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The 404(b)(1) Guidelines
Overview and New Developments

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I. Introduction and Background

There is little, if any, case law that specifically addresses a wetlands jurisdictional determination or a 404 permitting decision in the context of a brownfield redevelopment project.[1] There are a few possible reasons for this: In 2002, Congress passed amendments to CERCLA in the form of the Small Business Liability Relief and Brownfields Revitalization Act. The goal of the amendments was to ease some of the hurdles that developers encountered in urban revitalization projects. As these amendments are just over five years old, developers have only recently been taking advantage of them in large numbers; any body of case law developing around brownfields as a result of the CERCLA amendments would be similarly recent and not necessarily extensive. Second, environmental organizations are frequent challengers to 404 permitting decisions and they are generally more concerned by the development of pristine wetlands and undeveloped greenfields. These groups are less likely to allocate the resources necessary to bring a lawsuit related to previously contaminated properties that may contain degraded wetlands; they are more likely to pursue lawsuits where pristine wetlands are at issue. Third, many 404 permitting decisions are challenged by citizens groups or civic organizations concerned about development encroaching on their communities. These groups are probably less likely to challenge attractive redevelopment projects that replace abandoned, contaminated, industrial sites.

Even though case law does not provide much of a window into the role of governmental agencies such as the Army Corps of Engineers ("Corps") in brownfields redevelopment, we know

[1] In *Pogliani v. U.S. Army Corp of Engineers*, 2007 WL 983549, *1 (N.D.N.Y. March 28, 2007), plaintiffs challenged a permit issued by the Corps to Athens Generating Company for the fill of certain wetlands related to the construction of a new power plant. Public comment advocated for alternative brownfield sites in lieu of the site chosen. *Id*. at *7. The Corps rejected the alternatives as not practicable for various logistical reasons, *id*. at *7 n.9; the court accepted the reasons and ultimately upheld the permitting decision, *id*. at *26. This is one of the few cases in which brownfields are addressed in the 404 permitting context.

that the Corps is involved both in permitting decisions and in other aspects of redevelopment projects. For example, the Corps may contribute dredged material to cap a landfill, may assist in the restoration of riverbank, or may aid in flood control projects. *See* Tracy Norfleet and Barbara Wells, THE ROLE OF THE U.S. ARMY CORPS OF ENGINEERS IN BROWNFIELD REDEVELOPMENT 11-13 (Northeast-Midwest Institute 2003). Although the Corps has no specific authority related to brownfield redevelopment, it often may cooperate with other federal agencies, local governments, or nonprofit organizations in various projects that support brownfield redevelopment. *Id*. at 1. Certainly, wetlands are not infrequently affected by industrial pollution, sometimes even occurring at Superfund sites, such as the Metachem site in Delaware.

Because brownfield projects that include wetlands or waters of the United States will require a Clean Water Act Seciton 404 permit, these projects will need to comply with the regulations known as the 404(b)(1) guidelines. Moreover, the 404(b)(1) guidelines offer the potential for specific applications to brownfield sites that can favor redevelopment. Because the guidelines focus on selection of the "least environmentally damaging practical alternative" the beneficial effects of a brownfield cleanup are relevant. Also, the Corps has a duty to take into account the objectives of the applicants project. Environmental cleanup is an objective f brownfields projects. Thus, this paper discusses the 404(b)(1) regulations.

II. Section 404(b)(1) Guidelines

A. Introduction to the 404(b)(1) Guidelines

Section 404(b)(1) of the Clean Water Act ("CWA") directs the Environmental Protection Agency ("EPA") to develop guidelines for the placement of dredged or fill material. 33 U.S.C. § 1341(b). These guidelines developed by EPA are known as the "404(b)(1) Guidelines" and are located at 40 C.F.R. Part 230. According to a Memorandum of Agreement between the EPA and the Army Corps of Engineers ("Corps"), the 404(b)(1) Guidelines "are the environmental standards for Section 404 permit issuance under the CWA." *Memorandum of Agreement Between the Department of the Army and the Environmental Protection Agency, The Determination of Mitigation Under the Clean Water Act Section 404(b)(1) Guidelines*, 1990 ("Mitigation MOA"). The stated purpose of the Guidelines is to "restore and maintain the chemical, physical, and biological integrity of waters of the United States through the control of discharges of dredged or fill material." 40 C.F.R. § 230.1(a).

While the Guidelines are binding regulations, some flexibility in their application is contemplated and permitted. *See id.* § 230.6(a) ("It is unlikely that the Guidelines will apply in their entirety to any one activity, no matter how complex."). The Guidelines contemplate that the level of application and documentation will vary with the significance of the impact, such that projects involving smaller impacts would not receive the same level of analysis and documentation as projects involving greater impacts. *See id*. § 230.6(b) (stating that in applying the Guidelines, "different levels of effort . . . should be associated with varying degrees of impact" and that "the level of documentation should reflect the significance and complexity of the discharge activity"); *see also id.* § 230.10 (preamble); *Greater Yellowstone Coalition v. Flowers*, 359 F.3d 1257, 1271 (10th Cir. 2004) (*Greater Yellowstone II)*; *Towns of Norfolk v. U.S. Army Corps of Eng'rs*, 968 F.2d 1438, 1447 (1st Cir. 1992). EPA has issued a *Memorandum to the Field regarding Appropriate Level of Analysis Required for Evaluating Compliance with the Section 404(b)(1) Guidelines Alternatives Requirements* ("Field Memo"), which recognizes the Guidelines' flexibility and discusses the level of analysis needed for projects involving minor

impacts. The Field Memo specifically recognizes that the Guidelines afford flexibility in the stringency of the alternatives review, discussed below, for projects that have only minor impacts.

