
WATERSHED PLANNING

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**Technical Service Report No. 9
The Rocky Mountain Land Use Institute**



**College of Law
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WHAT IS WATERSHED PLANNING?

Introduction

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 established by the Federal Clean Water Act¹, 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. Land use planning and regulation, however, typically addresses 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 with an entire 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

¹ 33 U.S.C. § 1251-1387.

² "Addressing Barriers To Watershed Protections", by Robert W. Adler, 1995 Environmental Law, 25 ENTL 973 (1995).

³ *Id.* at 11.

⁴ See Daniel R. Mandelker, "Controlling Nonpoint Source Pollution: Can It Be Done?," 65 Chi-Kent L.Rev.479,480 (1989); D. Zaring, "Federal Legislative Solutions to Agricultural Nonpoint Source Pollution", 26 ELR 101 28 March 1996.

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 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 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 Several sections of the Clean Water Act, however, establish a framework for addressing both point and nonpoint water quality on a watershed basis.¹⁰

⁵ R. Adler at 994, N. 2 supra.

⁶ 33 U.S.C. § 1362(14).

⁷ EPA, "National Water Quality Inventory," 1992 Report to Congress (March 1994).

⁸ An exception to this general rule are 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 Section 401 of the Clean Water Act. See, 33 U.S.C. § 1341.

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 Sub-Committee on Oceanography of the House Committee on Merchant Marina Fisheries, 100th Cong., 2nd Sess. 84 (1988); EPA, "National Water Quality Inventory," 1992 Report to Congress (March 1994).

¹⁰ For a complete list of all federal programs and initiatives that are intended to reduce water pollution see "Water Quality: A Catalog of Related Federal Programs", GAO/RCED-96-173 (1996).

Section 208 Areawide Waste Treatment Management Plans

Watershed planning has its origins in Section 208 of the Clean Water Act,¹¹ which is 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 which as a result of "urban industrial concentrations or other factors has substantial water quality control problems" and to designate representative organizations "capable of developing effective areawide waste treatment management plans for such area."¹⁴ Section 208 requires agencies to plan for point source regulatory programs and develop programs for identifying and controlling nonpoint source pollution from agriculture, silviculture, mining construction, urban run-off and related activities. "Section 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 Section 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 the Clean Water Act added a new Section 319¹⁶ which provides for the development of nonpoint source management programs by the states. States must identify waters not attaining water quality standards without additional nonpoint source controls and identify best management practices for categories of nonpoint source problems, along with programs, to implement best

¹¹ 33 U.S.C. § 1288.

¹² See 33 U.S. C. § 1329(h)(11). See generally, R March et al., "Nonpoint Source Water Pollution § 208 Planning: Legal and Institutional Issues," 1981 - 1982 Agric. L.J.324,349(1991-1992) (section 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).

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

¹⁶ 33 U.S.C. § 1329 (a)-(b).

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 section 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

Stormwater Regulation

Although technically not a watershed planning provision, EPA's 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

¹⁷ See 33 U.S.C. § 1251 (a)(7).

¹⁸ See R. Adler et al., "The Clean Water Act Twenty Years Later," 173 (1993).

¹⁹ 33 U.S.C. § 1313 (d).

²⁰ 40 C.F.R. § 130.2 (l)(1991).

²¹ A series of cases have been brought around 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 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 Center v. Browner*, 20 F.3d 1981 (9th Cir. 1994); *NRDC v. Fox*, 909 F.Supp 153 (S.D.N.Y. 1995); *Idaho Sportsmens Coalition v. Browner*, No. C93-943(W.D. Wash. Sept. 26, 1996).

²² See B. Weeks, "Trends in Regulation of Storm water and Nonpoint Source Pollution" 25 ELR 10300, (June 1995).

²³ 33 U.S.C. § 1324(p).

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 (5) acres of land, and certain "light" industries.²⁴

There are three types of 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 runoff with raw materials, machinery and waste.

EPA Watershed Policies

Through several policy documents, EPA has 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 principals: 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; and third, 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

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

²⁴ 40 C.F.R. § 122.26(b)(14)(l)-(xl) (1994).

²⁵ EPA "Watershed Protection Approach," Annual Report, 1992.

