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Wetland Regulation and the Wetland Banking Solution for the Sacramento-San Joaquin Valley: The Effect on Fresno County Development

by

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WETLAND REGULATION AND THE WETLAND BANKING SOLUTION FOR THE SACRAMENTO-SAN JOAQUIN VALLEY: THE EFFECT ON FRESNO COUNTY DEVELOPMENT

Ann Bennett

INTRODUCTION

The majority of land development sites in the Sacramento-San Joaquin Valley[1] and throughout the country consist of land that is considered wetland, as defined by the United States Army Corps of Engineers (Corps).[2] Wetlands are protected by state and federal laws intended to prevent the continual depletion of unique and valuable wildlife habitat by development and other land uses.[3] The ultimate goal is to allow no net loss of wetland.[4] A loss of wetland is recognized when wetland is altered due to developmental and agricultural activities.[5] The goal to preserve our existing wetland is to be achieved by regulations that prevent further development or by the creation of comparable wetland to balance the loss.[6] When development requires

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[1] CAL. FISH & GAME CODE § 1779.5 (West 2002) ("Sacramento-San Joaquin Valley" means the Central Valley region, as defined in subdivision (g) of Section 13200 of the Water Code." *See also* CAL WATER CODE § 13200 (g) (West 2002) "Central Valley region, which comprises all basins including Goose Lake Basin draining into the Sacramento and San Joaquin Rivers to the easterly boundary of the San Francisco Bay region near Collinsville.").

[2] 33 C.F.R § 328.3(b) (1999).

[3] EPA OFFICE OF WETLAND PROTECTION, HIGHLIGHTS OF SECTION 404, p. 1 (Oct. 1989).

[4] Memorandum of agreement between the Environmental Protection Agency and the Department of the Army concerning the determination of mitigation under the Clean Water Act Section 404(b)(1) guidelines, 55 Fed. Reg. 9210 (March 12, 1990).

[5] 55 Fed. Reg. 9210 (March 12, 1990).

[6] *Id.*

the filling in of wetland,[7] the developer must assess the possible environmental loss and prepare a mitigation plan either to avoid the loss or recreate that habitat.[8]

While wetland mitigation and wetland regulation has been the subject of many writings, there has been very little assessment of the effect on the Fresno County area. Wetland mitigation laws may be the only effective means of slowing the rapid development and reducing the irreversible destruction of natural habitats in the Fresno County area. Wetland banking, which allows developers to buy preserved habitat, offers a valuable option to isolated and sometimes weak on-site mitigation efforts.[9] Wetland banking is also, perhaps, the best solution for allowing development while preserving natural wetland habitat.[10] This is important in the Fresno area where development has continued steadily and a wetland banking solution has not yet been implemented.[11] This comment assesses California's wetland regulation laws and discusses their effect on development projects locally, as well as the effect it will have on the future of Fresno County's valuable wetlands. This comment also explores plausible solutions worthy of pursuit.

I. FEDERAL STATUTES AND REGULATIONS GOVERNING WETLANDS

Most of this country's wetland regulations are governed at the federal level. Wetlands are governed by the Corps under the authority of the Clean Water Act[12] and the Rivers and Harbors Act[13] which regulate "dredge or fill material into navigable waters."[14] Navigable waters are defined as:

> the waters of the United States, including territorial seas. The term 'territorial seas' means the belt of the seas measured from the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters, and extending seaward a distance of three miles.[15]

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[7] 33 U.S.C. §1344(a)-(f) (1999).

[8] 40 C.F.R. § 230.10(d) (1999).

[9] CAL. FISH & GAME CODE § 1776(c) (Deering 1999).

[10] EPA OFFICE OF WETLAND PROTECTION, *supra* note 3.

[11] Barbara De Lollis, *Conservation Bank Transaction May Save Shrinking Wetlands,* FRESNO BEE, Dec. 7, 1996, at A14.

[12] 33 U.S.C. §§ 1251-1284 (1979).

[13] 33 U.S.C. § 403 (1977).

[14] David M. Ivester, *Guide to Wetlands Regulation,* 1 No. 3 LAND USE FORUM 198 (1992).

[15] 33 U.S.C. § 1362(7)(8) (1999).

The federal government gives the Corps statutory authority, specifically under Title 33 of the United States Code, to govern the wetland filling permit process and to determine the projects that will be permitted when navigable waters will be altered.[16] The federal government has such authority under the Commerce Clause of the United States Constitution.[17] The Commerce Clause is invoked with the justification that the government is regulating navigable waters used for interstate commerce.[18] The federal government was originally able to extend its reach to include wetland areas that are separate from navigable waters by reasoning that inland wetlands "provide critical habitat for many important species of fish and wildlife."[19] The extension of this broad reach of the Commerce Clause, allowing the government to include wetlands that are not connected or adjacent to navigable bodies of water, originated when the court in *Missouri v. Holland*[20] held that the Migratory Bird Treaty Act was constitutional.[21] Migratory birds, "were of great value as a source of food and in destroying insects injurious to vegetation, but were in danger of extermination through lack of adequate protection."[22]

The Supreme Court later confirmed the government's broad power to regulate wetland and the importance of this regulation in *United States v. Riverside Bayview Homes, Inc.*[23] In *Bayview Homes*, the Corps was required to determine the reasonableness of the definition and scope of navigable waters which included wetlands adjacent to, but not regularly flooded by, rivers and streams.[24] The Court determined that the Corps' definition was reasonable by examining the language, policies, and legislative history of the Clean Water Act.[25] The issue was presented when the Corps filed to enjoin landowners from filling eighty acres of wetland in preparation for development without a permit issued by the Corps.[26] The Corps argued that wetland property not connected to a navigable body of water was within the federal government's power to regulate and was defined as:

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[16] 33 C.F.R. § 322.5 (1999).

