CHAPTER 2

SUWANNEE RIVER PARTNERSHIP:

REPRESENTATION INSTEAD OF REGULATION

AYŞIN DEDEKORKUT

The Suwannee River Partnership began in 1998 as a government-led voluntary effort by agricultural producers and conservation groups to avert a water quality crisis through incentive-based reduction of nutrient discharges. With key stakeholders reluctant to participate and their scope of authority constrained by legislation, the water managers designed a process that integrated scientific knowledge and won a high level of voluntary participation by large agricultural producers. The case illustrates the difficulty of obtaining full representation in consensual ad hoc policymaking, but shows the value of collaborative scientific fact finding, and may serve as a model for promoting public learning.

The Middle Suwannee River Basin in North Central Florida includes Lafayette and Suwannee counties (Figure 3-1) and is a major recharge area to the Floridan Aquifer, the main source of water supply in the Suwannee River Basin. Because of its water quality and scenic nature, the Suwannee River was designated an Outstanding Florida Water[1] in 1979. The predominantly rural, agricultural basin is characterized by highly permeable limestone overlain by transmissive sandy soils and numerous sinkholes, and the aquifer is extremely susceptible to nonpoint source pollution (FDEP 2003). The basin is home to hundreds of residential and commercial septic systems, about 300 row crop and vegetable farms, 44 dairies, and about 150 poultry farms (Woods 2001). Without nutrient management, waste from these agricultural operations pollutes the Suwannee River and the Floridan Aquifer.

[insert Figure 3-1 about here]

The nitrate form of nitrogen from non-point sources is the main pollutant in the basin. Elevated nitrate concentrations could significantly damage the ecology of the river and the Suwannee River Estuary, principally through eutrophication, which causes algae blooms, depletion of oxygen, and fish kills (Katz et al. 1999). Nitrate concentrations higher than 10 mg/L in drinking water constitute a health hazard to children and pregnant women.

The Partnership programs affect the Middle Suwannee and Santa Fe Basins, which together constitute the potential source of 60–70 percent of the nitrate load to the Suwannee River Estuary (Suwannee River Partnership 2002). They primarily involve changing agricultural practices and better management of human waste. The three major targets of the Partnership are dairy, poultry, and row crop farmers.

History of the Partnership

Nitrogen readings in the Middle Suwannee River Basin have doubled over the last 20 years (Ritchie 2002). Groundwater from this watershed is affecting the surface water quality of the Suwannee River via springs and seeps in the riverbed (Hornsby et al. 2002b). Springs in the Middle Suwannee River Watershed have nitrate-nitrogen concentrations ranging from 1.2 to 17 mg/L (Hornsby et al. 2002a), and in 1990 nitrate concentrations in water from the Upper Floridan aquifer in parts of Suwannee and Lafayette Counties exceeded the maximum contaminant level of 10 mg/L set by the Environmental Protection Agency (EPA) for drinking water (Katz and Hornsby 1998). In water year[2] 2001, the Suwannee River Basin accounted for

98 percent of the 3,067 tons of nitrate-nitrogen and 78 percent of the 909 tons of total phosphorus that were transported to the Gulf of Mexico by the six area rivers. The Middle Suwannee River Basin, which covers only 8.6 percent of the total Suwannee Basin, accounted for 45.5 percent of the annual nitrate-nitrogen load delivered to the Gulf by the Suwannee River, whereas the Santa Fe River covering 5.7 percent contributed 15.8 percent (Hornsby et al. 2002a).

The Santa Fe and Lower Suwannee Rivers are Class III water bodies, designated for recreation, propagation, and maintenance of a healthy, well-balanced population of fish and wildlife. The Suwannee River Estuary is Class II, designated for shellfish propagation or harvesting. The Florida Department of Environmental Protection (FDEP) has determined that the Middle and Lower Suwannee River, the Lower Santa Fe River, and the Suwannee River Estuary may not be meeting their designated uses based on legal criteria (§ 62-303, Fla. Admin. Code) and are potentially impaired by excessive nutrients and algal mats (Suwannee River Partnership 2002). These rivers and the Suwannee River Estuary were on Florida's 1998 303(d) List of Impaired Surface Waters, and are on the 2002 Update (Suwannee River Partnership 2002). Thus FDEP is required by federal law to reduce nitrate levels in the River through regulatory measures under the Total Maximum Daily Loads[3] (TMDL) process. These measures can limit how farmers may fertilize or irrigate their crops, restrict how livestock producers manage the wastes from their animals, or change how septic systems are designed, installed, and maintained (IFAS 2002).