²⁶ Id.

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 nonpoint source pollution related to individual land use activities to be mitigated.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 wastewater management plan has been adopted under Section 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, set-backs, lot area coverage, impervious service 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 that 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

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

²⁷ See Mandelker, at 489, N. 4, supra. 65 Chi.Kent L. Rev. 479, 489(1989).

²⁸ See generally, E. Ziegler and D. Kernan, "Transfer of Development Rights," Technical Service Report No. 1, Rocky Mountain Land Use Institute, University of Denver College of Law (1994).

covered by impervious surfaces.²⁹ As impervious coverage increases, the velocity in 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 stream side habitat and in stream habitat as the water body is covered by a blanket of eroded sand and silt.³⁰

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.³¹

In areas that experience high snow fall, snow storage requirements can be implemented to ensure that snow melt does not result in a direct discharge to waterbodies. Subdivision site design standards can prevent direct storm water 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 in-stream 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.³² 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.³³

²⁹ See James and Chester, "Impervious Surface Coverage: The Emergence Of A Key Environmental Indicator," 62 Journal of the American Planning Association, No.2 (1996).

³⁰ T.R. Schueler, "Use of Cluster Development to Protect Watersheds, Watershed Protection Techniques 1, 3;" 137-40 (1994).

³¹ 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 sewerling old septic systems.

³² R. Arendt, "Rural By Design," APA, 1994.

³³ P. Calthorpe, "The Next American Metropolis," Princeton Architectural Press, 1993 at 72-74.

Regional Planning

To effectively employ land use planning and zoning techniques as a watershed protection tool, cooperation among neighboring units of governments is essential. Typically, land use regulatory authority is coterminous with municipal or county boundaries. The need for a regional approach is evident, however, when communities attempt to protect water quality because water pollution problems do not respect political boundaries.³⁴ Decisions to approve land use activities in one jurisdiction can cause water quality impacts that are experienced in 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 24 states authorize some type of regional planning and 18 states authorize the transfer of functions from one unit of government to another by voluntary agreement.³⁵

Recently, a regional planning approach known as the "compact" has received attention from commentators.³⁶ This is a voluntary approach to regional cooperation that includes a regional plan and 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.³⁷ 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").³⁸ Examples

³⁴ M. York, "Regions: Blind Isolation or Shared Vision?," 47 Land Use Law & Zoning Digest, No. 4 at 3 (April 1995).

³⁵ P. Salkin, "Regional Planning: New Political Magnetism," 44 Land Use Law & Zoning Digest, No. 6 at 3 (June 1992).

³⁶ See generally P. Bray and P. Salkin, "Planning by Compact: A New Regional Approach," 48 Land Use Law & Zoning Digest, No. 3 at 3, (March 1996).

³⁷ Id.

³⁸ See generally, M. Morris, "Regulating Regional Impacts: Toward Model Legislation," 47 Land Use

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;³⁹ the Cape Cod Commission Act⁴⁰ 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 Act⁴¹ which authorizes municipalities and counties to regulate certain "areas and activities of state interest" as defined by the act. 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.

EXAMPLES OF WATERSHED PLANNING EFFORTS

Federally- Funded Watershed Planning Efforts Under the Clean Water Act

The Clean Water Act has expressly authorized management programs for the Chesapeake Bay, Great Lakes, Lake Champlain and Long Island Sound watersheds.⁴² These programs are designed to "provide for intergovernmental coordination and cooperation, public participation, and targeted federal funding."⁴³

The Chesapeake Bay Agreement

Section 117 of the Clean Water Act ⁴⁴ defines the Chesapeake Bay Program.⁴⁵ Section 117 is "sparse and lacks significant authorities or requirements,"⁴⁶ but additional Chesapeake Bay Agreements in 1983 and 1987

Law & Zoning Digest, No. 8 at 3, (August 1995).

³⁹ Ga.CODE ANN. § 50-8-7.1

⁴⁰ Ch. 716 of the Acts of 1989 and Ch. 2 of the Acts of 1990.

⁴¹ C.R.S. § 24-65.1-101, et seq. (H.B. 1041). See also B. Green and B. Seibert, "H.B. 1041: A Voice in the Wilderness," Vol. 19, Colo. Lawyer, No. 11, pp. 2245-2247 (Dec. 1990).