B. The Least Environmentally Damaging Practicable Alternative

The Guidelines specify that no discharge of dredged or fill material shall be permitted if there is "a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences." *Id*. § 230.10(a). This provision and requirement is the source of the Corps' "alternatives analysis." Thus, in evaluating whether to issue a Section 404 permit, the Corps must determine that there is not a "less environmentally damaging practicable alternative" to the discharge proposed by the permit.

1. The Alternative Must Be "Practicable"

"Practicable" alternatives include, but are not limited to: (1) activities that do not involve a discharge of dredged or fill material into waters of the United States or ocean waters; and (2) discharges of dredged or fill material at other locations in waters of the United States or ocean waters. *Id.* § 230.10(a)(1)(i)-(ii). Alternatives for the proposed discharge include both onsite and offsite alternatives. An alternative is "practicable" if it is "available and capable of being done taking into consideration cost, existing technology, and logistics in light of overall project purposes." *Id*. § 230.10(a)(2).

a. The Presumption Against Discharge for Non-Water Dependent Projects

When the proposed project involves a discharge to a "special aquatic site," which includes wetlands, and the project is not "water dependent," practicable alternatives that do not involve discharge into special aquatic sites are presumed to be available unless clearly demonstrated otherwise. *Id.* § 230.10(a)(3). "The presumption for a non-water dependent project that a practicable alternative exists is not an automatic bar on issuance of a permit, but it does require that an applicant make a persuasive showing concerning lack of alternatives." *Utahns for Better Transp. v. U.S. Dep't of Transp.*, 305 F.3d 1152, 1163 (10th Cir. 2002). Courts have determined that in permitting a discharge into wetlands for a project that is not water dependent, the Corps must do more than evaluate a range of alternatives, it must rebut the presumption that there is a less environmentally damaging practicable alternative. *Greater Yellowstone Coalition v. Flowers*, 321 F.3d 1250, 1262 n.12 (10th Cir. 2003); *see also Utahns for Better Transp.*, 305 F.3d at 1163 ("For non-water dependent projects, it is presumed that a practicable alternative exists and the burden to clearly demonstrate otherwise is on the applicant."); *Sierra Club v. U.S. Army Corps of Eng'rs*, 450 F. Supp. 2d 503, 524 (D.N.J. 2006) ("A permit will not be granted unless the presumption is rebutted by a clear contrary demonstration by the applicant.").

A project is not water dependent if it does not require access or proximity to or siting within the special aquatic site to fulfill its basic purpose. 40 C.F.R. § 230.10(a)(3). Beyond these parameters, very little case law exists on how the determination of water dependence is made. In a guidance document, the Corps provides examples of what it views to be water-dependent projects: dams, marinas, mooring facilities, and docks. *Army Corps of Engineers Standard Operating Procedures for the Regulatory Program* at 6 (1999) (*the* "*SOP*"). The Corps explains that the "basic purpose of these projects is to provide access to water." *Id*. In the guidance document, the Corps also has taken the position that a residential development is not water dependent because the purpose of a residential development is to provide housing for people, and housing does not have to be located in a special aquatic site to fulfill the basic purpose of the

project, providing shelter. *SOP* at 6; *see also Forest Props. v. United States*, 177 F.3d 1360, 1363 (Fed. Cir. 1999) (stating that a housing development is considered a "non-water dependent project"). In *National Wildlife Federation v. Whistler*, 27 F.3d 1341 (8th Cir. 1994), however, the Eighth Circuit upheld the Corps' finding that a project opening a channel to the Mississippi River from a planned residential development was water dependent because the purpose was to provide boat access to the river from the residential development and was not to construct the development itself. Thus, at least one court has accepted the argument that, if an essential purpose of a residential development is to provide residents access to water, the development could be considered water dependent.

In a recent case, a district court in Florida held that mining in wetlands in southeastern Florida in the "Lake Belt" for limestone was not a water dependent activity. *See Sierra Club v. Flowers*, 423 F. Supp. 2d 1273, 1355 (S.D. Fla. 2006). In issuing permits for an industry-wide longterm limestone mining plan, the Corps had determined that the mining was water dependent and thus did not apply the regulatory presumption that there were practicable alternatives. This finding was challenged by the plaintiffs. In court, the government argued that the proposed activity was the extraction of mineral resources located in particular wetlands and thus that it would be meaningless to state that the activity could be carried out elsewhere. The court noted, however, that the Corps had recently found in a similar mining permit matter in Florida that the mining did not need to be located in a special aquatic site to fulfill its basic purpose, which was "develop[ing] a source for limerock." *Id*. at 1354. The court additionally found that the record evidence showed that the proposed mining activity did not require siting in wetlands in order to fulfill its basic purpose, to extract limestone. Accordingly, the court held that the Corps erred in ignoring the presumption that there were practicable alternatives and, initially, remanded the case. In a supplemental order, the court ruled that the permits must be set aside until the Corps could prepare a supplemental environmental impact statement.[2]

b. Consideration of the Applicant's Purpose Required

In evaluating alternatives, the Corps has a duty to take into account the objectives of the applicant's project. *Greater Yellowstone II*, 359 F.3d at 1270. "A competent analysis of alternatives depends upon a clear and accurate statement of the project's purpose, for it is only when the project's statement of purpose is reasonably defined that the alternatives analysis required by the Guidelines can be usefully undertaken by the applicant and evaluated by the Corps." *Flowers*, 423 F. Supp. 2d at 1352. The Fifth Circuit has held that the applicant's purpose is paramount in the alternatives analysis. *Louisiana Wildlife Fed'n, Inc. v. York*, 761 F.2d 1044, 1048 (5th Cir. 1985). According to the Fifth Circuit, "[i]ndeed, it would be bizarre if the Corps were to ignore the purpose for which the applicant seeks a permit and to substitute a purpose it deems more suitable." *Id.* The project purpose, however, cannot be defined overly narrowly so as to constrain the analysis of alternatives. *Whistler*, 27 F.3d at 1346.