The Formation and the Structure of the Partnership

Suwannee River Water Management District's (SRWMD) spring and groundwater monitoring results, which showed elevated nitrate levels in the Middle Suwannee River Basin, created widespread concern. SRWMD research showed the following estimated sources of nitrogen in

Suwannee and Lafayette counties: fertilizer 45 percent; poultry 33 percent; dairy cows 10 percent; beef cows 5 percent; atmospheric 6 percent; and people 1 percent (Hornsby and Mattson 1998). In the early 1990s FDEP conducted several Hydrologic Unit Area Demonstration Projects with EPA grants to assess dairy and poultry contributions to nonpoint source water pollution in the Middle Suwannee River Basin and to demonstrate new technology in the treatment of animal waste. U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) prepared plans to retrofit area dairy and poultry farmers with the best available technology and management practices for animal waste management, utilization, and disposal (FDEP n.d. a).

In 1991, at the request of the Lafayette and Suwannee River Soil and Water Conservation Districts, NRCS initiated a land treatment project in the Middle Suwannee River Area under the authority of Public Law (PL) 566, the Watershed Protection and Flood Prevention Act. In 1993, the NRCS approved PL-566 provisions for financial and technical assistance to dairy and poultry farmers to install conservation measures under Long Term Contracts (LTCs) . The Small Watershed Program for the Middle Suwannee was the first PL-566 project in the nation authorized for the sole purpose of groundwater quality protection. In 1995 the SRWMD provided supplemental cost share funds to dairy farmers through the Surface Water Improvement and Management (SWIM) program to expedite development and implementation of LTCs (Swicegood 2001). In 1996, the NRCS and SRWMD agreed to a cost-share arrangement to help dairy farmers in Suwannee and Lafayette counties to implement best management practices (BMPs) to improve animal waste management (SRWMD n.d. b). In 1999, the SRWMD approved funding of a special technical team to expedite development and implementation of LTCs for poultry farmers. In addition, the Florida Department of Agriculture and Consumer

Services (FDACS) offered poultry farmers additional cost-share funds to install their LTCs (Swicegood 2001).

By 1998 a number of state and regional agencies were collecting data on the sources and amount of nitrogen in the river, conducting research to understand the ecosystem better, and investigating funding opportunities to help farmers implement BMPs. In response to the need for coordination between numerous regulatory agencies that had authority over aspects of the issue, SRWMD requested during the Governor's Water Resources Coordinating Council meetings in December 1997 that the districts and other agencies coordinate their resources and research to develop a watershed strategy to control nitrates (Matthews and Grippa 1997).

The PL-566 Small Watershed Program for the Middle Suwannee and the Hydrologic Unit Area Demonstration Projects paved the way for the Partnership. The parties created the Suwannee River Partnership, chaired by FDACS, by signing the Agreement in Principle on Nutrient Management in the Suwannee River Basin of January 25, 1999. This agreement showed the signatories' intent to cooperate, but was not legally binding.

The 24 members that signed the original agreement include EPA, the U.S. Geological Survey Water Resources Division, and USDA NRCS from the federal government; FDEP, the Department of Community Affairs, the Florida Department of Health (FDOH), and FDACS from the state government; SRWMD as a regional government agency; Lafayette and Suwannee Counties as local governments; Lafayette Soil and Water Conservation District, Suwannee River Soil and Water Conservation District, and Suwannee River Resource Conservation and Development Council as conservation groups; as well as industrial, agricultural, and research groups. The mission of the Partnership is to determine the sources of nutrient loads to the basin, and to work with local land users to minimize future nutrient loading through voluntary,