⁴² 33 U.S.C. §§ 1267-1270 (1988). The Chesapeake Bay and Great Lakes Programs were adopted in 1987. There are also additional provisions for Long Island Sound, and Lake Champlain. *Id.* at 1070.

⁴³ Adler at 1071, N. 2 *supra*.

⁴⁴ 33 U.S.C. § 1267 (1988).

⁴⁵ Adler at 1071, N. 2 *supra*.

⁴⁶ *Id.*

provide detail to Section 117 through inclusion of a series of goals to be met in coming years.⁴⁷ The program is seen as a "clear acknowledgment of both the link between land use and water quality, and the need to manage and control regional growth and development in order to restore and protect the Bay's ecosystem."⁴⁸ The Chesapeake Bay Program's voluntary nature is viewed as a potential drawback because implementation remains up to the individual states, "thus foreclosing any truly region wide solutions."⁴⁹

The Great Lakes Program

The Great Lakes Program, authorized by Section 118 of the Clean Water Act, is an interesting combination of international agreements and federal oversight.⁵⁰ The program is more comprehensive and substantive than the Chesapeake Bay Program as it attempts to implement a whole ecosystem approach to water quality.⁵¹ Section 118 has three specific mandates to achieve this goal. First, Section 118 required EPA to promulgate consistent minimum water quality standards for state implementation within two years.⁵² Second, Section 118 provides for remedial plans to restore the most polluted areas.⁵³ Third, the Act provides for the development of Lakewide Management Plans to restore and protect the beneficial uses of the Great Lakes.⁵⁴

Long Island Sound And Lake Champlain

The provisions for the Long Island Sound and Lake Champlain are similar to

⁴⁷ Id. Discussion of goal to reduce nutrient inputs into the Bay by forty percent by the year 2000.

⁴⁸ Id. at 1072.

⁴⁹ Id.

⁵⁰ 33 U.S.C. s 1268 (1988). U.S.- Canada cooperation on border water issues has occurred since establishment of International Joint Commission in 1909. Subsequent signing of the Great Lakes Water Quality Agreement (GLWQA) in 1972 pre-existed any Clean Water Act authority or guidelines. Section 118 of the Clean Water Act gives authority for U.S. implementation of the GLWQA. See generally Adler at 1073, N. 2 supra.

⁵¹ See 1992 Inventory, "International Joint Comm'n, Seventh Biennial Report on Great Lakes Water Quality," (1994).

⁵² 33 U.S.C. § 1268(c)(2)(C).

⁵³ Id. at § 1268(c)(3).

⁵⁴ 33 U.S.C. § 1268(a)(3)(f).

those of the Chesapeake Bay Program. Each creates an EPA office responsible for studies and coordination of the respective management conferences, in addition to providing federal grants to implement the respective plans.

Examples of Local Watershed Planning Efforts

Bear Creek Basin: Jefferson and Clear Creek Counties, Colorado

Watershed management is achieved by the Basin Water Quality Committee comprising local governments and wastewater facility operators. The Committee receives assistance from existing regional and state water quality management agencies. The defined watershed is the hydrologic drainage of Bear Creek, including the Turkey Creek drainage, with a terminus at the Bear Creek Reservoir. This small-scale watershed management approach focuses on the problem of eutrophication with the goal of restoring the reservoir's fishery. Regulation is primarily imposed through the NPDES permitting process and the goals are achieved through advanced wastewater treatment targeting phosphorous. In addition, the Committee encourages phosphorous trading, BMP's for nonpoint sources, and water quality monitoring.

The Bear River Watershed: States of Utah, Wyoming and Idaho

This unique management program encompasses the entire 525 mile length of Bear River and its tributaries, covers three states, and encompasses several different ecoregions. The goal is to implement a water quality management plan in conjunction with developing the river's water resources for consumptive purposes. The Bear River Watershed has set both long term and short term goals in order to achieve its overall goal described above through the integration of water quality/quantity management. Coordination of the management plan is through the Bear River Resource Conservation District with participation from all three states; federal agencies including EPA Region VIII & IX, Fish and Wildlife and the Bureau of Reclamation; landowners; environmental groups and other stakeholders. Funding is provided by EPA, the State of Utah, and public and private institutions. Although the effectiveness of this management plan is far from clear, the participants feel the initiative is working well with cooperation from everyone involved. This voluntary plan may provide an excellent model for other regional, interstate watershed management plans as it incorporates all interested parties in a coordinated manner in an effort to manage an entire river basin for the benefit of all.