The importance of the applicant's purpose and properly defining the purpose is emphasized by a 2006 district court decision involving redevelopment of the Continental Airlines Arena at the Meadowlands Sports Complex. In *Sierra Club v. United States Army Corps of Engineers*, 450 F. Supp. 2d 503 (D.N.J. 2006), the New Jersey Sports and Exposition Authority

[2] In short, the district court vacated the permits until the Corps could prepare a supplemental environmental impact statement because, after taking additional evidence and briefing, the court found that the environmental effects from the mining activities were severe and the Corps failed to abide by its own regulations in originally issuing the permits. The defendants-intervenors limestone mining companies have appealed.

("NJSEA") solicited bids to redevelop the Continental Airlines Arena, which occupied 104 acres of the 684-acre Meadowlands Sports Complex. The Complex also housed Giants Stadium, the Meadowlands Racetrack, and ancillary parking and roadways. In issuing its request for proposals, the NJSEA stated that it wanted to capitalize on existing uses at the Complex and expand the mix of businesses without materially competing with existing businesses. Mills/Mack-Cali was the successful bidder and entered into a Redevelopment Agreement with the NJSEA. Mils/Mack-Cali applied for a Section 404 permit and Section 10 permit to fill 7.69 acres of wetlands on the site for construction of the "Meadowlands Xanadu Redevelopment Project." The Sierra Club and other environmental groups challenged the issuance of the permit, arguing among other things that the Corps improperly defined the basic project purpose too narrowly, which rendered its entire alternatives analysis deficient. The Corps defined the overall project purpose as "redevelop[ing] the Continental Airlines Arena site (allowing for continued use of the Arena Building), as envisioned and authorized by the NJSEA and in conformance with the NJSEA's strategic planning objectives." *Id*. at 525. The Corps further stated that the overall project purpose was based on the NJSEA's request for proposals and reflects the needs of the State of New Jersey as represented by the NJSEA and as defined by the Redevelopment Agreement. The plaintiffs alleged that the project purpose was defined so narrowly as to preclude the consideration of offsite alternatives.

The district court, however, upheld the Corps' definition of the overall project purpose, finding that "courts have upheld location-specific overall project purpose definitions where the specific site was essential to the project purpose." *Id*. (citing *Sylvester v. U.S. Army Corps of Eng'rs*, 882 F.2d 407, 409 (9th Cir. 1989)). The court also found this definition to be consistent with the Corps' own guidance, which provides that "[s]ome projects may be so site-specific . . . that no offsite alternatives could be practicable." *Id.* (citing *Regulatory Guidance Letter 93-02: Guidance on Flexibility of the 404(b)(1) Guidelines and Mitigation Banking*, § 3(a)(ii) (Aug. 23, 1993)). Thus, the court found that the Corps' project purpose definition was not "contrary to law." Additionally, the court found that the definition was well supported by the administrative record. In the record, the Corps recognized that Mills/Mack-Cali had to submit a proposal to redevelop the Continental Airlines Arena site or else its bid would have been rejected. The Corps did note as well that the applicant had evaluated adjacent properties that might allow opportunities for redevelopment of the Arena site but that these properties were either too small or had a greater impact on wetlands. The plaintiffs in the case have filed an appeal with the United States Court of Appeals for the Second Circuit.

In *Great Rivers Habitat Alliance v. United States Army Corps of Engineers*, 437 F. Supp. 2d 1019 (E.D. Mo. 2006), another district court also upheld the Corps' definition of a project purpose in the face of a challenge that the purpose was too narrowly defined. For several years, the City of St. Peters had planned to develop a mixed use area known as Lakeside Business Park, which would include office, warehouse, manufacturing, dining, entertainment, lodging, conference, and recreational uses. The project was located in a floodplain, and to develop it, the City obtained a permit from the Corps to construct a levee; stormwater pumping stations, drainage channels, and detention basins; and roadway improvements. The plaintiffs challenged the issuance of the permit, arguing among other things, that the Corps defined the project's purpose too narrowly and thus improperly excluded alternatives from analysis. The Corps defined the project purpose as "construct[ing] a new levee providing flood protection to a proposed development area known as Lakeside Business Park." *Id.* at 1025. The Corps also determined that certain criteria were "necessary to implement the desired plan," including: (1) be located in the City; (2) have a total area of 1,200 to 1,400 acres; (3) not be located adjacent to substantial residential areas; (4) have a "usable" area of approximately 500 to 800 acres, excluding right-of-way, open space, etc.; and (5) be located on an interstate or major

thoroughfare. The court found that the statement of purpose and criteria came from the City's "Practicable Alternatives Analysis," which was prepared by a consultant to the City.

The court determined that the Corps had a duty to take into account the objectives of the City's proposed project and that those objectives were determined through detailed study prior to applying for a permit from the Corps. The court held that the project purpose was not arbitrarily defined and had support in the record because the city's plans for future growth necessitated a mixed use business park on a large tract of land. The court stated that it could not conclude that the project purpose was defined "in an overly narrow manner as a pretense for excluding other alternatives or artificially constraining the Corps' alternatives analysis;" the court upheld the permitting decision *Id.* at 1027. Other district courts have been similarly deferential to the Corps' permitting decision where the Corps weighed the alternatives against a properly defined project purpose. *See Nw. Bypass Group v. U.S. Army Corps of Eng'rs*, 470 F. Supp. 2d 30, 44-45 (D.N.H. 2007) (denying preliminary injunction and noting that the Corps measured the alternatives against the basic project purpose and finding that the Corps reasonably concluded that there were no practicable alternatives); *Advocates for Transp. Alternatives, Inc. v. United States Army Corps of Eng'rs*, 453 F. Supp. 2d 289, 310-11 (D. Mass. 2006) (finding that the Corps reasonably eliminated alternatives because they did not achieve the project purpose and that, although it was undisputed that other alternatives would have resulted in less environmental impact, the Corps' practicable alternatives analysis was not arbitrary and capricious). One district court has determined that the Corps may rely on another agency to define the project purpose, where that agency, and not the Corps, has the expertise to define the purpose based on the project at issue. *Alliance for Legal Action v. U.S. Army Corps of Eng'rs*, 314 F. Supp. 2d 534, 550 (M.D.N.C. 2004) (finding that the Corps permissibly relied on the Federal Aviation Administration to define the project purpose because the Corps lacked the same level of knowledge of airfield operation and regulation).