[17] U.S. CONST. art. III, § 8.

[18] 33 U.S.C. § 1344 (1999) (see Notes of Decision following statute, note 1).

[19] EPA OFFICE OF WETLAND PROTECTION, *supra* note 3.

[20] Missouri v. Holland, 252 U.S. 416, 435 (1920).

[21] *Id.*

[22] *Id.* at 431.

[23] United States v. Riverside Bay View Homes, Inc., 474 U.S. 121 (1985).

[24] *Id.* at 126.

[25] Clean Water Act of 1977, as codified in 33 U.S.C. §1251-1284 (1979).

[26] *See* Riverside Bay View Homes, Inc., 474 U.S. at 124.

> those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.[27]

The lower court had determined that the landowner's property was not within the Corps' jurisdiction since the inland property did not actually become wetland because of flooding from a navigable body of water.[28] The Supreme Court found this determination to be too narrow of a reading of the Corps' definition because it had been expanded in 1975.[29] The redefinition now includes:

> not only actually navigable waters, but also tributaries of such waters, interstate waters and their tributaries, and nonnavigable, intrastate waters whose use or misuse could affect interstate commerce.[30]

Congress enacted the Clean Water Act as part of the Federal Water Pollution Control Act that was to be a comprehensive means to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[31] Congress recognized that wetlands are important because they actually filter and purify water as it drains into neighboring bodies of water.[32] Wetlands also prevent erosion and flooding and provide habitat for aquatic species important to the food chain.[33] The court found that Congress indicated its support of a comprehensive jurisdiction over national waters when it rejected measures to curb the Corp's jurisdiction.[34]

Federal authority of the Corps is gained through the government's interest in preserving habitat for endangered species through the Endangered Species Act (ESA).[35] The ESA prohibits the Corps from issuing a permit when it would jeopardize the continued existence of a threatened species.[36]

The Corps' wetland regulatory program has two components: the

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[27] *Id. See also* 33 C.F.R. § 328.3 (1999).

[28] *See* Riverside Bay View Homes, *supra* note 23, at 125.

[29] *See* Riverside Bay View Homes, *supra* note 23, at 123.

[30] *Id.*

[31] 33 U.S.C. § 1251 (1999).

[32] 33 C.F.R. § 320.4(b)(2)(vii) (1985); see *also* Riverside Bay View Homes, Inc., 474 U.S. at 134.

[33] 33 C.F.R. § 320.4(b)(2)(i) (1985).

[34] *See* Riverside Bay View Homes, *supra* note 23, at 137.

[35] Endangered Species Act of 1973, as codified in, 16 U.S.C. § § 1531-1544 (1988).

[36] David M. Ivester, *supra* note 14, at 197.

permit process and the enforcement process.[37] The permit process is the preliminary stage during which the landowner requests permission to proceed with the project that will alter wetland.[38] The second component is the enforcement process during which the Corps will prevent the landowner from altering wetland without a permit.[39]

A. The Permit Process

The Corps has the responsibility of regulating the permit process. This process requires the landowner to apply for a filling permit.[40] The Corps allows a notice and comment period to give those concerned people an opportunity to give their input about the planned project prior to the issuance of a permit.[41]

The Corps' permit process assesses two areas of the applicant's project. First the Corps must consider the possible adverse impacts to the environment.[42] The Corps follows the guidelines of section 404(b)(1) of the Clean Water Act, which set forth specific criteria for evaluation of the environmental effects of filling or dredging on wetland.[43] After the environmental impact assessment, the Corps does a public interest balancing test.[44] The Corps considers whether the project will be in the interest of the public or contrary to that interest.[45] The factors considered include "aesthetics, recreation, historic values, economics, water supply, water quality, energy needs and flood damage prevention."[46]

There are several requirements for getting a permit to fill wetland. One requirement is that there be no practical alternative to filling in that particular wetland area.[47] Another is that filling in the alternative area of development would create greater environmental problems.[48] The Corps assumes that there are always alternatives unless the project is water dependent.[49] Discharge is prohibited if it would violate laws

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[37] 33 U.S.C. §§ 1319, 1341-1342 (1999).

[38] 33 U.S.C. § 1341 (a)(1) (1999).

[39] 33 U.S.C. § 1319 (a)(1) (1999).

[40] 33 U.S.C. § 1344(a) (1999).

[41] 33 U.S.C. § 1341(a)(2) (1999).

[42] 33 U.S.C. § 1344(c) (1999).

[43] 404(b)(1) Clean Water Act 40 C.F.R 230 (2000); *see also* 46 Fed. Reg. 7644 (2000); *see also* Ivester, *supra* note 14, at 201.

[44] EPA OFFICE OF WETLAND PROTECTION, *supra* note 3, at p 4.

[45] 33 U.S.C. § 1341(a)(2) (1999).

[46] EPA OFFICE OF WETLAND PROTECTION, *supra* note 3, at 4.

[47] 40 C.F.R. § 230.10(a) (2000).