Wisconsin: Identification and Management of 330 Watersheds

The State of Wisconsin, under its nonpoint source program within the

Department of Natural Resources, has identified 330 watersheds. Each watershed, located within 22 basins in the state, are priority ranked based on the water quality conditions. In defining these watersheds, the state has learned that local interest is a critical and helpful component of the planning process. The goal is to identify very specific water quality objectives for watershed projects (e.g. reduce sediment by 50% of current levels), in addition to more general goals related to restoration of beneficial uses. The program is primarily voluntary with state funded incentives for local participation (ie. state matches local funding on top of state's mandated 70% share). The state role is essentially to coordinate local efforts and provide assistance to local planners for implementing management programs.

Dillon Reservoir, Colorado: Point Non Point Source Trading

In the early 1980s, an EPA-funded Clean Lakes Study identified phosphorus as the limiting pollutant for water quality in Dillon Reservoir, Colorado. Predictions on phosphorous loadings to the reservoir indicated that new growth and development in the Dillon watershed would come to a complete halt unless phosphorous would be controlled. As a result of the study, local entities and the Denver Water Department, the owner of the reservoir, were successful in getting the State of Colorado to adopt an in-lake water quality standard for total phosphorus. This standard was tied to a stringent but locally acceptable environmental condition in the reservoir.

A watershed-based water quality management plan was established with the goal of preventing any exceedance of the phosphorus standard for the reservoir. The plan called for best available technology for wastewater treatment, developed a point source phosphorus load allocation, and allowed NPDES discharge permits to increase the phosphorus allocation in exchange for nonpoint source phosphorus removal projects. Recently local governments have stepped up to the plate in an attempt to prevent phosphorus loads associated with growth and development from exceeding the state standard. For example, Summit County government requires pound- for- pound mitigation of nonpoint source phosphorus loads from major new developments as part of the planned unit development approval process.

Water quality planning continues to be an evolving process in the Dillon Reservoir watershed. Current efforts include incorporating GIS technology into the water quality planning process and a more sophisticated analysis of the relationship between water quality and the future operations of Dillon Reservoir as a major water supply source for the Denver metropolitan area.⁵⁵

⁵⁵ Personal communication with Lane Wyatt, consultant to Summit County Water Quality Control Committee.

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 Section 208 of the Clean Water Act is *Natural Resources Defense Council v. Costle*.⁵⁶ In that case, the N.R.D.C. brought an action in federal district court seeking a declaratory judgment construing the planning required under Section 208. 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 Section 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.”⁵⁷

The continued viability of Section 208 as a watershed planning tool was affirmed 11 years later by the Fourth Circuit in *Shanty Town Associates Limited Partnership v. Environmental Protection Agency*.⁵⁸ A developer filed suit challenging EPA’s restrictive conditions on funds granted to the municipality for construction of a sewage collection system. 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 Court granted standing but held that EPA had the authority to impose conditions on the grant award to minimize nonpoint source pollution. In that case, EPA imposed a condition on the grant limiting the amount of new development it can support because of concerns that better sewer service would lead to an explosion of development which would, in turn, lead to increased nonpoint source pollution.⁵⁹ The developer argued that imposition of this condition by EPA was an unlawful attempt to regulate nonpoint source pollution. The court disagreed, noting that section 208(f) of the Clean Water Act authorizes EPA to make grants to the states to help defray the costs of developing and administering 208 plans. 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

⁵⁶ 564 F.2d 573 (D.C. Cir. 1977).

⁵⁷ *Id.* at 576.

⁵⁸ 843 F.2d 782 (4th Cir. 1988).

