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Watershed Planning

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WATERSHED PLANNING*

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WATERSHED PLANNING DEFINED

Watershed planning is a term used to describe efforts to protect and enhance water quality using a watershed as the geographic area of focus. Watershed planning has its origins in federal programs estab-

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lished by the Federal Clean Water Act,¹ but it is inherently inter-jurisdictional and interdisciplinary requiring both cooperation among several units of government and the integration of two discrete disciplines—water quality management and land use planning. A typical watershed does not stop at the boundaries of a political jurisdiction, and, although a watershed plan may be based initially on federal policies and funding, its implementation is in large part through local government ordinances and regulations.

In the past, most important water resource management decisions have been made at the federal and state level with little input from municipal and county governments. With the increasing awareness of the relationship between land use activities and water pollution, local government involvement has become a critical component to water quality protection. However, land use planning and regulation typically address land use activities from a single jurisdictional perspective, whereas watersheds reflect topographic drainage patterns rather than political borders. Rarely is land ownership, much less control, vested in a single entity in a major watershed.² Successful watershed planning, therefore, requires an emphasis on regional planning. A watershed focus can facilitate attention to physical and biological, as opposed to purely chemical impacts to a waterbody. It also involves water pollution prevention and restoration of a watershed, rather than the mere mitigation of ongoing harm.³

Watershed planning is also the only way to address water pollution from nonpoint sources of pollution which remain largely unregulated.⁴ A major strategy for attacking nonpoint pollution is to reduce surface runoff from land use activities through a watershed strategy for an entire watershed that relies on land use planning and controls implemented by local governments. Local management based on a watershed approach allows programs to target the worst causes of polluted run-off and to implement the combination of solutions tailored to the conditions of each watershed.⁵

AUTHORITY FOR WATERSHED PLANNING

FEDERAL APPROACHES

Under the regulatory scheme established by the Clean Water Act, water quality is either affected by "point source" or "nonpoint source" pollution. The term point source means "any discernable, confined

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1. 33 U.S.C. §§ 1251-1387 (1995).
 2. Robert W. Adler, *Addressing Barriers To Watershed Protection*, 25 ENVTL. L. 973, 991-92 (1995).
 3. *Id.* at 995.
 4. See David Zaring, *Federal Legislative Solutions to Agricultural Nonpoint Source Pollution*, 26 ELR 10128 (1996); Daniel R. Mandelker, *Controlling Nonpoint Source Pollution: Can It Be Done?*, 65 CHI.-KENT L. REV. 479, 480 (1989).
 5. Adler, *supra* note 2, at 994.

and discrete conveyance.”⁶ In contrast, nonpoint sources include atmospheric deposition, contaminated sediments, and land use activities that generate polluted run-off, such as construction, agriculture, logging, mining and on-site sewage disposal.⁷ In recognition of a widely-held antipathy toward federal involvement in the regulation of land use on private land, the only activities subject to federal regulation under the Clean Water Act are those activities associated with a point source discharge of pollution.⁸ Thus, nonpoint source pollution remains the greatest cause of water pollution.⁹ However, several sections of the Clean Water Act establish a framework for addressing both point and nonpoint water quality on a watershed basis.¹⁰

Section 208 Areawide Waste Treatment Management Plans.

Watershed planning has its origins in Section 208 of the Clean Water Act.¹¹ Although this was the first formal acknowledgment by Congress of nonpoint source pollution, the 208 program has been criticized as a toothless system.¹² Even though the Senate has emphasized that it “clearly intended § 208 to produce specific nonpoint source abatement programs,”¹³ § 208 efforts are largely unfunded and remain voluntary.

Section 208 requires states to designate boundaries of areas in the state “[w]hich as a result of urban industrial concentrations or other factors has substantial water quality control problems . . .” and to designate representative organizations “[c]apable of developing effective areawide waste treatment management plans for such area.”¹⁴ Section 208 also requires agencies to plan for point source regulatory programs and develop programs for identifying and controlling nonpoint source pollution from agriculture, silviculture, mining construction,

6. 33 U.S.C. § 1362(14) (1995).

7. Office of Water, United States Environmental Protection Agency, *National Water Quality Inventory: 1992 Report to Congress* (EPA 841-R-94-001) (Mar. 1994).

8. An exception to this general rule is activities that require a federal license or permit which must demonstrate that they will comply with state water quality standards and requirements through a “401 Certification” required by § 401 of the Clean Water Act. See 33 U.S.C. § 1341 (1995).

9. See Association of State of Inter-state Water Pollution Control Administrators, *America’s Clean Water: The State’s Nonpoint Source Assessment* (1985), reprinted in *Impact of Nonpoint Source Pollution on Coastal Water Quality: Hearing Before the Subcomm. on Fisheries and Wildlife Conservation and the Environment and the Subcomm. on Oceanography of the House Comm. on Merchant Marine and Fisheries, 100th Cong., 2nd Sess. 84-110* (1988); EPA, *National Water Quality Inventory*, *supra* note 7.

10. For a complete list of all federal programs and initiatives that are intended to reduce water pollution see generally, United States General Accounting Office, *Water Quality: A Catalog of Related Federal Programs* (GAO/RCED-96-173) (June 19, 1996).

11. 33 U.S.C. § 1288 (1995).

12. See 33 U.S.C. § 1329(h)(11) (1995). See generally, Richard A. March et al., *Nonpoint Source Water Pollution § 208 Planning: Legal and Institutional Issues, 1981-1982 AGRIC. L. J. 324, 349* (explaining § 208 promoted voluntary compliance by planning agencies rather than mandatory control of nonpoint source pollution).

13. S. Rep. No. 370, 95th Cong., 1st Sess. 32 (1977).

14. 33 U.S.C. § 1288(a)(1)-(2) (1995).

urban run-off and related activities. According to one court, "[s]ection 208 charts a course not only for cleaning up polluted waters, but also for the prevention of future pollution by identifying problem sources, regulating construction of certain industrial facilities, and developing processes to control run-off sources of pollution."¹⁵ Implicit in the structure of § 208 is the notion that these so-called processes to control run-off implicate local government land use controls.