By contrast, the district court in the limestone mining case discussed above was not sympathetic to the alleged project purpose. In that case, the Corps stated that the "basic purpose" of the project was "to extract limestone" and the "overall project purpose" was "to provide construction-grade limestone from Miami-Dade County." *Flowers*, 423 F. Supp. 2d at 1354. The court rejected the notion that the project was so "site-specific" that there could be no offsite alternatives, stating that the mining proposed did not need to occur in the specific wetland site. Additionally, the court discussed that a project's purpose "cannot be tailored so as to render the alternatives analysis circular, i.e., using a premise (limestone mining must take place on the miners' land which happen to be wetlands) to prove a conclusion (the project requires siting within the wetlands) that is in turn used to prove the premise." *Id.* at 1356 n.240. The district court's decision that the project was not water-dependent appeared to have been informed in part by its review of another permitting dispute in which the Corps determined that mining activities did not necessarily need to be conducted in wetlands to fulfill their purpose. *See id.* at 1354-55.

In *City of Shoreacres v. Waterworth*, 420 F.3d 440, 449 (5th Cir. 2005), the Fifth Circuit was sensitive to the project's overall purpose when deciding that the Corps had fairly considered, and rejected, available practicable alternatives. Environmental organizations had challenged the Corps' issuance of a Section 404 permit for the construction of the Port of Houston Authority's Bayport Container Terminal. Among other alleged points of error, the organizations challenged the Corps' alternatives analysis under the Guidelines, specifically the Corps' finding that alternatives in Galveston County were not practicable because the Port of Houston Authority could neither spend bond money raised for the terminal outside of Harris County nor condemn property outside Harris County. The plaintiffs argued that the Port of Houston Authority could use revenue proceeds to purchase property outside Harris County. In upholding the Corps'

analysis, the Fifth Circuit observed that building the proposed container terminal in Galveston County would not comport with the Port's "overall project purpose," which the court saw as further expanding Harris County as one of the nation's major ports. *Shoreacres*, 420 F.3d at 448.

Other circuit courts have been similarly cognizant of the need to consider a project's purpose when evaluating whether the Corps has adequately undertaken an alternatives analysis. *See, e.g., Greater Yellowstone II*, 359 F.3d 1257; *Utahns for Better Transp. v. United States Dep't of Transp.*, 305 F.3d 1152 (10th Cir. 2002) ("[T]he Applicant and the [Corps] are obligated to determine the feasibility of the least environmentally damaging alternatives that serve the basic project purpose."). In *Greater Yellowstone II*, the applicant applied for a Section 404 permit to fill 1.45 acres of wetlands to construct an upscale housing development and golf course on ranch land. Part of the project's purpose was to provide income to the ranch that was being divided to develop the project so that ranch operations could continue. *Greater Yellowstone II*, 359 F.3d at 1270. The Corps' 404(b)(1) alternatives analysis evaluated five alternatives, including a nine-hole golf course and modified golf course designs. *Id.* at 1266. The Corps found that the nine-hole course was not practicable because the resulting reduced value in the residences and lower demand for such a course would not cover the expenses of operating the course or provide the necessary financial support to the ranch. *Id*. The Corps found the other alternatives not practicable because they did not comply with county local development regulations. *Id.* While the Tenth Circuit questioned whether more ranch land could be allocated to the golf course development to allow for a different design without affecting the ranching operations, the court nonetheless upheld the Corps' alternatives analysis.

c. "Availability" of Sites Not Owned by the Applicant

In determining whether an alternative is "available" and thus practicable, the Corps may consider sites not owned by the applicant, under certain conditions. The Guidelines provide: "If it is otherwise a practicable alternative, an area not presently owned by the applicant which could reasonably be obtained, utilized, expanded, or managed in order to fulfill the basic purpose of the proposed activity may be considered." 40 C.F.R. § 230.10(a)(2). Thus, the alternative must be practicable in terms of cost and logistics, be reasonably obtainable, and fulfill the basic purpose of the activity.

In *Shoreacres*, the Fifth Circuit held that to demonstrate that an alternative site not owned by the applicant is "reasonably obtainable," there must be more than "a mere, theoretical possibility of acquiring the alternative site." *Shoreacres*, 420 F.3d at 449. The plaintiffs had alleged that the Port could use operating revenue to build the container terminal outside of Harris County. The Fifth Circuit observed that there was no evidence in the record that the Port had any surplus operating revenues or that even if it did, that it would be sufficient to cover the cost. *Id.* at 448-49. The court held that the theoretical possibility that the Port could purchase property in Galveston County did not constitute a showing that the alternatives in Galveston County were reasonably obtainable. The court also held that the Shoal Point site in Galveston County was not "available" because the Corps had issued a permit for another party to build a container terminal at that site. The court concluded that the Corps was not arbitrary and capricious in finding that the Galveston County sites were not practicable.