⁵⁹ *Id.* at 788.

pollution.⁶⁰

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 CWA."⁶¹ The Director of the Water Management Division of EPA in Region 8 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."⁶² Courts have agreed with EPA's broad interpretation of the term point source, concerning that point sources must be interpreted broadly to effectuate the remedial purposes of the Clean Water Act.⁶³

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*,⁶⁴ plaintiffs argued that tailings ponds were a point source which required an NPDES permit. Hecla 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."⁶⁵ The court rejected this argument citing

⁶⁰ Id. at 790-791.

⁶¹ See 55 Fed. Reg. 47990,47997(Nov. 16, 1990) ("Preamble to storm water regulations under NPDES.")

⁶² Letter, Director of the Water Management Division of EPA, Region 8.

⁶³ *United States v. Earth Sciences, Inc.*, 599 F.2nd 368, 373 (10th Cir. 1979); see also *Trustees for Alaska v. EPA*, 749 F.2d 549, 558 (9th Cir. 1984).

⁶⁴ 870 F. Supp. 983 (E.D. Wash. 1994).

⁶⁵ Id. at 987.

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 Water Act.⁶⁶ 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.”⁶⁷

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*,⁶⁸ a federal district court held that mine adits 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. The court admonished that “any reliance on historical pollution to evade current liability misapprehends the focus of the CWA.”⁶⁹ The court based its ruling on the Ninth Circuit case, *Committee to Save Mokelumne River v. East Bay Utility*⁷⁰ 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.

The *East Bay* case raises problematic implications to watershed planning efforts aimed at restoring waters polluted from historic mining activities. That case arose from a lawsuit by an environmental group against a municipal utility district and regional water-quality control board for unpermitted discharges under the Clean Water Act. The utility district had acquired a portion of an abandoned mine in the 1960s to build a reservoir, and 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

⁶⁶ See e.g. *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. Castle*, 604 F.2d, 239,249 (4th Cir. 1979) (point sources include slurry ponds, drainage ponds, and coal refuse piles); *Sierra Club v. Absten Construction Co.*, 620 F.2d 41(5th Cir. 1980) (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).

⁶⁷ *Id.*

⁶⁸ 904 F.Supp. 1168 (D.Mont. 1995).

⁶⁹ *Id.* at 1172.

⁷⁰ 13 F.3d 305 (9th Cir. 1993), cert. denied, ___U.S.___, 115 S.Ct. 198, 130 L.Ed. 2d 130 (1994) (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).

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. The defendants conceded that the acid-mine drainage was a pollutant, and that the facility was a point source. They argued, however, that because there was no addition of pollutants from their activities, they were not liable under the Clean Water Act. 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. Under the reasoning of this case, watershed 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.*,⁷¹ 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."⁷² Other courts have also held that Clean Water Act permit requirements arise only where there is an "addition" of pollutants.⁷³

Discharges to Groundwater as Point Sources

In keeping with the trend to sweep as much as possible under the definition of point source, 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

⁷¹ 892 F.Supp. 1333 (D.N.M. 1995).

⁷² *Id.* at 1354.

⁷³ 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) and *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).

permit and the term “navigable waters” is defined as “waters of the United States”.⁷⁴ 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.”⁷⁵ 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.”⁷⁶ Congress did not, however, intend to include isolated groundwater as part of the navigable waters.⁷⁷

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 are decisions which hold that Congress intended regulation of all discharges of pollutants that could affect surface waters of the United States.⁷⁸ On the other hand are those courts which conclude that the possibility of a hydrologic connection between ground and surface waters is insufficient to trigger Clean Water Act regulations.⁷⁹ In *Washington Wilderness Coalition*⁸⁰ 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 to come within the purview of the Clean Water Act.⁸¹

⁷⁴ 33 U.S.C. §1362 (7).

⁷⁵ *United States v. Riverside Bayview Homes, Inc.*, 474, U.S. 121,133,106 S.Ct. 455,462, 88 L.Ed.2d, 419(1985).

⁷⁶ *Quivera Mineral Company v. EPA*, 765 F.2d 126, 129(10th Cir. 1985).

⁷⁷ See *Exxon Corp. v. Train*, 554 F.2d 1310(5th Cir. 1977); *United States v. GAF Corp.*, 389 F.Supp. 1379(S.D.TX. 1975).

