

Campaign 2001 Briefing Series

Issue Paper # 7

MEETING VIRGINIA'S ENVIRONMENTAL NEEDS IN TIGHT MONEY TIMES:

PRIVATE/PUBLIC PARTNERING CAN MAKE THE DIFFERENCE

Gregory C. Evans

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Foreword

Environmental issues tend, too often, to be couched in emotional terms with facts and figures relegated to the sidelines.

Sensible environmentalists are, many times, kept out of the media because they don't craft their speeches in emotional terms painting our environment as deteriorating into globs of polluted puddles in front of very eyes. Instead, these true environmentalists look for ways that development and environmental stewardship can work side-by-side.

Greg Evans, author of this Issue Paper for the Thomas Jefferson Institute's Campaign 2001 Briefing Series, has been an environmentalist his entire professional life. He understands government policy. He understands that our economy must continue to grow and prosper. He understands that protecting the environment can be accomplished in ways that make economic and development sense.

The enclosed paper offers creative insight into the environmental issues facing our state of Virginia. Mr. Evans offers creative suggestions to protect our environment in ways that bring government and the private sector into partnerships rather than into warring factions as too often happens today.

This Issue Paper should to be read and considered in combination with Issue Paper #1 in this series written by Dr. David Schnare, a veteran of the Environmental Protection Agency.

Mr. Evans and Dr. Schnare are two environmentalists who bring a functioning reality into their discussions and their commentaries on these important issues.

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Meeting Virginia's Environmental Needs in Tight Money Times

By: Gregory C. Evans

INTRODUCTION

April 2, 1998 – “ Secretary of Natural Resources, John Paul Woodley, Jr., outlined a plan today to improve water quality throughout the Commonwealth. Speaking at the Ninth Annual Environment Virginia Conference Woodley outlined a number of initiatives that will improve Virginia's water quality in the coming years:

- Grants and loans for sewage treatment plant upgrades,
- Grants and loans for agricultural best management practices and nutrient management plans,
- Grants and loans for urban and suburban storm water management,
- Environmental education,
- Vigorous enforcement of state water control laws,
- An awards program to recognize efforts throughout the Commonwealth,
- Cooperation with the federal government,
- Volunteer water quality monitoring,
- Support for environmental management systems,
- And, tax incentives for erosion control, stream buffers and environmentally friendly land improvements.

Woodley, keynote speaker at the conference, noted that the General Assembly had earmarked more than \$57.7 million in the recently passed state budget for water quality projects. ‘Never before has so much state funding been allocated to improving Virginia's water quality,’ Woodley said.”¹

That was three years ago, a time of unprecedented prosperity in the Commonwealth and a time when the Governor and the General Assembly were able to work aggressively together in a bipartisan fashion to address Virginia's pressing environmental challenges by allocating a significant percentage of the state budget surplus to fund needed programs. Secretary Woodley's list is a complete one in terms of addressing water quality concerns; and the needs and price tag gets even larger when other voter driven natural resource priorities such as open space preservation are factored into the equation.

Only three years have transpired since 1998 but those three years have seen a remarkable shift in the economic fortunes of the Commonwealth that has wiped out the surpluses

¹ Secretary Woodley Press Release, April 2, 1998

driving the state's environmental investments as well as significantly reducing funding for other state priority issues. Funding for many of the items on Secretary Woodley's list is now nonexistent but one can argue that the needs are greater than ever. How then can Virginia meet its natural resource priorities over the long-term?

One possible answer is to turn to more public/private partnerships to meet citizen required basic services such as waste water and drinking water treatment. Savings from such privatization could then be reinvested to solve other priority environmental problems with particular emphasis being placed on investments that leverage local and state resources against Federal and private capital so the return for Virginia's citizens is even greater. The end result could be significantly more funding being made available to meet environmental priorities without having to rely nearly as much on tax dollars.

For Virginia's state and local governments, the challenge of forming such partnerships is to find ways to fulfill their responsibility for ensuring that all citizens have access to basic services, while meeting the needs of private investors. This implies a new and often difficult transition for many governments, from provider and manager of basic services, to enabler and regulator. For private firms, the challenge is to be convinced that investing in any particular project offers more attractive returns than other available investment opportunities.

Overcoming these challenges is further complicated by the unfamiliarity and natural suspicion that exists between the public and private sectors. There is a reciprocal mistrust and lack of understanding of each other's interests and needs. Additionally, there is the absence of locally available information on, and experience with, arranging such partnerships; and the underlying legal, political, and institutional obstacles to forming effective public-private relationships.