incentive-based programs for protecting the environment and public health. The group has concentrated initially on the Middle Suwannee River Basin (Agreement 1999). Five Technical Working Groups with designated responsible agencies were created to address priority nutrient sources: Animal Waste Management and Fertilizer Management Groups—FDACS; Human Waste Group—FDOH; Monitoring Group—FDEP; and Outreach and Education Group—Florida Farm Bureau (SRWMD 2003a). Each group drew up plans to reduce nutrient loading in the water resources of the basin. To coordinate the work of all the participants, the Partnership created a position of full-time coordinator funded jointly by SRWMD, FDEP, and FDACS. While physically located at the Live Oak headquarters of the SRWMD, the coordinator, Darrell Smith, is an employee of the Partnership

Components of the Partnership Programs

The Partnership relies on voluntary cooperation and financial incentives for implementation of BMPs to reduce nitrogen loadings in the basin. BMPs are economically and technologically feasible changes in farming practices designed to reduce polluted runoff and conserve water. Because nitrates come from a variety of sources such as animal waste, human waste, and fertilizers, the plan proposes BMPs for each possible source. In poultry, BMPs relate to litter storage, dead bird disposal, and nutrient management. On dairies they relate to waste, and on row crops BMPs include irrigation and nutrient management (Loop 2001).

Dairy, poultry, and row crop farmers receive assistance to improve animal waste management and fertilization techniques from the USDA-NRCS PL-566 Small Watershed Program for the Middle Suwannee[4], the Environmental Quality Incentive Program (EQIP) administered by USDA Farm Service Agency, and the NRCS, along with state funds from the

SRWMD and FDACS cost share programs (Florida-Agriculture.com 1999). Each farmer requesting assistance through the NRCS will have a Dairy Comprehensive Nutrient Management Plan or a Poultry Conservation Plan that meets NRCS specifications and practices. Table 3-1 breaks out the costs of BMP implementation, and Table 3-2 shows the amount of money committed by each group to the Partnership programs.

[insert Table 3-1 about here]

[insert Table 3-2 about here]

The BMP Quality Assurance Program verifies that best management practices are maintained properly over a long period and provides assistance to farmers in resolving problems with BMPs. FDACS inspectors verify that BMPs are being maintained through routine on-site evaluations. When deficiencies are found, the two technicians of Lafayette and Suwannee Counties Soil and Water Conservation Districts funded by the Partnership follow up with farmers to correct problems (Suwannee River Partnership 2002). Fifteen poultry farms and four dairies were checked in 2001, and in 2002, 30 poultry farms and 4 dairies. The On-Farm Research Program includes BMP Effectiveness Demonstration Projects, or "319 projects,"[5] to verify that BMPs are effective in reducing nitrates lost to groundwater and surface waters. The Water Assessment Regional Network (WARN) monitors groundwater and surface water to identify trends in water quality over time (SRWMD n.d. a). The Florida Farm Bureau Federation certifies farmers participating in the Partnership programs through the County Alliance for Responsible Environmental Stewardship (CARES) Program. The Partnership recognized 37 CARES participants in 2001 and 43 participants in 2002 (Crawford 2002).

Santa Fe Basin Expansion

The success of the programs in the Middle Suwannee Basin prompted the Suwannee River Partnership to expand into the Santa Fe River Basin in 2002 by hiring another jointly funded coordinator to draft a plan of action to begin Partnership programs. The priority area in the Santa Fe Basin is the Lower Santa Fe Basin, which includes the reach of the river scheduled for development of a TMDL standard in 2007. The suspected sources of nitrogen in this area differ from the Middle Suwannee Basin, with a notable absence of poultry and a higher percentage from fertilizers and human sources.

The staff's recommendation for the Santa Fe Basin includes using the existing Steering Committee structure to provide direction for the initiative and using presentations to recruit additional partners in the basin. Possible interest groups include Soil and Water Conservation Districts of the three counties in the priority area, industry groups, and civic and special interest groups. The recommendation includes providing a benefit package to the agriculture industry in the basin. For reducing the nitrates originating from agricultural practices, techniques similar to those in the Middle Suwannee Basin will be used. However, comprehensive research is necessary to deal with the human waste problem by reinstating the Human Waste Technical Working Group with the addition of local stakeholders in the basin (Thomas 2003). This was not a big problem in the Middle Suwannee Basin, consequently the working group did not have to seek new technologies and practices.