[48] *Id.*

[49] 40 C.F.R. § 230.10(a)(1) (2000).

such as water quality regulations, the Endangered Species Act, or toxic effluent standards.[50]

The Environmental Protection Agency (EPA) and the Corps administer section 404 of the Clean Water Act.[51] This section of the Clean Water Act covers all waters of the United States.[52] Most importantly, in the Fresno County area, wetlands are

> those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.[53]

The Clean Water Act specifically regulates dredge or fill materials that are used to turn a wetland into dry stable ground for development.[54] Wetlands have needed increasing protection because over the last 200 years, half of the wetlands in the United States have been lost to farming, development, mining and forestry.[55]

B. Enforcement of the Permit Requirements

The EPA and the Corps share the enforcement process.[56] Once the permit process assessment has been completed, the EPA, by its authority under the Clean Water Act, may prevent filling or dredging of an area where it will have a negative impact.[57] Aside from the permit process, the EPA may also completely restrict filling specific areas even before anyone considers developing the area.[58] The EPA and the Corps work together to assess permit issues.[59] If a dispute arises between the two agencies, they communicate and resolve them through a process using a Memorandum of Agreement.[60] This agreement allows the agencies to discuss areas where they are not in agreement. It also allows for an appeals process where by the EPA Assistant for Water asks the Army Assistant Secretary for Civil Works to pass the permit

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[50] 40 C.F.R. § 230.10(b) (2000).

[51] Clean Water Act, 55 Fed. Reg. § 9210 (1990).

[52] 33 U.S.C. § 1362(7) (2000).

[53] 33 C.F.R. § 328.3(b) (1999).

[54] EPA Office of Wetland Protection, *supra* note 3, at 2.

[55] *Id.*

[56] Ivester, *supra* note 14, at 203.

[57] EPA OFFICE OF WETLAND PROTECTION, *supra* note 3, at 7; Clean Water Act § 404c.

[58] Land Use Forum, 197, 203 (1992), EPA Office of Wetland Protection, *supra* note 3, at 5-6.

[59] Clean Water Act, 55 Fed. Reg. 9210 (1990).

[60] 43 Op. Att'y Gen. 15 (1979); *see also* Ivester, *supra* note 14, at 203.

decision to a higher authority.[61]

The Corps is in charge of the permit process, but the EPA is responsible for discovering violations, such as unauthorized discharges.[62] Penalties imposed are specified in 33 U.S.C § 1319, the enforcement section. Civil or criminal action can be taken against violators.[63] A civil action must be filed in the appropriate district court and notice must be given to the state where the action has been initiated.[64] Fines range from $2,500 to $10,000 per day depending on the violation.[65] The Corps conducts an initial investigation and then issues administrative orders requiring compliance. If the landowner does not comply with this order, the violation is referred to the United States Department of Justice for either civil or criminal judicial enforcement.[66] The courts will not review these orders until the federal government brings an enforcement proceeding.

An example of this enforcement process can be found in *McGown v. United States.*[67] In this case the landowner brought an action seeking to void the Corps' order to cease and desist activities that were deemed a violation of the Clean Water Act.[68] The court established that even when a landowner has begun to negotiate a resolution in a dispute against the Corps' enforcement of the Clean Water Act, the court may not make any decisions until enforcement proceedings begin.[69] The purpose of this judicial limitation is to allow the regulatory agencies to act quickly in addressing environmental problems without getting tied up in litigation.[70]

In *McGown,* the plaintiff was reported to the Corps by his neighbor for constructing a levee without first obtaining a permit. After an investigation, the land was deemed wetland, and McGown was required to apply for an "after-the-fact permit" to comply with C.F.R. § 326.3(e).[71] The Corps' cease and desist order came during the long permit approval process. McGown continued construction without

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[61] 43 Op. Att'y Gen. 15 (1979); *see also* Ivester, *supra* note 14, at 203.

[62] 33 U.S.C. § 1319(a)(1) (1999).

[63] 33 U.S.C § 1319 (b) – (c) (1999).

[64] 33 U.S.C § 1319(b), (d) (1999).

[65] 33 U.S.C § 1319(c) (1999).

[66] Clean Water Act § 309.

[67] McGown v. United States, 747 F. Supp. 539, 542 (E.D. Mo. 1990).

[68] *Id.* at 540.

[69] *Id.* at 542.

[70] *Id.*

[71] *Id.* at 541.

waiting for the permit.[72] The EPA and the Corps have powerful authority to stop development or construction immediately, pending completion of the assessment.[73] The landowner cannot take any legal action until one of these agencies initiates legal action against the landowner.[74] The courts do not have jurisdiction until the EPA or Corps begin an enforcement action.[75]

The EPA or the Corps may impose fines for unauthorized development in wetland areas and can order restoration efforts.[76] In *Hoffman Group, Inc v. United States Environmental Protection Agency*,[77] Hoffman began construction on wetlands without a permit.[78] He later applied for one and was denied.[79] Here the court found that if Hoffman did not abide by the order to cease construction, the EPA could enforce the order in federal district court under Section 309(b) of the Clean Water Act.[80] The court could also impose civil penalties of up to $25,000 per day.[81] The EPA proposed fining Hoffman $125,000 for filling wetland on his property without a permit.[82] This fine could not be enforced until the EPA initiated a civil enforcement suit, and only then would the plaintiff have the opportunity to present his arguments before the court.[83] The EPA's decision to enforce penalties is subject to judicial review under 33 U.S.C section 1319(g)(8).[84]

United States v. Board of Trustees of Florida Keys Community College[85] further illustrates the penalties that can be imposed for the violation of the Clean Water Act. In *Florida Keys*, the United States brought an action calling for the restoration of a slough which had been filled by the defendants in violation of the Clean Water Act and the Rivers and Harbors Act.[86] This case illustrates the common prac-

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[72] *Id.*

[73] *Id.* at 542.

