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INTEGRATING LAND AND WATER MANAGEMENT

By

Frank E. Maloney (Deceased)
Richard Hamann

College of Law
Center for Governmental Responsibility
University of Florida
Gainesville

UNIVERSITY OF FLORIDA

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INTRODUCTION

The need for better integration of land and water management is widely accepted. There are several reasons for this. One is that land and water are so closely related as natural, physical systems that it is impossible to fully understand, wisely use or effectively manage one without considering the other. Sound decisions regarding the use and protection of water cannot be made without considering the effects of land use. Nor is it possible to properly manage land unless planning and regulatory functions are coordinated with water management. Second, it is highly inefficient to attempt to manage land or water in isolation. Just as the resources are interrelated, so are management programs. Unless management is well integrated, conflict, inconsistencies, overlap and duplication inevitably result. Such waste of public and private effort is increasingly intolerable. In Section I of this report, the need for better integration is examined.

Numerous programs for the planning and regulation of land and water use currently operate in Florida. Together they form an extremely complex management system. This system is not well integrated, but it demonstrates many subtle interrelationships. In Section II, the major land and water management programs are described and their mutual relations are examined.

Improved integration of land and water management can be attained. A range of management techniques are available to enhance communication and resolve inconsistencies. In Section III, several methods are discussed, including reorganization, review and comment procedures, coordinating councils, planning, and coordinated permitting. Examples of how these techniques have been used are described.

I. THE NEED FOR BETTER INTEGRATION OF LAND AND WATER MANAGEMENT

A. The Physical Interrelationship of Land and Water Systems

As physical systems, land and water are so closely related that it is impossible to fully inderstand, wisely use or effectively regulate one without considering the other.[1] Human development and use of land affects water in several ways. These impacts result from physical alterations to the land itself, from release to the hydrologic cycle of various substances associated with a particular activity, and from the withdrawal of water. As in most situations, no factor works independently. For example, a change in the land's surface features which causes increased runoff of water may also cause greater quantities of pollutants to wash into a stream.

One of the first steps in development of land for agricultural, urban or commercial uses is often to clear vegetation.[2] Destruction of the vegetative cover generally has three principal effects resulting from exposure of the soil, alteration of its structure, and loss of the plants. First, the rate and quantity of runoff increases and infiltration correspondingly decreases because the soil loses its capacity to absorb water.[3] Flooding downstream may be accentuated and groundwater recharge may be diminished as a result.[4] Second, erosion of the bare soil increases.[5] Erosion of watercourses may also be caused by the accentuated flows described above.[6] Third, any function performed by the vegetation of filtering pollutants from runoff is lost.

The impacts caused by destroying the natural vegetative cover are generally amplified by constructing impervious surfaces to replace it, with one exception - erosion is reduced once the surface is constructed. The cumulative impact on water resources of roofing, paving and compacting extensive land areas can be enormous. Impermeable surfaces collect and rapidly direct into watercourses whatever precipitation occurs.[7] The recharge of groundwater is blocked, streams

experience more rapid and accentuated fluctuations, flood peaks are increased, and dry period flows are diminished.[8] In addition, whatever pollutants have been deposited on the surface or leach from it are washed downstream.

Filling and draining wetlands has particularly severe impacts.[9] Wetlands exist at the interface between upland and aquatic systems and are the location of intensive biological actitivy. Destruction eliminates many of the functions served by wetlands, with harmful effects on both terrestrial and aquatic systems. One very important role of wetlands is as buffer against rapid hydrologic fluctuations.[10] They provide natural storage for flood waters, which are then released gradually, thus reducing flood peaks and the severity and duration of droughts.[11] In addition, by slowing the velocity of flood waters, wetlands can help reduce the damages when flooding does occur.[12] Wetlands are also important sites of groundwater recharge in some areas.[13] Another significant function of wetlands is that they purify the waters which flow through them and thus serve to mitigate the impacts on the aquatic system of land development in the watershed.[14] In addition, wetlands help to prevent siltation of downstream areas by slowing the flow of water, thus decreasing its ability to erode stream banks and allowing a portion of the sediment load to settle out.[15]

Another impact of land use on water arises from the contribution of pollutants. Some water pollutants, such as sediment[16] and nutrients,[17] may be released from natural systems as a consequence of altering the land. Other substances are deposited on the land and subsequently carried by runoff into waterbodies.[18] The wastes generated by a land use activity may be deliberately discharged into adjacent waters. In all cases, the type of land use and the manner in which it is designed and carried out, has a direct relationship with the type and quantity of pollutants which consequently enter receiving waters.

A similar relationship exists with regard to the withdrawal of water from natural systems to serve land uses. The amount of water that must be withdrawn

is directly related to the character of land use, its intensity and the practices or techniques used in the consumption of water.[20] For example, if a section of land is used as the site of a power generating plant, then many more gallons of water will be needed than if it is used for non-improved pasture, in which case no water other than rainfall is used.[21]

The quality, quantity and location of water, of course, also have a substantial impact on land use. The availability of sufficient quantities of clean water determines whether land can be used for many purposes.[22] Industry, agriculture and residential development cannot occur without adequate supplies of water. The feasibility of coal development in the upper great plains may well depend, for example, on whether sufficient quantities of water are available.[23] The critical importance of water is reflected in market values of land.[24] Declining water quality may result in corresponding declines in the usefulness of land.[25]

B. Functional Interrelationship of Land and Water Management Programs

Because land and water are so closely related as physical systems, programs for the development or management of these resources also tend to be functionally related. Thus, for example, the decisions made in the land use management program will affect whether the goals of a water quality improvement program are met. Similarly, the construction of a project for the improvement of water quality of the control of floods is likely to affect the success of land use planning. There are many examples of these types of interrelationships. Unfortunately, they too often arise as unintended secondary effects rather than well conceived interactions. Much of the need for better integration of land and water management is a need to better harmonize conflicting programs and to use them in mutually reinforcing ways.

Most local, state and federal programs for the protection and improvement of water quality operate pursuant to regulatory and planning authority and financing under the federal Clean Water Act.[26] These programs are replete with examples illustrating the functional relationship between land and water management programs and the need for better integration.[27] One of the most notorious has been the effect on land use patterns of constructing new sewage treatment plants and interceptor sewers.[28] Such facilities are typically designed with excess capacity to avoid problems of early obsolescence. The availability of sewers, however, often stimulates growth in areas that are unsuitable or unprepared to accommodate it. Runoff and other nonpoint sources of pollution can then cause water quality degradation as severe as that which the facilities were intended to correct. Because of the need to increase tax revenues to pay for their share of the costs of building and operating the facilities, local government officials with land use control authority may be reluctant to implement adequate growth control measures.

On the other hand, the failure to build new water pollution control facilities can have equally severe impacts on land use patterns and the growth management plans of local government officials.[29] Sewage treatment plants are designed with limited capacity. If excess volume is received, they discharge inadequately treated wastes. Discharge permits, then, allow the operator to accept a limited quantity of waste. When the connection of new development threatens to exceed this capacity, the utility may be required to impose a moratorium on new hookups. Unless alternative treatment systems are available, this action translates into a moratorium on new construction, which is more usually the perogative of local land use control authorities. Similar restrictions on the industrial usage of land may result from the enforcement of water quality limited effluent limitations in areas with badly degraded water quality.

These effects are largely unavoidable. It is not possible to regulate the sources of water pollution without affecting land use management programs because those sources are land use activities. This linkage of land and water management has become most evident in the control of nonpoint sources of water pollution.[30] The traditional emphasis of water pollution control programs has been on regulating the discharge of wastes from "point sources" such as sewage treatment plants and industrial facilities.[31] Water quality goals, however, cannot be achieved with such a limited approach because much of the pollutant load comes from nonpoint sources such as the runoff from construction sites, agricultural operations and urban streets.[32] The usual regulatory methods for controlling water pollution -- establishing and enforcing standards on the quality and quantity of discharge -- are impractical for use against the nonpoint sources, as is the construction of conventional treatment facilities.[33] If the nonpoint sources are going to be controlled, then land use controls must be used. Among the measures that have been recommended for consideration are: "zoning, flood plain zoning and regulations, environmental performance zoning, subdivision regulations, planned unit development regulations, buffer zones, conservation and scenic easements, density bonuses, housing codes, building codes, construction permits, development permits, transferable development rights, hillside development regulations, drainage regulations, grading regulations, soil erosion and sediment control regulations, solid waste control regulations, septic tank ordinances, taxation policies, public works policies, public investment policies, land conservation policies, and discharge policies."[34]

Flood plain management is another need that defies classification as exclusively a land or water management problem. In some respects, flooding is a water management problem. Water is the damaging agent. One way of controlling flood damage is to build structures to control the water. In other respects

flood damage is a problem of land use control. Flooding is a natural, necessary and beneficial hydrologic phenomenon. Problems occur because people build structures that are susceptible to damage within the flood plain. The least costly and least environmentally damaging method of preventing flood damage is to restrict land use within the flood plain. In many cases where structural improvements have been made to the flood channel, at a great cost, additional encroachment on the flood plain, made possible by the new works, has negated any reductions in flood damage potential.

Many other pressing needs of environmental management simply defy classification as either water management of land use problems exclusively and are not susceptible to solution by traditional, autonomous water management or land use controls. For example, the need for wetlands protection is widely recognized.[36] Many of the benefits of wetlands are water oriented. They filter pollutants, recharge groundwater, store surface water, and reduce the velocity of floodwaters. But they also provide excellent wildlife habitat, timber, open space and recreational areas, which are typical land use considerations. More importantly, the degradation of wetlands, and the loss of their water management functions, generally comes from changing land use patterns, such as conversion to agricultural use or for subdivision development. Although wetlands may be threatened by certain water management actions, such as lowering water levels in a river to provide water supplies or channeling streams to reduce flooding, these actions are generally taken to accomodate land use changes. Unless the land and water management decisions complement each other, wetlands cannot be effectively protected.

C. Causes of the Lack of Integration

Although land and water, because of their close physical relationship, are essentially a single resource, and land and water management programs are

functionally interrelated, these facts have not been adequately reflected in the multitude of decisions, laws and institutions which affect natural resources. Land and water are frequently used and abused, studied and regulated, spoken of and acted upon as though they were not integral parts of the same system.

The reasons are complex. The widespread failure to perceive that land and water are interrelated is a primary cause. Few people understand there is a relationship between what is done on the land and what happens to the water and vice versa.

> Natural processes are unitary whereas human interventions tend to be fragmentary and incremental. The effect of filling the estuarine marshes or felling the upland forests is not perceived as related to the water regime - to flood or drought - nor are both activities seen to be similar in their effect. The construction of outlying suburbs and siltation of river channels are not normally understood to be related - nor is waste disposal into rivers perceived to be connected with the pollution of distant wells.[37]

Even when individuals do understand, they frequently lack concern for the impact of their actions on the environment. For example, a person whose construction company is clearing land from which sediment erodes to smother aquatic life seldom cares enough about that impact to voluntarily pay for the added costs of erosion control. The lack of concern evidenced by such a person results from a deficiency in our system of ethics and values.[38] Although the builder would undoubtably view it as "wrong" to smother another human and, indeed, would be appalled at the thought of doing such a thing, there are no similar ethical scruples against smothering all of the non-human life in a section of a stream. Whereas the dominant ethics of our society hold that human life is valuable and not to be destroyed, the living environment presently has no equivalent value and is thus abused at will.

Another reason for the lack of concern for environmental effects is that the damage usually does not accrue as an economic cost to the person who causes it. To the contrary, substantial economic benefits may be gained.[39]

Because neither ethics nor economics have effectively restrained environmental degradation, government has had to intervene. Government regulation, however, and the actions of government itself have not been adequately integrative of land and water management. One reason, of course, is that the people who staff government agencies may suffer from the same ignorance and lack of values as private individuals. They are also subject to political pressure brought to bear by those whose business interests would be thwarted by effective environmental regulation. Other reasons suggested by commentators implicate institutional factors.

Government has historically attacked problems in a piecemeal, rather than a comprehensive manner. Numerous single-purpose agencies have been created to deal with specific problems such as the need for roads, flood protection or irrigation water. The emphasis of these agencies has been on achieving those narrow goals which have been assigned to them. Other factors have been less important.[40]

> Many times this approach compounded other problems even as it was helping resolve the one for which it was designed. This occurred because the problem-solver failed to consider secondary impacts, such as stimulus to growth and development, and failed to recognize the synergism involved. Federal agencies themselves have been slow to perceive, and often unable to correct undesirable secondary effects. The reason is that correction often would require a departure from the single-purpose mission-oriented role typically thrust on these agencies by legislation--and adherence to the assigned role is the standard by which Congress and client groups measure their effectiveness.[41]

More efficient and cost-effective methods may be ignored by such an agency when they lie outside the scope of traditional activities. For example, an agency which was created, staffed and funded to build dams is likely to promote the construction of dams to control flooding even when a less expensive alternative would be to implement flood plain management practices, if the latter solution would not be implemented by that agency.[42]

As the objectives of government have broadened in recent years to include

the goal of environmental protection, regulation has been implemented in an incremental and disjointed fashion with little regard to how the total system should operate.[43] As problems are recognized, new programs are specifically designed to address them. A legislature which sees a need to regulate the use of water might pass a law with the limited objective of accomplishing that goal. Later, that same legislature might see the need for land use planning, wetlands protection or some other aspect of the problem and pass regulations which bear little logical relationship to each other and are often duplicative, conflicting or inconsistent.

The confusion is compounded by a fragmentation of authority at each level of government and between levels of government.[44] As new programs are initiated, new agencies are created to administer them. As a result, there is

> a vast array of functional programs and responsibilities under the jurisdiction of numerous state agencies, units of local government, and special purpose boards, districts and commissions.[45]

One investigator has counted 137 federal programs which directly affect land use.[46] In addition there are thousands of local governments, which remain the primary focus of land use control, hundreds of regional organizations, and the states, each with individual, complex bureaucracies. Because of such a splintered organization, it is very difficult to devise and administer an integrated approach to land and water management. The agencies are often myopic, concerned only with their individual slice of the problem. They may also be jealous of their perogatives and funding among themselves.

Much of the fragmentation at state, regional and local levels reflects the demands of numerous federal categorical assistance programs.[47] State and local governments have, in many respects, become agents for the implementation of federal programs. Substantial funds are made available to accomplish national goals. The grants are administered at the federal level by a number of different units of the federal bureaucracy. Each of them is limited by detailed

statutory and administrative criteria regarding their expenditure, funding cycles, accounting requirements and similar matters.[48] These federal requirements are complex, diverse and nonharmonious.[49] If the state or local entity is not organized to mirror the federal organization, there may be substantial difficulty in meeting the program requirements.[50] As state and local counterparts are organized to manage the federal assistance, the fragmentation of government is enhanced.[51]

D. Results of the Failure to Integrate and Coordinate

Numerous undesirable consequences have flowed from the failure to effectively integrate and coordinate land and water management. Despite considerable progress, the environment is still not being managed as an integrated , holistic, natural system. Numerous decisions regarding development or regulatory activity are being made on a daily basis without adequate consideration of their effect on the resource as a whole or on other government programs. The quality of the environment is therefore continuing to be degraded.

This decline is occurring despite a proliferation of environmental laws and agencies to administer them. Much of the cause lies, no doubt, in the immensity of the task. Our laws, our institutions and the resources we have committed are probably insufficient to reverse the decline. Bureaucratic resources, like natural resources, are limited and likely to become even scarcer in the immediate future. One must question, however, whether current approaches are as effective and efficient as they should be.

Many programs and agencies have overlapping responsibilities, jurisdictions and requirements. Such duplication tends to waste the resources of both government and private parties. For example, it is not uncommon for more than one agency to consider the impact of a proposed project on water quality. Each

agency must support the necessary personnel to make the evaluation and may also need to support laboratory facilities. If they are making the same determination, then there is obvious waste. The money expended on two evaluations could be spent more profitably improving the quality of one of them.

The waste of duplication also affects private parties. A developer may have to submit multiple applications and otherwise deal with the independent personnel and discrete, sometimes conflicting requirements of the various agencies and levels of the government. As developers consistently emphasize, it is expensive and frustrating to negotiate the maze. Citizen groups also suffer, however, from the waste of scarce donated funds and volunteer time. Appearing at multiple hearings, presenting their views and evidence repeatedly and seemingly never receiving a final decision saps the strength of volunteer organizations.

The problems caused by the lack of integration are most acute when programs are conflicting and inconsistent. One arm of government, for example, may be seeking to destroy wetlands, while another seeks to protect them. Although conflict is necessary and beneficial so long as there are different points of view, in many cases too much effort is spent on such interagency struggles. The potential benefits of having programs reinforce one another may also be lost.

SECTION I - THE NEED FOR BETTER INTEGRATION OF LAND AND WATER MANAGEMENT

[1] Ian McHarg, Design With Nature 56 (1969); Walker & Cox, Water - An Element of Land-Use and Urban Growth Policies, 102 J. of the Urban Planning and Development Division, Proc. of the Am. Soc. of Civ. Eng. 82 (August 1976).

[2] EPA, Processes, Procedures and Methods to Control Pollution Resulting from All Construction Activity, 41, EPA 430/9-73-007 (1973).

[3] R. Darnell, Impact of Construction Activities in Wetlands of the United States, 131, 132 EPA-6001 3-76-045 (1976) (hereinafter cited as Darnell). Environments for Tomorrow, Interrelationships of Land Use Planning and Control to Water Quality Management Planning (prepared for the U.S. Environmental Protection Agency under Contract No. 68-01-0750) (hereinafter cited as Interrelationships). L. Leopold, Hydrology for Urban Land Planning: A Guidebook on the Hydrologic Effects of Urban Land Use, U.S.G.S Survey Circular 555 (1968).

[4] Interrelationships, supra note 3 at 49-50.

[5] R. Darnell, supra note 3 at 9. Sedimentation is a major environmental problem. Over 4 billion tons of sediment are washed into our nation's waterbodies each year. 2 Committee on Public Works, U.S. Senate, 93rd Congress, 1st Sess., A Legislative History of the Water Pollution Control Act Amendments of 1972, at 1457 (1973). Sedimentation is an insidious form of biological destruction because the public tends not to recognize silt as a pollutant and to view turbidity as an unavoidable natural phenomenon. Hines, Agriculture: The Unseen Foe in the War on Pollution, 55 Cornell L. Rev. 740, 754 (1970). Sediment literally smothers insects, molluscs, crustaceans and fisheggs; clogs the gills of fish; blocks the transmission of light; and increases water temperatures. Darnell, supra note 3 at 9. By filling channels, lakes and reservoirs, sediment decreases their usefulness. "Annual sediment deposits in the nation's reservoirs amount to approximately 950,000 acre-feet, or nearly five times the total volume excavated in building the Panama Canal." U.S. Environmental Protection Agency, Legal and Institutional Approaches to Water Quality Management Planning and Implementation at VI, n.1 (1977) (hereinafter cited as Approaches). Finally, sediment is a major transport mechanism for other pollutants, which attach themselves to the particles and are moved with them. Processes, supra note 2 at 92, 96.

[6] Interrelationships, supra note 3 at 49-50; U.S. Environmental Protection Agency, Preventive Approaches to Stormwater Management 16-21 (1977) (hereinafter cited as Preventive Approaches).

[7] Darnell supra note 3 at 30.

[8] Darnell, Id at 49; Interrelationships, supra note 3 at 49.

[9] See generally R. Darnell, supra note 3; C. Wharton, H. Odum, K Ewel, M. Duever, A. Lugo, R. Boyt, J. Bartholomew, E. de Bellevue, S. Brown, M. Brown & L. Duever, Forested Wetlands of Florida, Their Management and Use (1977) (hereinafter cited as Forested Wetlands); Proposed Amendments to the Federal Water Pollution Control Act: Hearings on S. 2770, §404 Before the Senate Committee on Public Works, 94th Cong., 2d Sess. 390 (1976) (hereinafter cited as §404 Hearings) (statements of Louis L. Clapper & Kenneth S. Kamlet); Id. at 683-87 (statement of Orie L. Loucks).

[10]A six inch rise in water over ten acres of wetlands places more than 1.5 million gallons in storage. §404 Hearings, Id. at 501.

[11]Researchers who studied the Nepuset River in Massachusetts concluded that destroying 10% of the wetlands would raise flood stages by 1.5 feet, and destroying 50% would raise floodwaters 3 feet. Id. at 685 n.1 The Army Corps of Engineers calculates that a 40% reduction in wetlands along the Charles River would elevate flood stages between 2 to 4 feet. Id. 685.

[12]For example, after widespread flooding in Pennsylvania, bridges below a wetland that had been preserved were unharmed, while similar bridges elsewhere were destroyed. Id. at 501.

[13]Id. at 419, 501.

[14]Forested Wetlands, supra note 10, at 51, 111-13. A study of Lake Minnetonka in Minnesota for the period from June 1969, to May 1970, revealed that although 77,000 pounds of phosphorus were released into the watershed, only 50,300 pounds reached the lake. Wetlands trapped 26,700 pounds. Id. at 509. The 512 acre Tinicum marsh daily reduces about 7.7 tons of BOD, 4.9 tons of $P-PO_4$, 4.3 tons of $N-NH_3$, 138 pounds of $N-NO_3$ and produces 20 tons of O_2. Id. at 503. In the Alcovy River system, the water of one tributary which was heavily polluted by human sewage and chicken offal could be reclassified as clean after passing through 2.75 miles of river swamp and upgraded to excellent after 7 more miles. Id. In Wisconsin, researchers concluded that 300 acres of wetlands which had been destroyed would have trapped 200-300 kg/yr of the phosphorus generated by agricultural and urban development of uplands. Id. at 684 n.5. It has been estimated that a 1,000 acre marsh may be able to purify the nitrogenous wastes of 20,000 people. Id. at 421.

[15]Id., 686 n.6.

[16]The runoff from a construction site, for example, may carry 40,000 times as much sediment as the runoff from an unaltered watershed. J. Wildrick, K. Kerns, Urban Water Runoff & Water Quality Control 10 (Dec. 1976)(Virginia Water Resources Research Center).

[17]There were over 10 billion tons of organic nitrogen in the virgin soil of the United States. Cultivation induces nitrification of organic nitrogen, which is then more susceptible to being washed away as nitrate. Interrelationships, supra note 3 at 50; Hines, supra note 5 at 748-49.

[18]The surfaces of an urban environment collect large quantities of a variety of noxious pollutants, including particulates from air pollution, petroleum products, litter, animal wastes, road deicing salts, herbicides, fungicides, pesticides, fertilizers and other chemicals. See generally, EPA, Urban Stormwater Management and Technology: An Assessment 88 (1974)(Hereinafter cited as Assessment). Amy, Pitt, Singh, Bradford & Lagraff, Water Quality Management Planning for Urban Runoff, EPA-440/9-75-004 (NTIS PB 241-689/AS)(1974).

[19]See generally, Interrelationships, supra note 3 at 30-56.

[20]National Water Commission, Water Policies for the Future, 368 (1973).

[21]If freshwater cooling towers or ponds are used, approximately 12,500 gallons of water are consumed in the production of one megawatt of electricity. Southwest Florida Water Management District, Water Management Plan, L-1 (1978).

[22]See generally, Interrelationships, supra note 3 at 61-74.

[23]D. Scott, G. Pfeiffer & D. Gronhovd, "Water as a Parameter for Development of Energy Resources in the Upper Great Plains -- Effects on Land and Water Resources of Alternative Patterns of Coal-Based Energy Development," North Dakota Research Report No. 70 (Dec. 1978), N.D.Ag. Ex. Station, Fargo, N.D. C. Boris & J. Krutilla, Water Rights and Energy Development in the Yellowstone River Basin; An Integrated Analysis (1980).

[24]See generally, Interrelationships 73-74. In Eastern Washington, for example, one study determined that availability of irrigation water caused a three to fourfold increase in the value of farmland. Department of Ecology, State of Washington, Irrigation Values (unpaginated mimeo)(1975).

[25]Interrelationships, Id.

[26]The Federal Water Pollution Control Act Amendments of 1972, P.L. 92-500, were revised and renamed by The Clean Water Act of 1977, P.L. 95-217, codified at 33 U.S.C. §§ 1251-1376
For comprehensive discussions of the water pollution control scheme embodied in the Act, see Hall, The Clean Water Act of 1977, 11 Nat. Resources Law. 343 (1978); Comment, The Clean Water Act of 1977: Great Expectations Unrealized, 47 U. Cin. L. Rev. 259 (1978).