Only producers in the Middle Suwannee River area from Dowling Park to Branford are eligible for the current PL-566 program. An extension of this to the Santa Fe Basin does not appear likely; there are limited funds for each state in this program, and Santa Fe has to compete

with proposals from the rest of the state. The Partnership is currently looking for alternative funding sources.

Challenges to FDEP's Implementation of the Clean Water Act

Environmentalists have not joined the Partnership because they view it as a loophole for farmers to avoid pollution limits. FDEP program administrator Daryll Joyner denies that the state has created a loophole because under EPA guidelines, those who propose exempting waterways from TMDLs must explain how much pollution will be reduced and by what date. As a result, FDEP requires "serious" documentation of the steps taken to reduce pollution. Farmers also deny that they are taking advantage of a loophole; they argue that the voluntary program encourages participation in pollution reduction more than regulations (Ritchie 2002).

Critics of the nonregulatory approach focus on two main points: whether the farmers would maintain the BMPs in the long run in a voluntary program, and whether BMPs are effective. BMP Quality Assurance Program and BMP Effectiveness Demonstrations address these points. Partnership coordinator Darrell Smith (2003a) believes these two programs set Suwannee River Partnership apart from other nonregulatory approaches. Carol Kemper (2003) of EPA Region 4 agrees, and claims that the Partnership is different because it takes care of Quality Assurance.

Nevertheless, the proposed Impaired Waters Rule (IWR) of FDEP, which allows the Partnership to provide an alternative to TMDL regulations, was challenged at the state level by six public interest groups and two individuals who filed a petition to have it overturned as an invalid exercise of delegated legislative authority under §120.56, Fla Stat. The petition alleged that nearly every provision of the proposed rule failed to comply with the Florida Administrative

Procedure Act and was thus invalid. On May 13, 2002, Department of Administrative Hearings (DOAH) Administrative Law Judge Stuart Lerner issued a 368-page final order in DOAH Case No. 01-1332RP which concluded that the proposed rule was a valid exercise of delegated legislative authority.[6] Florida's First District Court of Appeals ruled in FDEP's favor in the appeal of the final order on May 20, 2003, upholding Judge Lerner's order (Borkowski 2003). The IWR has survived the state court challenges and has been effective since June 10, 2002.

Some of the same parties who filed the state challenge also challenged the EPA, claiming that EPA has failed to review the Florida IWR as a change in water quality standards, as required by the Clean Water Act (CWA). FDEP claims that the IWR is not a water quality standard or a change to existing water quality standards, so the agency moved to intervene and was allowed to file as an intervening defendant. FDEP asserted that the plaintiffs' argument relied on a misinterpretation of Florida water quality standards and that the change"alleged was non-existent. The Court ruled in favor of EPA and FDEP on May 29, 2003 and assessed costs against the plaintiffs (Borkowski 2003). The Eleventh Circuit Court of Appeals reversed the order on October 4, 2004 and remanded the case back to the district court to determine the practical effect of the IWR on state water quality standards. As of March 2005 the case is on remand to the U.S. District Court for the Northern District of Florida (Stephens 2005).

In a separate action, environmental group Save Our Suwannee and supporters sued FDEP for violating state law and the CWA by failing to require Concentrated Animal Feeding Operations (CAFOs) to apply for National Pollution Discharge Elimination System (NPDES) permits[7]. While in voluntary partnership with FDEP to reduce pollution from their operations, the CAFOs are not required to obtain any groundwater or surface water permits. At trial, FDEP justified its partnership program under §403.0611, Fla.Stat., which allows the FDEP to "explore

alternatives to traditional methods of regulatory permitting, provided that such alternative methods will not allow a material increase in pollution emissions or discharges." On March 5, 2004, Judge Smith ordered FDEP to immediately require all CAFOs to apply for NPDES permits or demonstrate the applicability of an exemption. FDEP's appeal to the Court of Appeals was denied on March 2, 2005 (Stephens 2005).