Despite these constraints, combining the social responsibility, environmental awareness and public accountability of the public sector, with the finance, technology, managerial efficiency and entrepreneurial spirit of the private sector offers a very enticing mix of expertise to put forward in battle against the numerous environmental challenges facing the Commonwealth.

Private construction and operation of public infrastructure offers many opportunities for cost savings, efficiency, and service enhancement. Cost savings are attributable to several advantages the private sector has over the public sector: economies of scale, efficiencies due to competition; specialization and technical expertise; and lack of certain constraints such as in hiring personnel and acquiring equipment.

Private firms can also offer improved quality of services and performance enhancements. Privatization often leads to the addition of new technology and computerization of treatment facilities which are more difficult for a public entity to achieve. Quality and performance upgrades allow many private firms to guarantee compliance with environmental regulations in their contractual agreements.

It is for these reasons that this paper is being written. The objective is to first present several case studies where privatization of water-related basic services was undertaken successfully. These case studies have been edited from actual accounts of the parties involved and are offered as a way for the reader to become more comfortable with the details of public/private partnerships. The second part of the paper will then highlight some Virginia programs that have been very successful in leveraging public funds to encourage private investment to meet Virginia environmental priorities. These partnership type programs are being offered as examples of the types of investments the Commonwealth should continue and expand with the savings it achieves from large-scale privatization of basic services so our citizens can enjoy a cleaner and better Virginia.

CASE STUDIES

1. *Wastewater Treatment Plant Privatization: City of Taunton MA*²

The following is a case history of how a typical municipality implemented a long-term public-private partnership (20 years) for wastewater treatment services. It is illustrative of how a municipality, local labor organizations and the private sector joined forces to provide local citizens with badly needed treatment plant improvements while maintaining a flat sewer rate structure.

The City of Taunton is located in Southeastern Massachusetts, about 40 miles south of Boston and 15 miles east of Providence, Rhode Island. Over five million people live within a 50 mile radius of Taunton. The City's Department of Public Works (DPW) managed the Wastewater Treatment Plant operations contract since the City went to private operations in 1980. The DPW also coordinated capital improvements at the facility and has overseen other expenditures that remained the City's responsibility.

The Taunton wastewater facilities consist of a collection system comprised of more than 70 miles of sewers, 25 waste water pumping stations and a 8.4 MGD advanced wastewater treatment plant. The sewer system contains one combined sewer overflow, which discharges to the Taunton River during wet weather periods. During periods of significant rainfall, the City collection system is subject to heavy infiltration and inflow, severely impacting the quantity of wastewater received at the wastewater treatment plant.

Originally a primary wastewater treatment plant, the Taunton facility was upgraded in 1977 to provide secondary treatment and nitrification. In 1980, after a short term of operation with its own employees, the City contracted with a private firm which provided operation and maintenance services for its wastewater treatment plant and collection system pump stations. The private service provider was also responsible for residuals management and administering the industrial pretreatment program. As part of ongoing

² "Case History – Implementation of Design/Build/Operate Project: The City of Taunton Experience", Paul B. Doran, Jr., P.E., Director of Engineering Alternative Resources, Inc.

contract operations, the City and the private service provider jointly made operating and limited capital improvements to the facilities. These capital improvements were funded by the City to maintain operations.

The Taunton Waste Water Treatment Plant was staffed twenty-four hours per day, seven days per week by 18 operators, technicians and maintenance tradesmen. (Employees at the facility were unionized) Compensation, benefits, work rules, management rights and other employment conditions were contained in a formal agreement between the contract operator and the Union. Staffing levels, shift coverage, and operator certification requirements were subject to review and approval by the Massachusetts Department of Environmental Protection (MADEP). The plant staffing was in compliance with MADEP requirements.

Due to declining performance of worn out equipment, the plant had periodically exceeded the permit limits for five-day biochemical oxygen demand (BOD), total suspended solids (TSS), settleable solids, ammonia nitrogen, total residual chlorine, fecal coliform bacteria, and flow.

These violations prompted the United States Environmental Protection Agency (US EPA) to issue a series of Administrative Orders, requiring the City to correct deficiencies. The Administrative Orders also required the City to conduct traditional facilities planning and prepare detailed scopes of work for an Infiltration and Inflow Reduction Plan, a Combined Sewer Overflow Abatement Plan, and a Wastewater Facilities Capital Improvements Plan.

The study would result in a recommended facilities program to improve, upgrade, and refurbish as necessary all of the larger and older pump stations. After the completion of the facilities planning stage, the City planned to enter into a traditional design/bid/build project delivery method to complete the design and construction of the required wastewater infrastructure improvements set by Massachusetts General Laws.