[27]See generally Donley & Hall, Section 208 and Section 303 Water Quality Planning and Management: Where is it Now?, 6 Envt'l L. Rptr. 50115 (1976); Federman, The 1972 Water Pollution Control Act: Unforeseen Implications for Land Use Planning, 8 Urb. Law. 140 (1976); Hines, Farmers, Feedlots and Federalism: The Impact of the 1972 Federal Water Pollution Control Act Amendments on Agriculture, 19 S.D.L. Rev. 540- (1974); Jungman, Areawide Planning Under the Federal Water Pollution Control Act Amendments of 1972: Intergovernmental and Land Use Implications, 54 Tex. L. Rev. 1047 (1976); Phillips, Developments in Water Quality and Land Use Planning: Problems in the Application of the Federal Water Pollution Control Act Amendments of 1972, 10 Urb. L. Ann. 43 (1975).

[28]Interrelationships, supra note 3 at 74-77.

[29]C. Williams, The Influence of Environmental Law on Nebraska Land Use, 57 Neb. L. Rev. 730-762, 742-43 (1978).

[30]See generally, the authorities cited in note 27.

[31]A point source is "any discernible, confined and discrete conveyance . . . from which pollutants are or may be discharged." 33 U.S.C. §1362(14) (Supp. 1980).

[32]See discussion supra at notes 16 to 18.

[33]Jungman, supra note 27 at 67.

[34] EPA, Guidelines for Areawide Waste Treatment Management Planning 4-6 (August 1975). See also, EPA, Preventive Approaches to Stormwater Management 105-135 EPA 440/9-77-001.

[35] Water Policies for the Future, supra note 20 at 149-50.

[36] See e.g., Fish and Wildlife Service, Proceedings of the National Wetlands Protection Symposium, Reston, Va., June 6-8, 1977.

[37] Ian McHarg, Design with Nature, 65 (1971).

[38] Aldo Leopold, "The Land Ethic," A Sand County Almanac (1949).

[39] Ian McHarg, supra note 37.

[40] See remarks of Senators Jackson and Muskie quoted in Dreyfus and Ingram, The National Environmental Policy Act: A View of Intent and Practice, 16 Nat. Res. J. 243-262, at 246 and 253 (1976).

[41] Walker & Cox, supra note 1 at 86.

[42] Water Policies for the Future, supra note 20 at 379.

[43] J. Noble, J. Banta and J. Rosenberg, Groping Through the Maze, 1-164, 21 (1977).

[44] Groping Through the Maze, supra note 43 at 21, 27; F. Bosselman, D. Feurer, C. Siemon, The Permit Explosion, 73 (1976).

[45] Council of State Governments, State Planning: Intergovernmental Policy Coordination 1-158, 18 (1976).

[46] Groping Through the Maze, supra note 43 at 22

[47] In 1975, an Office of Management and Budget Committee found 1100 different categorical assistance programs. State Planning supra note 45 at 10.

[48] Id., 47.

[49] Id., 12.

[50] Id., 47.

[51] Id., 11.

II. LAND AND WATER MANAGEMENT IN THE STATE OF FLORIDA: EXISTING INTERRELATIONSHIPS

Introduction

Land and water management is an extremely complex process in Florida. Numerous state, regional and local governmental entities play varying roles.[1] A bewildering plethora of laws and regulations govern the execution of their responsibilities. The details of their activity are virtually impossible to comprehend. Yet, it is the sum of those actions that constitutes the system for managing natural resources that has evolved in Florida. This section of the report will describe the major laws that currently guide land and water management in Florida. Emphasis will be placed on their interrelationships and on techniques that are being used to integrate land and water management. Subsection A describes the basic administrative structure that has been created to administer these laws. Susbsections B through E then detail the operation of the Environmental Land and Water Management Act of 1972, the Local Government Comprehensive Planning Act of 1975, the Florida Water Resources Act of 1972 and the Florida State Comprehensive Planning Act of 1972.

A. Overview of Management Structure

As in most states, the government of Florida is divided into legislative, judicial and executive branches. The characteristics of the executive are unique, however. Many functions are carried out by the Governor. He may, for example, appoint the heads of certain executive agencies, subject to the approval of the Senate. Many other powers, though, are exercised by the Governor and independently elected Cabinet officers sitting as a board on which the Governor has only one vote. This board carries different names depending upon the particular duties being performed. Several different types of regional agencies, local governments and special districts also play important roles.

1. State Agencies

a. Department of Environmental Regulation

The Florida Department of Environmental Regulation (DER) was created by the Florida Environmental Reorganization Act of 1975 as the primary state level environmental permitting agency.[2] The Secretary of DER is appointed by the Governor. In addition, there is a seven member Environmental Regulatory Commission (ERC) which, representing various interest groups, sets regulatory standards and approves the use of federal grants.[3] Many of the functions of DER are exercised through district offices.[4]

The specific responsibilities of DER cover a wide spectrum. A primary activity is the regulation of pollutant discharges into the air or water pursuant to the Florida Air and Water Pollution Control Act.[4a] DER also has broad responsibilities,exercised in conjunction with regional water management districts, for the management of water quantity under the Florida Water Resources Act of 1972.[5] In addition, DER permits dredging, filling and similar activities in waters of the state.[6] The construction of wells,[7] the operational personnel of water and sewage treatment plants,[8] public drinking water systems,[9] solid waste

disposal,[10] and hazardous waste management.[11] DER also has important responsibilities for coordinating a broad environmental review of power plants,[12] power lines,[13] and certain major industrial facilities.[14] Besides these regulatory functions, DER also has responsibilities for lake restoration programs,[15] the administration of wastewater treatment plant construction grant programs,[16] areawide waste treatment management planning,[17] the coordination of Florida's public works program[18] and development of Florida's Coastal Zone Management Program.[19]

b. Department of Natural Resources[20]

The Florida Department of Natural Resources (DNR), in contrast to DER, is headed by the Governor and Cabinet. DNR has similarly broad responsibilities although they are oriented more toward natural resource management and less toward environmental permitting. One major area of responsibility is to manage the use of marine resources. Seafood dealers are licensed and regulated; the use of seafood is promoted and the taking of various marine creatures such as shrimp, crawfish and oysters is regulated.[21] Substantial scientific investigation into the biology of these resources is also conducted. With regard to freshwater areas, DNR conducts research and attempts to control the growth of noxious aquatic weeds.[22] DNR also has primary responsibility for protecting and restoring the state's sandy ocean shores, which it does by regulating coastal construction and helping to fund erosion control projects.[23] The various state parks and preserves are administered by DNR,[24] as are many aspects of the management of all other state lands, especially sovereignty submerged lands.[25] The acquisition of new state lands for conservation and recreation purposes is administered by DNR.[26] The containment and removal of pollutants discharged in coastal areas is a duty of DNR.[27]

c. Department of Community Affairs

The Department of Community Affairs (DCA) has been given responsibility for most of the state's activities in the area of land use control. The Environmental Land and Water Management Act of 1972[28] is administered by DCA. Under this Act certain large scale developments of regional impact (DRI) are subjected to regional and state scrutiny with review powers in the Governor and Cabinet.[29] DCA plays a key role in the DRI review process. In addition, DCA is responsible for administering the Areas of Critical State Concern program, under which the state may intervene in the land use regulatory process of local governments in certain critical areas.[30] Finally, DCA oversees implementation by local governments of the Local Government Comprehensive Planning Act, by which local governments in the state are required to adopt and enforce comprehensive plans covering certain specified elements of concern.[31] The Secretary of DCA is appointed by the Governor.

d. Game and Freshwater Fish Commission

The Game and Freshwater Fish Commission is an agency with independent constitutional status.[32] It is governed by five Commissioners, who are appointed by the Governor for staggered five year terms.[33] The Commission exercises the usual powers of such an agency to regulate bag limits, seasons, and techniques for the taking of game and freshwater fish.[34] In addition, the Commission has been charged with responsibility for protecting and managing rare, threatened and endangered species.[35] In recent years the Commission has become increasingly concerned with the need to preserve habitat, control pollution and manage water for the benefit of wildlife. It conducts research and advises other agencies on these needs.

e. Executive Office of the Governor

A reorganization of the Governor's Office by Governor Bob Graham in 1979 included a consolidation of state planning and budgeting functions under his

control.[36] The responsibility for developing a state comprehensive plan, formerly executed by the Division of State Planning of the Department of Administration was transferred to his office.[37]

2. Regional Agencies

a. Regional Planning Councils

Regional Planning Councils (RPC) play an important role in the management of land and water resources in Florida. Eleven regional planning councils, covering the entire state, have been created by the voluntary agreement of participating local government.[38] They perform a myriad of planning and technical assistance functions. Regional planning councils typically perform A-95 review,[39] conduct various functional planning activities,[40] provide technical assistance to local governments in preparing local plans, and review certain large scale land development projects, i.e. developments of regional impact (DRI).[42] In addition, the RPC's have been given statutory authority to appeal local government decisions regarding developments of regional impact to the Governor and Cabinet.[43]

As of January 1, 1981, the effective date of the Florida Regional Planning Council Act,[44] significant changes have been made in the composition and status of Regional Planning Councils. The Governor is given authority to specify the geographic area of the RPC's,[45] appoint one third of the membership,[46] and review rules of the RPC's relating to functions designated to them by the state.[47] In addition, the RPC's are now required to adopt regional policy plans,[48] and to use them as the basis for review of DRI's, local government comprehensive plans, and federally assisted projects subject to the A-95 review process.[49] These plans must be consistent with the plans of the Water Management Districts and the Department of Environmental Regulation.[50] The latter two agencies have been given authority to revise the regional plans to make them consistent, with a right

of appeal to the Governor and Cabinet remaining in the RPC.[51]

b. Water Management Districts

Five regional water management districts (WMD), organized along hydrologic boundaries and covering the entire state, exercise broad water management authority pursuant to the Florida Water Resources Act of 1972.[52] Although much of the authority of the water management districts has been actually delegated to them by DER and they are subject to the "supervisory authority of DER, in fact the water management districts are largely autonomous. Nine-member governing boards, appointed by the Governor, direct the water management districts.[53] Their responsibilities include the duty to conduct scientific investigations into the technical aspects of regional water resources,[54] consumptive use permitting authority,[55] power to regulate surface water management systems such as dams, impoundments or drainage works,[56] the preparation of a regional water use plan,[57] the permitting of artificial recharge projects,[58] the permitting of well construction[59] and the licensing of water well contractors.[60] All such decisions may be appealed to the Governor and Cabinet.[61] In addition, unlike any other state or regional agency, the WMD's are authorized to levy ad valorem taxes to finance their activities.[62]

3. Special Districts

a. Regional Water Supply Authorities

Regional Water Supply Authorities may be established by local governments, subject to approval by the Governor and Cabinet, for the purpose of constructing and operating regional water supply facilities. There are at present only two such authorities. The West Coast Regional Water Supply Authority was created in an attempt to resolve a long-standing "water war" between Pinellas, Pasco, and Hillsborough Counties. The Withlacoochee Regional Water Supply Authority was apparently created as a defensive move in an attempt to preclude the former

authority from taking water from that area.

b. Drainage Districts (Water Control Districts)

Much of Florida is wetlands and one of the predominant historical trends has been for landowners to drain their lands. The State has long encouraged such activity by creating or allowing landowners to establish special drainage districts. Such districts are necessary to allow landowners to collectively raise money to build and operate works. In addition, unwilling landowners may be forced to participate.

Although many districts were created by special act or by general act of local application,[64] the General Drainage Act of 1913,[65] codified as Chapter 298, Florida Statutes, provided a popular alternative.[66] Under Chapter 298, a majority of the landowners of contiguous wetlands can petition the circuit court and have a water control district created. A board of supervisors, elected by landowners in proportion to the extent of their holdings, conducts the affairs of the district. A plan of reclamation, approved by the court, guides the drainage project, and taxes on the benefited land pay for it.

c. Other Special Districts

In addition to the special districts described above, Florida law provides for the creation of numerous other types. Soil and water conservation districts, with extensive authority to adopt land use regulations, may be established.[67] Watershed improvement districts, with ad valorem taxing authority, may be created as subdistricts of the soil and water conservation districts.[68] Beach and shore preservation districts may be created by county governments.[69] Mosquito control districts,[70] navigation districts[71] and miscellaneous other special districts[72] are authorized and exist in profusion throughout the state.

4. Local Governments

Virtually all land use decisions in Florida are made by local governments. In addition, they sometimes exercise water management functions, particularly with regard to drainage control and water pollution abatement. There are three types of general purpose local governments in Florida: municipalities, chartered counties and nonchartered counties. Although each of them derives its power from the state, through the Constitution or by Legislative Act, the specific sources differ. Their respective authorities therefore differ somewhat also.

Municipalities derive their power from Article VIII, §2 of the Florida Constitution and the Municipal Home Rule Powers Act.[73] These municipal home rule powers generally authorize municipal legislation concerning any subject upon which the State Legislature could act except where preempted by the state or a charter county. Municipalities thus have authority to enact building, zoning, subdivision and environmental protection regulations. Non-charter counties have similarly broad powers.[74] Charter counties have whatever powers are conferred by the charter.[75]

One law of particular interest that affects all local governments in Florida is the Local Government Comprehensive Planning Act of 1975 (LGCPA).[76] In essence, this law requires local governments to adopt comprehensive plans for their growth and development. These plans must include specified elements and future land use decisions must be consistent with the plans. Non-binding review by state and regional agencies is also provided for.

B. The Environmental Land and Water Management Act of 1972 (Ch. 380)

The State of Florida's greatest direct involvement with land use is through the Environmental Land and Water Management Act of 1972 (ELA).[77] Closely modeled after the American Law Institute's (ALI) Model Land Development Code,[78] the ELA is an attempt to force local governments to consider the impact on state and regional interests of land development decisions while leaving most of the power to make those decisions at the local level.[79] A basic premise of the Act is that the state should become involved with only a small number of land use decisions -- those with regional or statewide impacts.[80] Local development decisions are primarily left to local communities, while the state participates in regulating development in "areas of critical state concern"[81] and "developments of regional impact."[82] Although many details of the process have been changed in recent years, the basic thrust of the regulatory framework remains unchanged.

1. Areas of Critical State Concern

The ELA empowers Florida's Governor and Cabinet, sitting as the "Administration Commission", to designate selected lands as "areas of critical state concern," thereby invoking a measure of state control over the content and administration of local land development regulations in the area.[83] As orginally enacted, an area could be designated if it fit within one of the following categories:

> (a) An area containing, or having a significant impact upon environmental, historical, natural, or archaeological resources of regional or statewide importance;
>
> (b) An area significantly affected by, or having a significant effect upon, an existing or proposed major public facility or other area of major public investment;
>
> (c) A proposed area of major development potential which may include a proposed site of a new community, designated in a state land development plan.[84]

With Florida's extensive, unique natural resources and rapid development, much of the state could obviously qualify under one of these categories, although the legislature limited designation at any one time to no more than 5% of the state's area.[85] Accordingly, in 1978, in the case of Askew v. Cross Key Waterways,[86] the Supreme Court of Florida invalidated that section. The basis of the Court's decision is a venerable doctrine prohibiting delegation of legislative powers.[87] According to the non-delegation doctrine, a grant of powers by the Legislature to an administrative agency is invalid unless guidelines and standards sufficient to constrain the unbridled discretion of the agency are attached.[88] In the view of the court, the grant of power to designate areas of critical state concern was essentially unconstrained by the broad criteria of the statute and was thus an unconstitutional delegation of the legislative powers.

Amendments enacted in 1979[89] attempt to cure the deficiency. First, the affected areas were redesignated by the Legislature, thereby rendering them non-administrative actions. Second, more detailed standards were added to the act for guidance of the Commission in making designations.[90]

The original ELA allowed the Commission to make a designation based on a report by the state land and planning agency and its own deliberations. Now, designation must be preceded by the appointment of a Resource Planning and Management Committee for the area, which must be given an opportunity to allow local governments to voluntarily work together to alleviate the problems compelling designation. This program will be discussed at length in a later section of this report.[91]

"Principles for guiding development of the area" must be specified at the time an area is designated.[92] A moratorium on development is specifically prohibited.[93] Local governments in the area then have six months to present land development regulations to the Commission which "comply" with the specified

principles.[94] If that does not occur, the state land planning agency, which is currently the Department of Community Affairs (DCA), must submit to the Commission, within 120 days, recommended land development regulations to supercede or supplement those of the local governments.[95] These must be adopted by the Commission before twelve months have transpired since the date of designation, or designation automatically terminates.[96] Until the Commission has approved or adopted land development regulations "...a local government may grant development permits in accordance with such land development regulations as were in effect immediately prior to the designation of the area..."[97] Afterwards, it is the responsibility of the local governments to adminster and enforce the new regulations,[98] and to conform the local government comprehensive plan to the principles for guiding development.[99] If the administration of them is inadequate, the DCA "may institute appropriate judicial proceedings...to compel proper enforcement...."[100] Development orders of the local government in an area of critical state concern may also be appealed to the Land and Water Adjudicatory Commission.[101]

2. Development of Regional Impact

The state also participates, under the ELA, in regulating developments of regional impact (DRI). The statute defines a DRI as "...any development, which, because of its character, magnitude or location, would have a substantial effect upon the health, safety, or welfare of citizens of more than one county." [102] The Aministration Commission has adopted guidelines "...to be used in determining which particular developments shall be presumed to be of regional impact."[103] For example, a petroleum storage facility would be presumed to be a DRI if located within 1,000 feet of navigable waters and with a storage capacity of over 50,000 barrels.[104] A sliding scale threshold applies to residential developments. Thus, in a county with a population of less than 25,000 a development of over 250 dwelling units is a DRI while the limit is 3,000 units in a county with a population

in excess of 500,000.[105] Although the statutory definition is apparently self-executing,[106] a developer may obtain a binding letter of interpretation from the DSP as to whether a development would be a DRI, which is binding on all state, regional or local agencies.[107]

The specifics of regulation depend upon the jurisdiction in which the DRI is to be built.[108] If there are no land development regulations in the jurisdiction, the developer is merely required to notify the DSP and local authorities of his intentions to build.[109] If no regulations are enacted or the area is not designated as being of critical state concern within 90 days, then development may proceed unimpeded by the ELA.[110] If development is proposed within an area of critical state concern, then it must meet the requirements of the designation and associated regulations.[111] The designation may specifically activate the DRI process for the area.[112] In most instances, the proposed DRI will be in a jurisdiction which has adopted land development regulations. An application must then be made to the local government for development approval.[113] Procedures for coordinating this application with other permitting agencies were recently enacted and will be discussed in a later section of this report.[114]

Although the local government is empowered to initially approve or deny an application, the regional planning agency is charged with the duty of evaluating the proposed developments' regional impacts and making a recommendation to the local government. It must consider "whether and to the extent which:

> (a) The development will have a favorable or unfavorable impact on the environment and natural resources of the region.
>
> (b) The development will have a favorable or unfavorable impact on the economy of the region.
>
> (c) The development will efficiently use or unduly burden water, sewer, solid waste disposal, or other necessary public facilities.
>
> (d) The development will efficiently use or unduly burden public transportation facilities.

> (e) The development will favorably or adversely affect the ability of people to find adequate housing reasonably accessible to their places of employment.
>
> (f) The development complies with such other criteria for determining regional impact as the regional planning agency shall deem appropriate, including, but not limited to, the extent to which the development would create an additional demand for, or additional use of, energy, provided such criteria and related policies have been adopted by the regional planning agency pursuant to § 120.54.[115]

The local government in turn must "...consider whether, and the extent to which:

> (a) The development unreasonably interferes with the achievement of the objectives of an adopted state land development plan applicable to the area;
>
> (b) The development is consistent with the local land development regulations; and
>
> (c) The development is consistent with the report and recommendations of the regional planning agency submitted pursuant to subsection (8) of this section.[116]

There is no requirement that the recommendations of the RPC be followed, but the decision regarding issuance of a development order may be appealed by either the developer, the Regional Planning Council, or the Division of State Planning to the Land and Water Adjudicatory Commission.[117] A final decision on whether to allow development is then made by that state level body.[118]

3. Regulating Areas of Critical State Concern to Protect Water

The history of the ELA furnishes an excellent example of the way land use controls may be used to protect water resources. The Environmental Land Act itself was proposed by Governor Askew's Task Force on Resources Management, which had been directed by him "to follow up on the recommendations of the Governor's conference on water management problems in South Florida...."[119] The ELA was thus a response to an environmental crisis which had first received significant attention, as is often the case, because of problems of water supply.

Water has continued to dominate the process. Those areas which have been designated as being of critical state concern thus far have been brought under

the Act largely to protect their vital resources. Within a year after passage of the ELA, the legislature designated a part of the Big Cypress Swamp as an area of critical state concern.[120]

The Big Cypress is an enormous swampy area occupying most of the southwestern end of the Florida peninsula.[121] Habitat is extremely varied, including pine flatwoods, hardwood hammocks, cypress swamps, wet prairies, and sawgrass marshes.[122] The location, depth and timing of inundation by water are extremely important in determining habitat types. The difference between a flatwood or hardwood hammock and a cypress swamp results from a relatively minor difference in elevation. Freshwater flow from the Big Cypress is also vital for regulating salinity in the adjacent highly productive mangrove estuaries of Everglades National Park. The entire region is thus extremely sensitive to alterations in the distribution and flow of surface waters.

Drainage and development threatened to ruin The Big Cypress, and local government officials had taken little action to prevent it.[123] Development of Golden Gate Estates by Gulf American Land Corporation, for example, was permitted.[124] In Golden Gate Estates an intricate grid of canals and roads was constructed to drain and provide access to a 173 square mile tract of the Big Cypress. The land was subdivided and sold to buyers all over the world. The water table was reduced, the hydroperiod shortened, the incidence of fires increased, the coastal estuary disrupted, and the specter of water shortages made imminent.[125]

The Division of State Planning proposed regulations and boundaries for The Big Cypress Area of Critical State Concern which were designated to prevent duplication of the Golden Gate Estates tragedy elsewhere in the area.[126] Three-fourths of the watershed was to be protected by stringent regulations.[127] Intense political opposition forced a drastic reduction in boundaries and weakening of the regulation.[128]

The final regulations which the Commission adopted are fairly restrictive.[129] No more than 10% of a site may be altered and no more than 50% of that may be covered with a non-permeable surface.[130] Other sections primarily regulate the hydrologic aspects of land development.[131] For example, if any dredge or borrow ponds are constructed they must "be aligned in the direction of local surface water flows...and must be designed to ... release ... storm-waters as sheet flow from their down-stream end into unaltered areas of vegetation."[132] New drainage facilities are required to "...release water in a manner approximating the natural local surface flow regime, through a spreader pond or performance equivalent structure or system, either on site or to a natural retention, or natural filtration and flow area."[133]

The first area to be designated as an area of critical state concern by the Commission was part of the Green Swamp in central Florida.[134] This area -- a perched swamp -- is both threatened by development and hydrologically vital.[135] The threat comes from being adjacent to the booming Orlando Disney World area. The hydrologic value of the Green Swamp lies in the fact that it is the source of five major rivers and one of the most important recharge areas in the state for the Floridan aquifer, Florida's main source of groundwater supply. The Green Swamp was designated primarily to protect its ability to supply good quality water.[136]

Regulations subsequently adopted for the area reflected this concern.[137] For example, the percentage of a site's area which may be altered is "...limited in accordance with the natural drainage capabilities of its soil."[138] No more than 50% of the altered area may be covered with a nonpermeable surface.[139] Large nonpermeable surfaces,[140] and new drainage systems[141] must release waters "...in a manner approximating the natural surface water flow regime." Protection or recharge capability,[142] prohibition of discharge into sinkholes,[143] protection

of the "water retention and filtering capacity of wetlands,"[144] and floodplain building restrictions are all addressed by the regulations. The standards and regulations of the Southwest Florida Water Management District regarding ground water withdrawals are incorporated by reference.[145]

4. Use of the DRI Process to Protect Water

Considerations of the impact on water resources have also played a determinative role in the evaluation of developments of regional impact. The first case decided on appeal by the Cabinet involved the proposed Three Rivers development, which was to be a large residential community located about 20 miles north of Orlando in Lake County.[146] Although supported by Lake County, the development was opposed by the East Central Florida Regional Planning Council.[147] A primary reason for its opposition was concern for the effects of sewage and stormwater runoff on water quality of the adjacent Wekiva River, which the Council had recommended for designation as a "scenic and wild river."[148] A hearing examiner appointed by the state agreed with the Council and his report was accepted by the Cabinet, thus blocking the uncoordinated development.[149]

Another example of how the DRI process works to protect water resources is the Estuaries, a proposed development of regional impact in Lee County adjacent to Estero Bay in Southwest Florida.[150] The developer proposed to develop a 6,500 acre tract of land[151] with 26,500 high density dwelling units.[152] The development would house 42,000 permanent residents, increasing to a seasonal population of 74,000.[153] Because approximately 92% of the property is wetlands, major filling would be necessary for development.[154] The adjoining waters of Estero Bay and San Carlos Bay are "relatively pristine coastal estuaries."[155] Estero Bay has been set aside as a State Aquatic Preserve[156] and both estuaries have been recommended for protection by an area of critical state concern designation.[157]

In its evaluation recommending disapproval of the project, the Southwest Florida Regional Planning Council concentrated heavily on potential harmful impacts on the water quality of the estuaries. Drainage from impervious surfaces[158] and grassed areas carrying a heavy load of pollutants[159] would eventually be routed into the estuaries. The filtering effect of a larger interceptor canal proposed by the developer was untested and subject to theoretical dispute.[160] Because of this threat to the water quality of San Carlos Bay and Estero Bay Aquatic Preserve the Regional Planning Council recommended denial of the project.[161]

Another impact evaluated by the Council was the proposed development's demand on the area's freshwater supplies.[162] The developer proposed to meet the sizable potable water demands of the project[163] by drawing upon a nearby aquifer known as the Sandstone Aquifer,[164] the capacity of which, according to the U.S. Geological Survey, had not been ascertained.[165] In the event sufficient water could not be obtained from the Sandstone Aquifer, the developer proposed to build a reverse osmosis plant to desalinate waters from the lower Harthorne and Suwannee aquifers.[166] These aquifers, however, are also of unknown capacity and currently serve several other nearby communities.[167] Non-potable water for irrigation of open spaces and recreational areas in the project would be drawn from effluent discharged from a planned sewage treatment facility, or barring that, from the lower Hawthorne and Suwannee aquifers.[168] The conclusion of the Planning Council staff with respect to these plans was that insufficient data existed to determine whether the project would unduly burden areawide water resources and for that reason the Council recommended against approval.[169]

Based on the negative recommendations of the Regional Planning Council, the Lee County Board of County Commissioners refused to issue a favorable development order. The developer appealed to the State Cabinet, and a state appointed

hearing examiner held lengthy hearings. Considerations of water quality and availability played a major role in the hearings and the local decision to prohibit the development was upheld.[170]

5. Effectiveness of the ELA as a Device for Integrating Land and Water Management

The Environmental Land Act represents an ambitious first step toward the integation of land and water management. Powers to control land use under the ELA are being used to protect the quality and quantity of water in areas of critical state concern and in watersheds affected by developments of regional impact. The effectiveness of the ELA in achieving these results, however, is limited by a number of restrictions born of legislative compromise with its opponents.