[74] *Id.*

[75] *Id.* at 540.

[76] Hoffman Group, Inc. v. United States Environmental Protection Agency, 902 F.2d 567, 568 (7th Cir. 1990).

[77] *Id.*

[78] *Id.*

[79] *Id.*

[80] *Id.*

[81] *Id.*

[82] *Id.* at 569.

[83] *Id.*

[84] *Id.*

[85] United States v. Board of Trustees of Florida Keys Community College, 531 F. Supp. 267, 268 (S.D. Fla. 1981).

[86] *Id.* at 268.

tice of beginning development before the proper permits are issued. The defendants had been issued permits to place large rocks to prevent the erosion of an embankment bordering the campus, but they had not applied for a permit to fill in the entire slough.[87] A biologist for the Corps visited the site and discovered that the project did not conform to the plan as originally approved.[88] After reviewing the project from the air, the Corps realized that the entire slough had been filled.[89] The Corps issued a cease and desist order to stop all other construction.[90] The court called the defendant's act of filling the slough without waiting for a permit, "self-help for the impatient" and disapproved.[91]

The court, in trying to find the best remedy, noted that it could require total restoration of the original site, provided this was feasible.[92] The court set forth several factors to be considered when determining the appropriate penalties and remedies.[93] First, the court looked at whether the defendant's actions were willful or negligent.[94] Second, it took into account the deterring effect of monetary penalties on future violations of the Clean Water Act.[95] Third, the court inquired as to whether the violation served a public or a private purpose.[96] And Fourth, the court considered the environmental importance of the damaged area and, most importantly, the availability of an alternative site that could be used for mitigation.[97] The court decided to fine the defendants and then give them the option to restore the slough to its original capacity or locate and preserve an area comparable to that which they destroyed.[98]

II. STATE STATUTES AND REGULATIONS GOVERNING WETLANDS

California's wetland conservation goals are guided and defined by the Sacramento-San Joaquin Valley Wetland Mitigation Bank Act of 1993. This act was intended to support the goals of federal wetland regulation and to encourage and foster land preservation and restora-

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[87] *Id.*
[88] *Id.* at 271.
[89] *Id.*
[90] *Id.*
[91] *Id.* at 274.
[92] *Id.* at 274-275.
[93] *Id.* at 275.
[94] *Id.*
[95] *Id.*
[96] *Id.*
[97] *Id.*
[98] *Id.*

tion.[99] The state achieves these goals by offering incentives to landowners, giving guidance, and promoting mitigation bank sites.[100]

The California Public Resources Code governing wetland preservation, defines wetland as:

> streams, channels, lakes, reservoirs, bays, estuaries, lagoons, marshes, and the lands underlying and adjoining such waters, whether permanently or intermittently submerged, to the extent that such waters and lands support and contain significant fish, wildlife, recreational, aesthetic, or scientific resources.[101]

The Keene-Nejedly California Wetlands Preservation Act was created to preserve wetlands for the benefit of the people of California.[102] It acknowledges that wetlands have an aesthetic, as well as environmental, value to the people.[103] This particular statute places an emphasis on the preservation of wetlands within the state park system.[104]

The California Inland Wetland Conservation Program, run by the California Department of Fish and Game, also protects wetlands in California.[105] The California Fish and Game Code establishes a board to acquire interests in land, to accept gifts of land, and to make transfers of land to further the goals of the program.[106] The board can take possession of a former wetland habitat to restore it.[107] It can then sell that land on the condition that, if the wetland habitat is not maintained as such, it can reclaim the property.[108]

Although the Clean Water Act places a portion of the wetlands filling permit responsibility on the individual states,[109] the EPA must approve the state programs. The states must comply with the requirements of Section 404 of the Clean Water Act and have a permit scheme that requires public notice and an opportunity for a public hearing, as well as a means of enforcing compliance through fines or civil penalties.[110]

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[99] CAL. FISH & GAME CODE §§ 1775-1796 (Deering 1999).

[100] CAL. FISH & GAME CODE § 1776(a) – (d) (Deering 1999).

[101] CAL. PUB. RES. CODE § 5812 (Deering 2000).

[102] CAL. PUB. RES. CODE §§ 5810-5811 (Deering 2000).

[103] CAL. PUB. RES. CODE § 5811 (Deering 2000).

[104] CAL. PUB. RES. CODE §§ 5811-5816 (Deering 2000).

[105] CAL. FISH & GAME CODE §§ 1410-1422 (Deering 2000).

[106] CAL. FISH & GAME CODE § 1412 (Deering 2000).

[107] CAL. FISH & GAME CODE § 1418 (Deering 2000).

[108] *Id.*

[109] *See* 33 U.S.C. § 1318(a) (1999).

[110] 33 U.S.C. § 1318(a)(1) (1999).