Section 319 Nonpoint Source Management

The 1987 amendments to § 319 of the Clean Water Act¹⁶ provide for the development of nonpoint source management programs by the states. Pursuant to this statute, states must: (1) identify waters not attaining water quality standards without additional nonpoint source controls, and (2) identify best management practices for categories of nonpoint source problems, along with programs, to implement best management practices to address these nonpoint sources. Section 319 is intended to operate principally through financial incentives providing federal matching funds for nonpoint source projects to states with approved management programs. Even though § 319 added nonpoint source pollution control to the Clean Water Act's other goals,¹⁷ many commentators believe implementation of 319 has not been effective.¹⁸

Total Daily Maximum Loads

Section 303(d) of the Clean Water Act¹⁹ requires that a state establish waste load allocations for point sources and load allocations for nonpoint sources for certain waterbodies. Together, these allocations comprise the total maximum daily load ("TMDL") for a waterbody. The TMDL is a mechanism for water-quality based control actions where technology-based controls alone are not adequate to meet water quality standards.²⁰ TMDL calculations ensure that the cumulative impacts of multiple point sources are accounted for and evaluated in conjunction with nonpoint sources in an integrated, basin-wide approach to identifying and resolving water pollution.²¹

15. *Natural Resources Defense Council v. Train*, 395 F. Supp. 1386, 1389 (D. D.C. 1975).

16. 33 U.S.C. § 1329(a)-(b) (1995).

17. *See* 33 U.S.C. § 1251(a)(7) (1995).

18. *See* ROBERT W. ADLER ET AL., *THE CLEAN WATER ACT TWENTY YEARS LATER*, 173 (1993).

19. 33 U.S.C. § 1313(d) (1995).

20. 40 C.F.R. § 130.2(i) (1997).

21. A series of cases have been brought by the United States forcing states to comply with § 303(d) requirements to establish total maximum daily loads for all water quality limited stream segments. Section 303 total daily maximum load cases of note include: *Scott v. City of Hammond*, 741 F.2d 992 (7th Cir. 1984); *Sierra Club v. Browner*, 843 F. Supp. 1304 (D. Minn. 1993); *Alaska Ctr. For The Env't v. Browner*, 20 F.3d 981 (9th Cir. 1994); *Natural Resources Defense Counsel v. Fox*, 909 F.Supp 153 (S.D.N.Y. 1995); *Idaho Sportsmen's Coalition v. Browner*, 951 F. Supp. 962 (W.D. Wash. 1996).

Stormwater Regulation

Although technically not a watershed planning provision, Environmental Protection Agency's ("EPA") stormwater regulation program does address some aspects of run-off. Because EPA has not been given the authority to regulate nonpoint sources, the stormwater management program is limited to regulating stormwater's entry into or passage through a point source.²² Section 402(p) of the Clean Water Act²³ requires certain stormwater discharges collected into point sources to obtain a discharge permit. Under the stormwater program, permits are required for stormwater discharges associated with categories of activities, including mineral extraction, manufacturing, hazardous waste facilities, landfills, recycling facilities, power generation, transportation, sewage treatment, construction disturbing more than five acres of land, and certain "light" industries.²⁴

There are three types of National Pollutant Discharge Emission Standards ("NPDES") permits for discharges composed entirely of stormwater: individual, general, and group. Individual permits set specific numerical effluent limitations and are similar to standard NPDES permits, while general and group permits use pollution prevention rather than end-of-the-pipe treatment and require the discharger to implement "best management practices" ("BMPs"). BMPs are techniques that are designed to reduce contact of stormwater run-off with raw materials, machinery and waste.

EPA Watershed Policies

Several EPA policy documents have emphasized the importance of watershed planning. The term "watershed," as used in EPA policy documents, refers to a "geographic area in which water sediments and dissolved materials drain to a common outlet—a point on a larger stream, a lake, an underlying aquifer, an estuary or an ocean. This area is also called the drainage basin of the receiving water body."²⁵ EPA's watershed protection approach is built on three main principles. First, the target watersheds should be those where pollution poses the greatest risk to human health, ecological resources, desirable uses of the water, or a combination of these. Second, all parties with a stake in a specific local situation should participate in the analysis of problems and the creation of solutions. Finally, the actions undertaken should draw on the full range of methods and tools available for integrating them into a coordinated, multi-organization attack on the problem.²⁶

22. See Brian Weeks, *Trends in Regulation of Stormwater and Nonpoint Source Pollution*, 25 ELR 10300, (June 1995).

23. 33 U.S.C. § 1342(p) (1995).

24. 40 C.F.R. § 122.26(b)(14)(i)-(xi) (1996).

25. Office of Water, United States Environmental Protection Agency, *Watershed Protection Approach: Annual Report 1992*, (EPA 840-R-93-001) (1993).

26. *Id.*

LAND USE REGULATION AND WATERSHED PLANNING

OVERVIEW

Traditional land use regulatory techniques can reduce or eliminate nonpoint source pollution in several ways. The comprehensive plan and the zoning ordinance can control the location, type and rate of new development. Subdivision controls, special overlay districts, special use permits and site plan review processes can include measures that require mitigation of nonpoint source pollution related to individual land use activities.²⁷

COMPREHENSIVE PLANS

Comprehensive plans establish policies to guide decision-makers during the land planning process. These plans typically articulate long-term policies to guide decisions in such areas as transportation, housing, future land use, water and sewer, and other infrastructure. As a watershed management tool, a comprehensive plan can include statements of goals and objectives to address watershed management. In addition, the comprehensive plan can be used to identify critical areas for water quality protection such as open space sites, stream corridors, drainage-ways and wetlands. Where an areawide waste water management plan has been adopted under § 208 of the Clean Water Act, local government comprehensive plans should incorporate the policies and strategies identified in the 208 plan.

ZONING REGULATIONS

Zoning regulations usually address the overall density and uses allowed within the geographic area defined for each zoning classification. Typically, development characteristics such as density, height, setbacks, lot area coverage, impervious surface ratio and access to light are addressed. Setbacks from streams, lakes and wetlands are frequently required by zoning ordinances to minimize sedimentation, bank erosion and chemical pollutants from interfering with water quality.

An alternative to zoning requirements that apply to all zoning categories is the overlay district. An overlay district establishes additional requirements designed to protect specific environmentally sensitive areas. For example, portions of a watershed may be designated as an overlay district in which land use activities are regulated to prohibit degradation to the aquatic habitat. Transfer of development rights programs can also be used to transfer permitted densities from areas critical to water quality protection.²⁸

27. See Mandelker, *supra* note 4, at 489.

28. See generally Edward H. Ziegler and David F. Kernan, *Transfer Development Rights*, Technical Services Report No 1, Rocky Mountain Land Use Institute, University of Denver College of Law (1994).