First, and most obvious is the 5% cap on designating areas of critical state concern. Much more of the state could benefit from state supervision. Wetlands alone constitute 24.7 to 34.02% of the state's area.[171] The entire coast should probably be designated as an area of critical state concern, because of its tremendous importance to the entire state and because of the development pressures which are being brought to bear on it.[172] Designation as areas of critical state concern could also be used to restrain development in regionally important floodplain and wetland areas. Similarly, those areas of the state which are growing beyond the limits which can be supported by their water resources and which are beginning to look toward other regions of the state for water, would be restrained by designation as areas of critical state concern. The 5% limit effectively forecloses these possibilities, however, which is probably what was intended.

A second major fault lies in the area of exemptions from regulation. An agricultural exemption may be found in the definition of development.[173] Development, as defined by the Legislature, does not include:

> ...The use of any land for the purpose of growing plants, crops, trees and other agricultural and forestry products; raising livestock...; or for other agricultural purposes.[174]

Therefore, land development regulations[175] may not be used to control agricultural development of land. This is extremely unfortunate. Vast areas of the state are being cut, bulldozed, burned and drained for agricultural expansion. Mixed hardwood forests and swamps are rapidly being replaced with either a pine tree monoculture or cattle pasture. The environmental effects of this development are as serious as that of building houses, because it is so extensive.[176]

Another exemption comes from the creation of certain vested rights in areas of critical state concern.[177] The statute prohibits limiting or modifying in any way "...the rights of any person to complete any development that has been authorized by subdivision approval,[178] or by a building permit or other authorization to commence development on which there has been reliance and a change of position."[179] Furthermore, "if a developer has by his actions in reliance on prior regulations obtained vested or other legal rights that in law would have prevented a local government from changing those regulations in a way adverse to his interests, nothing in this chapter authorizes any governmental agency to abridge those rights."[180] There are many areas of the state which have been subdivided or platted but where there has not been much actual building. Two particularly egregious examples are Golden Gate Estates near Naples and the Melbourne-Tillman Drainage District.[181] Because of this section, both are exempt from regulation despite a clear and urgent need to at least control the manner in which building occurs. Many parts of the Charlotte Harbor Area are similarly exempted.[182]

The protection of "vested rights" is a particularly expansive loophole because the Administration Commission is prohibited from establishing a

moratorium on development in the designated area[183] and the principles for guiding development do not become effective until after a legislative review.[184] A substantial gap is thus created between the date of designation and the effectiveness of new land development rules during which developers may obtain plat or subdivision approvals. Their rights would vest and they could not be regulated under the new principles.

Numerous specific time limits have been included in the ELA within which agency action is required.[185] In most cases these seem unrealistic. For example, the Regional Planning Council must evaluate the application, prepare a report, and give the developer "a reasonable opportunity to present evidence" regarding the contents of the report within a period of 50 days.[186] This is an insufficient period of time for an agency with limited personnel to properly assess the many environmental, economic and social impacts of a large development.

The ELA gives only the owner of the property, the developer, the Regional Planning Council or the Division of State Planning standing to appeal the local government's decision regarding a DRI.[187] The courts have so far strictly interpreted this provision.[188] The Model Code is superior in this respect, allowing any other person who was a party at the local hearing to appeal the local decision.[189] Interested parties have a good opportunity under the Model Code to participate in the hearings.[190]

The exemptions for agricultural development of land and "vested rights" are weaknesses shared by the DRI process with the regulation of areas of critical state concern.[191] State authority to control development in jurisdictions with no land development regulations is too limited. Developers may conspire with local government officials to avoid DRI review[192] and the state's only recourse is to designate the area as one of critical state concern within 90 days.[193]

Another problem lies in the definition of a DRI. The statutory definition is very broad and potentially applicable to a broad range of developments.[194] The administrative guidelines and standards, on the other hand, are extremely narrow.[195] They include only a few types of development, ignoring the other significant classes;[196] there are inordinately high thresholds for the types of development included;[197] they make no provision for classifying as DRI development which, because of their location, may have significant extraterritorial impacts, such as developments in prime aquifer recharge areas, wetlands, barrier islands, or riverine flood plains.[198] This weakness is probably attributable to the fact that legislative approval of the guidelines is necessary.[199]

Although the statutory definition is self-executing,[200] so that developments which are not included in the administration guidelines can be regulated as DRI, another section may effectively preclude this result. Developers are entitled to seek a binding letter of interpretation as to whether a proposed project would be a DRI. These letters are presumably issued using the guidelines. If a letter is issued stating that a proposed development is not a DRI, then other parties are barred from challenging that determination in the future and the development could never be forced to undergo a DRI review.

Since regional planning councils bear the primary burden of analyzing applications for construction of DRI it is extremely important that they have sufficient financing to hire competent personnel to conduct the necessary studies. They should not be dependent for funding on the local governments whose decisions the RPC may have to appeal. It would also be advantageous for the boundaries of the RPCs to coincide with those of water management districts.[201]

As originally enacted, the ELA made inadequate provision for the review of DRIs by agencies other than the regional planning council and local government. The specific expertise of other agencies should also be used. In particular,

review by the water management district and the Department of Environmental Regulation regarding the proposed development's impact on regional water resources is desirable. The statute now requires other agencies, if requested by the RPC, to review the proposed development and offer written recommendations on matters within the area of their jurisdiction.[202] These reports must then be incorporated verbatim in the RPC report, although dissenting views may also be attached. Where permits have been issued by DER or a water management district, however, the RPC is prohibited from offering any contradictory recommendations. This latter provision appears intended to create the appearance of consistency by stifling conflicting opinions. In general, however, the new requirements would appear useful for stimulating the joint, coordinated interagency review of DRI.

C. The Local Government Comprehensive Planning Act of 1975 (Ch. 163)

Land use control has traditionally been the domain of local government officials. By choosing to allow state intervention in only limited situations pursuant to Chapter 380, the Florida Legislature made the policy decision to continue giving local governments the bulk of responsibility for regulating land development. That was a task, however, that most local governments had never responsibly exercised. A policy statement in 1970 of the Southeastern Regional Assembly spoke of the problems of urbanization and stated:

> The problems are also those of local governments unprepared for meeting urban problems. The situation is further compounded by a rapidly expanding population and their often unresponsive elected representatives; neither are yet willing to recognize the cost of being urban and the ominous implications of unplanned future growth...For lack of land use controls and plans to guide and coordinate growth, subdivisions hastily built a decade ago have generated the school, transportation, and sewage crises of today.[203]

The Local Government Comprehensive Planning Act of 1975[204] was enacted as a corollary of Chapter 380[205] to stimulate and guide the development and implementation of comprehensive plans by local government.[206] It contains two essential mandates:

(1) Local governments are required to adopt comprehensive plans.[207]

(2) Development must conform to the plan.[208]

All local governments in Florida, including counties, municipalities, and certain special districts, are subject to the Act.[209] Approximately 460 local governments are thus regulated.[210] Each local government was required to officially designate a local planning agency by July 1, 1976[211] and have adopted a comprehensive plan by July 1, 1979.[212] The Act also required the state land planning agency to grant two one year extensions upon a showing of good faith effort to meet the statutory requirements.[213] The form and makeup

of the local planning agency is only loosely prescribed.[214] It may be a local planning commission,[215] planning department,[216] or council of local government officials.[217] In one instance a single city commission was designated.[218] The local planning agency has responsibility for recommending a plan for adoption by the local governing body and for monitoring its subsequent effectiveness.[219]

The Local Government Comprehensive Planning Act specifies a number of elements which must be included in a plan.[220] Each element encompasses a particular problem for which the plan is required to propose a solution. A land use plan element is required to designate the "proposed future general distribution, location, and extent of uses of land..." for various categories of use.[221] Another required element is the projection of needs for sewer, solid waste, drainage, and potable water facilities and the correlation of these needs with the land use element.[222] The plan must specifically address the problems of how to provide the necessary facilities.[223] A conservation element must be included which provides for "the conservation, development, utilization, and protection of natural resources in the area...."[224] Additional required elements are a traffic circulation element,[225] a recreation and open space element,[226] a housing element,[227] a utility element,[228] and, for those areas lying in the coastal zone, a coastal zone protection element.[229] There is also a number of "optional elements," which may be included in a plan, but are not required.[230] Optional elements are allowed for planning such aspects of the transportation system as mass transit,[231] ports,[232] airports,[233] bike paths,[234] pedestrian walkways,[235] and off-street parking.[236] Other optional elements provide for public services and facilities,[237] public buildings,[238] recommended community design,[239] area redevelopment,[240] safety,[241] historical preservation,[242] economic development,[243] and other appropriate needs.[244]

One of the most important aspects of the Act is its requirements for consistency and coordination. All elements of the comprehensive plan must be consistent with each other.[245] Although the term "consistent" is undefined, it would appear to mean, for example, the land use element should not plan for industrial development of an area which the water supply element plans to use of aquifer recharge. Similarly, the transportation element should not plan to pave a valuable wildlife habitat slated for preservation.

Coordination with the plans of adjacent local governments, the region and the state is also required as "a major objective of the local comprehensive planning process."[246] The plan must "include a specific policy statement indicating the relationship of the proposed development of the area to the comprehensive plans" of those other entities.[247] An intergovernmental coordination element, "showing relationships and stating principles and guidelines to be used in the accomplishment of coordination...,"[248] must be prepared. This element is required to "demonstrate consideration of the particular effects of the local plan..." upon the development of adjacent areas, the regional and the state comprehensive plan.[249]

Intergovernmental coordination is further encouraged by provisions for review of the plan by other governments, state agencies and the public. Sixty days before adoption, a copy of the plan must be sent to the Division of Local Resource Management,[250] to the Regional Planning Council,[251] to the county if the plan is prepared by a municipality or special district,[252] and to any other government agency in Florida which has requested one.[253] The Division of Local Resource Management then must distribute the plan to other appropriate state agencies for their review and comment.[254] The Division of Local Resource Management is then required to comment in writing on the plan, specifying any objections and making recommendations for modification.[255] Review by DLRM

should be primarily directed toward the local plan's impact on the state comprehensive plan and the activities of other state agencies.[256] Similarly, the Regional Planning Council may comment on the relationship of the local plan to any regional comprehensive plan.[257] The local governing body must respond in writing to these comments within four weeks.[259] All comments and replies are public documents.[260] In addition, procedures to facilitate public participation and input to the plan are mandated.[261] The local government is unconstrained, however, by the comments or reviews it receives. Although it is required to "consider all comments received from any person, agency or government,"[262] it may "adopt, or adopt with changes or amendments, the proposed comprehensive plan...despite any adverse comment received."[263]

In many respects the Local Government Comprehensive Planning Act was a tremendously progressive step toward integrated land and water management in Florida. At no other level of government are those functions so unified as at the local level. Because of this Act, many local officials have been forced to sit down and grapple with the problems of land and water use in a unified and holistic manner. The process of developing a comprehensive plan necessarily requires an integrated approach. Many innovative and effective programs have been stimulated by the process. Certain deficiencies have hampered the effectiveness of the Local Government Comprehensive Planning Act, however, and they must be examined.

First, the substance of the plans is not controlled. A local government can go through the requisite procedural motions of planning and never alter the existing pattern of development. Many have done so. Good planning involves looking at natural systems and human needs and from that insight deciding if, when, where and under what conditions development may proceed.[264] Too many planners recite platitudes, juggle statistics and then draw a few

multi-colored maps in whatever configuration local real estate developers have demanded. The LGCPA provides no method, other than persuasion, for the state to ensure that good planning takes place.

Second, there is no effective method of ensuring consistency of a local plan with the plans of other local governments, the state or regional entities. Although provisions for formal review help to encourage coordination, in many cases plans are incompatible and inconsistent. Sometimes this occurs because the reviewing agencies do not give their responsibility the necessary attention and effort. Budgetary limitations may effectively preclude the substantial commitment of qualified people's time that is needed for the analysis of comprehensive plans and the drafting of recommendations for improvement. In other instances, the local governing body may simply reject proffered advice and choose to adopt a plan that is inconsistent with those of other agencies or units of government. There is no means for resolving such conflicts.

Voluntary cooperation has had some success, however, and is to be commended where it occurs. The efforts of the South Florida Water Management District are particularly notable in this regard.[265] The District has arrangements with all of the counties within its jurisdiction that provides for participation by technical staff in their comprehensive planning activities. District staff advise the local governments as to the effect of local plans on water resources and whether they are consistent with regional water management plans. There is no requirement for a local government to accept the advice of the District, however.

These deficiencies could be remedied by giving the state and regional agencies a stronger role in the local governments' comprehensive planning process, together with the personnel to adequately perform that role. Consistency of local plans with state plans, regional plans and the plans of other

local governments could be mandated.[266] An entity established at the state level could be given authority to modify local plans to achieve consistency and resolve conflict.[267] Although a recent gubernatorial task force recommended such reforms, they do not appear to be forthcoming.[268]

One certain prediction is that the plans which are now being adopted will not moulder unused on the dusty back shelves of local libraries. They have a powerful legal status.[269] All land development regulations, all land development and "all actions taken in regard to development orders" must be "consistent" with the adopted comprehensive plan.[270] The precise meaning of the consistency requirement is not clear.[271] The statute offers no definition. Courts, however, are specifically authorized to consider the relationship of the comprehensive plan to challenged governmental action[272] and much litigation focusing on this term is expected.

D. The Florida Water Resources Act of 1972 (Ch. 373)

1. History

Land development in Florida is inextricably dependent on water management. Vast areas of the state are naturally subject to frequent inundation. Early settlers saw the water as an obstacle to productive use of the land and emphasized the construction of drainage works to remove it, thus allowing agricultural and residential development. Hundreds of single purpose drainage districts,[274] including the large Everglades Drainage District,[275] were formed to remove surface water from the land. In most instances, the water was simply dumped into the sea. The problems created by overdrainage and the destruction of wetlands continue to afflict Florida.[276] They include a lack of sufficient water in storage during periodic droughts, increased flooding during wet periods, salt water intrusion, proliferation of exotic plants, destructive fires, loss of organic soils, deterioration of water quality, and disruption of estuarine processes.

A more balanced approach to water management began with the formation of the Central and Southern Florida Flood Control District in 1949.[277] The immediate impetus for the formation of the District was provided by a major hurricane in 1947, which devastated the lower east coast of Florida and graphically demonstrated the need for further flood control measures. However, the District, which covered the lower southeastern quarter of the state, was not created as a simple flood control district. The storage of surface water for subsequent use rapidly became of equal importance to its disposition in periods of heavy rainfall.

Other hurricanes, in 1959 and 1960, led to the creation in 1961 of another large-scale multipurpose water management district, the Southwest Florida Water Management District, which covers another fifth of the state.[278]

As in the case of the Central and Southern District, storage of water quickly became one of the principal objects of the District. Moreover, the legislature granted the Southwest District authority to regulate ground water resources, which was lacking in the Central and Southern District.

Meanwhile, following the state's rejection of a proposed switch from common law riparianism to prior appropriation, the Florida legislature and water law experts at the University of Florida began to examine the possibilities for establishing a workable regulatory system for all of Florida, using the riparian system as its starting point.[279] These studies led first to the enactment of the 1957 Florida Water Resources Act,[280] establishing a statewide administrative agency to oversee the development of Florida's water resources. This agency, originally established as a Division within the State Board of Conservation, was authorized to issue permits for the capture and use of excess surface and ground waters,[281] and to establish rules for the conservation of water in areas of the state where overwithdrawals were endangering the resource through salt water intrusion or other causes.[282]

Building on the somewhat modest beginning described above, a group of water law experts at the Holland Law Center of the University of Florida developed "A Model Water Code."[283] The Code was designed to provide a vehicle for comprehensive state regulation of Florida's water resources along hydrologically sound lines, taking into consideration the interrelationship of all types of water resources. It provides for a system of administrative regulation within the framework of a riparian water law system. The essential chapters of A Model Water Code were adopted with significant modification as the Florida Water Resources Act of 1972[284] codified as Chapter 373, Florida Statutes (1979).

2. Administrative Framework

Florida's 1972 Water Resources Act established a two-tiered administrative structure headed at the state level by what is now the Department of Environmental Regulation.[285] Under the Department are five regional water management districts designed to provide the diverse types of regulation necessary in different areas of the state. They include the already existing Central and Southern Florida Flood Control District, renamed the South Florida Water Management District, and the Southwest Florida Water Management District. The Northwest Florida, St. John's River and Suwanee River Water Management Districts were created. Although the Act grants liberal powers to DER, delegation of those powers to the water management districts is encouraged.[286]

DER and the water management districts have four primary areas of responsibility under the Florida Water Resources Act of 1972: (1) water management planning; (2) construction and operation of water management structures; (3) regulation and permitting of consumptive use of water; and (4) regulation and permitting of surface water management systems. Each of these functions can have an enormous impact on land use and development and may, because of their effect on water resources, either enhance or conflict with attainment of the water management district's goals. Development of housing in wetlands with extensive private drainage systems, for example, supplements and aids a water management district that is seeking to drain land, but conflicts with objectives of water conservation by retention. Similarly, the locating of a landfill in an aquifer recharge area can aggravate problems of providing sufficient potable water.[287]

3. Planning

One of the most important functions of the water management agencies is to prepare a water management plan. Specifications for the preparation of

this plan and its relationship to other planning efforts are discussed in another section of this report.[288]

4. Water Management Structures

Chapter 373 recognizes the need for construction and operation of water management structures in Florida.[289] Enormous sums of money have been spent constructing such works. The federal government has usually provided 80% of the necessary construction money, with the state paying the remaining 20%.[290] The bulk of the money has been spent in South Florida on the Central and Southern Florida Flood Control Project. It is estimated that when the elaborate network of publicly constructed canals, levees and pumping stations is completed in South Florida, it will have cost over 721 million dollars.[291] This expenditure has made possible the intensive agricultural and urban development of South Florida. Large sugar cane and vegetable farmers in the Everglades Agricultural Area south of Lake Okeechobee have been able to drain a large portion of the original Everglades and farm the thick, organic soils. These farmlands, as well as several associated small towns, have also been protected from hurricane flooding. Urban development along the lower East Coast has also been protected from periodic flooding. As a result, developers have encroached even farther into the Everglades. Cities are being built to the very edge of the dikes which contain the remaining Everglades waters. These urban developments, often poorly designed, in turn have had numerous adverse effects on water resources resulting from drainage, destruction of vegetation, construction of impervious surfaces, and generation of pollutants. The South Florida Water Management District is now seeking to control some of these impacts through its surface water management system permitting process.[292]

5. Surface Water Management

Land development in Florida is particularly dependent on the construction and operation of drainage systems. Regulation of the management and storage of surface waters is expressly authorized by the Florida Water Resources Act. It states:

> Except for the exemptions set forth herein, the governing board or the department may require such permits and impose such reasonable conditions as are necessary to assure that the construction or alteration of any dam, impoundment, reservoir appurtenant work, or works will not be harmful to the water resources of the district[293]

and

> Except for the exemptions set forth in this part, the governing board or department may require such permits and impose such reasonable conditions as are necessary to assure that the operation or maintenance of any dam, impoundment, reservoir, appurtenant work, or works will not be inconsistent with the overall objectives of the district and will not be harmful to the water resources of the district.[294]

The potential breadth of this authority is revealed by an examination of the statutory definitions for the terms used.[295] In particular, a "dam" is defined as "...any artificial or natural barrier, with appurtenant works, raised to obstruct or impound, or which does obstruct or impound, any of the surface waters of the state.[296] "Surface water" in turn is "...water upon the surface of the earth, whether contained in bounds created naturally or artificially or diffused."[297] "Works" are defined as "...all artificial structures not included in subsections (1) and (2), including but not limited to, ditches, canals, conduits, channels, culverts, pipes, and other construction that connects to, draws water from, drains water into, or is placed in or across, the waters of the state..."[298]

Virtually any movement of earth in Florida could create a "dam" as defined in this statute. It is difficult to conceive of a construction project which would not result in the creation of "works," whether as a

golf course, parking lot or rooftop from which water drains or as a drainage system utilizing swales, gutters, ditches and culverts. A liberal reading of the statute would, therefore, give DER and the water management districts extensive authority to control many of the surface land alterations and drainage systems which are presently damaging water resources.[299]

Three vaguely worded but potentially crippling loopholes in the foregoing regulatory powers were also enacted by the Legislature.[300] The first exemption provides:

> Nothing herein, or in any rule, regulation, or order adopted pursuant thereto, shall be construed to affect the right of any natural person to capture, discharge, and use water for purposes permitted by law.[301]

The exact meaning of this provision is not apparent. It could be interepreted to mean that natural persons are completely exempt from all regulation under this section and may, therefore, build, drain, ditch, dike, and dam at will, subject only to the common law and other regulatory powers. A better interpretation would be that the regulations cannot affect the right of a person to conduct the activity of capturing, discharging and using water, but they can affect the manner in which he does so. Thus a natural person would have a right to trap or drain water, but not so much than minimum flows or ground water levels are affected. The district might also insist that a drainage system which a natural person constructs, incorporate design features to protect water quality and conserve water. An alternative interpretation would render this section of the Act almost completely ineffectual.

The second major exemption is for agriculture. Legislatures often exempt agriculture from environmental regulation, either not recognizing the substantial harm which agricultural development often causes or bowing to powerful political pressure. This particular exemption states:

> Nothing herein, or in any rule, regulation, or order adopted pursuant thereto, shall be construed to affect the right of any person engaged in the occupation of agriculture, floriculture, silviculture, or horticulture to alter the topography of any tract of land for purposes consistent with the practice of such occupation. However, such alteration may not be for the sole or predominant purpose of impounding or obstructing surface waters.[302]

The damage which could be wrought via this loophole is enormous. A farmer who wished to do so might fill any wetland on his property without restriction or plow or clear to the very edge of a creek. Whether lands can be drained at will is not clear.[303] The answer depends on whether drainage is an alteration of topography and whether drainage involves acts which are "...for the sole or predominant purpose of impounding or obstructing surface waters."