A third challenge involves petitions asking EPA to withdraw Florida's NPDES permitting authority. The plaintiffs allege that Florida has failed to administer the program in accordance with the CWA. Their justification includes FDEP's failure to require NPDES permits for CAFOs and its use of the IWR to change Florida's water quality standards.

The case is currently pending (Stephens 2005~~b~~). The impact of these court challenges on the Partnership, particularly the CAFO decision requiring some Partnership participants to file for permits, remains uncertain at this point.

Representation

The Partnership was formed under the leadership of the SRWMD and FDACS as an ad hoc process that brought together parties that historically did not collaborate—regulator and regulated—to decide collectively on how to deal with the problem. The Suwannee River Partnership and the Middle Suwannee Basin Work Plan are built on the concepts of partnership and coordination, and stakeholder involvement is critical. Participation is encouraged through public meetings within the basin, meetings among partners, and periodic progress reports (SRWMD 2003a). Three of the four major groups interested in water quality of the Suwannee River Basin—agriculture, regulatory agencies, and scientists—are involved in the Suwannee River Partnership. Environmental groups are not despite encouragement from the Partnership

(Roberts 2003b), possibly because they fear that the Partnership will undercut regulation (Webster 2003).

To ensure farmer participation, Partnership representatives attended meetings of farm organizations to promote the program. They sought out the most respected farmers early on and explained the program to them. When these were convinced and talked about the benefits, other farmers became interested. (Webster 2003). Farmers participated in the Technical Working Groups as well. According to Glenn Horvath (2003) of SRWMD, farmers signed up once they saw that BMPS could save money, but without financial incentives they might not have been able to participate. Under the TMDL approach farmers would receive less funding and fewer would use BMPs.

Some individuals were also crucial to the success of the Partnership: Congressman Allen Boyd, Representative Dwight Stansel, Senator Richard Mitchell, and Commissioner of Agriculture Charles Bronson have been helpful in getting cost-share funds from federal and state governments (Smith 2002). Many groups praised the leadership of SRWMD Executive Director Jerry Scarborough and Deputy Commissioner of Agriculture Martha Roberts.

Design of the Decision Process

Legislation has delineated available policy choices for dealing with nutrient management in the Suwannee River Basin. EPA's TMDL requirement with the CWA proposes one alternative and FDEP's IWR provides another. The local bodies choose between these two policies. FDEP may have provided an alternative to EPA requirements in reaction to typical rules made by the federal government that usually are not flexible enough to fit the needs of specific areas—an example of a resource question not being addressed at appropriate level of government.

The main executive agencies involved in the Partnership are FDEP and FDACS, with the support of Lafayette and Suwannee Counties' local governments and other groups. EPA oversees and can decide whether there is sufficient assurance of water quality improvement to make TMDLs unnecessary. The Partnership Steering Committee informed EPA representatives during the Steering Committee Meeting on April 16, 2003 in Tallahassee that they did not feel like partners with EPA and that their programs were never acknowledged by the agency as valid, despite the active participation of groups not covered by any regulatory agency or statute (Roberts 2003a). EPA promised to increase management participation in the Partnership and to keep contributing funds. EPA representative Curry Jones (2003) emphasized that the voluntary incentive-based approach was the best way to deal with this kind of a problem, and that EPA intended to use Suwannee as a model for other areas within EPA Region 4, especially in northern Georgia. However, during the subsequent review of the Reasonable Assurance Documentation, EPA voiced concerns about the comparatively low participation of row crop farms (82 out of about 300 have plans). The Partnership claims this is mostly due to lack of funding, not intent; 207 row crop farms have signed up with the program, some of which are waiting for funding and technical assistance. EPA's concerns were prompted by an anticipated lawsuit by a Florida environmental organization. With national attention on the Suwannee River, they wanted to make sure that their case was watertight when they reviewed and accepted FDEP's impaired waters list and Reasonable Assurance Documentation for exempted waters (Jones 2003). Consequently EPA did not accept FDEP's proposal of keeping parts of the Suwannee River off the impaired waters list, but rather added these parts as low priority.