One of the most effective zoning tools for minimizing water quality impacts associated with development is a limitation on the percentage of a site that may be covered by impervious surfaces.²⁹ As impervious coverage increases, the velocity and volume of surface run-off increases and there is a corresponding decrease in infiltration. Increased run-off results in increased erosion from areas disturbed by construction, which, in turn, increases sedimentation in adjacent waterbodies. Erosion can also cause loss of streamside habitat and instream habitat as the stream channel is covered by a blanket of eroded sand and silt.

SUBDIVISION CONTROLS

Another way to protect water quality is through subdivision design standards. Water quality impacts can be minimized by erosion and sedimentation control requirements, stormwater management systems, drainage design standards, landscaping specifications and construction management practices. To the extent polluted run-off from a subdivision cannot be avoided, developers should be required to mitigate the impacts of increased polluted run-off through some other project.³⁰

In areas that experience high snowfall, snow storage requirements can be implemented to ensure that snowmelt does not result in a direct discharge to waterbodies. Subdivision site design standards can prevent direct stormwater discharge to water bodies by requiring urban runoff to first pass over vegetated, undisturbed land. Site design standards can prohibit major modifications of stream channels, wetlands or lake shorelines and require that all instream work be avoided.

The design of the subdivision itself can affect water quality by encouraging the clustering of dwelling units and requiring that aquifer recharge areas, wetlands, steep slopes or other sensitive areas be left free from development.³¹ Street widths can be reduced to minimize paved surface areas and wetlands can be used to filter runoff from the development before it enters adjacent waterbodies.³²

REGIONAL PLANNING

To effectively employ land use planning and zoning techniques as a watershed protection tool, cooperation among neighboring units of government is essential. Typically, land use regulatory authority is co-terminous with municipal or county boundaries. However, the need for a regional approach is evident when communities attempt to protect water quality because water pollution problems do not respect po-

29. See Chester L. Arnold, Jr. and C. James Gibbons, *Impervious Surface Coverage: The Emergence Of A Key Environmental Indicator*, 62 J. AM. PLAN. ASS'N 243 (1996).

30. Summit County, Colorado requires developers to mitigate additions of phosphorous to Lake Dillon on a one to one basis. Some developers have met this requirement by sewerage old septic systems.

31. RANDALL ARENDT ET AL., *RURAL BY DESIGN: MAINTAINING SMALL TOWN CHARACTER*, (1994).

32. PETER CALTHORPE, *THE NEXT AMERICAN METROPOLIS*, 72-74 (1993).

litical boundaries.³³ Decisions to approve land use activities in one jurisdiction can have adverse water quality impacts on a neighboring, downstream jurisdiction. Regional planning can encompass strategies to control these impacts from developments that transcend the boundaries of individual units of local government. Regional planning may be implemented by multi-state authorities, such as the Tennessee Valley Authority or the Columbia River Gorge Area; associations of municipalities and counties within a particular geographic area of a state; or by neighboring municipalities within a county. At least twenty-four states authorize some type of regional planning and eighteen states authorize the transfer of functions from one unit of government to another by voluntary agreement.³⁴

Recently, a regional planning approach known as the "compact" has received attention from commentators.³⁵ This is a voluntary approach to regional cooperation that includes a regional plan and an ongoing management process for a particular geographic area. Each unit of government with jurisdiction in that area is a designated stakeholder. Under the compact approach, each governmental unit has the option of implementing portions of a regional plan. If it adopts the plan, it becomes a "participating community" in a compact.³⁶ The compact approach is ideal for addressing issues on a watershed scale because it integrates units of government horizontally (between neighboring jurisdictions) and vertically (between federal, state and local levels), all of which may have an impact on water pollution associated with the use and development of land.

Several states have enacted statutes that confer on local governments the authority to regulate "developments of regional impact" ("DRIs").³⁷ Examples include the Georgia Planning Act of 1989, which authorizes the Georgia Department of Community Affairs to establish rules and procedures for local government and regional agency review of development projects with regional impacts;³⁸ the Cape Cod Commission Act³⁹ which allows the Cape Cod Commission to review, approve, approve with conditions or deny projects with regional impacts; and the Colorado Areas and Activities of State Interest Act⁴⁰ which authorizes municipalities and counties to regulate certain "areas and

33. Marie L. York, *Regions: Blind Isolation or Shared Vision?*, 47 LAND USE LAW 4, 3 (1995).

34. Patricia E. Salkin, *Regional Planning: New Political Magnetism*, 44 LAND USE LAW 6, 3 (1992).

35. See generally Paul M. Bray and Patricia E. Salkin "Planning by Compact: A New Regional Approach," 48 LAND USE LAW 3, 3 (1996).

36. *Id.*

37. See generally, M. Morris, *Regulating Regional Impacts: Toward Model Legislation*, 47 LAND USE LAW 8, 3 (1995).

38. GA. CODE ANN. § 50-8.7.1 (1994).

39. 1989 Mass. Acts 716, amended by 1990 Mass. Acts 2 (*repealed 1991*).

40. COLO. REV. STAT. § 24-65.1-101, et seq. (1990) (H.B. 1041). See also, Barbara Green et al., *H.B. 1041: A Voice in the Wilderness*, 19 COLO. LAW., No. 11, pp. 2245-47 (Nov. 1990).

activities of state interest."⁴¹ Pursuant to this authority, several Colorado municipalities and counties have implemented permit requirements to regulate the impact to water quality caused by matters of state interest.

LEGAL ISSUES RELATED TO WATERSHED PLANNING

SECTION 208 PLANNING: IS IT ALIVE?

The earliest court decision to discuss the validity of water quality planning under § 208 of the Clean Water Act is *Natural Resources Defense Council v. Costle*.⁴² In that case, the Natural Resources Defense Council brought an action in federal district court seeking a declaratory judgment construing the planning required under § 208.⁴³ The United States Court of Appeals for the District of Columbia upheld the district court decision that 208 planning was required throughout a state, stressing that § 208 "sets up a comprehensive scheme for the elimination of water pollution in all areas of the state, both urban-industrial areas and agricultural and forest areas."⁴⁴

The continued viability of § 208 as a watershed planning tool was affirmed eleven years later by the Fourth Circuit in *Shanty Town Associates Limited Partnership v. Environmental Protection Agency*.⁴⁵ A developer filed suit challenging the EPA's restrictive conditions on funds granted to the municipality for construction of a sewage collection system.⁴⁶ Although the District Court for the District of Maryland held that the developer lacked standing and that its arguments failed on their merits, the Fourth Circuit granted standing, but held that EPA had the authority to impose conditions on the grant award to minimize nonpoint source pollution.⁴⁷ The case involved an EPA imposed condition on the grant which limited the amount of new development it could support. The concern was that better sewer service would lead to an explosion of development which would, in turn, lead to increased nonpoint source pollution.⁴⁸ The developer argued that imposition of this condition by EPA was an unlawful attempt to regulate nonpoint source pollution.⁴⁹ The court disagreed, noting that § 208(f) of the Clean Water Act authorizes EPA to make grants to the states to help

41. COLO. REV. STAT. § 24-65.1-101 (1997).

42. *Natural Resources Defense Council v. Costle*, 564 F.2d 573 (D.C. Cir. 1977).