III. VERNAL POOL HABITAT

Vernal pools are "shallow, temporary pools created where winter/spring rainfall fills depressions in claypan soil areas on the valley floor."[111] These pools are of major interest and concern for environmentalists and developers in the Sacramento-San Joaquin Valley because they are a unique habitat for several endangered species and are found on many development sites.[112] Vernal pools have also been a water supply for cattle and cattle grazing affects the pool's diversity.[113] "Diversity is a combination of species richness, (i.e. presence of species), and species evenness, (the relative abundance of species)."[114] Extensive analysis has been done on twenty-two vernal pools in Madera, Fresno, and Tulare Counties.[115] From March through October 1995, the California Department of Fish and Game and the United States Fish and Wildlife Service conducted a joint study to determine the individual pool characteristics.[116] They planned to use the data to determine the best wetland management techniques.[117]

Vernal pools are considered wetlands, even though they are dry part of the year in conjunction with seasonal rainfall.[118] The plant and animal species have adapted to this seasonal habitat and depend on this filling and drying cycle for reproduction.[119] Laypeople may have underestimated the significance of vernal pools as wetland, since the pools are dry part of the year but fall within the Corps' jurisdiction as protected wetland.[120] In Fresno and Madera counties these pools can vary in size from a few hundred feet to a few acres with a few thou-

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[111] Peter B. Mogle and John P. Ellison, *A Conservation-Oriented Classification System For The Inland Waters Of California*, reprinted in CAL. FISH AND GAME CODE § 77.4 at 161-180 (1991) [hereinafter *A Conservation*].

[112] JOHN C. STEBBINS ET AL., HABITAT CHARACTERIZATION STUDY OF SAN JOAQUIN VALLEY VERNAL POOLS 19-29, CAL. ST. UNIV. FRESNO (1995).

[113] *Id.* at 30. *See also* California Resource Agency, *Vernal Pools: Their History and Status in California's Central Valley* (last modified Aug. 13, 1998) *at* http://ceres.ca.gov/wetlands/whats new/vernalsjq.html.

[114] JOHN C. STEBBINS ET AL., EFFECTIVE MITIGATION TECHNIQUES FOR THE CENTRAL VALLEY VERNAL POOLS 11, CAL. ST. UNIV. FRESNO (1996).

[115] STEBBINS ET AL., *supra* note 112, at 2, 25-26. (Endangered species in these areas are: Ambystoma tigrinum californiense, Lepidurus packardi, and Scaphiopus hammondi.).

[116] STEBBINS ET AL., *supra* note 112, at 1.

[117] *Id.*

[118] *A Conservation*, *supra* note 111, at 161-180.

[119] STEBBINS ET AL., *supra* note 112, at 2.

[120] *Id.*

sand square feet as an average.[121]

During the last fifty years, species that depend on vernal pools have been endangered by the loss of ninety to ninety-five percent of the valley's vernal pools.[122] This loss is due to several factors including: chemical contamination, scraping and filling that occurred in the course of development, construction, and agricultural projects.[123] The vernal pools are a valuable natural habitat that land development projects must protect.

IV. CASE STUDY: THE COPPER RIVER DEVELOPMENT AND WETLAND REGULATION A LOCAL EXAMPLE OF WETLAND REGULATION AFFECTING DEVELOPMENT

The Copper River Golf Course development began in 1991.[124] Events of the Copper River Golf Course development make a good case study of a trend in the Fresno County area where development has struggled with any attempt at environmental protection and responsible, objective city planning.[125] Landowners who want to develop their land need a good understanding of wetland regulation, or need to hire an expert with such knowledge.[126] These regulations, which have been criticized for being too restrictive and pervasive, can make it very expensive and time consuming for a landowner to develop land.[127]

The explosive growth north of Fresno toward Friant has taken a large amount of wetland habitat and agricultural land and turned it into developed property.[128] The only regulation that seems strong enough to slow the process is Section 404 of the Clean Water Act. The Clean Water Act, enforced by the Corps, typically does not bow to the tre-

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[121] STEBBINS ET AL., *supra* note 114, at 1.

[122] STEBBINS ET AL., *supra* note 112, at 2.

[123] *Id.*

[124] Barbara De Lollis, *Expensive Water Hazard; Vernal Pools Spell Trouble For Country Club,* FRESNO BEE, Dec. 7, 1996, at A1.

[125] Editorial, *Copper River EIR is Crucial; The Long-Term Impact of the Proposed Upscale Housing Development By Bill Tatham Sr. Must Be Seriously Considered by Fresno County Officials,* FRESNO BEE, Feb. 16, 1996, at B6. *See also* Anne Dudley, *Opponent Says Mayor Traded Vote For Money,* FRESNO BEE, Sept. 15, 1995, at B1.

[126] Ivester, *supra* note 14, at p. 200.

[127] Jonathan Silverstein, Comment, *Taking Wetlands To The Bank: The Role Of Wetland Mitigation Banking in a Comprehensive Approach to Wetlands Protection,* 22 B.C. Envtl. Aff. L. Rev. 129, 130 (1994).