Scientific Learning

Environmental interest groups are not convinced that BMPs are effective means of improving water quality. The On-Farm Research Program of the Partnership includes a BMP Effectiveness Demonstration Project at one dairy, one poultry, and one row crop farm to measure pre- and post-BMP water quality. The Partnership will monitor wells at all three sites over the next five years to determine the effect of BMPs (Smith 2003b).

Still, the only significant scientific uncertainty is how soon water quality will actually improve. Even if the BMPs are working it will take a long time to observe changes in the groundwater. As a result, achieving water quality levels for Outstanding Waters designation is not projected to occur before 2028.

Public Learning

The Steering Committee responsible for coordinating the Middle Suwannee Basin Work Plan, composed of the chairs of each Technical Working Group, meets monthly. Progress in research and implementation is reported in these meetings, which are open to public (SRWMD 2003a). The reports, and summaries of these meetings, are shared through an e-mail list and the Partnership website. The Partnership views communication as essential to the success of the Basin Work Plan. As a result, a Technical Working Group dedicated solely to outreach and education, chaired by the Florida Farm Bureau, works to increase understanding and support among stakeholders and the general public (SRWMD 2003a).

The Partnership has numerous research and education programs.

- University of Florida's Institute of Food and Agricultural Services (IFAS) Manure Lab in Live Oak provides manure analysis and application rate recommendations

to growers in the Basin, and is funded by several members of the Partnership. The Manure Lab Committee, composed of IFAS faculty, FDACS, and Partnership staff, meets monthly to consider education programs related to animal waste management in the Basin, and publishes a newsletter for producers (Smith 2003b).

- The Mobile Irrigation Laboratory (MIL), administered by the Suwannee River Resource Conservation and Development Council and funded by FDACS, evaluates irrigation systems for efficiency, makes water conservation recommendations to farmers, and demonstrates the benefits of water conservation for both nutrient management and water quality. The MIL team evaluated around 75 systems in 2002 (Smith 2003b).
- NRCS and the Conservation Districts provide technical assistance for farmers to implement BMPs. In addition, FDACS and FDEP provide BMP follow-up assistance to farmers through the BMP Quality Assurance Program (Smith 2003b). Soil and Water Conservation District technicians advise producers regarding available BMPs, provide technical assistance, and convey feedback from the grower community to the Partnership agencies on technical assistance, cost sharing, research needs, and the success of voluntary efforts (SRWMD 2003a). Farmers view technicians as a valuable resource because they can talk to farmers in their own language and earn the farmers' trust (Barnes 2003). The technicians help farmers see the need for continuous management and better practices. Horvath (2003) maintains that the change will be accomplished through education, not the stick approach of regulatory programs.

Problem Responsiveness

The Suwannee River Partnership is one of the first basin-wide voluntary participation conservation programs in the nation (FloridAgriculture Viewpoint 2000). Glasgow (1999) maintains that through the voluntary efforts of producers and the technical and funding support of conservation partners, an impending water quality crisis has been averted without imposing mandatory rules and regulations. Early results show that farmers have kept more than 77 tons of nitrates from dairy wastes and 475 tons of nitrates from poultry wastes out of the aquifer through voluntary, incentive-based nutrient management practices.

Farmers participate in such a program for many reasons. While financial incentives are very important, some of the groups supposedly participated because they feared that regulation changes were “around the corner” (Horvath 2003). Farmers believed that the regulatory approach would force all farms to adopt the same standards regardless of their effectiveness with individual farms, whereas the Partnership approach makes individual recommendations according to farm--by-farm variations in the types of products, hydrological characteristics such as existence of sinkholes, etc. FDEP (n.d. b) praises the Suwannee River Partnership for working with farmers to develop customized plans rather than mandating a single regulatory program for all agricultural interests in the region. According to Assistant Director of Agricultural Policy at the Florida Farm Bureau Federation Frankie Hall (2003), the flexibility and freedom allowed for by the voluntary approach is not only more efficient, but also appeals to the independent nature of the farmers. Such personal values influence reactions to voluntary versus regulatory programs.