43. *Id.* at 575.

44. *Id.* at 576.

45. *Shanty Town Assoc. Ltd. Partnership v. Environmental Protection Agency*, 843 F.2d 782 (4th Cir. 1988).

46. *Id.* at 784.

47. *Id.* at 788.

48. *Id.*

49. *Id.* at 790.

defray the costs of developing and administering 208 plans.⁵⁰ The court found that 208 requires plans to contain procedures to identify and address major sources of nonpoint source pollution, and that grants for sewer systems are a potential method for controlling nonpoint source pollution.⁵¹

EXPANDING JURISDICTION UNDER THE CLEAN WATER ACT

Although the Clean Water Act is designed primarily to control point source discharges of pollution, EPA and the courts consistently have taken an expansive view of activities subject to Clean Water Act regulation, perhaps out of frustration that little has been accomplished to reduce nonpoint source pollution. Through broad interpretations of the term "point source" and liberal interpretations of 401 certification powers, the courts and EPA have relied on the Clean Water Act to address water quality impacts that go well beyond the discharge of pollutants and, arguably, the intended scope of the Clean Water Act.

IS EVERYTHING A POINT SOURCE?

EPA has stated its intent "to embrace the broadest possible definition of point source consistent with the legislative intent of the Clean Water Act."⁵² The Director of the Water Management Division of EPA in Region Eight recently explained that "any seeps coming from identifiable sources of pollution (i.e., mine workings, land application sites, ponds, pits, etc.) would need to be regulated by discharge permits."⁵³ Courts have agreed with EPA's broad interpretation of the term point source, finding that point sources must be interpreted broadly to effectuate the remedial purposes of the Clean Water Act.⁵⁴

A case in point arose in Washington where environmental organizations sued Hecla Mining Company for discharging without an NPDES permit. In *Washington Wilderness Coalition v. HECLA Mining Co.*,⁵⁵ plaintiffs argued that tailings ponds were a point source which required an NPDES permit. The mining company maintained that its tailing ponds were not point sources but merely "areas of low topography into which mine tailing for mineral processing activities have been deposited and through which water may percolate."⁵⁶ The court rejected this argument citing several cases to support the conclusion that man-made ponds designed to receive tailings are conveyances or containers falling within the definition of point source under the Clean

50. *Id.* at 791.

51. *Id.* at 790-91.

52. See 55 Fed. Reg. 47990, 47997 (Nov. 16, 1990) ("Preamble to storm water regulations under NPDES.").

53. Letter from Director of the Water Management Division of EPA, Region 8.

54. *United States v. Earth Sciences, Inc.*, 599 F.2d 368, 373 (10th Cir. 1979); see also *Trustees for Alaska v. EPA*, 749 F.2d 549, 558 (9th Cir. 1984).

55. *Washington Wilderness Coalition v. HECLA Mining Co.*, 870 F. Supp. 983 (E.D. Wash. 1994).

56. *Id.* at 987.

Water Act.⁵⁷ The court narrowed the scope of activities falling under the nonpoint source designation to "uncollected runoff water from, for example, oil and gasoline on a highway which is difficult to attribute to a single polluter."⁵⁸

Through a similar analysis, acid mine drainage flowing into creeks has been found to be a pollutant requiring an NPDES permit. In the case of *Beartooth Alliance v. Crown Butte Mines*,⁵⁹ a federal district court held that mine audits and pits were point sources requiring a discharge permit. The court rejected the defendants' argument that no permit was needed because there had been no "addition" of pollutants as a result of mining.⁶⁰ The court admonished that "any reliance on historical pollution to evade current liability misapprehends the focus of the Clean Water Act."⁶¹ The court based its ruling on the Ninth Circuit case, *Committee to Save Mokelumne River v. East Bay Utility*⁶² in which a municipal utility and state agency were held liable for discharging without a permit for drainage collected into a dam which, from time to time, flowed into the river.⁶³

The *East Bay* case raises problematic implications to watershed planning efforts aimed at restoring waters polluted from historic mining activities. *East Bay* arose from a lawsuit brought by an environmental group against a municipal utility district and regional water-quality control board for unpermitted discharges under the Clean Water Act.⁶⁴ The utility district had acquired a portion of an abandoned mine in the 1960s to build a reservoir. In the 1970s, the district and the board constructed impoundments, ditches, pipes, valves, culverts, and channels in an attempt to reduce toxic run-off from the site, which they continued to operate. From time to time, there were accidental spills from the facility.

Even though this treatment system improved the over-all water quality of the river, the court found that the discharge of collected run-off and the accidental spills were a point source subject to the Clean Water Act's permit requirements.⁶⁵ The defendants conceded

57. *Id.* at 988, citing *Appalachian Power Company v. Train*, 545 F.2d 1351, 1373 (4th Cir. 1976) (distinguishing point sources from "unchanneled and uncollected" surface waters); *Consolidated Coal Co. v. Costle*, 604 F.2d, 239, 249 (4th Cir. 1979) (explaining that point sources include slurry ponds, drainage ponds, and coal refuse piles); *Sierra Club v. Absten Construction Co.*, 620 F.2d 41, 45 (5th Cir. 1980) (stating that gravity flow from rain or run-off water may be part of a point source discharge if the miner at least initially collected or channeled the water and other materials).

58. *Washington Wilderness Coalition*, 870 F. Supp. at 988.

59. *Beartooth Alliance v. Crown Butte Mines*, 904 F. Supp. 1168 (D. Mont. 1995).

60. *Id.* at 1172.

61. *Id.*

62. *Committee to Save Mokelumne River v. East Bay Util.*, 13 F.3d 305 (9th Cir. 1993), *cert. denied*, 513 U.S. 873 (1994).

63. *Id.* at 308 (finding that historical level of pollution compared to current level of pollution emanating from facility was not material to resolution of Clean Water Act claim that owners and operators were discharging pollutants).

64. *Id.* at 307.