In the *Sierra Club* case concerning the redevelopment of the Meadowlands Complex, the court held that the Corps reasonably concluded that the availability of proposed alternative sites was "at best speculative" in part because of limitations imposed by leases held by the Jets and Giants sports franchises and because of the NJSEA's directive that all bidders on the project limit development to the Continental Airlines Arena site. *Sierra Club*, 450 F. Supp. 2d at 531. Again,

where alternatives cannot be reasonably utilized, courts tend to uphold the Corps' rejection of them.

d. Cost as a Consideration in Practicability

The Guidelines specifically enumerate cost as among the considerations to be factored into whether an alternative is practicable. 40 C.F.R. § 230.10(a)(2). In the regulatory preamble to the Guidelines, the EPA stated that it was its intent "to consider those alternatives which are reasonable in terms of the overall scope/cost of the proposed project" and that if "an alleged alternative is unreasonably expensive to the applicant, the alternative is not 'practicable.'" 45 Fed. Reg. 85339, 85343 (Dec. 24, 1980). The Field Memo states that the determination of what constitutes an unreasonable expense should consider "whether the projected cost is substantially greater than costs normally associated with the particular type of project." Generally, however, as the scope and cost of the project increases, the level of analysis of alternatives will increase. *See* Field Memo.

Following the Guidelines, the Corps has viewed cost as an important consideration in evaluating whether an alternative is practicable. In *Greater Yellowstone II*, in addition to considering whether a nine-hole course or other modified course would provide revenue necessary to support the ranching operations, the Corps conducted an independent analysis of other real estate sites in the market area and concluded they were not practicable because while they would involve similar impacts to wetlands, they would make the project much costlier. *Greater Yellowstone II*, 359 F.3d at 1266-67. Similarly, in *Great Rivers*, alternatives were rejected as being too costly, while in the *Sierra Club* case concerning redevelopment of the Meadowlands, the Corps found that "downsizing would undermine the economics of the project." *Great Rivers*, 437 F. Supp. 2d at 1029; *Sierra Club*, 450 F. Supp. 2d at 530.

Other cases show similar levels of consideration, and courts have sided with the Corps' permitting decision when cost was among the factors in the decision. In *Bering Strait Citizens for Responsible Resource Development v. U.S. Army Corps of Engineers*, 2008 U.S. App. Lexis 37, *2 (9th Cir. Jan. 3, 2008), at issue was a permit issued for gold mining in Alaska. One of the points of dispute was whether the Corps had adequately considered practicable alternatives. The court stated that "the Corps determined that all alternatives were impracticable because the nearby uplands were too steep to stabilize the facilities, because the alternative designs would require the destruction of higher value wetlands, or would expand the project's footprint, or because alternatives were cost prohibitive or undesirable for other reasons." *Id*. at *15-16. The Ninth Circuit held that this rationale was acceptable under the CWA. In *Alliance for Legal Action v. U.S. Army Corps of Engineers*, the plaintiffs challenged an airport authority and the Corps over a permit that allowed the discharge of fill into wetlands for the construction of a new runway. 314 F. Supp. 2d at 534. The plaintiffs alleged that practicable alternatives were not considered, and the district court sided with the Corps, determining, with respect to off-site alternatives, that an evaluation of such alternatives was not necessary because off-site airports were not practicable in terms of cost. *Id*. at 546. In *Pamlico-Tar River Foundation v. U.S. Army Corps of Engineers*, the plaintiffs also alleged that the Corps had failed to consider practicable alternatives. 329 F. Supp. 2d 600, 603 (E.D.N.C. 2004). At issue was a permit issued to a phosphate mining company for the discharge of fill into approximately 1,200 acres of wetlands. The district court determined that the Corps did consider available alternatives but properly rejected certain of them because they were not "cost effective." The district court observed that the alternative that was ultimately selected cost the mining company $66.1 million more than the company's preferred alternative. The district court was persuaded that the Corps selected the least environmentally damaging practicable alternative.

e. Logistics as a Consideration in Practicability

Whether an alternative is available and capable of being done from a logistical standpoint also is a factor in whether an alternative is "practicable." 40 C.F.R. § 230.10(a)(2). In the Meadowlands case, for example, the Corps rejected several alternatives from a logistical standpoint, and the court held the Corps' alternatives analysis, taking these logistical considerations into account, was reasonable. *Sierra Club*, 450 F. Supp. 2d at 529. Specifically, the Corps rejected alternatives that would require taller buildings because of logistical constraints associated with deliveries and the provision of services. *Id*. at 529-30. The Corps also rejected alternative parking configurations as not logistically feasible and rejected component reconfiguration alternatives as for logistical reasons because they would cause severe traffic congestion. *Id.* at 530-31.

In *Shoreacres*, the Fifth Circuit held that alternative sites in Galveston County were not "logistically feasible" alternatives because the Port of Houston intended to fund the project with bond funds and it could not spend its bond funds outside of Harris County. *Shoreacres*, 420 F.3d at 448. The court also noted that siting the project at the Galveston County sites would needlessly complicate the logistics of "maritime commerce through Harris County because the shipping industry would have to move passengers and goods through locations that are comparatively remote from metropolitan Houston." *Id.* Due to the logistical hurdles, the court agreed with the Corps that the alternatives were not practicable. *Id*.

2. The Alternative Must Have a Lesser Impact on the "Aquatic Ecosystem"

In addition to being practicable, an alternative is a "less environmentally damaging practicable alternative" if it has less adverse impact on the aquatic ecosystem. 40 C.F.R. § 230.10(a). The term "aquatic ecosystem" means "waters of the United States, including wetlands, that serve as habitat for interrelated and interacting communities and populations of plants and animals."[3] *Id.* § 230.3(c).