⁷⁸ See e.g. *CEC v. Colorado Refining Company*, 838 F.Supp. 1428 (D. Colo. 1993) (discharge of any pollutant into navigable waters includes such discharge which reaches navigable waters through ground water).

⁷⁹ *Village of Oconomowoc Lake v. Dayton-Hudson*, 24 F.3d 962 (7th Cir. 1994); *Kelly v. United States*, 618 F. Supp. 1103(W.D. Mich. 1985); *Town of Norfolk v. Corps of Engineers*, 968 F.2d 1438 (1st Cir. 1992. Deferred to an agency interpretation excluding ground water from coverage under the Clean Water Act)

⁸⁰ 870 F.Supp. 983 (E.D. Wash. 1994) See N. 64, *supra*. and accompanying text.

⁸¹ 870 F.Supp at 990.

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.”⁸²

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 Section 401 of the Clean Water Act⁸³ to address impacts that are unrelated to the discharge of pollutants. In *PUD No. 1 of Jefferson County v. Washington Department of Ecology*,⁸⁴ the court affirmed a Washington court’s decision that allowed a state, through the 401 certification process, to impose minimum stream flow requirements on a hydroelectric project. The court read Section 401 to allow a state to impose any condition for water quality certification necessary to ensure compliance with state requirements that protect a designated use⁸⁵ and held that the minimum flow condition was necessary to protect the stream for its use as a fishery.⁸⁶

A recently decided citizen suit in Oregon is illustrative of the trend to apply 401 certification to address nonpoint source pollution within a watershed. In *Oregon Natural Desert Association v. Thomas*,⁸⁷ a collection of environmental groups sued the United States Forest Service under the citizens suit provision of the Clean Water Act⁸⁸ seeking a declaratory judgment establishing that applicants for federal grazing permits are required to obtain state 401 certification that the grazing activity will not adversely impact state water quality standards. 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” a state certificate must be obtained

⁸² 55 Fed.Reg. 47990,47997(Nov. 16, 1990).

⁸³ 33 U.S.C. § 1341.

⁸⁴ 511 U.S. 700, 114 S.Ct. 1900, 128 L.Ed.2d (1994).

⁸⁵ *Id.* at 1910.

⁸⁶ *Id.* See also *Kelley v. Federal Energy Regulatory Commission*, No. 95-1509 (D.C. Cir.1996).

⁸⁷ 1996 WL 585965(D. Ore. 1996).

⁸⁸ 33 U.S.C. § 1365

and the forest service argued that the plain meaning of “discharge” is limited to a point source or a nonpoint source with a conveyance. 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. The court also held that the Forest Service’s interpretation of the meaning of Section 401 is not entitled to any deference because the EPA, not the Forest Service, administers the Clean Water Act.⁸⁹ Finally, the court determined that the legislative history of section 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.⁹⁰

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 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.⁹¹ Pursuant to these enabling statutes, local governments have enacted ordinances to restrict developments in wetlands, farmlands and historic districts and sites.⁹² Courts have upheld these attempts to address the environmental impacts of land use activities.⁹³ In some states, legislative enactments expressly authorize some form of watershed

⁸⁹ Id.

⁹⁰ 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.” 115 Cong. Rec. 28970 (1969).

⁹¹ See R. Platt, “Land Use Controls: Geography, Law, and Public Policy,” 219,241(1991).

⁹² J.H. Wickersham, “The Quiet Revolution Continues: The Emerging New Model For State Growth Management Statutes,” Zoning and Planning Law Handbook, 1995.

⁹³ See eg *City of Colorado Springs v. Board of County Commissioners*, 895 P.2d 1105 (Colo. App. 1994), cert. denied __ U.S.__, 116 S.Ct. 564, 133 L.Ed 2d 489 (1994) (upholding county authority to enact regulations to address impacts to aquatic habitats and wetlands).

regulation.⁹⁴ 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*.⁹⁵ Under that test, the dedication requirement must “substantially advance” a legitimate government purpose and the exaction or dedication must be “roughly proportional”⁹⁶ 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.⁹⁷ 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 adjoining greenway within the floodplain.⁹⁸ The Dolans 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:

⁹⁴ See, for example, Texas B.T.C.A., Government Code § 212.002, 212.003 granting cities authority to implement water pollution control ordinance in their extra territorial jurisdictions. See also Colorado, C.R.S. §31-15-707(IV)(b) authorizing municipalities to regulate in an area five miles from the source of water supply. See also North Carolina, N.C.GEN.STAT. § 143-214.5 and 143-2.214.6(a), 143-215.6(a).