65. *Id.* at 308.

that the acid-mine drainage was a pollutant, and that the facility was a point source, but they argued that because there was no addition of pollutants from their activities, they were not liable under the Clean Water Act.⁶⁶ Rejecting this argument, the court said that the Clean Water Act does not require that there be a greater level of pollution entering the river than before in order to impose liability for discharging pollutants without a permit.⁶⁷ Under the reasoning of this case, watershed based efforts to address water pollution caused by abandoned mines may be chilled because of the fear of incurring Clean Water Act liability anytime run-off from an abandoned mine is collected or channeled. Not all courts, however, have agreed with the Ninth Circuit's conclusion that liability arises even where there is not an "addition" of pollutants. For example, in *Friends of Santa Fe County v. L. A. C. Minerals, Inc.*,⁶⁸ an environmental group brought a citizens' suit to challenge mine remediation work being performed under the oversight of the State of New Mexico. In that case, the court found that the citizens' suit must prove that the defendants caused an *addition* of pollutants, because "migration of residual contaminations resulting from previous releases is not an ongoing discharge under the Act."⁶⁹ Other courts have also held that Clean Water Act permit requirements arise only where there is an "addition" of pollutants.⁷⁰

DISCHARGES TO GROUNDWATER AS POINT SOURCES

In keeping with the trend to sweep as much as possible under the definition of point source, the courts have extended federal jurisdiction over point source discharges to address groundwater contamination, even though the Clean Water Act does not directly regulate groundwater quality. The Clean Water Act makes it unlawful for any person to discharge any pollutant into navigable waters without a permit.⁷¹ Given the Act's purpose to regulate as fully as possible all sources of water pollution, the Supreme Court has decided that the term navigable is of "little import."⁷² According to the Court, Congress intended navigable waters to embrace virtually "every creek, stream, river or body of water that in any way may effect interstate commerce."⁷³ Congress did not, however, intend to include isolated

66. *Id.*

67. *Id.* at 309.

68. *Friends of Santa Fe County v. L. A. C. Minerals, Inc.*, 892 F.Supp. 1333 (D. N.M. 1995).

69. *Id.* at 1354.

70. *See, e.g.*, *National Wildlife Fed. v. Consumers Power Co.*, 862 F.2d 580, 589 (6th Cir. 1988) (hydroelectric dam's facilitation of pollutants already in the water not permissible addition of pollutants); *National Wildlife Fed. v. Gorsuch*, 693 F.2d 156, 175 (D.C. Cir.1982) (upholding EPA's determination that addition of a pollutant occurs only if the "point source itself physically introduces pollutants from the outside world).

71. As defined in the Clean Water Act, the term "navigable waters" means "[w]aters of the United States (§ 502, 33 U.S.C. § 1362(7) (1995)).

72. *United States v. Riverside Bayview Homes, Inc.*, 474 U.S. 121, 133 (1985).

73. *Quivera Mineral Co. v. EPA*, 765 F.2d 126, 129 (10th Cir. 1985).

groundwater as part of the navigable waters.⁷⁴

Where impacts to tributary groundwater, as opposed to isolated groundwater, are at issue, the law is not as clear. Courts are split on the question of whether tributary ground water which is naturally connected to surface water is subject to the Clean Water Act regulation. On the one hand, some courts have determined that Congress intended regulation of all discharges of pollutants that could affect surface waters of the United States.⁷⁵ On the other hand, there are courts which conclude that the possibility of a hydrologic connection between ground and surface waters is insufficient to trigger Clean Water Act regulations.⁷⁶ In *Washington Wilderness Coalition*,⁷⁷ the court reasoned that since the goal of the Clean Water Act is to protect the quality of surface waters, any pollutant that enters such waters, whether directly or through ground water, is subject to regulation by a NPDES permit. It is not sufficient, however, to allege ground water pollution, and then to assert a general hydrologic connection between all waters. Rather, pollutants must be traced from their source to surface waters in order to come within the purview of the Clean Water Act.⁷⁸

EPA interprets its jurisdiction over groundwater to depend on a connection with surface water. In the preamble to the NPDES permit regulations for stormwater discharges, EPA states that the rule does not apply to groundwater "unless there is a hydrologic connection between the ground water and a nearby surface water body."⁷⁹

FEDERAL LICENSES AND PERMITS: 401 CERTIFICATIONS

Carving out another exception to the general rule that the Clean Water Act regulates only point source discharges of pollutants, the United States Supreme Court has given states broad authority under § 401 of the Clean Water Act⁸⁰ to address impacts that are unrelated to the discharge of pollutants. In *PUD No. 1 of Jefferson County v. Washington Department of Ecology*,⁸¹ the Supreme Court affirmed a Washington court's decision that allowed a state, through the 401 certification pro-

74. See *Exxon Corp. v. Train*, 554 F.2d 1310 (5th Cir. 1977); *U.S. v. GAF Corp.*, 389 F. Supp. 1379 (S.D. Tex. 1975).

75. See, e.g., *Colo. Env'tl Coalition v. Colo. Refining Co.*, 838 F. Supp. 1428, 1434 (D. Colo. 1993) (finding discharge of any pollutant into navigable waters to include such discharges which reach navigable waters through ground water).

76. See *Town of Norfolk v. United States Corps of Eng'rs*, 968 F.2d 1438, 1450-51 (1st Cir. 1992) (deferring to an agency interpretation excluding ground water from coverage under the Clean Water Act); *Village of Oconomowoc Lake v. Dayton Hudson Corp.*, 24 F.3d 962, 965 (7th Cir. 1994); *Kelly v. United States*, 618 F. Supp. 1103, 1105-07 (W.D. Mich. 1985).

77. *Washington Wilderness Coalition v. HECLA Mining Co.*, 870 F. Supp. 983, 990 (E.D. Wash. 1994); see *supra* note 55 and accompanying text.

78. *Id.* at 990.

79. NPDES permit regulations and groundwater, 55 Fed. Reg. 47,990, 47,997 (1990).

80. 33 U.S.C. § 1341 (1995).