[128] De Lollis, *supra* note 124.

mendous power most Fresno and Madera County developers have used to push various projects through, while disregarding details such as adequate water supply and future effects of development.[129] The developers and city government members have, at times, been accused of bias when City Council members cast votes favorable to the developers at the expense of wetlands.[130]

Mitch Hayden, a Corps officer, did the assessment on the permit for wetland mitigation for the Copper River Golf Course development in 1994.[131] The Corps was notified by the California Fish and Game Department and the County of Fresno that the development by Bill Tatham Sr., original owner of the Copper River Golf course site, violated Section 404 of the Clean Water Act.[132] Tatham continued development without planning to mitigate damage to the wetland.[133] The development destroyed four acres of vernal pool habitat by creating a golf course and turning some of the existing pools into lakes.[134] The Corps sent Tatham a notice of the violation, but never heard from him.[135]

The property was later purchased by Granville Homes, a California land development company, which planned to continue development.[136] Granville was informed that they could not continue development until they planned to mitigate the damage to this wetland property.[137] When the violation was reported, Granville homes was fined and required to get an after-the-fact Clean Water Act Permit.[138] The property had a standing violation and needed after-the-fact wetland mitigation.[139]

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[129] Editorial, *Copper EIR is Crucial; The Long-Term Impact of the Proposed Upscale Housing Development By Bill Tatham Sr. Must Be Seriously Considered By Fresno County Officials,* FRESNO BEE, May 20, 1997, at B2.

[130] Anne Dudley & Russell Clemings, *Opponent says mayor traded vote for money,* FRESNO BEE, Sept. 15, 1995 at B1.

[131] Telephone Interview with Mitch Hayden, Corps Officer (Aug. 27, 1999); *see also* De Lollis, *supra* note 124.

[132] *Id.*

[133] De Lollis, *supra* note 124.

[134] *Id.*

[135] Telephone Interview with Mitch Hayden, Corps Officer (Aug.27, 1999).

[136] De Lollis, *supra* note 124.

[137] De Lollis, *supra* note 124; *see also,* Sanford Nax, *Copper River Deal in Works; Three Top Fresno Developers Are Looking to Buy 600 Acres for Homes,* FRESNO BEE, Apr. 2, 1999, at C1.

[138] An after-the-fact permit is a permit issued after the filling violation has already occurred. 33 U.S.C. 1344 (1999); *see also,* McGown v. United States, 747 F.Supp. 539, 541 (E.D. Mo. 1990).

[139] DeLollis, *supra* note 124.

Two of the larger vernal pools had been destroyed when they were turned into lakes. The pools that were turned into lakes are considered "destroyed" because a lake and a vernal pool function completely differently.[140] The other two smaller vernal pools were degraded by the development.[141] A degraded vernal pool is one that has its hardpan basin intact but has been disturbed in such a way that the superficial layer and its plant life are altered from their natural state.[142] The vernal pools received considerable attention because they are the habitat of the federally protected fairy shrimp.[143] These shrimp live and breed in the pools as the pools fill with water in the wet season and then lay eggs that drop into the cracks of dry soil when the pools dry up.[144] The fairy shrimp were placed on the endangered species list in 1994,[145] one year after Tatham developed over the vernal pools. Tatham is not being held responsible for the fairy shrimp by the Fish and Wildlife Service, since the vernal pool habitat was destroyed before the Fairy Shrimp was listed as endangered.[146]

Donna Daniels works for the California Fish and Game Department.[147] Although the Copper River violation was governed mainly by the Corps and the Fish and Wildlife Service, she had some knowledge about the events.[148] Tatham, the developer of Copper River, began development without waiting for approval from the Corps.[149] Had Tatham followed the Corps' procedure, he would have been allowed to develop, avoiding this current deadlock.[150]

The Corps is currently trying to find a solution that will enable Granville to mitigate their damages.[151] Three sites are being evaluated for use as wetland mitigation banks.[152] The Corps would like to see wetland mitigation banks in the San Joaquin Valley because there are

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[140] STEBBINS ET AL., *supra* note 112, at 2.

[141] De Lollis, *supra* note, 124.

[142] STEBBINS ET AL., *supra* note 112, at 2.

[143] STEBBINS ET AL., *supra* note 112, at 25-28.

[144] STEBBINS ET AL., *supra* note 114, at 16.

[145] Stevenson, *'Endangered' Fairy Shrimp is Erroneous Listing,* FRESNO BEE, Mar. 27, 1996, at B5.

[146] *See* De Lollis, *supra* note 124.

[147] Telephone Interview with Donna Daniels, Biologist, California Department of Fish and Game. (Aug. 28, 1999).

[148] *Id.*

[149] *Id.*

[150] *Id.*

[151] Telephone Interview with Mitch Hayden, *supra* note 131; De Lollis, *supra* note 11.

[152] De Lollis, *supra* note 11.

none at this time.[153]

The Copper River development is the first enforcement action of this kind in the San Joaquin Valley. It is novel because other development violations went undiscovered, or the developers began with an approved wetland mitigation plan.[154] Tatham, who proceeded with his plan before obtaining a permit, said that it was just a mistake.[155]

The most important lesson from the events of Copper River is that there must now be an after-the-fact effort to correct or make up for the damage. Another project which includes a planned community of 1,825 homes, one shopping center, and a 60-room hotel, has been put on hold until there is a solution for dealing with the damage.[156] As a result of this enforcement developers are now motivated to find a solution.[157] Because on-site mitigation uses expensive property that would otherwise have profited the developers, one solution we might look to protect the environment and still allow future growth is wetland banking.[158]

V. WETLAND PRESERVATION AND DEVELOPMENT SOLUTIONS THE LAW AND AUTHORITIES GOVERNING WETLAND BANKING

Wetland banking is new to the Central Valley but has been used as a solution in other parts of the state. A wetland bank is a system allowing people to purchase credit in a preserved wetland habitat that is the same as the habitat that has been lost through development or agriculture.[159] The executive and legislative branches of the federal government created this concept in response to problems in wetland conservation.[160]

Wetland conservation banks are set up with the primary goal of conserving valuable and important habitats.[161] A wetland bank is an all-encompassing approach in that it can be used to save endangered plants and animals as well as dwindling wetland habitat. Wetland banks are also a better means of preserving wetland habitat, compared

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[153] De Lollis, *supra* note 124.