⁹⁵ 512 U.S. 374, 114 S.Ct. 2309, 129 L.Ed 2d 304(1994).

⁹⁶ *Id.* at 2319-2320.

⁹⁷ Dolan also challenged a requirement to dedicate a 15 foot pedestrian/bikeway.

⁹⁸ *Id.* at 2314.

"[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."⁹⁹

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.¹⁰⁰ The court confirmed, however, that "increasing the amount of impervious surface will increase the quantity and rate of storm-water flow from the petitioner's property."¹⁰¹

In 1987, the Supreme Court established the "essential nexus" test for dedications of land developed more fully in *Dolan*. The court's *Nollan*¹⁰² 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. The court found that the Commission's justification failed to satisfy the "essential nexus" between the dedicated and its stated purpose.

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.¹⁰³ 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 some interesting court decisions regarding the constitutional validity of various water quality management schemes. For example, conditions imposed

⁹⁹ *Id.* at 2319.

¹⁰⁰ *Id.* at 2318.

¹⁰¹ *Id.* at 2320.

¹⁰² *Nollan v. California Coastal Comm'n*, 483 U.S. 825 (1987).

¹⁰³ For an excellent discussion of *Dolan* and post-*Dolan* decisions, see N. Stroud and S. Trevarthen, "Defensible Exactions After *Nollan v. California Coastal Commission* and *Dolan v. City of Tigard*", 25 *Stetson L. Rev.* 719 (Spring, 1996).

on a development by the Authority survived a takings challenge in *Leroy Land Development v. Tahoe Regional Planning Authority*.¹⁰⁴ 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. 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.¹⁰⁵

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*,¹⁰⁶ the court found that the justification for the regulation need not be limited to the needs or burdens created by the subject property alone.¹⁰⁷ Because regulations to protect the lake, if not this particular fee, applied to all property owners and regulation of the property was the only way to protect the lake, the plaintiffs were not unfairly singled out.¹⁰⁸

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*,¹⁰⁹ 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.¹¹⁰ The case was remanded to the district court

¹⁰⁴ 939 F. 2d 696, 697-99 (9th Cir. 1991).

¹⁰⁵ *Id.* at 699.

¹⁰⁶ 23 Cal.App. 4th 1458, 28 Cal. Rptr. 2d 734 (Cal. App. 1994), cert. denied 115 S.Ct. 485, 130 L.Ed 2d 397(1994).

¹⁰⁷ *Id.* at 745.

¹⁰⁸ *Id.* at 746-48.

¹⁰⁹ 35 F.3d 1269 (8th Cir. 1994).

¹¹⁰ *Id.* at 1275.

with instructions to determine the proper cost allocation scheme.

In Florida, in the case of *Villas of Lake Jackson v. Leon County*,¹¹¹ 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. The rezoning was based on documented 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.¹¹² A drainage system was designed and built at a cost of \$45,000.00 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.

The due process claim failed because the developer did not demonstrate a protected property right under state law.¹¹³ 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*¹¹⁴ that equal protection challenges that do not involve a suspect class or a fundamental right require simply that the ordinance in question be "rationally related to a legitimate state interest" to withstand a facial challenge. 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.¹¹⁵ 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. The court also found that density limits and setbacks around the lake were

¹¹¹ 884 F.Supp. 1544 (N.D. Fla.1995).

¹¹² *Id.* at 1550.

¹¹³ *Id.* at 1555.

¹¹⁴ 505 U.S. 1,10, 112 S.Ct. 2326, 2321-2332. 120 L.Ed. 2d 1,6-7(1992).