81. *PUD No. 1 of Jefferson County v. Wash. Dep't of Ecology*, 511 U.S. 700, 723 (1994).

cess, to impose minimum stream flow requirements on a hydroelectric project. The Court read § 401 to allow a state to impose any condition for water quality certification necessary to ensure compliance with state requirements that protect a designated use.⁸² In accordance with this interpretation, the Court held that the minimum flow condition was necessary to protect the stream for its use as a fishery.⁸³

A recently decided citizen suit in Oregon is illustrative of the trend to apply 401 certification for nonpoint source pollution within a watershed. In *Oregon Natural Desert Ass'n v. Thomas*,⁸⁴ a collection of environmental groups sued the United States Forest Service under the citizen suit provision of the Clean Water Act.⁸⁵ The groups wanted a declaratory judgment establishing that applicants for federal grazing permits are required to obtain state 401 certification to ensure that the grazing activity will not adversely impact state water quality standards.⁸⁶ Section 401(a)(1) requires that before a federal permit may be issued for "any activity . . . which may result in any discharge into navigable waters . . ." ⁸⁷ a state certificate must be obtained. The forest service argued that the plain meaning of "discharge" is limited to a point source or a nonpoint source with a conveyance.⁸⁸ The court, however, was not persuaded by this argument and ruled that "discharge" does not restrict the definition to point sources or nonpoint sources with conveyances.⁸⁹ The court also held that the Forest Service's interpretation of the meaning of § 401 is not entitled to any deference because the EPA, not the Forest Service, administers the Clean Water Act.⁹⁰ Finally, the court determined that the legislative history of § 401(a) reveals a congressional intent to regulate all polluting activities through water quality standards and that there was no distinction between point and nonpoint sources in the original act.⁹¹

These expansive interpretations of Clean Water Act authority raise an interesting question for watershed planning professionals. Are these interpretations based on a fair reading of the Clean Water Act or are they symptomatic of an increasing awareness that the remaining water pollution problems are not easily addressed by traditional end-of-the-pipe controls? Arguably, a coordinated watershed approach that features local regulation of land use activities is a better solution

82. *Id.* at 712.

83. *Id.* at 719-22; *see also* *Kelley v. Federal Energy Regulatory Comm'n*, 96 F.3d 1482 (D.C. Cir. 1996).

84. *Oregon Natural Desert Ass'n v. Thomas*, 940 F. Supp. 1534, 1536 (D. Or. 1996).

85. Clean Water Act § 505, 33 U.S.C. § 1365 (1995).

86. *Oregon Natural Desert Ass'n*, 940 F. Supp. at 1536-37.

87. 33 U.S.C. § 1341(a)(1) (1995).

88. *Oregon Natural Desert Ass'n*, 940 F. Supp. at 1540.

89. *Id.*

90. *Id.*

91. *Id.* at 1541, "Senator Cooper stated that the 1970 Amendments require, without exception, that all federal activities that have any effect on water quality be conducted so that water quality standards be maintained," *quoting* 115 CONG. REC. 28,970 (1969).

to nonpoint source pollution than an ever-expanding notion of Clean Water Act authority.

VALIDITY OF LOCAL REGULATION OF WATER QUALITY IMPACTS

Since the 1960s, state legislatures have passed enabling acts to permit local protection of certain critical resources, including water resources.⁹² Pursuant to these enabling statutes, local governments have enacted ordinances to restrict developments in wetlands, farmlands and historic districts and sites.⁹³ Courts have upheld these attempts to address the environmental impacts of land use activities.⁹⁴ In some states, legislative enactments expressly authorize some form of watershed regulation.⁹⁵ Local government regulations designed to implement watershed plans can give rise to the same claims that are raised to challenge any land use regulation, including takings, equal protection, due process and preemption theories.

TAKINGS, DUE PROCESS AND EQUAL PROTECTION

Land use regulations designed to protect water quality frequently include a requirement that a portion of a development site near a waterbody be kept in a natural state. This type of development restriction may give rise to a "takings" claim. In particular, any regulation that actually requires land to be dedicated to the public should be carefully considered under the two-part test established by the United States Supreme Court in *Dolan v. City of Tigard*.⁹⁶ Under that test, the dedication requirement must "substantially advance" a legitimate government purpose and the exaction or dedication must be "roughly proportional"⁹⁷ to the impact of the project.

In *Dolan*, Mrs. Dolan challenged the requirement to dedicate to the City all of the land lying within the floodplain of Fanno Creek.⁹⁸ The floodplain was designated in the City's Master Drainage Plan which recommends that it remain free of structures and be preserved as a greenway. The City's comprehensive plan recommended that the floodplain be included in the greenway system and the Community Development Code required dedicating sufficient open space for an

92. See R. PLATT, *LAND USE CONTROLS: GEOGRAPHY, LAW, AND PUBLIC POLICY* 219, 241 (1991).

93. J.H. WICKERSHAM, *THE QUIET REVOLUTION CONTINUES: THE EMERGING NEW MODEL FOR STATE GROWTH MANAGEMENT STATUTES* (1995) (*Zoning and Planning Law Handbook*).

94. See, e.g., *City of Colorado Springs v. Board of County Comm'rs*, 895 P.2d 1105, 1120 (Colo. Ct. App. 1994), *cert. denied*, 116 S.Ct. 564 (1995) (upholding county authority to enact regulations to address impacts to aquatic habitats and wetlands).

95. See, for example: Colorado, COLO. REV.STAT. § 31-15 707(iv)(b) (1997) (authorizing municipalities to regulate in an area five miles from the source of water supply); North Carolina, N.C. Gen. Stat. § 143-214.5 & 143.6(a), 143-215.6(a) (1996).

96. *Dolan v. City of Tigard*, 512 U.S. 374, 384 (1994).

97. *Id.* at 391.

98. *Id.* at 380-83 (plaintiff also challenged a requirement to dedicate a 15 foot pedestrian/bikeway).

adjoining greenway within the floodplain.⁹⁹ The Dolan's did not dispute that establishing a greenway in the floodplain for stormwater control was a legitimate public purpose. Instead, they claimed that there was not a sufficient nexus between the requirements and the impacts of the development.

The Supreme Court agreed and explained that under the "roughly proportional" test: "[n]o precise mathematical calculation is required, but the city must make some sort of individualized determination that the required dedication is related both in nature and extent to the impact of the proposed development."¹⁰⁰ The court was not persuaded that a public greenway, as opposed to a private one, was related to the City's goal to minimize stormwater run-off or prevent flooding.¹⁰¹ The court confirmed, however, that "increasing the amount of impervious surface will increase the quantity and rate of stormwater flow from the petitioner's property."¹⁰²

In 1987, the Supreme Court, in *Nollan v. California Coastal Commission*,¹⁰³ established the "essential nexus" test for dedications of land developed more fully in *Dolan*.¹⁰⁴ The *Nollan* decision found a taking because the Coastal Commission justified exacting an easement along the front of the property facing the ocean as necessary to obtain access to the beach.¹⁰⁵ The court found that the Commission's justification failed to satisfy the "essential nexus" test.¹⁰⁶

From the Supreme Court's point of view regarding land dedications, it appears that mitigating nonpoint source run-off is an appropriate governmental land use goal, but land dedication requirements may not be the safest solution. Regulations that require parts of a parcel to remain undeveloped (as in the case of stream setbacks) may be a better way to accomplish the goal.¹⁰⁷ There may be circumstances, however, in which only a dedication of property to the public will serve the public interest in water quality protection. In those cases, the local government must be prepared to show that there is an essential nexus between water quality and the dedication and that the extent of the dedication is roughly proportionate to the water quality impacts of the development.