A third exemption states:

> Nothing herein, or in any rule, regulation or order adopted pursuant thereto, shall be construed to be applicable to construction, operation or maintenance of any closed system. However, part II of this chapter shall be applicable as to the taking and discharging of water for filling, replenishing, and maintaining the water level in any such closed system.[304]
>
> 'Closed system' means any reservoir or works located entirely within lands owned or controlled by the user and which requires water only for the filling, replenishing, and maintaining the water level thereof.[305]

The meaning of this exemption is again not very clear. It appears to be an attempt to exempt private reservoirs. By using the term "works," however, and by ignoring the fact that works are often used for draining water from lands as well as impounding them, the legislature has made somewhat doubtful the applicability of the statute to drainage systems controlled by any one entity. The term "closed system" is itself a misnomer. Although a system might be located entirely within the boundaries of land a single entity controls, the effects may extend far beyond those boundaries. The only

reasonable interpretation of this exemption is that it applies only to systems which hold all water on the land and must occasionally draw additional water from outside to replenish water which is used.

To date neither DER nor any of the water management districts has implemented a program for the regulation of surface water management which is as comprehensive and protective as that authorized by the Water Resources Act. The Department of Environmental Regulation, the Northwest Florida Water Management District, and the Suwannee River Water Management District have no regulations yet. The St. Johns River Water Management District,[306] the Southwest Florida Water Management District,[307] and the South Florida Water Management District[308] have each implemented permitting systems.

The regulations of the St. Johns River Water Management District regarding management and storage of surface waters are applicable at this date only in areas which have been transferred to the District from either the Central and Southern Florida Flood Control District or the Southwest Florida Water Management District, where permitting systems were previously in effect.[309] Because these rules are so similar to those of the Southwest Florida Water Management District, they will not be discussed further in detail.

The Southwest Florida Water Management District requires a permit to "construct, alter, abandon or remove any dam, impoundment, reservoir, appurtenant work, or works which" impounds water on or diverts water from an area greater than 40 acres or alters a watercourse which drains a watershed in excess of five square miles.[310] A permit is also required for the operation or maintenance of a dam or other works which impounds water on or diverts water from an area exceeding 160 acres.[311] If the structure has a headgate or a valve, the threshold decreases to 40 acres.[312]

A number of conditions, apparently designed to protect minimum flows, potentiometric surfaces and other aspects of water quantity, are attached to the issuance of a permit.[313] The permitted activity must be one which is "a reasonable, beneficial activity,"[314] is "consistent with the public interest,"[315] and will not interfere with an existing "legal use of water."[316] More specifically, the permitted activity:

> (a) Must not restrict or alter the rate of flow of a stream or other watercourse by more than ten percent (10%) at the time and point of withdrawal, except in the case of a dam where water is stored for subsequent release downstream.
>
> (b) Must not cause the level of the potentiometric surface under lands not owned, leased, or otherwise controlled by the applicant to be lowered more than five feet (5').
>
> (c) Must not cause the level of the water table under lands not owned, leased, or otherwise controlled by the applicant to be lowered more than three feet (3').
>
> (d) Must not cause the level of the surface of water in any lake or other impoundment to be lowered more than one foot (1') unless the lake or impoundment is wholly owned, leased, or otherwise controlled by the Applicant.
>
> (e) Must not cause the potentiometric surface to be lowered below sea level.[317]
>
> (4) Issuance of a permit will be denied if the permitted activity:
>
> (a) Will cause the rate of flow of a stream or other watercourse to be lowered below the minimum flow established by the Board.
>
> (b) Will cause the level of the potentiometric surface to be lowered below the regulatory level established by the Board.
>
> (c) Will cause the level of the surface of water in any lake or other impoundment to be lowered below the minimum level established by the Board.
>
> (d) Will significantly induce salt water encroachment.

> (e) Will cause the water table to be lowered so that the lake stages or vegetation will be adversely and significantly affected on lands other than those owned, leased, or otherwise controlled by the applicant.[318]

This permitting system has several faults. First, the thresholds are so high as to exempt too many of the small projects whose cumulative impact or direct local impact may be very harmful. Second, the published criteria do not sufficiently provide for consideration of impacts on water quality, fish and wild life, other environmental impacts or land use implications.[319] Third, the numerical criteria, though seemingly precise, are vague and fail to consider cumulative impacts.

The South Florida Water Management District has promulgated the most detailed and comprehensive regulations of the water management districts.[320] The District has issued, in the regulations, a "District-wide General Permit" for projects that:

> 1. have less than ten acres total land area,
> 2. have less than two acres of impervious area,
> 3. require a discharge facility no greater than the equivalent of one 24-inch pipe gravity discharge,
> 4. are located wholly on lands which may be classified as uplands as defined in Chapter 17-4, Florida Administrative Code,
> 5. are located within a local jurisdiction which has adopted subdivision regulations, and
> 6. are not located in areas governed by District basin rules which specifically provide that General Permit rules are not applicable;
>
> are hereby granted a general permit to construct, alter, or operate said works. For projects which are to be developed in phases the term 'total land area' shall be construed to mean total contiguous land holdings.[321]

A similar type of District-wide General Permit has been issued for the construction, alteration or operation of works in conjunction with certain public highway projects.[322] Although there is no need to apply for a permit, a "Notice of Intent to Construct works pursuant to General Permit" must be filed at least 30 days prior to commencement of work.[323]

A number of additional conditions are attached to the General Permit. Design of the works must include "...techniques for storm water runoff quality control"[324] and the work must be carried out "...so as to minimize any degradation of water quality..."[325] Accordingly, the permittee is required to "...institute necessary measures during the construction period, including full compaction of any fill material placed around newly installed structures, to reduce erosion, turbidity, nutrient loading and sedimentation in the receiving waters, and to minimize any adverse impact of the works on fish, wildlife and natural environmental values."[326] All other local, state or federal authorizations must be obtained before the permit is effective.[327] Thus the water management district reinforces the functioning of other regulatory agencies. Finally, the district reserves the right to require individual permitting of any works which "...are shown to be harmful to the water resources of the District or may interfere with the legal rights of others or may be inconsistent with the overall objectives of the District, or may otherwise be contrary to the public interest...."[328]

The construction, alteration, operation or abandonment of any works which are not covered by a general permit must be specifically permitted by the water management district.[329] To obtain a permit, the applicant has the burden of showing the act:

> (a) will not be harmful to the water resources of the District; and
> (b) will not interfere with the legal rights of others; and
> (c) is not against public policy.[330]

In addition, "the Board will consider the water quality and quantity impact and land use implications of the requested act."[331] More detailed criteria for the construction of works are specified in the publication, "Basis of Review of Construction of Surface Water Management Systems Serving Projects

with Two or More Acres of Impervious Area Within the South Florida Water Management District - May 1977."[332]

The South Florida Water Management District has demonstrated an awareness of the relationship of its surface water management permitting system to the regulatory functions of other government agencies. Thus, the effectiveness of a permit is conditioned on the receipt of all other necessary governmental authorizations.[333] In addition, there are higher thresholds for the General Permit program in Dade and Palm Beach Counties because local agencies there have the power and willingness to enforce standards similar to those which the District would impose.[334] The District, thus, is essentially delegating its permitting authority to the local agencies in order to eliminate redundancy and overlap of functions. In one area of Dade and Borward Counties, the C-9 or Snake Creek Canal basin, the District has been working closely with all local governments and the Regional Planning Council to develop integrated criteria for both surface water and land management.[335] Special surface water management criteria have thus been implemented in this sensitive area.[336]

6. Consumptive Use Permitting

One of the most important parts of the Florida Water Resources Act of 1972 authorizes regulation of consumptive use of water.[337]

> the governing board or the department may require such permits for consumptive use of water and may impose such reasonable conditions as are necessary to assure that such use is consistent with [its] overall objectives and is not harmful to the water resources of the area.[338]

Only "...domestic consumption of water by individual users" is legislatively exempted from potential regulation.[339] Even existing users must apply for a permit.[340]

To obtain a consumptive use permit, the applicant has a burden of showing, "...that the proposed use of water:

(a) Is a reasonable-beneficial use...; and
(b) Will not interfere with any presently existing legal use of water; and
(c) Is consistent with the public interest.[341]

The standard of reasonable-beneficial use is a particularly innovative feature of the Act. It is defined as "...the use of water in such quantity as is necessary for economic and efficient utilization for a purpose and in a manner which is both reasonable and consistent with the public interest."[342] This standard is derived from aspects of both Eastern and Western water law and is designed to protect both other water users and the general public from wasteful uses of water.[343]

The reasonable use rule as developed in the Eastern United States allows each riparian owner to use only such amounts of water as are reasonable with respect to the uses of other riparian owners. The rule is sufficient to protect other riparians from some wasteful operations, but is of little use to nonriparians or to the general public. The beneficial use rule of the Western prior appropriation states holds that an appropriator who diverts more water than is actually needed acquires no rights to the excess. There is no requirement of "reasonableness," however, in relation to other users or potential users.

Use of reasonable-beneficial use as a standard in Florida's law is an attempt to combine the best features of the reasonable use and beneficial use rules. First of all, the quantity of water used must be efficient with respect to the use itself. This part of the reasonable-beneficial use test, requiring that the use be "beneficial," allows only that quantity of water to be used as is necessary for an economically efficient operation. The value of the use itself in relation to other uses is not considered in this part of the test. However, the reasonable-beneficial use standard also requires that

the water, regardless of amount, be used for a purpose which is both reasonable and consistent with the public interest. Thus, the purpose must be "reasonable" in relation to other uses. This criterion requires that the use not be detrimental to other users or inconsistent with the character of the watercourse from which the supply is taken, or inconsistent with the public interest.

One device which the water management districts could use to integrate their decisions with those of local land use planners would be through defining the public interest component of the reasonable-beneficial use standard.[344] Permitting use of water for an activity that is inconsistent with local, state, or regional plans could be found contrary to the public interest. For example, if coastal zone management planners have determined it would be desirable to preserve an area in its natural state, it would not be in the public interest for the water management district to grant a consumptive water use permit for the potable water supply of a large residential development in this area. Rather than granting the permit simply because water is physically available, the District could deny it to reinforce the efforts of the land use planner.

Two other features of the 1972 Florida Water Resources Act could be used by Florida's water managers to harmonize the issuance of permits with land use and other plans. The Department of Environmental Regulation is allowed to designate in the State Water Use Plan certain desirable uses which are to be given a preference in the granting of consumptive use permits.[345] Such uses might include recreation, preservation of the environment, protection of recharge areas, and others. A general preference for those uses which are consistent with land use plans over those uses which are inconsistent might also be stated. Once such a designation is made, the governing boards of the

water management districts must recognize it. Although some western states employ preferences in their prior appropriation laws to promote particular water policies, to date, preferences have seldom been used in the United States to further environmental objectives.[346]

Similarly, certain uses may be declared undesirable, in which case the governing board of a water management district is authorized, but not compelled, to deny a consumptive use permit. Activities which are contrary to local, state or regional land use plans could be declared undesirable, regardless of their impact on water resources. Water use zoning would thus reinforce land use plans.

The Florida Water Resources Act also provides for the establishment of minimum flows for surface watercourses, as well as minimum lake and ground water levels.[347] It is essential that any system of water allocation include provisions for minimum flows and levels for public purposes. Commercial navigation, recreational boating, fishing, hunting, swimming, and protection of the ecology are some of the non-consumptive public purposes that can be and should be protected under the minimum flow and level concept in Florida. The determination of which uses are entitled to protection, however, should be made only after taking into consideration all relevant land use and other plans.

7. Coordination with Land Use Management

Several of the water management districts review and comment on the water resource aspects of applications to local government for the approval of land development projects. In addition to DRIs, such projects as subdivisions, parking lots, condominiums, PUDs and changes in zoning may be reviewed. Information regarding such factors as the availability of water supplies, the impact of the drainage system on water quality, susceptibility to flooding, and loss of wildlife habitat or other environmental values may be supplied.

The degree to which a particular water management district actually makes such reviews varies widely between districts. It depends in large part on the willingness of the District to assess the impacts of land use damages. The Southwest Florida Water Management District, for example, has been dominated by board members who believe the District should strictly limit its activities to water management. The Board therefore disallows involvement by the District in what they view as strictly "land use" decisions. There is also some worry on the part of SWFMD attorneys that if statements are made in the context of a review process, the District may be estopped to take an inconsistent position with regard to its own permit, which is typically issued at a later date. For this reason, the SWFMD has been unwilling to give advice on DRIs or other land use decision. The South Florida Water Management District, on the other hand, has consistently sought to increase its participation in the land use decisions of local governments.[348] Another factor is whether a District can afford the financial cost of participation. It takes a great deal of time and money for well qualified experts to properly review complicated development proposals and then articulate their concerns in written reports and oral presentations.

Since the SFWMD is the most involved of any district and since it has set a pattern that other districts appear to be following, its review activities will be described in detail. The District's stated objectives are:

1. To provide technical expertise on water-related matters to local governments and regional planning councils to assist them in making more enlightened land development decisions

2. To inform the applicant and local government of potential problems (including possible conflicts between District and local government permitting requirements) and thus facilitate the resolution of problems prior to land use commitments by local government

3. To apprise the applicant, during the initial planning stages, of development modifications that are necessary to comply with District permitting requirements

4. To enable the District to be informed of potential development activity relevant to its permitting process.[349]

The SFWMD has reviewed 88 DRIs within its jurisdiction since 1973.[350] This review is made pursuant to agreements the WMD has entered into with each of the five Regional Planning Councils that lie, at least in part, within its jurisdiction. The agreements provide for the District to submit a report to the RPC and state:

> The report shall include an analysis based on the information in the ADA, of the magnitude of any positive or negative impacts of the proposed project on groundwater quality and quantity, surface water quality and quantity, and on the demonstrated ability of the project area and Region to absorb the increased demand for water supply, sanitary sewage disposal, and storm drainage. The report may also include analyses of such other relevant water and natural resource matters upon which the DISTRICT may wish to comment. Statements regarding the DRI's conformance with local and federal criteria shall also be included where applicable.[351]

These reports are made free of charge.[352]

The SFWMD has identified two specific problems relating to review by it of DRIs.

(1) In certain cases the District impact assessments provided to the Regional Planning Councils have not been utilized as a basis for the preparation of the natural resources and water-related public facilities portions of the RPC's Recommendation Reports. In these cases this has resulted in technical inaccuracies (of a water-related nature) in the RPC's report.[353]

(2) Generally ADAs are submitted with insufficient data for review. The type of impacts that are assessed by this District require more detailed technical data than that requested in the ADA questions.[354]

The SFWMD also reviews certain other applications for rezoning or subdivision approval pursuant to agreements that have been entered into with most of the counties in the District. Under these agreements, the county staff is generally entitled to request District review of applications that:

(1) Involve an area greater than 10 acres;

(2) would require greater than 100,000 gallons per day, peak day demand (approximately 170 units);

(3) in parcels of a lesser size, have a runoff coefficient of greater than .8 at ultimate development;

(4) involve an excavation; or

(5) involve a water treatment plant.[355]

In addition, District input may sometimes be requested for applications that do not meet those criteria.

Under the Florida Uniform Land Sales Practices Law, Chapter 478, Florida Statutes, the subdivision of land into 50 or more parcels must be registered with and approved by the Division of Florida Land Sales of the Department of Business Regulation. The SFWMD has an agreement by which applications for registration are reviewed and commented upon by the District.[356]

The local government comprehensive plans that are being prepared and adopted under the LGCPA will form the basis for most local land use decisions and thus will have an enormous impact on water resources.[357] The SFWMD has been reviewing the drainage and water supply elements of these plans.[358]

DER and the Corps of Engineers have a coordinated program for the joint processing of permit applications for dredging, filling, constructing bulkheads or docks and similar activities in state waters.[359] These activities often also require water management district permits. In addition, other types of activities regulated by DER (discharge of pollutants, location and land fills, construction of water treatment plants, etc.) have a tremendous impact on the same waters the WMDs are charged with managing from the perspective of Chapter 373. Because of this overlap, the desirability of coordinating the activities of DER and the WMDs has long been recognized.

In 1975, the Legislature mandated the collocation of DER regional offices with the WMD offices "to the maximum extent practicable."[360] It was intended by this action that they would work as more of an integrated unit. To some extent collocation has been achieved. DER has an office, for example, in the building of the SFWMD. In other instances collocation has not been practicable

because the WMD offices are located in rural areas while the bulk of DER's work is done in the urban areas.

The most extensive coordination of permitting appears to occur in the SFWMD. Upon receiving a permit application, each agency immediately forwards a copy of its respective counterpart. The receiving agency then evaluates the application to determine whether it also requires a permit and whether the activity would have impacts of concern. The permit is then discussed at bi-weekly staff meetings attended by personnel from both agencies.

E. State Land and Water Planning

There were two major state and regional planning efforts in Florida during the 1970's. The Division of State Planning attempted to develop a comprehensive state plan, including sections dealing with land development and water. The Department of Environmental Regulation and the five regional water management districts have been preparing a State Water Plan. This section will trace the development of those plans.

1. The Florida State Comprehensive Plan

The State of Florida, like most other governments, has historically operated without a clear conception of its goals and policies. Problems have been addressed on an ad hoc basis and usually only after a crisis has developed. Of course, it is impossible for any organization to be either efficient or effective without knowing what state of affairs it is seeking to promote over the long term. Without such guidance it is difficult to evaluate the performance of agencies and conflicts are likely to arise. For example, the agency which builds roads may be constructing expressways and thus promoting construction in areas which water management agencies would like to protect as locations for aquifer recharge.

Having recognized the need for planning, the legislature passed the Florida State Comprehensive Planning Act of 1972.[361] This Act ordered the Division of State Planning[362] to prepare a state comprehensive plan designed to "provide long-range guidance for the orderly social, economic and physical growth of the state by setting forth goals, objectives and policies."[363] The State Comprehensive Plan was not conceived of as a document that would ever be final, but as one that would be continually revised to reflect new information and values.

In 1976, the Governor ordered the Division of State Planning to prepare the comprehensive plan as a compilation of eighteen sections, each of which focused on a particular area of concern such as agriculture, economic development, environmental resources, land development, utilities and water.[364] DSP then moved to prepare the plan by forming interagency and interdisciplinary committees to advise the agency on what the contents of the plan should be.[365] Numerous drafts were prepared, debated and refined. By 1977 a plan was ready.

Major shifts in state policy were proposed. The water section, for example, proposed that it should be state policy:

> In substantially unaltered watersheds, maintain runoff infiltration and other hydrologic relationships (soil profile, rate of soil erosion or impoverishments, etc.) to achieve as nearly as practical the natural hydrologic conditions and to provide for a balance of urban, agricultural, and natural systems recognizing that natural productivity is optimized under unaltered conditions.[366]

This policy is exactly contrary to the popular and lucrative tradition in Florida of ditching, diking, draining and otherwise grossly modifying natural hydrologic systems. Several sections called for closer coordination of land and water management.[367] The plan itself was intended to aid attainment of that goal by formulating a comprehensive and consistent state policy regarding all aspects of land and water management.

The State Comprehensive Plan, however, was never implemented. The original Act provided that an element of the plan could become effective as a state policy upon approval by the Governor and transmittal to the Legislature.[368] In 1977, however, when it appeared the plan would be controversial, legislative approval was required before the plan "or parts or revisions thereof" could become effective as state policy.[369] Governor Askew subsequently approved the plan and duly submitted it to the Legislature. It emerged a eunuch. The Legislature not only refused to approve the State Comprehensive Plan, it directed:

> Except as specifically authorized by law, no part of the state comprehensive plan, or the policies set forth therein, or any revision thereto shall be implemented or enforced by any executive agency. The chief planning officer may, from time to time, in bill form, present to the Legislature specific proposals to implement goals, objectives, and policies of the state comprehensive plan. Nothing contained in the plan or parts or revisions thereof shall have the force or effect of law or authorize the implementation of any programs not otherwise authorized pursuant to law. It is further the intent of the Legislature that enactment of this legislation shall not amend existing statutes, other than as provided herein, or provide additional regulatory authority.[370]

In response, Governor Askew ordered his executive agencies to implement the plan as "executive planning policy."[371] It was to be used in preparation of all planning documents and, perhaps more significantly, it was to be used by the Department of Administration when it analyzed agency budget requests.[372] Although the Graham administration has not withdrawn the order and has in fact moved to further integrate planning with the budgeting process, little else has been done regarding the plan. An assessment of this apparent failure will be deferred until the parallel and somewhat intertwined history of development of the State Water Plan has been explained.

2. The State Water Plan

The development of a State Water Plan is specifically required by the Florida Water Resources Act of 1972.[373] It is one of the most important requirements of the Act because the State Water Plan should serve as an intelligent basis for the comprehensive management contemplated by the legislation. The drafters of A Model Water Code stated, with respect to this requirement:

> [A]dditional measures toward more efficient management of water resources must be implemented at all levels of government. This will require a determination of needs and capabilities, and the formulation of long-range plans for the development of all water resources and related land resources within a hydrologic unit...Regulation of water use remains a primary state function. This requires state planning for many

> purposes including enforcement of existing laws, enactment of new legislation, coordination of local regulatory efforts, and administration of consistent state regulatory policies. Unfortunately, state planning and resource management agencies are frequently understaffed and lacking in sufficient expertise to carry out meaningful planning responsibility...It is essential that state agencies be staffed to discharge their water resources planning responsibilities competently. Failure of the states to respond to this challenge can only result in inadequate and uncoordinated water management.[374]

The Department of Environmental Regulation is given primary responsibility by the Water Resources Act for developing the State Water Plan.[375] It is to be developed in cooperation with the Division of State Planning, however, "as a functional element of a comprehensive state plan."[376] The State Water Plan, in turn, is to be a marriage of the State Water Quality Plan and the State Water Use Plan.[377] The State Water Quality Plan contains water quality standards, objectives and guidelines with a specific program of implementation. The State Water Use Plan is intended to be "an integrated, coordinated plan for the use and development of the waters of the state..."[378] The Act requires that planners base the State Water Plan on studies of existing water resources, existing and contemplated uses of water, and such other subjects as drainage and flood plain zoning.[379]

A listing of general objectives which the State Water Use Plan should seek to reconcile and implement is contained in the Act. It requires that the Department of Environmental Regulation give "due consideration to":

(a) the attainment of maximum reasonable-beneficial use of water...

(b) the maximum economic development of the water resources consistent with other uses.

(c) the control of such waters for such purposes as environmental protection, drainage, flood control, and water storage.

(d) the quantity of water available...

(e) the prevention of wasteful, uneconomical, impractical or unreasonable uses...

(f) presently exercised domestic use and permit rights.

(g) the preservation and enhancement of the water quality of the state...

(h) the state water resources policy...[380]

The Department is further specifically directed to "...give careful consideration to the requirements of public recreation and to the protection and procreation of fish and wildlife."[381] In the plan it may "...prohibit or restrict other future uses on certain designated bodies of water which may be inconsistent with these objectives."[382] In addition, it can designate undesirable or desirable uses for particular bodies of water and either deny permits or grant preferences on that basis.[383]

The Act clearly seems to contemplate that preparation of the State Water Use Plan would be undertaken by the Department of Environmental Regulation, with the water management districts acting in a subsidiary role. [T]he department" is specifically charged with the responsibility of formulating a plan.[384] The water management districts appear to have been given primarily an advisory or consulting role.

> During the process of formulating or revising the State Water Use Plan, the department shall consult with, and carefully evaluate the recommendations of, concerned federal, state, and local agencies, particularly the governing boards of the water management districts, and other interested persons.[385]

Each governing board of a water management district, in turn,

> ...is directed to cooperate with the department in conducting surveys and investigations of water resources, to furnish the department with all available data of a technical nature, and to advise and assist the department in the formulation and drafting of those portions of the state plan applicable to the district.[386]

Although the water management districts have an important role in the statutory scheme for preparation of a state water use plan arising from their technical expertise and familiarity with local conditions, it seems clear that primary

responsibility for setting general policy, as well as specific objectives and plans for action, was given to the Department of Environmental Regulation in the Water Resources Act.