¹¹⁵ citing *FCC v. Beach Communications*, 508 U.S. 307, 113 S.Ct. 2996,2101,124 L. Ed.2d 211(1993).

related in a rational way to that interest.¹¹⁶

Next, the court considered whether plaintiff's claim that the county intentionally singled out plaintiffs to deny equal protection of the law. The court relied on *Village of Arlington Heights v. Metropolitan Housing Development Corp*¹¹⁷ which held that purposeful discrimination 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.¹¹⁸ Citing another Supreme Court case, 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. 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.¹¹⁹ Because the county had been concerned about protecting 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.¹²⁰

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.¹²¹ 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

¹¹⁶ Setback requirements usually withstand challenges. See e.g. *Threatt v. Fulton County*, 467 S.E. 2d 546 (Ga.1996) (upholding a county requirement that prohibited development from disturbing vegetation within 50 feet of a river).

¹¹⁷ 429 U.S. 252, 266, 97 S.Ct. 555, 564, 50 L. Ed.2d 450 (1977).

¹¹⁸ 884 F. Supp.at 1577.

¹¹⁹ Id. See also *Kawaoka v. City of Arroyo Grande*, 17 F.3d 1227, 1240 (9th Cir.1994), cert denied ___U.S.___ 115 S. Ct. 193,130 L. Ed.2d 125 (1994)(city's general plan and water moratorium were rational)..

¹²⁰ 884 F.Supp. 1544 at 1579. Also applying a traditional due process and equal protection analysis is *City of Austin v. Quick*, 1996 WL 426025 (Tex. App. 1996) (city ordinance limiting amount of impervious cover in watershed zone did not violate either due process or equal protection).

¹²¹ See e.g. *ACW Realty Management, Inc. v. Planning Board of Westfield*, 662 N.E.2d 1051 (Mass. App.1996) (decision of the City of Westfield to deny a special use permit for a gasoline station for impacts to an aquifer upheld). And see *Connecticut Resources Recovery Authority v. Planning and Zoning Commission of Wallingford*, 626 A.2d 705 (Conn. 1993) (zoning regulation prohibiting solid waste disposal over an aquifer was a valid exercise of police power).

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 Comm'n v. Granite Rock Co.*, the United States Supreme Court characterized the federal preemption test as whether there is either an "actual conflict between state and federal law", or a "congressional expression of intent to preempt."¹²² 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."¹²³ 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.¹²⁴

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.¹²⁵ 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

¹²² *California Coastal Commission v. Granite Rock*, 480 U.S. 572, 107 S.Ct. 1419, 94 L.Ed. 2d 577 (1987)).

¹²³ See *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 230 (1947); see also *Pacific Gas and Elec. Co. v. Energy Resources Comm'n*, 461 U.S. 190, 206 (1982); *Ray v. Atlantic Richfield*, 435 U.S. 151, 157 (1978).

¹²⁴ See *Ray* at 168-169.

¹²⁵ *Granite Rock* at 1428-29.

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 Sup'visors of Rappahannock County*,¹²⁶ 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.¹²⁷ And in *Holiday Point Marina Partners*¹²⁸ 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.¹²⁹ Whether state law preempts local government water quality ordinances is a question of state statutory interpretation.¹³⁰

¹²⁶ 888 F.Supp. 753 (W.D.Va.1995).

¹²⁷ *Id.* at 4-5. The court also held that the county regulations did not violate the commerce clause.

¹²⁸ *Holiday Point Marina v. Anne Arundel County*, 666 A.2d 1332 (Md.App. 1996).

¹²⁹ *Id.* at 1338.

¹³⁰ See e.g. *Water Quality Association v. County of Santa Barbara*, 44 Cal.App. 4th 732, 52 Cal.Rptr 2d 184 (1996) (county ordinance governing water softeners conflicted with, and was preempted by state law); *City and County of Denver v. Board of County Comm'rs of Grand*, 782 P.2d 753 (Colo. 1989) (state water rights administration statute did not completely exempt water projects from local government regulations); *State College Borough Water Authority v. Board of Supervisors of Halfmoon Township*, 659 A.2d 640 (Pa. Commonwealth Court 1995) (township's conditions on well permit to address turbidity or water quantity impacts to other wells preempted by Susquehanna River Commission); *City of Colorado Springs v. Board of County Comm'rs*, N. 93, *supra.* (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.)