[154] *Id.*

[155] *Id.*

[156] *Id.*

[157] *Id.*

[158] WILDLANDS, INC, THE MITIGATION BANKING CONCEPT, BROCHURE (1999).

[159] CAL. FISH & GAME CODE § 1777.2 (Deering 1999).

[160] Wheeler, *Official Policy on Conservation Banks,* Governor's Report from EPA and Resources Agency, 1995, at 1.

[161] *Id.* at 2.

to individual attempts to mitigate damages on site.[162] Individual efforts at creating comparable on-site wetland environments are less likely to be successful because they then do not relate to the other habitats surrounding them.[163] Individual mitigation efforts on-site are smaller, lower-budget efforts. Wetland banks that make up a collective well-funded project area potentially create a more valuable and stable preserved habitat.[164]

Wetland banks are also beneficial to private landowners.[165] A landowner who has property consisting of wetland comparable to the wetland in a potential development can be paid to preserve the integrity of the property.[166] This can be an effective solution for all parties.[167] Wetland banking also creates an economic incentive for the preservation of natural habitat.[168] It can be difficult to create an artificial habitat that has the same makeup as the natural environment that it copies.[169] Wetland conservation banks lessen the conflicts between development and conservation.

A. California Wetland Banking

Wetland banking in California is governed by the Sacramento-San Joaquin Valley Wetlands Mitigation Bank Act.[170] The Act is intended to uphold the goal of wetland preservation set forth in Section 404 of the Clean Water Act.[171] The Act is also intended to encourage private landowners to become involved in the wetland preservation process.[172]

One goal is to create wetland mitigation banks that do not compete for resources with other existing state functions.[173] The banks are to be self-financing and maintained without reducing the local tax base or

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[162] CAL. FISH & GAME CODE § 1776c (Deering 1999).

[163] Wheeler, *supra* note 160 at 2. *See also;* Federal Register, Vol 60, No. 43, Mar. 6, 1995, Federal Guidance for the Establishment, Use and Operation of Mitigation Banks.

[164] Wheeler, *supra* note 160, at 2.

[165] *Id.*

[166] WILDLANDS, INC, THE MITIGATION BANK CONCEPT, BROCHURE at 3 (1999).

[167] *Id.* at 4.

[168] Wheeler, *supra* note 160, at 2; *see also* Wheeler, *supra* note 160, at 2; *see also* WILDLANDS INC, THE MITIGATION BANK CONCEPT, BROCHURE at 12.

[169] STEBBINS ET AL., *supra* note 114, at 18-20.

[170] CAL. FISH & GAME CODE § 1771-1796 (Deering 1999).

[171] *See id.* at § 1780.

[172] *See id.* at § 1776(b).

[173] *Id.* at § 1776(d)(6).

creating non-compensated burdens on local services.[174] These factors explain the price difference between the cost of the land before it is turned into a bank and the cost afterwards. The Department of Fish and Game planned to achieve its goal of a virtually financially self-sufficient bank creation by using the purchase of the bank credits to pay for the governmental administration of the bank.[175]

The requirements for creating a mitigation bank are also provided by the Fish and Game Code.[176] According to the code, the new bank site creator must submit a full legal description of the land to be protected as a wetland bank.[177] There must also be an agreement by the operator to maintain the land as a wetland habitat permanently and to protect it legally in perpetuity.[178] There must be assurance of continued financing in the form of a trust or bond.[179] A private owner may be required to have a contract that specifically states what constitutes a breach, or they may be required ahead of time to agree on circumstances that would necessitate a change of operator, ownership, or both.[180] These requirements help foster the lasting integrity of the bank site.[181]

The wetland bank site must follow a price formula to determine the price of a bank credit.[182] Wetland bank sites are carefully developed, maintained, and controlled areas and the price per acre is set to ensure the bank's financial integrity.[183] Credits for each wetland acre created are determined by the following costs: wetland creation, monitoring, maintenance, administration, tax, interest on holding the land, and any other costs included in maintaining the land in perpetuity.[184]

B. The Wetland Banking Process

California wetland bank sites are set up with the ultimate objective being the preservation and protection of wetlands and in the Sacramento-San Joaquin Valley vernal pools are of particular concern.[185]

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[174] *Id.*
[175] *Id.*
[176] *See id.* at § 1786.
[177] *Id.* at § 1786(b)(1).
[178] *Id.* at § 1786(b)(3)(B).
[179] *Id.*
[180] *Id.* at § 1786 (b)(4).
[181] *Id.* at § 1792.
[182] *Id.*
[183] *Id.*
[184] *Id.*
[185] U.S. Department of Interior, Fish and Wildlife Service, *Interim Method for De-*

The soil type and ecology of the vernal pools can vary considerably.[186] This variance is significant because the vernal pool credits for a particular habitat must be matched with the same habitat that is to be lost.[187] A matching habitat is determined by the type of soil and the ecology of the pools.[188] Any developer can buy credits, but because habitats must match, a buyer in the same area will get priority over one that is not.[189]