Partnership participants argue that TMDLs would probably not achieve better practices and water quality because “people would be intimidated” (Joyner 2003), while with voluntary

approaches, farmers are doing more than what they would do otherwise. Many of the BMPs they apply are not required under regulatory programs (Webster 2003). In addition, the proponents of the Partnership maintain that traditional regulatory programs like CAFO rules generally apply only to larger operations. In the Middle Suwannee Basin this includes only four dairy and ten poultry operations; in the Santa Fe Expansion one dairy in the priority area, and three dairies in the extended area would be treated as a point source and have to apply for a NPDES permit or demonstrate that they have no potential discharge (Seibold 2003). For FDEP it is harder to enforce regulations on many smaller farms. The Partnership is trying to cover operations not covered by other regulatory programs. As a result, there is more compliance with BMPs through the voluntary approach.

In addition to funding and fear of regulations, stewardship and trust play a role in farmers' participation in the program (see Chapter 18). As poultry farmer Nancy Barnes (2003) put it, "farmers can't be without soil and water." It is in their best interests to keep this resource healthy. Frankie Hall (2003) of the Florida Farm Bureau Federation says that building better relationships with the community is important to farmers and through this approach they "gain all around." The bad examples of the Dairy Rule imposed on the Lake Okeechobee watershed,[8] and TMDL regulations for the Everglades and resulting lawsuits, also played a role in making people see the value of the proactive approach. In one of the early meetings with farmers the Partnership brought a representative from the Everglades sugar industry who talked about the litigation and fighting between the agricultural interests, the regulatory agencies, and environmentalists, and asked the audience not to make the same mistake.

It is difficult to evaluate the fairness of the distribution of costs and benefits. Some believe that the Partnership is dominated by agricultural interests and is a way to funnel state and

federal funds to farmers. In contrast to the cost-share funding that agricultural operations receive, industrial point sources are expected to cover full costs of water quality improvement measures. Poultry farmer Chuck Edwards (SRWMD 2003b) states that since keeping the river clean affects everybody that uses it, including the tourists, everybody is benefiting from the cost share, not only the farmers, and "society should pay for what they benefit from" (Edwards 2003). He further argues that everybody is responsible for the current state of the water, not only the farmers.

As of May 23, 2003, the Partnership had signed up 39 of the 40 dairies, 131 of the 139 poultry farms, and 207 of the 300 crop farms; 32 dairies, 126 poultry farms, and 82 crop farms in the basin have Management Plans and have started implementing Best Management Practices. The remainder are waiting for technical assistance or funding. The Partnership encourages farmers to sign up in advance for the program, because NRCS uses the long waiting lists to seek funding. The goal of the Middle Suwannee Basin Work Plan (Suwannee River Water Management District 2003) is to achieve 80 percent participation in BMPs for row crop and 100 percent participation for poultry and dairy farmers in the basin by 2008, when the PL-566 program that provides financial assistance to farmers will fully be implemented.

The Reasonable Assurance Documentation (Suwannee River Partnership 2002) cites significant progress toward the goal of clean waters. However, it is too early to forecast the outcome because the implementation of BMPs in all farms will not be completed until 2008, and restoring the Suwannee River Estuary to levels comparable to water quality at the time the rivers were designated as Outstanding Water Bodies in 1979 is to be accomplished by 2028 (Suwannee River Partnership 2002).

Conclusions

The Suwannee partnership has grappled with representation, but stands as a success story in process design and public learning. These successes appear to be due to a series of choices among which incentives, trust, voluntary cooperation, and mutual responsibility figure prominently.

The partnership began under threat of a legislative solution. Without such a threat only the farmers that were forced to do something would participate in partnership programs and they would do so without commitment. Moreover there were significant financial incentives; many doubt that the same number of farmers would have participated otherwise. The proposed reduction of EQIP cost-share funds from covering 75 percent of the costs of implementation to 50 percent is expected to reduce participation, and therefore the effectiveness of the program (Joiner 2003).

While farmers are well represented, environmentalists are not. The prevailing view in the environmental community has been that the Partnership opens a loophole for farmers to avoid pollution limits. This view led to legal challenges some of which are currently pending.