Development of the State Water Use Plan, however, has never proceeded as envisioned by the statutory drafters. Initially, the Legislature failed to appropriate sufficient funds for the State to undertake the detailed, comprehensive water resources planning required by the statute. The Department of Natural Resources, originally charged with administration of Chapter 373, therefore did nothing to prepare a plan. Instead, in 1974, it delegated this responsibility to the water management districts,[387] which were prepared to exercise it. The two largest and relatively affluent water management districts immediately began to invest large sums of money in planning.[388] By December of 1973 the Central and Southern Florida Flood Control District (C&SFFCD) had already formulated "A 'Rough Cut' Model of a South Florida Water Supply Plan."[389] Over 2.6 million dollars was spent by the C&SFFCD in the fiscal years 1974-76 on resource planning.[390] The Southwest Florida Water Management District (SWFWMD) has similarly emphasized planning. As a result, these water management districts soon developed strong entrenched ideas about how water should be managed within their respective areas.

There was a renaissance of state level interest in the State Water Use Plan following the transfer to a newly created Department of Environmental Regulation of the Chapter 373 administrative powers.[391] DER began to work on the plan in 1976. An agreement was soon reached with the Division of State Planning whereby DER agreed to use the water element of the State Comprehensive Plan as the policy basis of the SWUP.[392] An agreement was also reached with the water management districts reaffirming their delegated authority to continue developing plans for their respective areas but providing for some

standardization of format.[393] DER was to take the five regional plans together with the water element and "synthesize" a State Water Use Plan.[394]

Although the agreement called for the SWUP to be consistent with the water element, attainment of such consistency was very difficult. The water management districts had been planning for several years in the absence of state direction. Consequently, when the DSP developed a document that was at variance with their established policies and with which they were supposed to comply, they revolted. Negotiations ensued in the Office of the Governor and a compromise water section was developed.[395] DER prepared a document consisting of a short introduction, the water section of the SCP, and five executive summaries of the water management district plans[396] and prepared to hold public hearings on adoption of that collection as a technical and advisory document to be termed Phase I of the SWUP.[397] These hearings, however, were cancelled when the Graham administration entered office.[398]

3. The Failure of State Planning in the 1970's

After several years of effort there is no effective State Comprehensive Plan and there is no State Water Use Plan. The reasons for this apparent failure are complex. First, at least with respect to the State Comprehensive Plan, there was no clear conception, from the beginning, of how the plan was to be used and implemented. It was unclear what actions of state government the SCP would guide and by what means it would be used to control them. That uncertainty hampered development of the plan and led to a reaction by the Legislature that it should have no effect. A second major related problem leading to that reaction is that the plan was not drafted by those who were in a position to implement it. The Division of State Planning was an independent planning group that was separated from the agencies that actually make substantive decisions. If the plan had been drafted by those with authority for implementation, it

would probably have received voluntary acceptance. The Division of State Planning certainly had little such implementing authority and was in no position to force other agencies to accept the plan. Indeed, it is difficult to conceive of any one institution other than the Governor and Cabinet or the Legislature having such power.

This deficiency was most apparent with respect to the State Water Use Plan. DER and DSP had agreed the water section of the SCP would be used as a policy basis for the SWUP. All parts of the SWUP were therefore supposed to be consistent with the water section. The State Water Use Plan, however, was actually being written by the water management districts. Water management district governing boards, not DER, were making the substantive policy decisions regarding water use planning. Furthermore, the WMDs had the willingness and ability to implement those decisions. To the extent that the water section conflicted, it was vigorously resisted.

DER, on the other hand, has limited power to implement anything that is inconsistent with policies of the water management districts. Although Chapter 373 gives DER "general supervisory authority"[399] over the water management districts, it is mostly illusory. The Governor and Cabinet are exclusively empowered to "review and ...rescind or modify any rule or order of a water management district..."[400] Therefore, since in addition the two larger districts are also financially independent, DER was put in the untenable position of attempting to adopt a plan that it could not implement.

Finally, it appears the Legislature's enthusiasm for planning and environmental protection was dwindling in the late 1970's. The State Comprehensive Planning Act had been passed early in the decade. By 1978 the Legislature was more concerned with what it perceived as excessive government regulation and a runaway bureaucracy than with adopting new, comprehensive and protective policies.

4. The Current Status of State Planning

Shortly after taking office in January, 1979, Governor Graham appointed a blue ribbon Resource Management Task Force and charged it with the responsibility of reviewing Florida's system for planning, land use and environmental management. After a year of deliberations, including thirty days of full committee meetings, numerous other subcommittee meetings, and the review of voluminous staff papers, the Task Force reported its conclusions and recommendations.[401] Two prominent concerns were expressed.[402] The first was a need to eliminate the "current chronic under-funding of resource laws." The second was the need for integrated state, regional and local planning for resource management.

With respect to the latter, the Task Force made several specific recommendations.[403]

> 1. Comprehensive resource management policies are prerequisite to the effective management of land and water resources at all levels of government. Activities of the various resource management agencies need a clear direction within an integrated policy framework that promotes consistency between government agencies.
>
> 2. The state should formally adopt state resource management policies that concisely express policy direction for the management of state resources and the inherent problem of growth. These policies should have the necessary legal effect of guiding state agency activities, including planning, research, regulation and service delivery toward a common set of goals. They should also guide the policies and activities of regional and local agencies insofar as these activities affect state resources. Specific state goals should include, but not be limited to a state water policy, coastal management policy, and agricultural lands policy, as described in later recommendations in this report.
>
> 3. Florida's regional planning councils should formally adopt by rule comprehensive regional resource management policies which are a concise statement of policy direction for the management of regional resources. They should be more detailed than state policies, but not as site specific as a local comprehensive plan. Regional policies should be consistent with state policies, and be certified as such by the state planning agency.

> 4. Local government comprehensive planning is currently the basic tool for growth management in Florida. The hopes and aspirations which led to the passage of the Local Government Comprehensive Planning Act of 1975 have not been achieved. It is vital that local government comprehensive planning be improved and integrated with other state and regional resource management. After the adoption of state and regional resource management policies, and when the required five year review of local government comprehensive plan occurs, local comprehensive plans should be certified by both the region and the state for local conformance to state and regional policies. Subsequent local government plan amendments should also be certified. This should not change already-approved development decisions made by local governments.

Another set of recommendations directly addressed the need for water management planning.[404]

> 1. The Task Force recommends that the state develop and adopt a state water policy. The policy should be developed through the combined efforts of the water management districts and the Department of Environmental Regulation, with the aid of regulated industries and the public. The policy should be a "mid-range" policy, that is of more specificity than the water policies expressed in the Florida statutes, but broad enough to guide the development of more specific plans by the water management districts. The policy should be a part of the integrated policy framework described in Section One, and should be formally adopted as a state rule under the Administrative Procedure Act. Both the State Water Use plan and the State Water Quality plan should be made consistent with the adopted state water policy.
>
> 2. The Task Force recommends to the Governor that, to the greatest extent possible, planning for the regulation of both water quality and water quantity be consolidated at the regional or district level. This process should continue on a selective basis, with delegation occurring under standards and guidelines established by the state, to those regional or district agencies which have or can develop the financial and technical capabilities to carry out both functions.

A year later, little has been accomplished toward developing the integrated planning framework recommended by the Task Force, except in the area of water policy. DER and the water management district have been working to develop a state water policy along the lines recommended by the Task Force.[405] Extensive negotiations have taken place, a compromise has been reached and

public hearings are now being held as part of the rule adoption process. The value of the document that appears likely to emerge is doubtful, however. Because of DER's weak legal position vis-a-vis the water management districts, the policies resulting from the negotiations are considerably vaguer and less specific than those originally proposed by DER. Further, a disclaimer at the beginning of the document states, "this rule does not repeal, amend or otherwise alter any rule now existing or later adopted by the Department or Water Management Districts." [406]

Despite these weaknesses, there would be value in adopting the proposed policy. It would, at the very least, be a common point of agreement and reference for the development of more specific policies and plans in the future. It could also serve as a beginning for implementation of the more comprehensive recommendations of the Task Force.

SECTION II - LAND AND WATER MANAGEMENT IN THE STATE OF FLORIDA: EXISTING INTERRELATIONSHIPS

[1]For a more detailed description of the relevant governmental agencies, see Chapter II, "State, Regional and Local Water Resource Agencies," Maloney, Plager, Ausness and Canter, Florida Water Law - 1980, Florida Water Resources Research Center Publication No. 50, at 99-166.

[2]1975 Fla. Laws, Ch. 75-22.

[3]Fla. Stat. §403.804.

[4]Id., §403.802.

[4a]1967 Fla. Laws, Ch. 67-436, codified at Fla. Stat. §§403.011-403.4153 (1979).

[5]1972 Fla. Laws, Ch. 72-299, codified at Fla. Stat.§§373.012-.617 (1979).

[6]Fla. Stat. Chs. 403 and 253 (1979); Fla. Admin. Code, C. 17-4.

[7]Fla. Stat. §373.306 (1979); Fla. Admin. Code, Ch. 17-21.

[8]Fla. Stat. §403.101 (1979); Fla. Admin. Code, Ch. 17-16 (1979).

[9]Florida Safe Drinking Water Act, 1977 Fla. Laws, Ch. 77-337, codified at Fla. Stat. §§403.850-.864 (1979).

[10]Florida Resource Recovery and Management Act, 1974 Fla. Laws, Ch. 74-342, codified at Fla. Stat. §§403.701-.715 (1979).

[11]1980 Fla. Laws, Ch. 80-302, amending Fla. Stat. Ch. 403, Part IV (1979).

[12]Florida Electrical Power Plant Siting Act, Fla. Stat. §§403.501-.517 (1979); Fla. Admin. Code §17-17.

[13]Florida Electrical Transmission Line Siting Act, 1980 Fla. Laws, Ch. 80-65, codified at Fla. Stat. §§403.522-.527 (Supp. 1980).

[14]Florida Industrial Siting Act, Fla. Stat. §§288.501-.518 (1979).

[15]Water Resources Restoration and Preservation Act, 1977 Fla. Laws, Ch. 77-369, codified at Fla. Stat. §403.0615 (1979).

[16]Fla. Stat. §§403.1821-.1835 (1979).

[17]See §208, Pub. L. 92-500, 86Stat. 880.

[18]Fla. Stat. §373.026(9) (1979).

[19]Florida Coastal Management Act of 1978, 1978 Fla. Laws, Ch. 78-287, codified at Fla. Stat. §§380.19-.25 (1979).

[20]See generally, Fla. Admin. Code, Ch. 16-6.

[21]Fla. Stat., Ch. 370 (1979).

[22]Id., §§372.925, 372.932 (1979).

[23] Id., Ch. 161 (1979).

[24] Id., Chs. 592, 258.

[25] Id., Chs. 177, 197-270, 285.

[26] Id., Chs. 253, 259.

[27] Id., Ch. 376.

[28] 1972 Fla. Laws, Ch. 72-317, codified at Fla. Stat. §§380.012-380.12(1979).

[29] Id., §380.06 (1979).

[30] Id., §380.05 (1979).

[31] 1975 Fla. Laws, Ch. 75-257, codified at Fla. Stat. §§163.3161-.3211 (1979).

[32] Fla. Const. Art. IV, §9; Whitehead v. Rogers, 233 So. 2d. 330 (Fla. 1969).

[33] Fla. Stat. §372.01 (1979).

[34] See Fla. Stat., Ch. 372 (1979); Fla. Admin. Code, Ch. 16.

[35] Florida Endangered and Threatened Species Act, 1977 Fla. Laws, Ch. 77-375 codified at Fla. Stat. §372.072 (1979). Endangered and Threatened Species Reward Trust Fund, 1979 Fla. Laws, Ch. 79-217, §2 codified at Fla. Stat. §372.073 (1979).

[36] 1979 Fla. Laws, Ch. 79-190. See Stryker, Planning and Budgeting Reunited: A Contract Marriage, 7 Fla. Env. & Urban Issues 12 (1979).

[37] Fla. Stat. §§ 23.011-.017 (1979).

[38] Alternative mechanisms for creating Regional Planning Councils have existed. Councils have been established pursuant to Fla. Stat. §§163.01, 163.02 and Ch. 160 (1979).

[39] See discussion in Section III,C infra accompanying notes 34-60.

[40] RPC's may study original capabilities and needs in such diverse areas as criminal justice, water quality, disaster preparedness and health care.

[41] Many smaller local governments have contracted with RPC's for the preparation of local government comprehensive plans.

[42] Fla. Stat. §380.06(8)(1979).

[43] Fla. Stat. §380.07(2)(1979).

[44] 1980 Fla. Laws, Ch. 80-315 codified at Fla. Stat. §§ 160.001-.008 (1980 Supp.).

[45] Fla. Stat. §§160.003(8); 160.01(1) (1980 Supp.).

[46] Id., §160.01(2), (3).

[47] Id., §160.05(3).

[48] Id., §160.07

[49] Id.

[50] Id.

[51] Id.

[52] 1972 Fla. Laws, Ch. 72-299 codified at Fla. Stat. Ch. 373 (1979).

[53] Fla. Stat. §373.073 (1979).

[54] Id., §§373.026, .036.

[55] Id., §§373.203-.249.

[56] Id., §§373.403-.443.

[57] Id., §373.036.

[58] Id., §373.106.

[59] Id., §373.313.

[60] Id., §373.323.

[61] Id., §373.114.

[62] Id., §373.503; Fla Const. §9(b), Art. VII.

[63] Id., §373.1962.

[64] See for example, the creation of the Everglades Drainage District, 1913 Fla. Laws, Ch. 6456.

[65] Id., Ch. 6458.

[66] Whether drainage districts may continue to be created under Ch. 298 is in doubt. See Florida Water Law - 1980 at 157-160, discussing the Formation of Local Governments Act, 1974 Fla. Laws, Ch. 74-192, codified as Fla. Stat. Ch. 165 (1979).

[67] Fla. Stat., Ch. 582 (1979).

[68] Id., §582.231.

[69] Id., §161.36.

[70] Id., Ch. 388.

[71] Id., §§374.3001-.521.

[72] Id., Ch. 165.

[73] 1973 Fla. Laws, Ch. 73-129, codified as Fla. Stat., Ch. 166 (1979).

[74]Fla. Const., Art. VII, §1(f)(1968); Fla. Stat., §§125.001-.74(1979).

[75]Fla. Const., Art. VIII, §1(g)(1968); Fla. Stat. §125.80-.88(1979).

[76]1975 Fla. Laws, Ch. 75-257 codified as Fla. Stat. §§163.3164-.3211(1979).

[77]1972 Fla. Laws, Ch. 72-317, codified as Fla. Stat. Ch. 380 (1979).

[78]ALI, A Model Land Development Code (1975). In actuality, the law was modeled after Tent. Draft No. 3, April 1971, which was the version available at that time.

[79]Fla. Stat. §380.021 (1979). Although the state has authority to regulate land use decisions, it has traditionally delegated that power to local governments, which are now very jealous of preserving their powers in this area. Finnell, Saving Paradise: The Florida Environmental Land and Water Management Act of 1972, 1973 Urb. L. Ann. 103-136, 107.

[80]The ALI Reporters believed "...at least 90 percent of the land use decisions currently being made by local governments have no major effect on the state or national interests." ALI, Model Code, supra note 78 at 50. If cumulative and aggregate impacts of those decisions are considered, the validity of that statement is doubtful.

[81]See discussion infra at notes 119-144.

[82]See discussion infra at notes 102-118.

[83]Fla. Stat. §380.05 (1979).

[84]Fla. Stat. §380.05(2) (1975).

[85]Fla. Stat. §380.05(20) (1979).

[86]372 So. 2d 913 (Fla. 1978).

[87]See K. Davis, Administrative Law Treatise §2.00 to 2.17.

[88]See e.g., Conner v. Joe Hatton, Inc., 216 So. 2d 209 (Fla. 1968); Sarasota County v. Barg, 302 So. 2d 737 (Fla. 1974).

[89]1979 Fla. Laws, Ch. 79-73.

[90]The effectiveness of this attempt to comply with the Cross Key Waterways decision has been questioned. See Pelham, Regulating Areas of Critical State Concern: Florida and the Model Code, 18 Urb.L.Ann. 3-83, 71 (1980).

[91]See discussion infra in Section III, D, 2 accompanying notes 67-71.

[92]Fla. Stat. §380.05(1)(b)(1979).

[93]Id.

[94]Id., §380.05(6).

[95]Id., §380.05(8).

[96] Id., § 380.05(9).

[97] Id., § 380.05(17).

[98] Id., § 380.05(8).

[99] Id., § 380.05(14).

[100] Id., § 380.05(13).

[101] Id., § 380.07(2).

[102] Fla. Stat. § 380.06(1) (Supp. 1980).

[103] Id., §380.06(2); Fla. Admin. Code 22F-2.

[104] Id., 22F-2.08.

[105] Fla. Admin. Code 22F-2.10.

[106] Thus a development that does not meet the criteria of the guidelines can still be a DRI if it meets the statutory definition. General Development Corp. v. Division of State Planning, 353 So. 2d 1203 (Fla. 1st DCA 1977); Pelham, Regulating Developments of Regional Impact: Florida and the Model Code, 29 U. Fla. L. Rev. 789, 799-801 (1977).

[107] Fla. Stat. § 380.06(4) (Supp. 1980).

[108] See Finnell, supra note 79 at 129-30.

[109] Fla. Stat. § 380.06(5)(c)(1979).

[110] Id., A recent article in the Gainesville Sun described the political machinations in Suwannee River City which resulted from this technical distinction in the ELA. The City Commission, which had planned to adopt land development regulations, delayed adoption so that the developer of a 160 acre site would not be required to have it evaluated as a DRI. Gainesville Sun, 2D, Wed., Feb. 15, 1978.

[111] Fla. Stat. § 380.06(5)(b)(1979).

[112] Fla. Admin. Code 22F-1.30.

[113] Fla. Stat. §§ 380.06(5)(a), (6)(1979). Special procedures are mandated for consideration of the application. Fla. Stat. § 380.06(7)(1979).

[114] See discussion infra in Section III,F,4 accompanying notes 127-136.

[115] Fla. Stat. § 380.06(11)(a)(Supp. 1980).

[116] Id., § 380.06(13).

[117] Fla. Stat. § 380.07(2)(1979).

[118] Id., § 380.07(4). The Land and Water Adjudicatory Commission tends to uphold the decisions of local government.

[119] Finnell, supra note 79 at 112.

[120] 1973 Fla. Laws, ch. 73-131. The Big Cypress was also removed from calculation of the 5% limitation specified in Fla. Stat. § 380.05(17)(1979).

[121] See L. Carter, The Florida Experience 20-21 (1974).

[122] Eisenbud, supra note at 6-8.

[123] A South Florida regional jetport was one of the more threatening proposals. See, L. Carter, supra note 44 at 232-40.

[124] See, Phase I, Golden Gate Estates Redevelopment Study, Collier County, Florida [hereinafter cited as Golden Gate Estates Study]; L. Carter, supra note 44 at 232-40.

[125] Id., Big Cypress Study, supra note . To its credit, Collier County is now seeking to reverse the destruction. See Proposed Interim Modifications, Golden Gate Estates Canal System, Ch_2M-Hill, November, 1978.

[126] L. Carter, supra note 121 at 248-51.

[127] Id. Carter described the proposed regulations succinctly: "The basic objective was to maintain indigenous hydrologic and ecologic systems. In the sloughs and coastal wetlands, only 5 percent of any given site could be disturbed and only half of that could be paved over or otherwise covered with impermeable surfaces ...For the higher lands...the regulations were less restrictive, but, even there, not more than 10 or 20 percent of any site could be 'disturbed' and only 5 or 10 percent covered with impermeable surfaces. Although some drainage could be allowed, discharges would be expected to simulate natural surface flows and no discharges to tidewater were to be permitted. Even in the existing urbanizing areas..., the regulations would be significant; for instance, no mangroves could be disturbed, no new drainage facilities discharging to tidewater could be built, and no new construction would be allowed that did not meet standards prescribed under the national flood insurance program." Id. at 251.

[128] 650,000 acres outside of the proposed national preserve were originally included. This was reduced to 285,000 acres. Id. at 253-54.

[129] Fla. Admin. Code 22F-3.

[130] Id. 22F-3.06(1).

[131] Note, however, that they expressly fail to regulate any of the hydrologic aspects of agriculture development or operation. Id., 22F-3.04, .07(4), .09(3).

[132] Id., 22F-3.06(5).

[133] Id., 22F-3.07(2).

[134] Id., 22F-5.02. The area has since been redesignated by the Legislature. Fla. Stat. § 380.0511(1979).

[135] R. Healy, Land Use and the States 116 (1976).

[136] The rule designating the area lists the following objectives:

1. Minimize the adverse impacts of development on resources of the Floridan Aquifer, wetlands, and flood-detention areas.

2. Protect the normal quantity, quality and flow of ground water and surface water which are necessary for the protection of resources of state and regional concern.

3. Protect the water available for aquifer recharge.

4. Protect the functions of the Green Swamp Potentiometric High of the Floridan Aquifer.

5. Protect the normal supply of ground and surface water.

6. Prevent further salt-water intrusion into the Floridan Aquifer.

7. Protect or improve existing ground and surface water quality.

8. Protect the water-retention capabilities of wetlands.

9. Protect the biological-filtering capabilities of wetlands.

10. Protect the natural flow regime of drainage basins.

11. Protect the design capacity of flood-detention areas and the water management objectives of these areas through the maintenance of hydrologic characteristics of drainage basins.

Fla. Admin. Code 22F-5.03.

[137] See Id., 22F-6, 7.

[138] See Id., 22F-6.08(4).

[139] Id.

[140] Id., 22F-6.08(5).

[141] Id., 22F-6.08(12).

[142] Id., 22F-6.08(10).

[143] Id.

[144] Id., 22F-6.08(11).

[145] Id., 22F-6.08(15).

[146]R. Healey, supra note 135 at 123. Three Rivers was planned to contain 18,000 dwelling units, housing 50,000 people, on a 5,800 acre tract of land. Id.

[147]Id.

[148]Id.

[149]Id. at 125.

[150]The Principal Investigator, Frank E. Maloney, was involved in this controversy as a consultant to the Southwest Florida Regional Planning Council.

[151]2,800 acres were to be left undisturbed.

[152]Development of Regional Impact Assessment, The Estuaries, No. 6-7475-5, Southwest Florida Regional Planning Council, April, 1976, [hereinafter cited as DRI Assessment]. 1. Net density was estimated to be 13.0 dwelling units/ acre.

[153]Id.

[154]Id. at 4.

[155]Id.

[156]See the Florida Aquatic Preserve Act of 1975, Fla Stat. §§258.35 - .46 (1979).

[157]DRI Assessment, 4.

[158]It was estimated that approximately 25% of the development site would be covered by impervious surfaces. DRI Assessment, 45.

[159]Some of the pollutants associated with such runoff are nitrogen, phosphorus, bacteria, viruses, petrochemicals, and heavy metals.

[160]DRI Assessment, 50.

[161]Id. at 68.

[162]Id. at 28-37.

[163]See table, Id. at 29.

[164]Id. at 30.

[165]Id. at 31.

[166]Id. at 32.

[167]Cape Coral and Sanibel Island both draw saline water from the same Hawthorne and Suwannee formations and desalinate it for potable water.

[168]Id. at 34.

[169] Id. at 37, 125.

[170] Estuary Properties, Inc. v. Board of City Comm. of Lee County, Case No. 76-1560, Division of Administrative Hearings, Order of the Land and Water Adjudicatory Commission, December 8, 1977. The decision of the Governor and Cabinet, however, has been reversed by the First District Court of Appeal on the grounds that it constitutes an unconstitutional taking of private property. Estuary Properties, Inc. v. Askew, 381 So. 2d 1126 (Fla. 1st D.C.A. 1979). Ultimate resolution of the case will soon be made by the Supreme Court of Florida.

[171] Environmental Land Management, Final Report to the Governor and the Legislature, Environmental Land Management Study Committee, 90, December 1973. One group calculates that only 35% of Florida is suitable for development. L. Carter, supra note 121 at 135 n. 24.

[172] Id.

[173] Fla. Stat. § 380.04(1979).

[174] Fla. Stat. § 380.04(3)(e)(1979).

[175] Fla. Stat. § 380.031(7)(1979).

[176] L. Carter, supra note 121 at 26-7.

[177] Fla. Stat. § 380.05(18)(1979).

[178] The statute specifically refers to subdivision registration under Chapter 478 or recording of the subdivision under a local subdivision plan law. Fla. Stat. § 380.05(18)(1979).

[179] It appears unclear whether the qualifying phrase "...on which there has been reliance and a change of position" applies only to building permits or whether it also applies to subdivision approvals. Id.