In a recent district court case, the district court agreed with the Corps' weighing of the effects to the aquatic ecosystem where the Corps determined that it was more important to preserve a drinking water source than a trout stream. *Audubon Naturalist Soc'y of the Cent. Atlantic States v. U.S. Dep't of Transp.*, -- F. Supp. 2d -- , 2007 WL 3299255, at *32 (D.Md. November 8, 2007). Under dispute was a highway project (the Inter-County Connector or "ICC") spanning two Maryland counties. The plaintiffs challenged the issuance of the 404(b) permit, arguing, *inter alia*, that the Corps improperly evaluated the effects to the aquatic resources. The district court noted that the Corps considered various alternatives that would satisfy the purpose and need statement and that the Corps concluded that none would completely avoid impacts to aquatic resources. *Id.* The court observed that the Corps' selected the alternative considered to be the least environmentally damaging practicable alternative primarily based on the relative importance of the two highest quality aquatic resources that would be affected by the ICC—the trout stream and the Rocky Gorge Reservoir. *Id*. The Corps found that the Rocky Gorge Reservoir was more important to protect because of its drinking water supply to approximately 600,000 people. *Id.* The district court agreed and, after addressing other points of contention, sided with the federal agencies that the ICC should move forward. *Id*. at *60.

[3] Because the term is defined as "waters of the United States," it could be argued that it only refers to jurisdictional waters, so that when comparing impacts at alternative sites with the proposed site, only impacts to jurisdictional waters may be evaluated and compared. If a project involves the filling of wetlands as well as other kinds of waters, the impacts on both must be considered and compared.

Impacts on the "aquatic ecosystem" may include more than just impacts to the water itself. In *Greater Yellowstone II*, the applicant argued that impacts to the aquatic ecosystem did not include impacts on bald eagles because the bald eagles did not depend on the wetlands for sustenance, although the eagles did depend on a river adjacent to the wetlands. *Greater Yellowstone II*, 359 F.3d at 1273 n.16. However, the court observed that the Guidelines, in the provisions addressing endangered and threatened species, acknowledge that "nesting areas, protective cover, adequate and reliable food supply, and resting areas for migratory species" may be elements of the "aquatic habitat" that are "particularly crucial to the continued survival of some threatened and endangered species." *Id.* at 1273 n.15 (citing 40 C.F.R. § 230.30(b)(2)). Thus, the court found that the Corps' alternatives analysis should have, and in fact did, take into account the impact of the proposed development "as a whole on the bald eagle nesting and foraging habitat." *Id. Greater Yellowstone II* indicates that some courts have adopted a broad view of the phrase "aquatic ecosystem," as suggested by the Guidelines.

3. The Alternative Must Not Have Other Significant Adverse Environmental Consequences

Finally, an alternative is a "less environmentally damaging practicable alternative" as long as it does not have "other significant adverse environmental consequences." 40 C.F.R. § 230.10(a). Other, non-aquatic ecosystem impacts could include, for instance, air emission impacts. The Guidelines do not appear to contemplate a comparison between the "other" environmental impacts at the alternative site and the proposed site; rather, if the alternative site has any other significant impacts, even if the proposed site has the same impacts, the alternative is not the least environmentally damaging practicable alternative. One court has described this provision as the avenue through which the Corps may consider "public environmental considerations which remain part of the Corps' permitting responsibility." *Lakewood Associates v. United States*, 45 Fed. Cl. 320, 332 (Fed. Cl. 1999).

C. Consideration of Compensatory Mitigation in the Alternatives Analysis

The Mitigation MOA between the Corps and EPA was written as a guide to field personnel in order to address the type and level of mitigation which demonstrates compliance with the Guidelines. Mitigation includes avoiding impacts, minimizing impacts, rectifying impacts, reducing impacts over time, and compensating for impacts. Compensatory mitigation includes actions such as restoring existing degraded wetlands or creating new man-made wetlands. The Mitigation MOA provides that, in the alternatives analysis, when evaluating the least environmentally damaging practicable alternatives, "[c]ompensatory mitigation may not be used as a method to reduce environmental impacts."

In discussing mitigation in general, courts have had mixed responses with regard to the function of mitigation in the alternatives analysis. At least one court has held that the Corps may consider mitigation measures in the determination of the least environmentally damaging practicable alternative. *See Town of Norfolk*, 968 F.2d at 1449 ("We hold that it is reasonable for the Corps to consider, under the practicable alternatives analysis, the functional value of the wetland to be impacted and the mitigation measures proposed to avoid secondary impacts."). By contrast, another court has stated, "While mitigation efforts are required, they should be considered after the Corps is satisfied that no practicable alternatives are available to the applicant." *Great Rivers*, 437 F. Supp. 2d at 1031 n.23. In *Shoreacres*, the plaintiffs alleged that the Corps violated the Mitigation MOA because the Corps took into account the significant mitigation offered by the applicant when the Corps evaluated the least environmentally damaging practicable alternative. *Shoreacres*, 359 F.3d at 447 n.5. The Fifth Circuit did not directly

address the plaintiffs' point of contention, but it pointed out that EPA, the other party to the MOA, was involved in the decisionmaking process and ultimately approved the mitigation plan, as did the other federal and state resource agencies. *Id.* The court appeared persuaded by this "unanimous approval" by the other agencies of the mitigation plan as support that the Corps' permitting decision should be upheld. *Id.*

D. Reliance on the NEPA Alternatives Analysis

The Guidelines provide that for actions subject to the National Environmental Policy Act ("NEPA"),[4] the NEPA alternatives analysis may form the basis of the 404(b)(1) alternatives analysis. *Id.* § 230.10(a)(4). Consequently, where a savings of time and resources follow, agencies have combined the NEPA and 404(b)(1) alternatives analysis. *See, e.g., Audubon Naturalist Soc'y*, 2007 WL 3299255, at *29. If the NEPA alternatives analysis is not sufficiently detailed, however, it may be necessary to supplement the NEPA documents or reevaluate alternatives. *Id.*; *Utahns*, 305 F.3d at 1163; *Town of Norfolk*, 968 F.2d at 1448.