Watershed planning efforts by the Lake Tahoe Regional Planning Authority have generated interesting court decisions discussing the constitutional validity of various water quality management schemes. For example, conditions imposed on a development by the Authority

99. *Id.* at 379.

100. *Id.* at 391.

101. *Id.* at 389-91.

102. *Id.* at 392.

103. *Nollan v. California Coastal Comm'n*, 483 U.S. 825 (1987).

104. *Id.* at 836-37.

105. *Id.*

106. *Id.* at 838.

107. For an excellent discussion of Dolan and post-Dolan decisions, see Nancy E. Stroud & Susan L. Trevarthen, *Defensible Exactions After Nollan v. California Coastal Commission and Dolan v. City of Tigard*, 25 Stetson L. REV. 719 (1996).

survived a takings challenge in *Leroy Land Development v. Tahoe Regional Planning Authority*.¹⁰⁸ In that case, the Ninth Circuit reversed a lower court's decision that offsite mitigation conditions to protect water quality failed to advance the governmental purpose of protecting Lake Tahoe.¹⁰⁹ Persuaded by the fact that the interstate compact forming the regional authority was created to minimize the adverse effect of urbanization due to erosion and pollution, the Ninth Circuit held that the off-site mitigation requirements were designed to "ameliorate erosion, destabilization and other adverse environmental effects . . ." and directly furthered the governmental interest underlying the regulations.¹¹⁰

In another Lake Tahoe case, a property owners' association challenged as a takings a lake pollution mitigation fee assessed at the time of building permit issuance. In *Tahoe Keys Property Owners' Ass'n v. State Water Resources Control*,¹¹¹ the court found that the justification for the regulation need not be limited to the needs or burdens created by the subject property alone.¹¹² According to the court, the plaintiffs were not unfairly singled out because: (1) the regulations to protect the lake, if not this particular fee, applied to all property owners, and (2) regulation of the property was the only way to protect the lake.¹¹³

Courts have been clear and consistent in requiring some kind of relationship between conditions imposed on land use approvals to address water quality and the water quality impacts of a development proposal. A case in point arose where a developer was compelled to purchase land and install a drainage system that would serve other developments in a watershed area and the county failed to require repayment of a portion of the costs by future developers. In *Christopher Lake Development Co. v. St. Louis County*,¹¹⁴ the court found that the drainage system requirement violated the developer's due process and equal protection rights because he was forced to pay more than his share of costs that should have been allocated throughout the watershed.¹¹⁵ The case was remanded to the district court with instructions to determine the proper cost allocation scheme.

In Florida, in the case of *Villas of Lake Jackson v. Leon County*,¹¹⁶ a developer sued a county challenging on equal protection and due process theories a rezoning ordinance designed to address water quality impacts to a watershed.¹¹⁷ The rezoning was based on documented

108. *Leroy Land Dev. v. Tahoe Reg'l Planning Auth.*, 939 F.2d 696, 697-99 (9th Cir. 1991).

109. *Id.* at 699.

110. *Id.*

111. *Tahoe Keys Property Owners' Ass'n v. State Water Resources Control*, 28 Cal. Rptr. 2d 734 (Cal. Ct. App. 1994), *cert. denied*, 513 U.S. 988 (1994).

112. *Id.* at 745.

113. *Id.* at 746-48.

114. *Christopher Lake Dev. Co. v. St. Louis County*, 35 F.3d 1269 (8th Cir. 1994).

115. *Id.* at 1275.

116. *Villas of Lake Jackson v. Leon County*, 884 F. Supp. 1544 (N.D. Fla. 1995).

117. *Id.* at 1548.

concerns about stormwater runoff further deteriorating the nearby lake's water quality. In that case, during the county's process of reviewing and approving a 1972 development proposal, the impact of drainage from the development on Lake Jackson became an issue. Accordingly, the developer agreed to install a stormwater management system before any development commenced on the project.¹¹⁸ A drainage system was designed and built at a cost of \$45,000 with a capacity larger than would have been necessary for the developer's property alone. In 1989, the county down-zoned the property from multi-family to estate zoning because of the water quality concerns associated with denser development and prohibited development within an area adjacent to the lake. The developer sued the county claiming, *inter alia*, that the zoning ordinance violated its due process rights and denied equal protection.¹¹⁹

The due process claim failed because the developer did not demonstrate a protected property right under state law.¹²⁰ With regard to the equal protection claim, plaintiffs identified several properties in the Lake Jackson drainage area which they contended were treated differently. The court examined the county ordinance under a traditional equal protection test and reiterated the Supreme Court's view in *Nordlinger v. Hahn*;¹²¹ equal protection challenges that do not involve a suspect class or a fundamental right simply require the ordinance in question be "rationally related to a legitimate state interest" to withstand a facial challenge.¹²² An ordinance must be upheld against equal protection challenge if there is any reasonable conceivable state of facts that could provide a rational basis for the classification.¹²³ In light of these lenient standards, the federal district court found that Leon County's interest in protecting the water quality of Lake Jackson through development restrictions was related to a legitimate and important county interest.¹²⁴ The court also found that density limits and setbacks around the lake were related in a rational way to that interest.¹²⁵

Next, the court considered plaintiff's claim that the county intentionally singled out plaintiffs denying them equal protection of the law.¹²⁶ The court relied on *Village of Arlington Heights v. Metropolitan Housing Development Corp.*,¹²⁷ which held that purposeful discrimination

118. *Id.* at 1551.

119. *Id.* at 1548.

120. *Id.* at 1555.

121. *Nordlinger v. Hahn*, 505 U.S. 1, 10 (1992).

122. *Villas of Lake Jackson*, 884 F. Supp. at 1577.

123. *See FCC v. Beach Communications*, 508 U.S. 307 (1993).

124. *Villas of Lake Jackson*, 884 F. Supp. at 1577-78.

125. Setback requirements usually withstand challenges. *See e.g.*, *Threat v. Fulton County*, 467 S.E.2d 546, 550 (Ga. 1996) (upholding a county requirement that prohibited development from disturbing vegetation within 50 feet of a river).