[180] Fla. Stat. § 380.05(15)(1979). This section apparently refers to a line of Florida cases which have applied theories of estoppel to prevent government regulation of landowners. See, Texas Co. v. Town of Miami Springs, 44 So. 2d 808 (Fla. 1950); Sakolsky v. City of Coral Gables, 151 So. 2d 433 (Fla. 1963); City of Gainesville v. Bishop, 174 So. 2d 100 (Fla. 1st D.C.A. 1965).

[181] See notes 121-125 supra and accompanying text; D. Barile, An Environmental Study of the Melbourne-Tillman Drainage District and an Evaluation of Alternative Land Use Plans for the City of Palm Bay, Florida. Masters Thesis, Florida Inst. of Technology (1976).

[182] DSP, Charlotte Harbor: A Florida Resource, DSP - BLWM 39-78.

[183] Fla. Stat. § 380.05(1)(b)(1979).

[184] Id., §380.05(1)(c).

[185] Fla. Stat. § 380.06(4)(a)(1979). (60 days for issuance of binding letter of interpretation); Fla. Stat. 380.06(7)(b)(1979) (If the Regional Planning Council needs more information than the application supplies, then it must request the additional information within 15 working days of receipt); Fla. Stat. § 380.06(8)(1979) (The Regional Planning Council's report must be prepared within 50 days of receipt of public hearings on the application.)

[186] Fla. Stat. § 380.06(8)(1979).

[187] Fla. Stat. § 380.07(2)(1979); Pelham, supra note 25 at 64-7.

[188] Sarasota County v. Beker Phosphate Corp., 322 So. 2d 655 (Fla. 1st D.C.A. 1975) (adjacent county had no standing to appeal decision of neighboring county); Sarasota County v. General Development Corp., 325 So. 2d 45 (Fla. 2d D.C.A. 1976) (county had no standing to appeal decision of municipality within its borders).

[189] ALI, Model Code, supra note 78 §§ 7-502(2), 9-103(1)-(2).

[190] Id. §§ 2-304(5), 7-502(2), 9-103(4).

[191] See, notes 104-105, supra and accompanying text.

[192] See, note 110 supra.

[193] The 5% limitation, of course, generally precludes this action.

[194] Fla. Stat. § 380.06(1)(1979).

[195] Fla. Admin. Code 22-F.

[196] Pelham, supra note 90 at 802-803.

[197] There is evidence developers are modifying their plans to slip under the thresholds and thus escape regulation. Pelham, supra note 90 at 803.

[198] Id. at 803-804.

[199] Fla. Stat. § 380.10(1), (2)(1979); Pelham, supra note 25 at 801.

[200] General Development Corp. v. Division of State Planning 353 So. 2d 1203 (Fla. 1st D.C.A. 1977); Pelham, supra note 90 at 799-801.

[201] Environmental Land Management, Final Report to the Governor and the Legislature, Environmental Land Management Study Committee, 9 (December, 1973).

[202] Fla. Stat. § 380.06(11)(b)(Supp. 1980).

[203]Quoted by Daniel W. O'Connell, Status Report on the Local Government Comprehensive Planning Act of 1975: Problems and Prospects, 5 (Seminar, Updating the Land Use Game in Florida, Environmental Law Section and Local Government Law Section of the Florida Bar, Orlando, Florida, March 8, 1977)[hereinafter cited as O'Connell].

[204]Fla. Stat. §§ 163.3161-.3211 (1979).

[205]The Local Government Comprehensive Planning Act which was enacted was also based on a draft prepared by the Environmental Land Management Study (ELMS) Committee. See, O'Connell, supra note 203 at 5.

[206]Fla. Stat. § 163.3161 (1979). See generally, Sullivan & Kressel, Twenty Years After - Renewed Significance of the Comprehensive Plan Requirement, 9 Urban L. Annual 33-67 (1975).

[207]Fla. Stat. § 163.3167(1979).

[208]Fla. Stat. § 163.3194(1)(1979).

[209]Fla. Stat. § 163.3164(11)(1979).

[210]Id. This total includes 390 municipalities, 66 counties and 3 special districts. See, O'Connell supra note 126, at 6.

[211]Fla. Stat. §§ 163.3167(8), .3174(1979).

[212]Id., § 163.3167(2)(1979).

[213]Id., § 163.3167(7)(1979).

[214]Id., §§ 163.3164(12), .3174(1)(1979).

[215]Id., § 163.3174(1)(1979).

[216]Id.

[217]Id.

[218]O'Connell, supra note 203 at 7.

[219]Fla. Stat. § 163.3174(5)(1979).

[220]Id., § 163.3177(1979).

[221]Id., § 163.3177(6)(a)(1979).

[222]Id., § 163.3167(6)(c)(1979).

[223]Id.

[224]Id., §163.3167(6)(d)(1979).

[225] Id., § 163.3167(6)(b)(1979).

[226] Id., § 163.3167(6)(e)(1979).

[227] Id., § 163.3167(6)(f)(1979).

[228] Id., § 163.3167(6)(i)(1979).

[229] Id., § 163.3167(6)(g)(1979).

[230] Two of the optional elements, regarding mass transit and ports, and airports, are required, however, for local governments with populations greater than 50,000. Id., § 163.3167(6)(j)(1979).

[231] Id., § 163.3177(7)(a)(1979).

[232] Id., § 163.3177(7)(b)(1979).

[233] Id.

[234] Id., § 163.3177(7)(c)(1979).

[235] Id.

[236] Id., § 163.3177(7)(d)(1979).

[237] Id., § 163.3177(7)(e)(1979).

[238] Id., § 163.3177(7)(f)(1979).

[239] Id., § 163.3177(7)(g)(1979).

[240] Id., § 163.3177(7)(h)(1979).

[241] Id., § 163.3177(7)(i)(1979).

[242] Id., § 163.3177(7)(j)(1979).

[243] Id., § 163.3177(7)(k)(1979).

[244] Id., § 163.3177(7)(l)(1979).

[245] Id., § 163.3177(2)(1979).

[246] Id., § 163.3177(4)(1979).

[247] Id.

[248] Id., § 163.3177(6)(h)(1979).

[249] Id.

[250] Id., § 163.3184(1)(a)(1979). This function was formerly performed by the Division of State Planning, which was dissolved in 1979.

[251] Id., § 163.3184(1)(b)(1979).

[252] Id., § 163.3184(1)(c)(1979).

[253] Id., § 163.3184(1)(d)(1979).

[254] Id., § 163.3184(1)(e)(1979).

[255] Id., § 163.3184(2)(1979).

[256] Id. In practice the review is sketchy and not very helpful. The Division of Local Resource Management has one individual assigned to reviewing the hundreds of plans that are being received. A visit to his office finds them stacked in the hall for lack of storage space.

[257] Id., § 163.3184(3)(1979).

[259] Id., § 163.3184(2)(1979).

[260] Id., § 163.3184(5)(1979).

[261] Id., § 163.3181(1979).

[262] Id., § 163.3184(6)(1979).

[263] Id.

[264] I. McHarg, Design With Nature (1969).

[265] 3 So. Fla. Water Management District Bulletin, No. 9 (Oct. 1977); Also, interviews and material on file with the author supplied by P. K. Sharma and Jeanne Crews of the District.

[266] See, e.g., Mandelker, The Role of the Local Comprehensive Plan in Land Use Regulation, 74 Mich.L.Rev. 900, 965-71 (1976).

[267] See, e.g., Ore. Rev. Stat. § 197.325 (1)(1979).

[268] See, Final Report to Governor Bob Graham of the Resource Management Task Force, Volume I - Recommendations (January, 1980). The author served as staff to the Committee on Integrating Land and Water Planning and Administration.

[269] Fla. Stat. §§ 163.3194, .3197(1979).

[270] Fla. Stat. § 163.3194(1)(1979).

[271] See generally, Mandelker, Catalano and Dimento, Mandating Consistency Between General Plans and Zoning Ordinances: The California Experience, 8 ABA Nat. Res. Lawyer 455-66 (1975); Jarlock, Consistency With Adopted Land Use Plans as a Standard of Judicial Review: The Case Against, 9 Urban L. Amn. 69-109 (1975); Note, Comprehensive Land Use Plans and the Consistency Requirement, 2 Fla. St. L. Rev. 766-88 (1974); Arline, The Legal Significance of the Local Government Comprehensive Plan (unpublished seminar paper on file with the author).

[272] Fla. Stat. § 163.3194(3)(a)(1979).

[274] See Florida Dept. of Agriculture, Drainage Districts of Florida, Bull. 67, New Series 9-14 (1931); see generally F. Maloney, S. Plager and F. Baldwin, Water Law and Administration: The Florida Experience §100.1 (1968).

[275] 1913 Fla. Laws, ch. 6456 §1, at 129.

[276] See M. Carter, Ecosystems Analysis of the Big Cypress Swamp and Estuaries, (EPA, Region IV, June 1973); R. Eisenbud, An Examination of the Law Relating to the Water Rights of the Everglades National Park: A Case Study in Legal Problems of the Coastal Zone, Sea Grant Tech. Bull No. 21 (Univ. of Miami; Sea Grant Program 1971); Division of State Planning, Tallahassee, Fla., Report of the Special Project to Prevent Entrophication of Lake Okeechobee (November 1976); D. Barile, An Environmental Study of the Melbourne-Tillman Drainage District and an Evaluation of Alternate Land Use Plans for the City of Palm Bay, Florida (Thesis to Graduate Council of Florida Institute of Technology, February, 1976).

[277] 1949 Fla. Laws, Ch. 25270, at 629.

[278] 1961 Fla. Laws, Ch. 61-691, at 230.

[279] See, Fla. Water Resources Study Comm'n, Florida's Water Resources, A Report to the Governor and the 1957 Legislature 14, 15 (1956).

[280] 1957 Fla. Laws, Ch. 57-380, at 855.

[281] 1957 Fla. Laws, Ch. 57-380, §8(1)(a), at 858.

[282] 1957 Fla. Laws, Ch. 57-380, §8(1)(b), at 858.

[283] Maloney, Ausness & Morris, A Model Water Code (University of Florida Press) (1972).

[284] 1972 Fla. Laws, Ch. 72-299; now Fla. Stat. §373.013-.433 (1979).

[285] The 1972 Florida Water Resources Act established the Dept. of Natural Resources as the state level agency charged with regulation of consumptive use of water. Fla. Stat. §373.019(1)(1975). At that time, a separate state agency, the Dept. of Pollution Control was in charge of water quality control. Fla. Stat. §403.503(1975). To assure proper coordination of these two management functions, water use and water quality control, the 1975 Florida Legislature placed both under a single new environmental agency, the Department of Environmental Regulation. Florida Environmental Reorganization Act of 1975 Fla. Laws, Ch. 75-22, §§8,11.

[286] Fla. Stat. §373.016(3)(1979).

[287] The Miami-Dade Water and Sewer Authority has faced just such a problem. "New Water Site Faces Pollution," The Miami Herald C-1 (Jan. 2, 1977).

[288] See discussion accompanying notes 373-398, infra.

[289]Fla. Stat. §§373.016(2)(c), .86, .103(3)(4), .036(2)(c)(1979).

[290]Milliman, Water Supply Planning and the Longterm Outlook for Southeast Florida, 3, Vol. 1, No. 2 The Florida Outlook (Bureau of Economic and Business Research, U. of F. 1977).

[291]Central and South Florida Flood Control District, Facts and Figures.

[292]See notes 320-336, infra and accompanying text.

[293]Fla. Stat. §373.413(1)(1979).

[294]Id., §373.416(1).

[295]Id., §373.403.

[296]Id., §373.403(1).

[297]Id., §373.019(11).

[298]Id., §373.403(5). Note also the very broad definition of "waters of the state" in §373.019(a).

[299]The damages referred to are:

(a) A loss of natural water storage on the surface and in the ground.

(b) Reduced infiltration, when water table is below the surface, and thus reduced recharge of ground water.

(c) Increased downstream flooding and erosion.

(d) Destruction of habitat and natural water level fluctuations which are necessary for fish and wildlife.

(e) Estuarine productivity is reduced both by diversion of fresh water from the estuary and by alteration of its rate of flow.

(f) The natural filtering function of marshes and other vegetation is destroyed, bypassed, or overloaded, thus causing open water pollution.

(g) Increased pollution is generated by increased unwise human use of the area.

(h) Fires, subsidence of soils, undesirable changes in vegetation, etc. result from the drying out of land.

[300]Fla. Stat. §373.406(1979).

[301]Id., §373.406(1).

[302]Id., §373.406(2)(Supp. 1980) Silviculture was added in 1980.

[303]The Southwest Florida Water Management District has adopted a qualified interpretation of this provision. The exemption does not apply if the alteration results in substantially:

(a) Altering the peak rate of flow or the total volume of discharge of waters into works of the District;

(b) Altering the rate of flow or total volume of water withdrawn from works of the District;

(c) Altering the direction of surface runoff into works of the District;
(d) Altering the water table or the level of the potentiometric surface.
Fla. Admin. Code 16J-4.05(2).

[304] Fla. Stat. §373.406(3)(1979).

[305] Id., §373.403(b).

[306] Fla. Admin. Code 16I-4.

[307] Id., 16J-4.

[308] Id., 16K-4.

[309] Id., 16I-4.03.

[310] Id., 16J-4.04(1).

[311] Id., 16J-4.04(2)(a)(b).

[312] Id., 16J-4.04(2)(c).

[313] Id., 16J-4.06(3),(4),(5).

[314] Id., 16J-4.06(3)(a).

[315] Id., 16J-4.06(3)(b).

[316] Id., 16J-4.06(3)(c).

[317] Id., 16J-4.06(5)(a)-(e).

[318] Id., 16J-4.06(4). Note conditions may also be attached to operation and maintenance permits. "...to assure that the permitted operation or maintenance will not be inconsistent with the overall objectives of the District and will not be harmful to the water resources of the District." Id., 16J-4.10(3).

[319] Rule 16J-4.06(4)(e), which prohibits lowering the water table to such an extent that vegetation is adversely affected, is the type of criteria which is needed. It does not apply, however, within the boundaries of lands "owned, leased, or otherwise controlled by the applicant" and to that extent is of limited effectiveness.

[320] See Fla. Admin. Code 16K-4. Note that these regulations were published under the District's former name, the Central and South Florida Flood Control District.

[321] Id., 16K-4.021(a)(1)-(6).

[322] Id., 16K-4.022.

[323] Id., 16K-4.021(1)(c).

[324] Id., 16K-4.021(a)(b)1.

[325] Id., 16K-4.021(1)(b)2.

[326] Id.

[327] Id., 16K-4.021(1)(b)3.

[328] Id., 16K-4.021(1)(d).

[329] Id., 16K-4.01, 4.03, 4.09. Note, however, the exemptions of 16K-4.15(1).

[330] Id., 16K-4.15(1)

[331] Id., 16K-4.15(2).

[332] Id., 16K-4.035.

[333] Id., 16K-4.021(1)(b)3.

[334] Id., 16K-4.021(2).

[335] Central and Southern Florida Flood Control District, Annual Report for the Years October, 1974, thru September, 1976, at 11.

[336] Fla. Admin. Code 16K-34.

[337] Fla. Stat. §§373.203-.249 (1979).

[338] Fla. Stat. §373.219(1)(1975).

[339] Id.

[340] Fla. Stat. §373.226(1979).

[341] Id., §373.223(1).

[342] Id., §373.019(5).

[343] See generally, Maloney, Capehart & Hoofman, Florida's "Reasonable Beneficial" Water Use Standard: Have East and West Met?, 31 U.Fla.L.Rev. 235-83 (1979).

[344] The rules of the Southern Florida Water Management District lists factors which the Board may consider in determining whether a use is consistent with the public interest. Fla. Admin. Code 16CA-2.05(2).

[345] Fla. Stat. §373.036(a)(1979).

[346] See Ohrenschall & Imhoff, Water Law's Double Environment: How Water Law Doctrines Impede the Attainment of Environmental Enhancement Goals; 5 Land & Water L. Rev. 259, 270(1970); but see Ore.Rev.Stat. §536.340 (Supp. 1971).

[347] Fla. Stat. §373.042(1979).

[348] The SFWMD began to review and comment on DRI applications for development approval in 1973. In 1974 it began to review zoning applications and subsequently began reviewing subdivision approvals. SFWMD, Resource Control Department, Annual Report - Fiscal Year 1976-77, 3-4.

[349] Id., 27.

[350] SFWMD, Improvement of the Department of Regional Impact Process, (June 8, 1979)(Report submitted to the Governor's Resource Management Task Force). (Hereinafter referred to as SFWMD DRI Report.)

[351] Agreement Between the South Florida Regional Planning Council and The South Florida Water Management District, Article I, November 10, 1977. I assume the other agreements have the same language. These elements are further explained in Appendix B of SFWMD, DRI Report, supra note 350at 18-19.

[352] Id., Article 7 of the Agreement.

[353] SFWMD, DRI Report, supra note 350 at i.

[354] Id.

[355] These criteria are contained or alluded to in the following letters from the District confirming the agreement. W.V. Storch, P.E., Director, Resource Planning Department to J. Gary Ament, Development Coordinator, St. Lucie County (August 26, 1975); Peter Rhoads, Assistant to the Director, Resource Planning Department to Kris Schenk, Director, Martin County Planning and Zoning Department (March 28, 1976); Susan M. McCormick, Planner, Resource Planning Department to Chuck DeSanti, Assistant Zoning Director, Department of Planning, Zoning and Building (October 8, 1975); W.V. Storch, P.E., Director, Resource Planning Department to Robert F. Cook, Director, Metropolitan Dade County Building and Zoning Department (October 14, 1975).

[356] Resource Planning Department, Central and Southern Florida Flood Control District, Report to Governing Board on Land Development Review Activities, July 1, 1974 - September 30, 1975, p. 6 (June, 1976).

[357] See the discussion of the LGCPA at Section II,C, supra accompanying notes 203-272.

[358] SFWMD, DRI Report, supra note 350.

[359] See Fla. Admin. Code, 17-4 Memorandum of Understanding Between Corps of Engineers and Florida Department of Environmental Regulation on Permit Processing and Enforcement in the Waters of the State.

[360] Fla. Stat. §403.809(1)(1977).

[361]1972 Fla. Laws, Ch. 72-295; codified at Fla. Stat. §§23.011-.013 (1979).

[362]The Division of State Planning was in the Department of Administration. Fla. Stat. §23.0112(2)(1977). Its functions regarding comprehensive planning were transferred to the Office of the Governor in 1978.

[363]Fla. Stat. §23.0114(1979).

[364]Exec. Order No. 76-29; 6 Fla. Admin. Code, 22E-3.02.

[365]The Principal Investigator for this study, Frank E. Maloney, served on the Policy Advisory Committee for the water section.

[366]The Florida State Comprehensive Plan, 174 (Feb. 9, 1978).

[367]See e.g., The Florida State Comprehensive Plan, 186 (Feb. 9, 1978).

[368]Fla. Stat. §23.013 (1975).

[369]Fla. Laws, Ch. 77-306.

[370]Fla. Stat. §23.013(2)(1979).

[371]Exec. Order 78-48 (August 28, 1978).

[372]Id.

[373]Fla. Laws, Ch. 72-299, codified at Fla. Stat. §§373.013-.6161 (1979).

[374]A Model Water Code, 70-71 (1972).

[375]Fla. Stat. §373.036(1)(1979).

[376]Id.

[377]Fla. Stat. §373.039(1979). The State Water Quality Plan is expected to be a compilation of State water quality standards and rules and the 208 plans.

[378]Fla. Stat. §373.936(1)(1979).

[379]Id.

[380]Fla. Stat. §373.036(2)(1979).

[381]Fla. Stat. §373.036(7)(1979).

[382]Id.

[383]Fla. Stat. §373.036(8), (9)(1979).

[384]Fla. Stat. §373.036(1)(1979).

[385]Fla. Stat. §373.036(3)(1979).

[386]Fla. Stat. §373.036(4)(1979).

[387]Governor's Resource Management Task Force, Committee Seven, Integrating Planning and Policy for Water Resources, Appendix C, p. 25, Final Staff Draft (Oct. 10, 1979).

[388]At the time the Florida Water Resources Act of 1972 was passed, the Central and Southern Flood Control District and the Southwest Florida Water Management District were already operating and funded by property tax revenues. See, Maloney, Plager, and Baldwin, Water Law and Administration: The Florida Experience, §101 (1968).

[389]W. Storch, A Rough Cut Model of a South Florida Water Supply Plan Vol. 1, No. 9, (Central and So. Fla. Flood Control District, Dec-Jan. 1973). See also, S. Winn, A Progress Report on the South Florida Water Use and Supply Development Plan Vol. 3, No. 3, (August, 1976).

[390]Annual Report for the Years Oct. 1, 1974 - Sept. 30, 1976, 26 (Central and So. Fla. Flood Control District).

[391]Fla. Laws, Ch. 75-22.

[392]Appendix C, supra note 387, at 26.

[393]Id., at 25.

[394]Id., at 27.

[395]Id.

[396]State Water Use Plan, December, 1978.

[397]Appendix C, supra note 31, at 28.

[398]Id.

[399]Fla. Stat. §373.026(7)(1979).

[400]Fla. Stat. §373.114(1979). The director of the department administering Chapter 373 was originally vested with this power, but it was removed in 1975. Fla. Laws, Ch. 75-22, §11.

[401]Resource Management Task Force, Final Report to Governor Bob Graham, Volume I - Recommendations, Volume II - Appendix (January, 1980).

[402]Id., Volume I,2.

[403]Id., 11-12.

[404] Id., 31; The Auditor General recently made similar recommendations. See State of Florida, Office of the Auditor General, Performance Audit of the Administrative Structure of the State Water Management Program, 25-27 (May 21, 1980).

[405] See proposed Chapter 17-40, Water Policy, Workshop Draft (2/12/81).

[406] Id., 17-40.01(5).

III. TECHNIQUES FOR THE INTEGRATION OF LAND AND WATER MANAGEMENT

A. Introduction

1. Common Themes

The search for integrating techniques and an evaluation of those that are examined must begin with a definition of what integration encompasses. Webster[1] defines the verb "integrate" as "to form into a whole: UNITE." The closely related concept to "coordinate" is defined as "to bring into a common action, movement, or condition: HARMONIZE." The basic purpose of integrating or coordinating land and water management is to create an holistic system for the management of those interrelated resources.

Integration therefore has two goals which should be differentiated. The first concerns improving the quality of our society's relationship to the ecosystem. Land use decisions should be made with regard given to how they will affect the quality, quantity and availability of water. Similarly, decisions regarding the use of water should reflect a consideration for their effect on land and land use. In other words, all of our social, economic, legal, business and political decisions should be grounded in an awareness of and respect for environmental values and functions. To achieve substantial integration of land and water management, from this aspect, there must be substantial additional controls on land and water use. At a minimum, there would have to be a broadening of perspectives, which the present management system, looking at problems narrowly, if at all, does not foster.

The second goal is to coordinate and integrate the functioning of existing governmental programs that affect or manage land and water resources in order to make them more effective and efficient. Such an integrated system would have several significant characteristics. Each agency and unit of government would

have knowledge of and would act with concern for the effect of its activities on the natural system as a whole and on the interests of other agencies or units of government. Information and opinions would be freely exchanged. Cooperation and mutual assistance would be emphasized. Unnecessary duplication would be eliminated. Conflicts and inconsistencies would be identified and resolved.

To accomplish the integration of land and water management, a variety of organizational and procedural techniques may be used. The remainder of this report is devoted to a discussion of the most important techniques that have been developed. They share common themes. The communication of information -- facts, data, opinions, expertise and views -- seems vital. The development of plans, environmental impact statements, formal review and comment procedure, and the creation of coordinating councils all help to facilitate the flow of information. The identification and resolution of conflicts or inconsistencies is a second major theme of the integrating techniques examined here. Reorganizations, delegations, and consistency requirements are used to shift the authority to make decisions. Finally, redundancy, overlap and duplication of effort are particularly the target of coordinated permitting procedures.

2. Caveat

Although this report is primarily oriented toward showing why the integration of land and water management is needed, where it is presently occurring and how it can be improved, several cautionary remarks must also be included. First, complete and total integration is not possible. Both the natural world and the institutional context of management are too complex for the holistic ideal to ever be fully achieved.

> Clearly, everything is connected. But because everything is connected, it is beyond our capacity to manipulate variables comprehensively. Because everything is interconnected, the whole of the environmental problem is beyond our capacity to control in one unified policy.[2]

Second, the creation of a totally intregrated system for environmental management could have highly undesirable consequences. In particular, there is a danger of inhibiting the diversity and creative tension that seems needed in governmental affairs.