While the NEPA alternatives analysis may form the basis of the 404(b)(1) alternatives analysis, the purpose and effect of these two analyses are different. Under NEPA, the agency is required to identify its environmentally "preferred" alternative, a process which does not involve a practicability analysis. 40 C.F.R. § 1502.14(e). Because NEPA is a procedural statute only, the agency is not required to "choose" the environmentally preferred alternative. *Utahns*, 305 F.3d at 1186-87. Under the Guidelines, however, if a less environmentally damaging practicable alternative to the proposed discharge is identified, a Section 404 permit cannot be issued for the proposed discharge. 40 C.F.R. § 230.10(a); *Utahns*, 305 F.3d at 1187 ("CWA prevents the COE from issuing a § 404(b) permit if there is a less damaging practicable alternative.").

E. Other Requirements of the Guidelines

1. General Restrictions

In addition to requiring an alternatives analysis, the Guidelines impose other requirements and restrictions on the Corps's ability to issue a Section 404 permit. For instance, under Section 230.10(b) of the Guidelines, a discharge cannot be permitted if it:

(1) violates state water quality standards;

(2) violates toxic effluent standards;

(3) jeopardizes endangered or threatened species; or

(4) violates protections on marine sanctuaries.

40 C.F.R. § 230.10(b).

2. No Significant Degradation

Additionally, a discharge of dredged or fill material will not be permitted if it will cause or contribute to the "significant degradation" of waters of the United States. *Id.* § 230.10(c). In

[4] NEPA requires federal agencies to evaluate the environmental impacts of all major federal actions significantly affecting the quality of the human environment. 42 U.S.C. § 4332(C).

making this determination, the Corps evaluates a wide range of issues set forth in the Guidelines. *Id*. The Corps evaluates impacts on the physical, chemical, and biological aspects of the aquatic ecosystem, as well as impacts on special aquatic sites and effects on human use characteristics. *See* 40 C.F.R. Subparts C, D, E, F, and G.

In *Shoreacres*, the plaintiffs argued that shipping traffic resulting from the construction of the Bayport Terminal would lead to the eventual deepening of the Houston Ship Channel, which would cause significant degradation. *Shoreacres*, 420 F.3d at 449. The Fifth Circuit, however, found that Section 230.10(c) did not require the Corps to consider the effects of the terminal once it begins operations. *Id.* The court noted, rather, that the question under Section 230.10(c) is whether the *discharge* itself will cause or contribute to significant degradation. *Id.* The deepening of the Houston Ship Channel would not occur as a result of the discharge being permitted for the construction of the Bayport Terminal. *Id.* Rather, it would occur, if ever, as the result of a separate project. *Id.* Therefore, the court held that the Corps was not arbitrary and capricious in finding that it was not required to consider any future deepening of the Houston Ship Channel under the Guidelines. *Id.* at 449-50.

In *City of Olmstead Falls v. EPA*, 435 F.3d 632 (6th Cir. 2006), the Corps issued a permit for a runway expansion project at the Cleveland Hopkins airport, which required the filling and culverting of 5,400 linear feet of a creek, the filling of 2,500 linear feet of tributaries to the creek, and the filling of 87.85 acres of wetlands. The applicant was required to implement significant mitigation, including purchasing and restoring 265 acres of wetlands, preserving 89 acres of wetlands and wetlands buffers, and preserving or restoring over 27,000 linear feet of streams. *See http://www.epa.state.oh.us/pic/nr/2001/april/clevehop.html*. Opponents of the project challenged the project on numerous fronts, including on the ground that the issuance of the permit would cause significant degradation of the aquatic ecosystem. The Sixth Circuit held that, in light of the significant compensatory mitigation, the Corps' determination that the discharge would not cause or contribute to significant degradation was not arbitrary and capricious. Under the facts of this case, compensatory mitigation was used in determining whether a proposed discharge will cause significant degradation of waters of the United States.

3. Mitigation

The Guidelines further provide that a discharge may not be permitted unless "appropriate and practicable steps" have been taken to minimize potential adverse effects of the discharge on the aquatic ecosystem. 40 C.F.R. § 230.10(d). The Corps and EPA have entered into the MOA on Mitigation, which sets forth guidance on mitigation. Under the Guidelines and this MOA, a "sequence" of mitigation is to be followed, whereby impacts are avoided to the maximum extent practicable, then those impacts that cannot be avoided are minimized, and finally the impacts are compensated through mitigation. This "avoid, minimize, compensate" sequencing is generally followed by the agencies. The "avoidance" step is handled through the "least environmentally damaging practicable alternative" analysis. The Guidelines describe ways to "minimize" unavoidable impacts, although the agencies do not view these ways as exclusive. *See id.* Subpart H (40 C.F.R. §§ 230.70-.77).

The MOA sets forth the agencies' preferences on compensatory mitigation. Under the MOA, the agencies prefer on-site mitigation, but if it is not practicable, off-site mitigation should be performed in the same geographical area (in close proximity and, to the extent practicable, in the same watershed). Additionally, the MOA calls for a consideration of the functional values lost by the discharge and expresses a preference for in-kind mitigation, as well as a preference for wetland restoration over creation. For impacts to wetlands, the MOA calls for no net loss of

functions and values and states that a minimum of a 1:1 acreage replacement ratio may be used as a surrogate for no net loss. The ratio may be higher, however, where the impacted wetlands are of high functional value and the replacement wetlands are of lower functional value, or the likelihood of success of the mitigation project is low. The MOA also states that mitigation banking may be an acceptable form of compensatory mitigation. In 1995, EPA, the Corps, and other federal agencies issued guidance on the establishment, use, and operation of mitigation banks. *See* 60 Fed. Reg. 58605 (Nov. 28, 1995). EPA has issued other guidance on mitigation, including on in-lieu-fee mitigation. *See* http://www.epa.gov/owow/wetlands/guidance/.