126. *Villas of Lake Jackson*, 884 F. Supp. at 1577.

127. *Village of Arlington Heights v. Metropolitan Housing Dev. Corp.*, 429 U.S. 252, 266 (1977).

can be indirectly proven by a "stark pattern" of adverse impact on a particular group, and examined whether the evidence of differing treatment revealed a pattern of irrationality.¹²⁸ The court held that as long as there is a rational basis for the differing treatment, an as applied equal protection claim will not prevail.¹²⁹ The court also noted that the Supreme Court has recognized that it may be very difficult to show unequal application of the zoning ordinance since each parcel can be unique.¹³⁰ Because the county had been concerned about protecting the water quality of Lake Jackson for many years and had been studying a comprehensive plan for the entire drainage basin, the court found that the plan was not aimed at plaintiff's property.¹³¹

These cases illustrate that watershed protection schemes are evaluated under the same standards that apply to any land use regulations. Clearly, watershed protection is a legitimate governmental purpose.¹³² Setback requirements, impervious surface restrictions and density controls are all appropriate tools to protect water quality and dedications of land for water quality purposes will be subject to scrutiny under the *Dolan* test which requires that the dedication be "roughly" proportionate to the impacts of the proposed land use. Equal protection challenges of watershed regulations are likely to fail, even if parcels of property are treated differently, so long as the differing treatment is related to a comprehensive water quality management program.

FEDERAL OR STATE PREEMPTION

The implementation of a watershed plan through local land use regulations may trigger challenges on the basis of federal or state preemption. Implementing regulations will be adjudged under the usual standards applied by the courts to resolve preemption questions. Preemption challenges to watershed planning typically arise either where watershed regulations are applied to projects located on federal lands or where they allegedly conflict with state or federal water quality laws.

In *California Coastal Commission v. Granite Rock Co.*,¹³³ the United States Supreme Court characterized the federal preemption test as whether there is either an "actual conflict between state and federal

128. *Villas of Lake Jackson*, 884 F. Supp. at 1577.

129. *Id.* at 1579.

130. *Id.* See also *Kawaoka v. City of Arroyo Grande*, 17 F.3d 1227, 1240 (9th Cir. 1994), cert. denied, 115 S. Ct. 193 (1994) (stating that "city's general plan and water moratorium were rational).

131. *Villas of Lake Jackson*, 884 F. Supp. at 1579. Also applying a traditional due process and equal protection analysis is *City of Austin v. Quick*, 930 S.W.2d 678, 692 (Tex. Ct. App. 1996) (holding that city ordinance limiting amount of impervious cover in watershed zone did not violate either due process or equal protection).

132. See, e.g., *ACW Realty Management, Inc. v. Planning Bd. of Westfield*, 662 N.E.2d 1051 (Mass. App. Ct. 1996), see also *Connecticut Resources Recovery Auth. v. Planning and Zoning Comm'n of Wallingford*, 626 A.2d 705, 716 (Conn. 1993) (finding that "zoning regulation prohibiting solid waste disposal over an aquifer was a valid exercise of police power).

133. *California Coastal Comm'n v. Granite Rock Co.*, 480 U.S. 572 (1987).

law”, or a “congressional expression of intent to preempt.”¹³⁴ Local regulations which reflect the exercise of police powers will be preempted by federal statutes only “if that was the clear and manifest purpose of Congress.”¹³⁵ Under these tests, federal preemption becomes a question of statutory interpretation and analysis. An actual conflict between state and federal law requires that the former give way.¹³⁶

Where a project is located on federal land, state or local regulations designed to address water quality impacts will probably survive preemption attacks, at least with respect to federal land management statutes. According to the Supreme Court’s holding in *Granite Rock*, local government regulations that seek to categorically prohibit activities on federal land will be preempted by federal land management acts but regulations that seek to regulate the environmental impacts of projects on federal lands would not be preempted by those acts.¹³⁷ Under this distinction, a county could not zone federal lands to categorically exclude land uses allowed by federal law. It could, however, impose regulations on land uses intended to ensure that adverse water quality impacts would be mitigated.

Watershed regulations may also be challenged under theories that they are preempted by federal and state water quality regulatory schemes. Given the point source focus of the Clean Water Act and federal policies that reserve to state and local governments the authority to regulate nonpoint sources, most land use regulations addressing water quality impacts of land use activities should survive preemption attacks brought under the Clean Water Act.

Courts have evaluated whether the Clean Water Act preempts local water quality regulations in a variety of cases. In *Welch v. Board of Supervisors*,¹³⁸ a county ordinance banning land application of sewage sludge was held not to be preempted by the Clean Water Act because the ban does not conflict with Clean Water Act sludge disposal policies and more stringent county land ban regulations are expressly allowed by regulation.¹³⁹ In *Holiday Point Marina v. Anne Arundel County*,¹⁴⁰ a Maryland appellate court found that Army Corps of Engineers’ review under the Clean Water Act and Rivers and Harbors Appropriation Act permit requirements did not preempt a zoning ordinance prohibiting marina development within a specific distance of shellfish beds.¹⁴¹

134. *Id.* at 580-81.

135. *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 230 (1947); *see also* *Pacific Gas & Elec. Co. v. Energy Resources Comm’n*, 461 U.S. 190, 206 (1982), *Ray v. Atlantic Richfield*, 435 U.S. 151, 157 (1978).

136. *Ray*, 435 U.S. at 168-69.

137. *Granite Rock*, 480 U.S. at 1428-29.

138. *Welch v. Bd. of Supervisors*, 888 F. Supp. 753 (W.D. Va. 1995).

139. *Id.* at 756-57.

140. *Holiday Point Marina v. Anne Arundel County*, 666 A.2d 1332 (Md. App. 1996).

141. *Id.* at 1338.

Whether state law preempts local government water quality ordinances is a question of state statutory interpretation.¹⁴²

142. See, e.g., *Water Quality Ass'n v. County of Santa Barbara*, 52 Cal. Rptr. 2d 184, 191 (Cal. Ct. App. 1996) (finding county ordinance governing water softeners in conflict with and preempted by state law); *City and County of Denver v. Bd. of County Commissioners*, 782 P.2d 753, 765 (Colo. 1989) (holding that state water rights administration statute did not completely exempt water projects from local government regulations); *State College Borough Water Auth. v. Bd. of Supervisors*, 659 A.2d 640, 645 (Pa. Commw. Ct. 1995) (finding that county regulations requiring domestic water system development not significantly deteriorate wetlands or degrade natural scenic were enacted pursuant to statutory authority to impose more stringent regulations.).