> I regard the fractionalization of effort as our only hope to maintain an inflow of diversified opinion which will permit the surfacing and consideration of all points of view. I don't believe there is any chance of lumping all environmental activities within one agency, on either the federal or state level, without one interest becoming the dominant interest and squelching all others.[3]

Third, the push for greater efficiency can leave many substantive concerns as casualties in its wake. Development interests frequently bemoan the multiplicity of environmental hurdles they must overcome. Often, however, their concerns seem directed more at the substance than at the process. They do not want to comply with environmentally protective standards if profits will be reduced. "Red tape" is often a code phrase for "painstakingly crafted substantive laws."[4] In addition, the benefits of a careful decision-making process should not be overlooked.[5]

Finally, the importance of individual human responsibility, creativity and initiative must be emphasized. Although revised procedures and organizations may often be necessary, the ultimate success of any integrating or coordinating technique ultimately depends on the attitudes and awareness of the people who staff government agencies. This is an intangible but most important factor.

B. Reorganization

1. Consolidation in General

Much of the current complexity, duplication and difficulty in resolving conflicts in land and water management may be attributable to the fact that there are so many agencies at each level of government, whose respective responsibilities overlap, and who are not all directly accountable to the same

supervisory authority. Agencies that are independent of each other tend, at a minimum, to not communicate very well. At worst, they are adversarial in their relationship.

Each agency has its own legislative authority, procedures, internal lines of communication and perceived mission. Each agency has relative independence in that adminstrators of each agency have some authority to shift funds, hire and fire, change rules and procedures, approve or disapprove permits and otherwise direct all parts of the agency in accordance with a common policy. No such direction is invested in one administrator over all of the agencies involved with land and water management in Florida. One option for integrating the planning and administration of land and water would be to consolidate these functions into one agency whose head could then integrate them.[6] Reorganizations may also be used to separate overlapping jurisdictions or establish clearer mechanisms for the resolution of conflicts.

The consolidation of disparate programs into one agency offers several advantages. It establishes clear reponsibility for natural resource management, thereby enhancing bureaucratic accountability to the public, the Legislature and the executive. "Passing the buck" is made more difficult. Common goals can be more easily set and enforced. It is easier for a large agency to retain specialized expertise and shift it between departments than for separate agencies. Communication also seems to be enhanced. Most importantly, the adminstrative head of such an agency is uniquely capable of resolving conflicts as they arise. Indeed, that is a chief responsibility of such a person. With the widened perspective of broadened responsibilities, interactions can be seen and considered, appropriate tradeoffs can be made, and a more ecologic, holistic management can be implemented. The effectiveness of consolidated natural resource management programs in states such as New York, Wisconsin, Minnesota and Georgia is evidence of these advantages.

Significant disadvantages may also accrue to large "super agencies". Size can make them cumbersome and unwieldy, difficult to administer effectively. Rather than becoming integrated, the various land and water management programs may continue to operate separately, submerged within a "holding company". Accountability may thus be lessened in reality and interagency conflict, rather than being reduced, may simply become intra-agency strife. Finally, the checks and balances that come from having differing views advocated by different agencies in the public arena, would be lost. A strong administrator may suppress certain ideas and stifle opposing views. Reorganization is clearly no panacea. As Petronius noted in 66 A.D.:

> We strained hard...but it seemed that everytime we were beginning to form a team, we were reorganized. I was to learn later in life that we tend to meet any new situation by reorganizing. This is a wonderful method for creating an illusion of progress while producing confusion, inefficiency and demoralization.

2. Consolidation in Florida

The 1975 Environmental Reorganization Act was intended to consolidate land and water management programs in a single state agency.[7] For a variety of political reasons, it was only partially successful. Although many pollution control and permitting functions were consolidated into the Department of Environmental Regulation, whose Secretary is appointed by the Governor, many related functions remained in the Department of Natural Resources, whose Executive Director is responsible to the Governor and Cabinet. In addition, the authority to review water management district rules and orders was placed in the Governor and Cabinet, with general supervisory authority given to DER.

At the state level, four agencies presently exercise major, overlapping responsibilities for land and water management.[8] The Department of Environmental Regulation regulates dredge and fill, discharge of water pollutants, discharge

of air pollutants, sewage treatment systems, landfills, hazardous wastes, and potable water systems. In addition, it oversees public works funding, lake restoration projects, water quality planning and "supervises" the water management districts. The Department of Health and Rehabilitative Services regulates septic tanks. The Department of Natural Resources regulates dredge and fill of sovereignty submerged lands and coastal construction setback lines. In addition, it manages preserves, parks and saltwater fisheries. The Department of Community Affairs administers the DRI and Areas of Critical State Concern processes.

There is excessive duplication and overlap in this system. Although DER has responsibility for protecting water quality, HRS regulates septic tanks, a major potential source of water pollutants. The coastal construction setback line is regulated by DNR, while coastal zone management planning is conducted by DER, and the determination of whether a development in the coastal zone is a DRI rests with DCA. This is illogical.

On the regional level, DER regional offices process many of that agency's less major permit applications for dredge and fill or discharge of water pollutants. Water management districts are authorized to prepare water management plans, construct and operate water control structures, regulate consumptive use of water, regulate surface water management systems, and regulate discharge to underground formations. Regional Planning Councils prepare regional plans, advise local governments, make recommendations regarding DRIs and can appeal local government DRI development orders.

Several options for consolidating land and water management authority were considered by the Governor's Resource Management Task Force.[9] The most sweeping proposal that was discussed had been developed by the Chamber of Commerce. It provided for the merger of state level land and water management functions into a new Department of Resource Management under the Governor and Cabinet. All of

the regional functions would be consolidated into Regional Environmental Districts. Regional Environmental Districts (REDs) would be organized along the lines and would assume the duties and taxing authority of water management districts. In addition, the districts would exercise the regional permitting certification functions of DER and the DRI review and appeal functions that RPCs presently exercise. State oversight would be the responsibility of the Department of Resource Management.

This option was rejected by the Committee. Although it remains viable as a theoretical concept, it does not appear to have much political support in Florida.

3. Delegation

Another type of reorganization, involving the reallocation of responsibility and authority between levels of government occurs when one agency delegates its permitting duties to another. Since decision-making is then centered in one agency rather than several, redundancy, overlap and inconsistency can be reduced. Those who are regulated then only have to deal with a single agency rather than two or more. Delegation can also serve to bring regulation down to a level that is more familiar with local problems and conditions. Regulation can thus be made more effective. On the other hand, if lower levels of government are more responsive to development interests, then regulatory objectives may not be attained. There is also a danger of transforming the recipient of the authority into a mere agent of the delegator.

The delegation of permitting authority to the states is very common in federal programs. The Clean Water Act, for example, provides for the delegation to state pollution control officials of authority to issue discharge permits under the National Pollutant Discharge Elimination System.[10] In order to qualify for a delegation of this authority, a state must meet certain criteria designed to ensure that federal objectives will be met in the absence of direct federal

permitting. In addition, the delegating agency, in this case the United States Environmental Protection Agency, retains authority to review state issued permits and supersede them when necessary. The delegation may also be revoked if the authority is not exercised in accordance with federal standards. This pattern of delegation, with accompanying restrictions, is very typical of federal permitting programs. Similar delegations could be useful in Florida. The Governor's Resource Management Task Force recommended, in particular, that some of the water quality permitting of DER be delegated to water management districts, thereby integrating water quality and quantity management on a regional level.[11] Delegation of certain water quality management tasks to local governments was also recommended. In both instances, DER would retain strong oversight powers.

C. Review and Comment Procedures

1. Introduction

Procedures for the review by one agency or unit of government of the plans, permits or other proposed actions of another can help to integrate land and water management. Comments submitted by the reviewing agency may contain a technical evaluation that the recipient could not make. They might also contain information regarding possible conflicts with the activities or interests of the reviewer. The identification and resolution of such conflicts is thus facilitated.

A wide variety of procedures have been devised for the exchange of this type of information. Environmental Impact Statement (EIS) procedures are perhaps the best known, but those of Circular A-95 are also significant. Numerous other more local systems are in use. All of them help to create the conditions under which disparate programs and interests can be coordinated. Their common weakness, however, is that they cannot reconcile the conflicts that are identified.

2. Environmental Impact Statements (EIS)

The National Environmental Policy Act of 1969 (NEPA)[12] established a national policy to integrate land and water management. Congress specifically recognized "...the profound impact of man's activity on the interrelations of all components of the natural environment..."[13] and declared the Federal Government has a responsibility "to improve and coordinate Federal plans, functions, programs and resources..."[14] to attain environmental quality. NEPA was thus designed to force the myriad of government agencies to manage the nation's resources in a comprehensive, coordinated way.[15]

NEPA's "action-forcing"[16] heart is the requirement that "every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment..." contain a detailed environmental impact statement.[17] Environmental impact statements must be a comprehensive compilation and disclosure of information on the potential environmental impacts of a project. Most importantly it is meant that decision-makers use this information in evaluating whether to pursue a particular course of action. The environmental impact statement is intended to cut through bureaucratic myopia and force officials to consider the interrelated effects on land and water resources of their decisions. For example, prior to NEPA, an official who was planning a highway could limit consideration to such factors as distance, cost, and expected usage. If a highway were needed between two points then it would be routed so as to be most convenient to drivers and least expensive, monetarily, to construct. If that alignment cut through the center of a vital wetland, it was irrelevant to the planner, except for the fact that expensive filling would be necessary. NEPA gave such a planner the additional responsibility of considering the effects of highway construction on the wetland ecology and of considering less damaging alternatives.

In addition to forcing agencies to consider the impacts of their activities on the environment, NEPA forces them to consider how those activities interrelate with those of other agencies. Prior to the passage of NEPA, Senator Jackson noted, "The present problem is not simply the lack of a policy. It also involves the need to rationalize and coordinate existing policies."[18] Accordingly, NEPA directs: "Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved."[19] Guidelines issued by the Council on Environmental Quality for preparation of environmental impact statements also require that state and local agencies be given an opportunity to comment on the proposed federal action.[20] Failure to offer other agencies and the public an opportunity to comment on an environmental impact statement may result in rejection of it by a court.[21] Furthermore, those comments must be meaningfully considered. Other agencies and individuals whose environmental interests will be affected by a proposed federal action thus have a right to show how the action will conflict with their programs, goals or policies. Although in most cases the agency may continue with the project despite the conflict, it must address the issue and rationalize its action. Strong pressures can thus be exerted for the agency to coordinate its activities with those of others.[22]

Finally, NEPA may have broadened the legislative mandate of many agencies to include implementation of its policies, authorizing them to undertake environmental programs which they felt were unauthorized by previous law.[23] Although there was conflict in Congress over whether NEPA should have the effect of changing existing agency mandates, it appears Senator Jackson and those who favored a blanket mandate prevailed.[24] NEPA, therefore "authorizes and directs that, to the fullest extent possible,...the policies, regulations, and public

laws of the United States shall be interpreted and administered in accordance with the policies set forth in this Act."[25] It includes such language as "[A]ll agencies of the Federal Government shall - (A) Utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment."[26] Furthermore, "The goals and policies set forth in this Act are supplementary to those set forth in existing authorizations of Federal agencies."[27]

Although the agencies have been reluctant to base their action on any expanded authorization stemming from NEPA,[28]

> ...NEPA has been used as authority for regulating the use of off-road vehicles on public lands, for barring the use of poisons in federal predator-control programs, for modifying the multiple use concept of national forest management, and for regulating mining on national forest lands.[29]

NEPA has tended to aid the integration of land and water management in three important ways. First, it requires agencies to consider all of the significant environmental effects of their projects. The impact of a land use modification on the water regime must now be considered whereas previously it could have been ignored. Unfortunately, a strongly single-purpose agency may proceed regardless of those effects, but they must be formally considered.

Second, NEPA forces an agency to consider the views of other agencies and groups through formal commenting procedures. Comments may not be ignored, but must be addressed. The views of another agency with expertise in particular must be given great weight.[30] Although the conflict may continue, it must be recognized and rationalized.

Third, NEPA may have broadened the authority of existing agencies where necessary to implement its policies. Agencies thus may have greater powers to take whatever action is necessary to ensure that environmental impacts are

minimized and that programs are consistent with those of other agencies.

The deficiencies of NEPA, or of any similar process for developing environmental impact statements, are limitations of effectiveness.[31] Agencies are required to develop analyses of environmental impact and consider the comments of reviewers, but they are not required to conform their action to any standard. The EIS process can thus become a vast and cumbersome exercise in paper shuffling.

3. A-95 Review

The Office of Management and Budget has initiated a major program, detailed in Circular A-95, to coordinate federal or federally assisted programs with those of state, regional and local authorities. The program utilizes a network of state and areawide planning and development clearinghouses which must be given an opportunity to review federal programs or requests for federal assistance.[34]

A wide range of activities must undergo A-95 review. The program applies to projects or activities for which federal assistance is being sought;[35] to direct federal development activities;[36] to federal programs which require a state plan as a condition for receiving assistance;[37] and to all federally assisted multijurisdictional and areawide planning.[38] In addition, agencies which grant licenses or permits "for developments or activities significantly affecting area and community development or the physical environment" are urged to utilize the A-95 clearinghouses.[39]

The A-95 clearinghouse has two major functions. First, it acts as a coordinating body. After the clearinghouse is notified of a project or application, it has the function of notifying other appropriate state or local agencies and then acting as liaison with the federal agency or applicant.[40] Second, the

A-95 clearinghouse is responsible for making comments and recommendations on the project or application,[41] "for the purpose of assuring maximum consistency ...with State, areawide and local comprehensive plans."[42]

Comments or recommendations are encouraged on a wide range of issues[43] including: (1) Evaluation of consistency with comprehensive plans,[44] objectives, goals, and priorities;[45]

(2) Analysis of whether the proposal "duplicates, runs counter to, or needs to be coordinated with other projects or activities";[46]

(3) Consideration of environmental impacts.[47]

Another important aspect of Circular A-95 relates to the coordination of planning in multijurisdictional areas.[48] First, the boundaries of any planning district designated under federal programs must conform to the boundaries of planning districts designated under state programs "unless there is clear justification for not doing so."[49] If no state planning districts have been established, local governments and the Federal Regional Council must be consulted to assure consistency with other existing districts.[50] Second, federal agencies are required to develop procedures applicable to multijurisdictional planning activities funded by them designed "to assure the fullest consistency and coordination with related planning and development being carried on by the areawide comprehensive planning agency or clearinghouse...."[51] Applicants for multijurisdictional planning assistance must submit to the federal funding agency a memorandum of agreement with the applicable areawide comprehensive planning agency specifying how coordination will be achieved.[52] The agreement must identify relationships between the organizations and the activities which should be coordinated[53] and specify "the organizational and procedural arrangements for coordinating such activities."[54] Suggested arrangements are to have overlapping board memberships, joint review of projects and activities, and a system of information exchange.[55] Arrangements for the cooperative sharing of resources

must also be included.[56] Finally, the memorandum must contain "agreed upon base data, statistics and projections for planning."[57]

The impact of Circular A-95 may be considerable, because it gives an agency with a regional integrated perspective the authority to review and attempt to coordinate a myriad of programs with land and water management implications. Although the role of an A-95 clearinghouse is only advisory, its comments are given serious consideration by the federal agencies.[58] One commentator reports that the federal government has followed the recommendations of a regional agency with which he is familiar in 90% of the applications reviewed by it.[59] To the extent that regional planners are given influence over the disbursement of federal money, they have obtained a powerful tool.[60]

4. Evaluation

The EIS and A-95 procedures are not, of course, the only instances where review and comment are practiced. Previous sections of this report described procedures for the review of local land use decisions by water management districts and the review by a variety of other interests of local government comprehensive plans. Such procedures are valuable in several ways. They help to identify inconsistencies and conflicts. Other agencies, units of government, and interest groups can make their views or knowledge known. If all parties are willing, some accommodation or mitigation can be negotiated. If not, then at least the conflict has been identified. More often, the review process helps to establish common points of agreement.

As noted previously, however, there are deficiencies that make this technique incapable of fully integrating land and water management. It tends to be extraordinarily cumbersome. Vast quantities of paper are generated and never read by those who should do so. More fundamentally, although the review and comment procedure can help to identify conflicts, it cannot relieve them.

Although the identification of inconsistencies is a necessary first step in the integration of programs, it is not the final one. Someone must be empowered to go further and make whatever decisions are needed to resolve conflicts.

D. Coordinating Councils

1. Overview

One very commonly used technique for integrating otherwise independent land and water management programs is to establish a coordinating council, with representation on it of various agencies, units of government and groups whose interests transcend organizational lines.[61] Coordinating councils serve several functions.[62] Like review and comment procedures, they serve as a means by which the members can exchange information and share perspectives. They enable the group to focus on common problems. Most importantly, coordinating councils provide a forum in which conflicts can be resolved through debate and negotiation. Activities that should not be consolidated into a single agency can thereby be coordinated.

Coordinating councils have been formed in many configurations.[63] In some states the cabinet acts as a form of coordinating council. In other states, interagency groups have been established by statute or executive order. Regional councils, primarily composed of representatives of local governments, coordinate intergovernmental relations in many areas.

Numerous coordinating councils are working in the state of Florida. The Coordinating Council on the Restoration of the Kissimmee River Valley and Taylor Creek-Nubbins Slough Basin was created to develop means of undoing the damage caused by channelization of the Kissimmee River.[64] As part of Florida's Coastal Zone Management Program, an Interagency Management Committee, composed of several principal agency heads, was established to coordinate state programs

affecting coastal land and water resources.[65] Eleven Regional Planning Councils, made up of local government representatives and gubernatorial appointees, perform many coordinated tasks. The author is most familiar, however, with the Resource Planning and Management Committees established pursuant to Section 380.045.

2. Resource Planning and Management Committees

Previous sections of this report described the process by which areas of critical state concern are designated and local land use controls are preempted by the state.[67] There are strong traditions of land development and home rule in Florida. In both instances where the state has exercised the power to designate areas of critical state concern, there has been vociferous opposition by local interests. Considerable controversy surrounded both efforts.

When, in 1977, the state began to examine another area for possible designation, the Apalachicola Bay region, it decided to take a more conciliatory tack.[68] The regional need was to resolve certain conflicts that were arising between the development of upriver areas and the protection of the estuary and its associated fishing industry. A committee was established with representatives of both upriver and estuarine local governments. Technical assistance was provided by the Division of State Planning. Results were encouraging. Through informal meetings and negotiations, the participants came to understand each others' positions, discovered points of common agreement and eventually developed a unified position on several important issues.

As a result, legislation was introduced to formalize such committees and make them a part of the process for designating areas of critical state concern. Section 380.045 of the Florida Statutes now requires the Governor to designate a resource planning and management committee for any area under consideration for designation as an area of critical state condern. The committee must include

representatives of elected officials, planning officials, the regional planning council, the water management district and other representatives deemed appropriate by the Governor. It is required to meet for at least six months prior to a designation, but can meet longer. The statutory purpose of a resource planning and management committee is "to organize a voluntary, cooperative resource planning and management program to resolve existing, and prevent future, problems which may endanger those resources, facilities, and areas described in §380.05(2)." Its only power is to make a recommendation as to whether an area should be designated.

The first such committee established was formed to address the serious problems confronting the three counties which surround the Charlotte Harbor estuarine area.[69] The waters of the Myakka, Peace and Caloosahatchee Rivers, draining into an embayment formed by several relatively underdeveloped barrier islands and fringed by extensive wetlands, form one of the largest, most pristine estuarine systems in Florida.[70] The development of surrounding lands, however, is a major threat to the system. The current population of Lee, Charlotte and Sarasota counties is about 200,000. Yet over 800,000 lots have been platted and not yet built upon. Massive, ill-planned, subdivisions have scarred the landscape. Wetlands have been drained or filled, homesites are highly subject to flooding, the sources of water supply are uncertain, and water quality degradation seems inevitable if development proceeds as envisioned.

The committee appointed by Governor Graham had four representatives from each county -- an elected official from the county, an elected official from a major city, a developer and an environmentalist.[71] In addition, representatives of the Department of Community Affairs, the Department of Environmental Regulation, the Department of Natural Resources, the Southwest Florida Regional Planning Council, the South Florida Water Management District, and the Southwest Florida Water Management District were members. Other persons participated on

an ad hoc basis. The Principal Investigator on this project, Dean Frank E. Maloney, was named Chairman. The committee was given one year by the Governor to develop recommendations.

The initial meeting of the Charlotte Harbor Committee focused on attempting to define the problems of the area and the goals of the group. Two goals were identified:

> (1) To maintain and improve the functional and structural integrity of the natural estuarine ecosystems and related coastal components through coordinated management of human impacts in surrounding uplands and freshwater systems.
>
> (2) To identify and address the impact of growth so as to minimize or eliminate any adverse effects on the Charlotte Harbor area.

Specific problems in the areas of intergovernmental coordination and decision-making, community infrastructure, water quality and quantity and natural systems were identified. General recommendations were developed.

Discussions were intense, lengthy, confused and sometimes acrimonious. A year after beginning, the committee had only developed some rather general recommendations. Then, something tragic happened. The Chairman suddenly and unexpectedly died. A new Chairman was appointed just before the final meeting.

At that meeting, the CHC voted to adopt the recommendations it had developed and recommend that the Governor reconstitute the committee to work toward implementation. Their recommendation was accepted and the committee is continuing. Recommendations have been made more specific and the focus is now on evaluating how well local governments are impelmenting the recommendations of the committee. Specific criteria for making such evaluations have been adopted and will be recommended to the Governor after a formal hearing in April, 1981.

The ultimate success of this effort will depend, of course, on the extent to which local governments implement the recommendations of the committee and whether the estuarine ecosystem is thereby protected from the impact of human

activities in "surrounding uplands and freshwater systems." Only time will tell on that point. Meanwhile, significant smaller successes are identifiable. Merely bringing together all the diverse interest groups, agencies and units of government has clearly enhanced communication and mutual understanding. Some conflicts have probably been avoided and a common focus has been brought to bear on the enormous problems of the area. The deficiencies are the same as those which afflict any similar coordinating council. There was considerable confusion as members postured, jockeyed for position and tried to set a course of action with little guidance as to what direction they should be heading. The commitment of sufficient time and money to really accomplish the needed tasks in an expert manner was also not forthcoming.

3. Evaluation

Coordinating councils perform valuable functions that can help to integrate land and water management. They provide a forum through which technical information and points of view can be exchanged. The interrelationships of various programs can be explored. Conflicts can be identified and discussed. Opportunities for cooperation may be explored. As the Council of State Governments has stated, however,

> On the whole, then, interagency councils seem to have been relatively effective to date in those States where they have been used. They depend heavily upon communications and mutual cooperation to achieve coordination. Their primary weakness is probably a tendency to degenerate into purely discussion groups. This happens most often when there is no specific focus for the council's activities or no substantive responsiblities to perform.[72]

The most successful coordinating councils seem to be those that have some substantive authority to implement their recommendations. A Tahoe Regional Planning Commission, for example, established in 1961, was largely ineffective.[73] Although it had adopted a regional land use plan, it "had no authority to implement the plan itself or to require local governments to adhere to it."[74]

A successor, the Tahoe Regional Planning Agency, was created by interstate compact with power to directly regulate land use. It appears to have been much more effective. The Twin Cities Metro Council has been similarly successful, largely because it was given authority to disapprove local plans that are inconsistent with certain regional plans.[75]

E. Integration Through Planning

The development and implementation of comprehensive plans for the use of land and water resources appears to offer the greatest potential for integrating the management of them.[76] Indeed, it is a necessity. In order to bring order and consistency out of the chaos of numerous, sometimes conflicting programs, common goals and policies must be established.

> These are complex problems that cross all jurisdictional boundaries .... If government actions and activities are to achieve compatible objectives, overall goals and priorities must be defined, and policies and programs at all government levels coordinated within this framework. The function of a ... planning process is to provide... this capability to define goals and policies, determine priorities, allocate resources and coordinate activities.[77]

The existence of some means to ensure implementation or enforcement of the plan is essential, however, for success. Otherwise, the process can easily become an exercise in futility -- planning for the sake of planning -- with little substantive effect on the conduct of functional programs or on the use of resources.

Few states have an effective comprehensive planning process. Those plans which are developed tend to be overly broad and general. They also tend to go out of date quickly or to be simply unrealistic. These defects result from the immensity of the task and the fact that few plans have any "teeth"--they are unenforceable, so they do not matter and little attention is given to their development.