Generally, the Corps is entitled to deference in the selection of the appropriate mitigation for a permitted discharge. *See Olmstead Falls*, 435 F.3d at 637-38; *Shoreacres*, 420 F.3d at 447 n.5. And, a recent Ninth Circuit case indicates that, even when a mitigation plan is not fully developed, courts may still find that the Corps has undertaken its obligations under the CWA and 40 C.F.R. § 230.10. In *Bering Strait Citizens for Responsible Resource Development v. U.S. Army Corps of Engineers*, which addressed a 404 permit for gold mining in Alaska, the plaintiffs had alleged that the mitigation measures provided in the permit were insufficient because some of the measures had not been developed. Specifically, one of the permit conditions required the permit applicant to meet with the Corps within three months of permit issuance to explore additional mitigation opportunities. 2008 U.S. App. Lexis 37, at *23. The court noted that it had not yet "squarely addressed the question of whether plans to develop additional mitigation measures in the future can satisfy the CWA's mitigation requirements." *Id*. The court reasoned that, in a related context, it had held that prospective mitigation measures could satisfy NEPA's mitigation requirements when the plans were developed to a reasonable degree. Deciding that the undeveloped mitigation measures at issue were only part of the larger mitigation plan, the court held that the Corps had made a genuine effort to develop a mitigation plan. The court upheld the Corps' actions.

Even so, two recent district court cases suggest that courts do scrutinize mitigation measures. In *Environmental Defense v. U.S. Army Corps of Engineers*, 515 F. Supp. 2d 69, 81 (D.D.C. 2007), the district court held that the Corps' proposed mitigation measures for a Mississippi River flood control project did not offset the project's impacts on fish and waterfowl, in violation of § 230.10(d) of the Guidelines.[5] Specifically, the court observed that the proposed mitigation would eliminate accessible habitat and substitute mitigation sites that would be inaccessible to spawning fish. *Id*. at 80. The court was critical of the Corps' use of "discounted habitat quantity values for habitat loss," which led the Corps to exaggerate the extent of the proposed mitigation for the fisheries impacts. *Id*. at 79. The court further criticized this act and others discussed by the court as "results-oriented decision-making" and concluded that the mitigation proposal was arbitrary and capricious. *Id*. at 85.

In *Ohio Valley Environmental Coalition v. U.S. Army Corps of Engineers*, the district court considered four permits issued to fill headwater streams in conjunction with mountaintop removal coal mining. 479 F. Supp. 2d 607, 614 (S.D.W.V. 2007). The court determined that the Corps had not adequately assessed the full impacts of destroying headwater streams and that, because the Corps did not have a complete understanding of the impact, the Corps' decision that the mitigation measure described in the mitigation plan alleviated that impact consequently failed. *Id*. at 636, 643. The court further determined that the mitigation measures were insufficient on

[5] In this case, it was the Corp's activities that were subject to the Guidelines, as opposed to the Corps' reviewing a 404(b) permit application by a private party. As the district court stated, the Corps' Record of Decision serves the same purpose as the 404(b) permit; it is the document that a court reviews for arbitrary or capricious action. *Envtl. Defense*, 515 F. Supp. 2d at 77 n.4.

other grounds because they lacked a reasoned basis. *Id*. at 646. Specifically, the court was concerned that the Corps failed to describe how the measures would offset the impacts. *Id*.

In March 2006, the Corps and EPA jointly issued a rule governing "Compensatory Mitigation for Losses of Aquatic Resources." 71 Fed. Reg. 15520. Compensatory mitigation is intended to offset environmental losses of unavoidable impacts associated with a 404(b) permit. The proposed regulation is intended to address not just mitigation for wetlands loss, but for all types of aquatic resources that may be affected by 404(b) permitting activities. The proposed rulemaking is fairly extensive and proposes to modify Title 33 of the CFR (related to the Corps' regulations) and Title 40 of the CFR (related to the EPA regulations); the modifications of both sections include similar provisions. The proposed rule directs the district engineer to determine what compensatory mitigation is required "based on what is available, practicable, and capable of compensating for the aquatic resource functions that will be lost." The amount of compensatory mitigation must be sufficient to replace lost aquatic functions.

Under the proposed rule, compensatory mitigation generally should be located within the same watershed and where it is most likely to replace lost aquatic functions; the proposed rulemaking terms this a "watershed approach to compensatory mitigation." The watershed approach emphasizes the strategic selection of mitigation sites in order to improve the quality and quantity of aquatic resources within watersheds. If the watershed approach is not practicable for a project, then the district engineer may consider off-site and in-kind alternatives. If off-site and in-kind alternatives are not practicable, then the district engineer may consider off-site and out-of-kind mitigation opportunities. The proposed rulemaking specifically permits the use of mitigation banks; credits from an approved mitigation bank may be purchased, if the impacts are located within the service area of the bank. The rulemaking also approves of preservation projects that are instituted through legal instruments such as conservation easements and title transfers to a land trust.

The proposed rulemaking requires applicants to submit a mitigation plan to the district engineer. In addition to a description of the mitigation project and the reasons for the site selection, the mitigation plan must also contain performance standards to be used to evaluate whether the project is achieving its objectives. Under the proposed rulemaking, the mitigation projects should be designed to be self-sustaining, once the performance standards have been achieved. Until the time at which the standards are achieved, the proposed rulemaking provides for monitoring reports to assess the development of the mitigation project. If the monitoring reports reveals that the mitigation is not progressing as designed, then the district engineer will require remediation measures.

Finally, the proposed rulemaking details requirements for mitigation banks and in-lieu fee mitigation programs. Mitigation banks must be approved in order to be used for compensatory mitigation. Interagency Review Teams ("IRTs") review the documentation for the establishment and managements of the banks, and the proposed rulemaking sets forth requirements for operating procedures of the banks. Mitigation banks with banking instruments dating prior to 90 days after publication of the final rule will not be subject to the new rules. Regarding in-lieu fee programs, 90 days after publication of the final rule, district engineers will not authorize new in-lieu fee programs to provide compensatory mitigation for 404(b) permits. Instead, existing in-lieu fee programs must reconstitute themselves as a mitigation bank, consistent with the mandates of the new regulations.