The leadership and commitment of key people such as SRWMD Executive Director Jerry Scarborough and Deputy Commissioner of Agriculture Martha Roberts, as well as the support they were able to secure from people with political influence, such as Commissioner of Agriculture Charles Bronson and state and federal legislators, were crucial. This leadership may also have been critical in building trust among the Partnership participants, and that trust was certainly key to resolving the issues in a collaborative manner. The participation of the Farm Bureau Federation was key to building trust between the farmers and the regulatory agencies.

Scarborough (2003) believes that the Farm Bureau gives credibility to the Water Management District in the eyes of the farmers.

Farmers showed good faith in participating in the program. However, because EPA rules on Impaired Waters do not allow delisting a water body before water quality improves, TMDLs have to be prepared for portions of Middle Suwannee and Santa Fe. This may cause the farmers who think they were promised no regulation to lose faith in the Partnership. The technical members attending a Steering Committee Meeting argued that the strategies used to improve water quality will be the same whether TMDLs are set or not, and this message needs to reach the farmers. Leadership was also sensitive to the need to recognize farmers for their efforts. Commissioner of Agriculture Charles Bronson personally presents the CARES signs to each farmer recognized through the program in a ceremony each year at Representative Stansel's farm. The expected technical support was also very important for the farmers.

The availability of scientific information and its wide distribution through extensive public education and farmer outreach programs aided agreement among the variety of interests. The bad examples of the Everglades and Lake Okeechobee demonstrated the likely outcomes of not collaborating, and participants knew they did not want a similarly lengthy and painful process. Significant doubts among farmers as to the efficacy of BMPs were assuaged by provisions for monitoring and re-evaluation.

Incomplete representation created legitimacy problems, but didn't prevent the parties from thoroughly reviewing the evidence and crafting workable solutions. Whether the absence of environmentalists will ultimately prove to be a serious liability depends on how successfully the Partnership can retain farmers.

Finally, the voluntary nature of the conservation programs is appealing to the farmers. As suggested by Florida Farm Bureau President Carl B. Loop Jr.: "voluntary Best Management Practices work. They work better than practices mandated through government regulation" (Crawford 2002).

Although participants advocate the Partnership as a successful alternative to regulation for addressing water quality problems, the series of lawsuits indicate that not everybody is convinced. The failure to involve environmental groups and provide adequate assurance about the effectiveness of Partnership activities remain the major weaknesses of the Partnership.

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[1] An Outstanding Florida Water is water designated worthy of special protection because of its natural attributes, and is intended to protect existing good water quality with stricter stormwater controls (FDEP, 2003a).

[2] A "water year" is a 12-month period from October 1 through September 30, designated by the calendar year in which it ends. Thus, the year ending September 30, 1999 is called the "1999" water year (U.S. Geological Survey, 2003).

[3] A TMDL is a scientific determination of the maximum amount of a pollutant that a river, lake, or other surface water can tolerate without exceeding surface water standards that protect public health, wildlife, and habitat (FDEP 2001). EPA is responsible for TMDL development for waters that were previously listed in 1998 even if they are not on the 2002 303(d) list unless water quality improvement takes place.

[4] The Program is locally sponsored by the Suwannee and Lafayette Soil and Water Conservation Districts, and helps dairy and poultry farmers.

[5] This project is usually referred to as the "319 project" because it was funded by EPA grants through Section 319 of CWA.

[6] The final order can be found at http://www.dep.state.fl.us/water/tmdl/docs/IWRfinalruling.pdf.

[7] EPA's CAFO rules require farming operations over a certain size to get a NPDES permit. In dairy, these are operations of 700 or more mature cows. In poultry, depending on the type of

operation, operations over 30,000 (liquid manure operations), 82,000 (dry litter layer operations), and 125,000 (other dry litter operations) birds are considered to be CAFOs. Under the new Final Rule dated December 15, 2002, CAFOs must implement nutrient management plans that include appropriate best management practices to protect water quality. The deadline for FDEP to comply with this is April 2006.

[8] § 62-670-500, Fla. Admin. Code, enacted by FDEP in 1987, required all dairies within the watershed and its tributaries to implement BMPs for reducing phosphorus flows into the lake (SFWMD 1997).