A prospective wetland bank site is controlled and regulated by the Fish and Wildlife Service, federal guidelines under section 404 of the Clean Water Act, and California's official policy on conservation banks.[190] A wetland mitigation bank is complete and ready to sell credits when the Fish and Wildlife Service has decided on the amount of credit it will give to that particular land.[191] Bank credits are determined by the number of acres in the preservation site, the type of vernal pool, the number of protected species identified, the number of rare species, the site condition, and the defensibility of the site.[192] The size of the preservation site is significant because smaller sites are often good for protecting rare species, while the larger sites can sustain a variety of wildlife.[193]

C. Wetland Banking Options in the Central Valley

The two local organizations that run wetland banks are the Wildlands Company Inc. and the Sierra Foothill Conservancy. Wildlands, Inc. was the first private company in California to run a private commercial mitigation bank.[194] This company employs a staff that handles the business and the science of the creation and maintenance of a wetland bank.[195] The company sells mitigation credits to developers

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termining the Number of Available Credits and Service Areas for Vernal Pool ESA Preservation Banks in the California Central Valley, 1996, P.2.

[186] *Id.*

[187] *Id.*

[188] *Id.*

[189] *Id.*

[190] CAL. FISH & GAME CODE § 1777.2 (Deering 1999); *see also,* 404(b)(1) 55 Fed. Reg. 9210, (1990) *Memorandum of Agreement Between The Environmental Protection Agency and the Department of the Army Concerning the Determination of Mitigation Under the Clean Water Act.*

[191] U.S. Department of Interior, *supra* note 185 at 1.

[192] *Id.* at 4.

[193] *Id.*

[194] Wildlands, *supra* note 166, at 10.

[195] *Id.*

gained through land that the company has purchased.[196] The company also will monitor the development and construction of the wetland area.[197] Thus far, Wildlands has developed one bank site, which is located in the Sacramento area.[198]

The Wildlands Company states that there are numerous benefits to commercial banking through their organization.[199] The company makes the development site planning more efficient by offering developers a prepared and pre-approved mitigation site.[200] This service expedites environmental planning which can be very expensive.[201] Development landowners can also avoid liability for the creation, maintenance, and possible failure of their own on-site mitigation efforts by using this service.[202] The bank land habitat is protected in perpetuity; thus, there is some legal guarantee that the land will remain in its natural state.[203]

The Sierra Foothill Conservancy is also involved in wetland banking.[204] The Sierra Foothill Conservancy works to achieve similar goals as the Wildlands company, but it is not a private company working for profit.[205] The Conservancy instead attains land through willed property, straight purchase, or through conservation easements.[206] This group is a local land trust created to preserve open space and wildlife habitat.[207] The Conservancy uses and maintains the land and works to legally protect foothill property.[208] The Conservancy manages two wildlife preserves, both wetland banking sites.[209] These preserved areas are used currently for adult and child education programs, research, and grazing.[210]

The land currently owned by the Conservancy is McKenzie Table Mountain Preserve which is 2,940 acres of foothill habitat containing vernal pools.[211] The other is The Mary Elizabeth Miller Preserve at

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[196] *Id.*
[197] *Id.*
[198] *Id.*
[199] *Id.*
[200] *Id.* at 13.
[201] *Id.*
[202] *Id.*
[203] *Id.* at 12.
[204] SIERRA FOOTHILL CONSERVANCY, BROCHURE (1999).
[205] *Id.*
[206] *Id.*
[207] *Id.*
[208] *Id.*
[209] *Id.*
[210] *Id.*
[211] STEBBINS ET AL., *supra* note 112, at 8.

Black Mountain Preserve with 360 acres of foothill land.[212]

A wetland bank site is now being considered at Kennedy Table located in Madera County near the Copper River development.[213] This site could provide a solution to the Copper River Development mitigation problem. The Kennedy Table site is privately owned and contains three small pools and one very large pool.[214] The vernal pools in this area are in good condition and have not been damaged by decades of continual cattle grazing.[215]

CONCLUSION

Commercial wetland management can be beneficial because the landowners, the management company, and the developers all stand to gain economically. This economic motivation will strengthen the preservation efforts. A workable system of wetland mitigation regulation can be created to encompass the inevitable development push while preserving key wetland habitat. There are many sites in the Sacramento-San Joaquin Valley that offer high quality wetland worth protecting over some of the wetlands found in locations that are considered more desirable for development. These alternative sites that are available for wetland banks should be used as such and should be protected. Wetland banks tend to be in areas that are undesirable to a developer or farmer, so there is a greater chance that their current preservation will not be challenged, which increases the likelihood of continued preservation. In California, and specifically the Sacramento-San Joaquin Valley, development continues at a steady rate. The rapid growth is not likely to be halted, but must be slowed and regulated while still allowing developers and politicians some viable options. Thoughtful wetland mitigation options are critical for these powerful valley developers. Otherwise, this momentum toward development will dominate politics and the pendulum will swing against beneficial environmental protection regulation, and cause irreversible environmental damage to our valley.

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[212] SIERRA FOOTHILL CONSERVANCY BROCHURE (1999).

[213] Telephone Interview with Donna Daniels, *supra* note 147.

[214] STEBBINS ET AL., *supra* note 112, at 8.

[215] *Id.*