One noteworthy exception is the state of Oregon. In 1973, Oregon established

a Land Conservation and Development Commission (LCDC), composed of seven gubernatorial appointees.[78] The LCDC is required to "adopt state-wide planning goals and guidelines for use by state agencies, cities, counties and special districts in preparing, adopting, revising and implementing existing and future comprehensive plans."[79] Local governments, in turn, are required to adopt local comprehensive plans which are consistent with the state goals and guidelines and implement them through appropriate zoning, subdivision and other ordinances.[80] The comprehensive plan is to be "a generalized, coordinated land use map and policy statement of the governing body...that interrelates all functional and natural systems and activities relating to the use of lands [which are defined to include water]."[81] To enforce these requirements, the LCDC is empowered to review local government comprehensive plans, implementing ordinances and land development decisions to ensure consistency.[82] If a local government refuses to comply, then the LCDC can develop and administer a comprehensive plan for the area[83] and charge the expense to the local government.[84]

The Metro Twin Cities Council, discussed previously, is another example of how the enforcement of plans can help to integrate land and water management.[85] Sprawling land development in that area had threatened to destroy natural resource areas, pollute ground and surface waters and increase the cost of providing such services as water and sewers. In response, the Metropolitan Twin Cities Council was created and given responsibility to assist local governments in the development and impelmentation of local comprehensive plans consistent with a development framework adopted by the council.[86] Four "metropolitan system plans" for transportation, airports, open space and sewers are particularly significant. The Metro Council can disapprove local plans and local governments are prohibited from allowing development that is inconsistent or conflicts with one of the system plans.

Other schemes for developing consistent, effective plans have been implemented in the coastal areas of California,[87] the Portland, Oregon area,[88] the New York Adirondack Park,[89] and Lake Tahoe.[90] State approval and coordination of local plans is required in Australia[91] and in the Netherlands.[92] In Florida, local governments are required to develop comprehensive plans and subsequent development decisions have to be consistent with the plan, but there is no requirement for approval by state or regional levels of government.[93] In addition, as discussed previously, state and regional planning are largely uncoordinated and ineffectual.[94]

Proposals by the Governor's Resource Management Task Force, following somewhat the same lines as the Oregon system, would change this situation.[95] Their recommendation was to create an hierarchical system of comprehensive plans. State policy would be adopted and used to guide the development of more specific regional policies. Local comprehensive plans would be developed in accordance with the regional plans. Consistency of local plans with regional policy and of regional policy with state policy would be mandated, and enforced by review and certification procedures. Land development would have to be consistent with the planning framework.

The implementation of such a comprehensive planning system seems necessary if consistency in land and water management is to be achieved. Someone must be given authority to resolve conflicts between the multitudinous programs, agencies, units and levels of government in Florida, but this role could only be performed rationally by reference to an integrated, comprehensive plan.

F. Coordinated Permitting

1. Overview

Many programs for the management of land and water resources are ultimately implemented through permitting systems. These programs often have different, sometimes conflicting, objectives. Procedures are also frequently at variance with one another. The system as a whole has thus become extraordinarily complex. It is expensive to administer and it is expensive to participate.

Developers view themselves as victims of an overly complicated, confusing, redundant and inconsistent morass of rules and regulations, administered by an alphabet soup of bureaucrats. Developers have difficulty identifying the rules applicable to their development and the agencies responsible for administering them. They also have trouble obtaining decisions once jurisdiction has been established. The costs of delay seem particularly objectionable:

> The American developer is confronted with a bewildering and time-consuming proliferation of regulations at virtually every level of government. The cost of meeting the myriad of requirements a developer now faces is less in preparation of the documenting materials and more in the cost of delay itself.[96]

Citizens who are concerned with protecting environmental quality also suffer when the system is unnecessarily complex and fragmented.

> The multiplicity of permits and complexity of the permit process are bewildering. Environmentalists have a difficult time identifying the laws with which a developer must comply and determining where citizen input is necessary in the numerous permit granting procedures of state agencies. Equally important, environmentalists are concerned that because of the fragmented, complex permit granting process, the public's interest is not adequately protected through the cluster of low visibility decisions made by state agency officials. In fact, some environmental advocates assert that current permit granting activities have become so complex and confusing that the legislative intent and mandate of many environmental safeguards are not being fulfilled. Procedural games have displaced analysis of proposals as the dominant activity in permit acquisition. As a result, the quality of public policy decisions regarding permits has declined.[97]

For these reasons, improvement of the permitting process has become a major governmental objective. Simplistic solutions, however, are unlikely to be implemented.

> 'One-stop shopping' -- the delegation of all authority over land use and environmental issues to a single 'czar' -- cannot, realistically speaking, be accomplished. The issues are too complex; our political institutions, too varied. There are, however, very real opportunities for simplifying present control systems and, in the process, improving the quality of development and enhancing the fairness and efficiency of procedures.[98]

The coordinated permitting procedures discussed below are representative examples of a type of reform that is likely to become more and more common.

2. Washington's Environmental Coordination Procedures Act (ECPA)

The Environmental Coordination Procedures Act (ECPA),[99] enacted in Washington, does two things. It establishes a centralized mechanism for disseminating information about the regulatory process and it creates an optional consolidated procedure for obtaining state permits. Both aspects of the ECPA are administered by the Department of Ecology (DOE).

DOE is directed to establish permit information centers at its central and regional offices where citizens can go and receive information regarding the permitting requirements of federal, state and local agencies.[100] In addition, each county is directed to establish an office for receiving master permit applications. Personnel in these offices are to assist citizens in preparing master permit applications and have responsibility for submitting them to the DOE.

The consolidated permitting process is initiated by submission of a completed master permit application.[101] A certification by the local government that the project complies with the local comprehensive plan and zoning ordinances must accompany the master application.[102] Once it has certified a project, the local government is prohibited from changing its rules during the pendency of

master application processing. However, if the local government so chooses, it can have the request for certification processed as part of the master application. In that case, it has the same status as one of the state agencies.

Upon receiving the master application, the Department of Ecology notifies other state agencies that may have an interest in the project.[103] Those agencies can then respond in one of two ways. They may notify DOE that they have no interest in the project, in which case they are barred from ever claiming jurisdiction. Or they may notify DOE of which permits are needed and whether public hearings are required.

The DOE then sends appropriate forms to the applicant for each of the individual permits. When returned to DOE these applications are transmitted to the agencies with jurisdiction for evaluation in accordance with their usual standards. Use of the consolidated process does not change the substantive rules applicable to a proposed development.[104]

DOE is responsible for notifying the public of the master application and scheduling a public hearing.[105] At the public hearing information and views relevant to the various permit applications are submitted.[106] Each of the agencies with substantive responsibility is then given a deadline for making a determination. Those decisions are collected by DOE, incorporated into a single document and sent to the applicant. A consolidated appeal may then be taken if desired.[107]

The major criticism of the Environmental Coordination Procedures Act appears to be the voluntariness of it.[108] Developers are not required to use the process; it is optional to them. In practice, most developers are using the master application procedure to identify relevant state permits and are then dropping out to pursue individual negotiations.[109]

3. The Florida Industrial Siting Act of 1979

The Florida Industrial Siting Act of 1979 (ISA)[110] establishes a consolidated state level permitting process that is similar to the Washington ECPA discussed supra. Because of several important differences, however, it is closer to the "one-stop permit" ideal of development interests. Only a single application needs to be submitted under the ISA. Unlike the ECPA, individual permit applications are not required. Further, although substantive permitting standards are not supposed to be altered by the ISA, a single state agency determines whether the application demonstrates compliance. Finally, the ultimate decision on whether to issue a permit is made by one body--the Governor and cabinet. That permit then stands in lieu of all other state permits.

To be eligible to use the ISA permitting process an applicant must be proposing a new or expanded industrial, commercial, wholesale or retail business activity having the potential to create 50 jobs and requiring at least two permits.[112] A developer who chooses to use the ISA[113] may file a notice of intent to file an application with the Department of Environmental Regulation.[114] This notice of intent is sent to :

> the Division of State Planning, the water management district and the regional planning agency which have jurisdiction over the area wherein the proposed project is to be located, the Department of Community Affairs, the Department of Commerce, the Department of Transportation, the Department of Natural Resources, the Game and Fresh Water Fish Commission, the Department of Health and Rehabilitative Services, the Department of Business Regulation, the Department of Agriculture and Consumer Services, the Department of State, and the local governmental entities which have jurisdiction.[115]

The applicant can then seek binding written agreements with DER as to the data and level of information which must be submitted.[116] Once the application itself is submitted, DER requests a hearing officer and transmits copies to the agencies listed above.[117] DER is also required to make rapid determinations as to the completeness and sufficiency of the application.[118]

DER carries the primary burden of analyzing the proposal. It is required to study:

> (a) The environmental impact of the project, including impacts on water quality, air quality, fish and wildlife, and cultural resources.
> (b) The impact of the project on the economy of the area, including provisions of employment opportunities and related economic impacts.
> (c) The impact of the project on necessary public facilities, including transportation facilities.
> (d) The impact of the project on energy demand.
> (e) Compliance of the project with agency standards.[119]

In addition, the Department of Veterans and Community Affairs and the appropriate water management district are required to submit reports regarding the effect of the proposed project on matters within their respective jurisdictions.[120] All of these reports are compiled with any comments received by DER and transmitted to the hearing officer.[121]

Before a certification hearing can be held, however, the applicant must secure a statement of approval from the local government with jurisdiction over the project.[122] The local government must certify that the project complies with Chapter 380 of the Florida Statutes and with local comprehensive plans and land development regulations.

The hearing officer may then hold a certification hearing.[123] Any possibly interested agency, unit of government or person is either required or allowed to be a party to the hearing. After hearing all the evidence, the hearing officer submits a recommended order to the Governor and Cabinet, which is responsible for issuing a final order.[124]

This order constitutes the only state permit required to build and operate the project.[125] It replaces a host of other permits, including authorization to use state lands. It is effective for seven years, during which time it cannot be altered, except that DER can impose new operating standards to the same extent

that it imposes them on other operating facilities. Once the local government has issued a statement of approval, however, it is barred from altering its regulation at all during the pendency of the proceedings or for a period of two years following issuance of the approval except through the procedures of the Local Government Comprehensive Planning Act.[126]

4. Optional Coordinated DRI Review

The process of securing approval to construct Developments of Regional Impact[127] has been a subject of criticism by development interests. Their major complaint has been the cost in time and money of preparing an application for development approval and moving it through the review and appeals process. Much of this expense is wasted, they contend, because the DRI process is merely duplicating other permitting and review programs administered by the state, federal and local agencies, none of which is coordinated with DRI review.

This subject was examined extensively by the Governor's Resource Management Task Force,[128] which concluded:

> The Developments of Regional Impact Process is relatively effective but at times has been unnecessarily burdensome and complicated. However, it is basically a valuable process and should not be abandoned or replaced by other existing review or permitting processes. Rather, the process should be improved to fulfill its statutory purpose and should be better integrated with other planning and permitting to eliminate processing delays and provide more knowledgeable review.[129]

Many participants felt that the DRI review process could be modified to serve as a means of coordinating other permitting and review programs and that if this were done, developers would have an incentive to use the process rather than evade it. A number of specific recommendations directed toward this goal were considered by the Legislature in the 1980 session. A more coordinated review process emerged from those deliberations.[130]

Preapplication conferences between the developer and the regional planning

agency are now required.[131] Preapplication conferences may be used to identify issues and coordinate the review with other appropriate state and local agency requirements. At the request of either party, other state or regional agencies may be required to participate in the preapplication conference by identifying the types of permits issued by them, the level of information that must be submitted, and permitting procedures. In addition, the preapplication conference can be used to negotiate a binding written agreement with the regional planning agency as to the information which must be submitted in the application for development approval.[132] Questions may be eliminated if they are irrelevant to regional review. The information submitted in other permit applications or in environmental impact statements may be incorporated.

In addition, the developer has the option of selecting any state or regional licensing agencies and requiring them to participate in a coordinated review process.[133] Binding agreements with any of those agencies may be requested on the following matters:

> 1. The identifiable areas of agency jurisdiction over the proposed development.
> 2. The identifiable agency rules, subject to changes imposed by law, applicable to the proposed development.
> 3. The types and categories of information which may be required at the time of license or permit application for the proposed development.
> 4. Any other appropriate agreement pursuant to appropriate state or federal law or regulation.[134]

These agreements are binding on the agencies for five years unless inaccurate information was supplied by the developer, conditions have changed substantially, or material modifications of the development are proposed. The agencies may also be requested to identify "issues or problems which could later constitute grounds for permit denial or major modifications of the proposed agreement."[135] These statements, however, are not binding.

Coordination of the actual review process is largely the responsibility of

the regional planning agency.[136] It is given considerable latitude to exercise creativity and initiative in this task. It may encourage additional preapplication conferences, the development of coordinated permit processing schedules, concurrent processing of applications, joint application requirements or other techniques.

Another amendment is intended to reduce the appearance of inter-agency conflict. At the request of the regional planning agency, other agencies may be required to comment on matters within their jurisdiction. Those comments must be incorporated verbatim, although the regional planning agency may attach dissenting views. If water management district or Department of Environmental Regulation permits have been issued, however, the regional planning agency is prohibited from offering conflicting recommendations to the local government.

5. Conclusion

Coordination of the permitting process offers many advantages to both development interests and environmentalists. As a Special Committee of the American Bar Association has noted:

> Overlapping agency jurisdiction and repetitious hearings are among the most frustrating aspects of present decisionmaking mechanisms...No reasonable person can deny the pressing need to avoid unnecessary repetitious or circuitous proceedings.[137]

The attempts to coordinate permitting described here are only examples. Other coordinating systems are also available as models. The Florida Electrical Power Plant Siting Act[138] is particularly noteworthy as an example of consolidated state review of major energy facilities. Unlike the Industrial Siting Act, local powers are preempted. An excellent example of coordination at the local level and between local, state and regional agencies may be found in the operation of Dade County's Development Impact Committee, where an interagency board reviews development proposals and makes a coordinated recommendation to the board of county commissioners.[139] The benefits of meticulous, public review of land and water

resource commitments should not be forgotten, however, for the sake of expediency. As the Conservation Foundation has observed: "[T]he line between procedural and substantive is a fine one."[140]

III. TECHNIQUES FOR THE INTEGRATION OF LAND AND WATER MANAGEMENT

[1]Webster's Seventh New Collegiate Dictionary.

[2]Charles Lindblom, quoted in Council of State Governments, Integration and Coordination of State Environmental Programs (1975) at 16.

[3]An anonymous state official, Id. at 17.

[4]Amory Lovins, quoted in the Conservation Foundation Letter (October 1979) at 7.

[5]Id.

[6]See generally, Mister Z, The Case for a Department of Natural Resources, 1 Nat. Res. J. 197-207 (1961); H. Henry and D. Halperin, State Government Organization: Agencies Dealing with Marine Resources, Volume I, Marine Law Affecting Marine Resources (1969); Council of State Governments, Integration and Coordination of State Environmental Programs, 19-54 (1975).

[7]Fla. Laws 1975, Ch. 75-22.

[8]See the discussion in Section II, A, infra for a more complete general description of state and regional agencies and their functions.

[9]See Resource Management Task Force, Final Report to Governor Bob Graham, Volume II, Committee Eight (January 1980).

[10]33 USC §§1342 (Supp. 1980); 40 CFR §124. See generally, Maloney, Fernandez and Hamann, Merging Two Systems: NPDES and Tennessee Water Quality Control (1976)(Report to the Division of Water Quality Control, Department of Public Health, State of Tennessee).

[11]Resource Management Task Force, Final Report to Governor Bob Graham, Volume I, 31-32 (January 1980).

[12]P.L. 91-190 codified at 42 USC § 4321 et seq. Several states have enacted similar provisions regarding state action. See 5 Environmental Affairs 567-93 (1976).

[13]§ 101(a).

[14]§ 101(b).

[15]Drefus and Ingram, The National Environmental Policy Act: A View of Intent and Practice, 16 Nat. Res. J. 243-62, 246 (1976).

[16]F. Anderson, NEPA in the Courts, vii (1973).

[17]§ 102(c). The Environmental Impact Statement must discuss,
(i) the environmental impact of the proposed action,
(ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,

(iii) alternatives to the proposed action,
(iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and
(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

[18] F. Anderson supra note 16 at n.189.

[19] § 102(c).

[20] 40 CFR § 1503. For a discussion of these regulations see Roady, The 1979 Council on Environmental Quality Regulations Under the NEPA, 54 Fla. Bar J. 155-59 (1980).

[21] See cases discussed in F. Anderson supra note 16 at 223; Environmental Law Institute, Federal Environmental Law 290-295 (1974).

[22] See e.g., Andrews, Agency Responses to NEPA: A Comparison and Implications, 16 Nat. Res. J. 301-22, 315-16 (1976).

[23] Federal Environmental Law supra note 21 at 286-297.

[24] Id.

[25] § 102(1).

[26] § 102(2)(A).

[27] § 105.

[28] Federal Environmental Law supra note 21 at 291-92.

[29] Id.

[30] Sierra Club v. Froehlke, 359 F. Supp. 1289, 1348-49 (S.D.Tex., 1973).

[31] Council of State Governments, Integration and Coordination of State Environmental Programs 72-24 (1975).

[32] Office of Management and Budget, Evaluation Review and Coordination of Federal and Federally Assisted Programs and Projects, Circ. A-95 (revised), 41 FR 2052 (Jan. 13, 1976), ELR 47001. See generally, Hoffman, Regional Planning and A-95 Review, 10 Real Corp. Prof. and Trust J. 670-74 (1975); Myhra, A-95 Review and the Urban Planning Process, 50 J. of Urb. Law 449-463 (1973); Council of State Governments, State Planning: Intergovernmental Policy Coordination, 103-18 (1976).

[33] Designation of A-95 clearinghouse agencies is generally by the Governor of the state or state law. Circ. A-95, Part V, 10.

[34] Id., Part I.

[35] Id., 3(a).

[36] Id., 3(b) and Part II.

[37] Id., 3(c) and Part III.

[38] Id., 3(d) and Part IV.

[39] Id., 3(b); Part II,4.

[40] Id., 3(b)-(h).

[41] Id., 3(a).

[42] Id., 5

[43] Id., 5

[44] Id., 5(a), (g).

[45] Id., 5(c).

[46] Id., 5(b)(1).

[47] Id., 5(d).

[48] Id., Part IV.

[49] Id., 2(a).

[50] Id., 2(b).

[51] Id., 3.

[52] Id.

[53] Id., 3(b).

[54] Id.

[55] Id.

[56] Id., 3(c).

[57] Id., 3(d).

[58] Myhra, supra note 32 at 457-59.

[59] Hoffman, supra note 32 at 674.

[60] Myhra, supra note 32 at 451.

[61] See generally, Council of State Governments, Integration and Coordination of State Environmental Programs, 67-69 (1975).

[62] Council of State Governments, State Planning: Intergovernmental Policy Coordination, 123 (1976).

[63] Id., 70-73.

[64] Fla. Stat. §373.1965 (1979).

[65] J. Brindel, Florida and Coastal Zone Management, 54 Fla. Bar J. 295-299 (April 1980).

[66] See the Florida Regional Planning Council Act, 1980 Fla. Laws, Ch. 80-315 codified at Fla. Stat. 160.001-.09 (1980 Supp.).

[67] See the discussion in Section II,B,1, supra accompanying notes 83-101.

[68] Division of State Planning, The Apalachicola River and Bay System: A Florida Resource (1977) (DSP-BLWM-5-77). Ted Forsdgren, a planner with DSP, largely coordinated the effort and supplied much of this information.

[69] Since the first committee did not contain a representative from the "planning office of each of the local governments within the area under study" it probably did not fully comply with the statutory criteria.

[70] See generally, Division of State Planning, Charlotte Harbor: A Florida Resource (1978)(DSP-BLWM-39-78); In addition, the author has an extensive file on this area.

[71] The author served the committee intensively as a staff assistant to the Chairman. The discussion is based on that experience and a large file of program documents.

[72] Integration and Coordination of State Environmental Programs, supra note 61. at 69.

[73] Council of State Governments, Intergovernmental Relations in State Land Use Planning, 14-15 (1974).

[75] F. Bosselman, D. Feurer and C. Siemon, The Permit Explosion, 12-15 (1976).

[76] Mulder et al, Integrating Water Resources and Land Use Planning, 44-46 (Utah Water Research Laboratory)(January, 1979).

[77] Council of State Governments, State Planning: Intergovernmental Policy Coordination, 8 (1976).

[78] The Oregon Land Use Act of 1973, codified at Oregon Rev. Stat. §§197.005-.425 (1979).

[79] Id., §197.225.

[80] Id., §197.175.

[81] Id., §197.015(4)

[82] Id., §197.300

[83] Id., §197.325.

[84] Id., §197.330.

[85] See note 75 infra and accompanying discussion.

[86] See The Permit Explosion supra note 75 at 12-17.

[87] See R. Healy (ed.), Protecting the Golden Shore: Lessons from the California Coastal Commissions (1978).

[88] Ore. Rev. Stat. §§197.705-.795 (1979).

[89] N.Y.Exec.Law §§800-813 (CLS, 1980 Supp.).

[90] See discussion infra at notes 73-75.

[91] F. Bosselman, In the Wake of the Tourist, 134 (1978).

[92] Id., 122.

[93] See discussion in Section II,C supra accompanying notes 203-272.

[94] See discussion in Section II,E supra accompanying notes 361-400.

[95] See discussion in Section II, E supra accompanying notes 401-406.

[96] U.S. Department of Housing and Urban Development, Final Report of the Task Force on Housing Costs, 28 (May 1978).

[97] Council of State Governments, Untangling the Permit Web: Washington's Environmental Coordination Procedures Act, 1-2 (June 1978).

[98] The Permit Explosion, supra note 75 at 5.

[99] RCWA §§90.62.010-.908 (Supp. 1980-81). See Coker and Elliott, The Environmental Coordination Procedures Act of 1973, or ECPA! ECPA! Rah, Rah, Rah!!, 49 Wash. L.Rev. 463-508 (1974); Untangling the Permit Web supra note 97.

[100] RCWA §90.62.090 (Supp. 1980-81).

[101] Id., §90.62.040.

[102] Id., §90.62.100.

[103] Id., §90.62.040.

[104] Id., §90.62.060(7).

[105] Id., §90.62.050.

[106] Id., §90.62.060.

[107] Id., §90.62.080.

[108] Coker and Elliott, supra note 99 at 475.

[109] The Permit Explosion supra note 75 at 21.

[110] 1979 Fla. Laws, ch. 79-147 codified at Fla. Stat. §§288.501-.518 (1979).

[111] See generally, Hopping and Rhodes, Penetrating the Permitting Profligacy: The Industrial Siting Act of 1979, 53 Fla.B.J. 555-59 (Oct. 1979).

[112] Fla. Stat. §288.503(13)(1979). Residential housing projects are excluded and special requirements surround Outstanding Florida Waters. Id.

[113] Id., §288.506. Unlike the ECPA, the ISA provides for locking the applicant into the proceeding.Id.

[114] Id., §288.508.

[115] Id., §288.509.

[116] Id., §288.508(2).

[117] Id., §288.507, .508(1).

[118] Id.

[119] Id., §288.509(4).

[120] Id., §288.509(2), (3).

[121] Id., §288.504(9).

[122] Id., §288.505.

[123] Id., §288.51.

[124] Id., §288.511.

[125] Id., §288.514.

[126] Id., §288.505.

[127] See the discussion in Section II,B supra accompanying notes 102-118.

[128] Resource Management Task Force, Final Report to Governor Bob Graham, Vols.I,II (January 1980).

[129] Id., Vol I at 23.

[130] Fla. Laws 1980, Ch. 80-313. See generally, Stroud, The Second Generation Legislation for Developments of Regional Impact 8 Fla.Env.& Urb.Issues 3 et seq. (Oct. 1980).

[131]Fla. Stat. §380.06(7)(a)(Supp. 1980).

[132]Id., §380.06(7)(b).

[133]Id., §380.06(8)(a).

[134]Id., §380.06(8)(b).

[135]Id., §380.06(8)(c).

[136]Id., §380.06(8)(d).

[137]ABA Committee on Environmental Law, Development and the Environment, 45-46 (1974).

[138]Fla. Stat. §§403.501-.517 (1979).

[139]The Permit Explosion, supra note 75 at 33-34.

[140]Conservation Foundation Letter, 7 (Oct. 1979).