoring upstream flows, and assessing and managing stormwater runoff, among other things. “The way we talk about it is in terms of storing water on the landscape, in the form of restored wetlands and riparian areas,” says Berg, whose firm is conducting seminars for other professionals in the art and science of integrated restoration. “It’s not like all the water coming from Baltimore, for example, is going to one big wetland. We’re looking at various steps along the way, giving water a chance to come in contact with adjacent lands.”

Looking forward, Berg sees wetland and ecosystem restoration as moving beyond sustainable design, which is a mere temporary placeholder for what he and his colleagues at Biohabitats refer to as regenerative design. “What that means is, when you’ve finished your project, you’ve started a process that eventually provides more natural capital or ecosystem services than the day you’ve installed it.” There’s much more to learn in the areas of resource economics and ecosystem dynamics, he says, but “I think that as this field of endeavor matures, there’s going to be an even bigger market in terms of restoring the environment in this way and providing these ecological services. We’re really jazzed about the future of the market.”— **GEORGE STUBBS** (gstubbs@zweigwhite.com) ■