A private firm approached the City with the concept of using a non-traditional design/build/operate method of project delivery for the needed improvements. City officials decided to abandon the conventional facilities plan approach and take the necessary steps to implement a non-traditional, design/build/operate approach. As a potential means to reduce cost and to satisfy the needs of the wastewater infrastructure and the other municipal needs, the City assessed several options for increasing the role of the existing private wastewater plant contract operator.

Design/build/operate project delivery methods were not allowed under the Massachusetts procurement laws for municipal projects. For this method to be implemented, the City had to draft special legislation that would be sent to the Massachusetts Legislature for approval.

The legislation was written in a manner that assured that a fair and open competitive process would be used to select a design/build/operate service provider, and that the

process was in the spirit of existing state procurement law, while maintaining adequate flexibility and control for the City throughout the procurement process. The legislation was ultimately passed as an outside section of the fiscal year 1996 state budget and signed into law.

Key elements of the Taunton Special Legislation were:

- **Term of Agreement:** 20 years, Renewals: One 5-year extension,
- **SRF:** Project eligible for Massachusetts State Revolving Loan Funding,
- **Selection Criteria:** Developed in RFP; award on technical, qualitative and quantitative merits
- **Selection Criteria:** Most advantageous proposal to the City (may not be lowest in cost)
- **Labor Provisions:** Project Labor Agreement required, salaries and benefits equal or better,
- **Negotiate:** Provision to negotiate with vendor.

In considering an increased private role at its wastewater plant and pump stations, the City desired to satisfy a number of objectives. Each is briefly described below:

Upgrade Treatment Plant and Pump Stations and Improve Performance. The City sought private assistance to identify, finance, permit, design and construct cost effective means to upgrade the treatment plant and pump stations.

Minimize Operation and Maintenance (O&M) Costs . The Proposers were required to preserve all capital investments in the facilities, assure the long-term reliability and efficiency of the treatment plant and pump stations.

Improve NPDES ³Compliance. Over the years, unreliable treatment plant equipment had contributed to the problem of noncompliance with NPDES permit requirements; thus, the Proposers were expected to correct equipment deficiencies and improve compliance with NPDES permit limits. If selected as Service Provider, the Proposer would also assume liability for fines and penalties for NPDES noncompliance.

Limit The City's Economic Exposure for NPDES Noncompliance. The Proposers would be required to provide high quality, uninterrupted, economical operation of the wastewater treatment plant, the collection system pump stations, and solids handling and residuals disposal. In addition, the Proposers would be required to process the City's wastewater in a manner that met all applicable Commonwealth of Massachusetts and Federal laws, regulations, policies and rules.

³ NPDES stands for National Pollution Discharge Elimination System. It is a federal requirement.

Compliance with Administrative Order Requirements. The Proposers would ensure that the requirements of the latest and all future EPA Administrative Orders were satisfied. The City would incorporate the Proposer Capital Improvements Program to satisfy the Administrative Orders.

Rate Impacts. The City's economic objectives were to reduce costs for the City and its customers. It was anticipated that with a long-term contract, annual service fees for private operation would be reduced. Costs for repayment of capital projects were expected to be offset by increased operating efficiency and reduced operating costs, and by more efficient design and construction resulting in reduced costs for capital improvements.

Customer Service Objectives. The Proposers would be expected to plan and schedule operations to deliver wastewater treatment services in a manner which avoided any negative impacts, real or perceived, on the City and its customers including minimizing odor, lighting, noise, and visual impacts on the surrounding neighborhood.

Employment, Career Opportunities and Development. The Proposers would provide employment opportunities to all present plant employees, with compensation (i.e., wages plus benefits), comparable or better than the combined compensation currently being paid by the present service provider and the City. Proper training, as well as career development opportunities were also sought.

Combined Sewer Overflow (CSO) Compliance. The Proposers would be responsible for the necessary Combined Sewer Overflow improvements, which would comply with EPA Nine Minimum Controls in the short term and EPA CSO policy in the long term. The City's preferred solution was the elimination of all CSO discharges.

Economic Development and Water Quality. Plant Capacity was considered a finite resource available to meet the City's water quality and economic development objectives. The Proposers' programs was to assist in promoting conservation of its use to help meet these objectives.

The City did not want to achieve a short-term gain through concession fees, but rather to reduce cost to the City and the rate-payers over the long term.

A Request for Proposals (RFP) was issued in May of 1996 to test "market interest". The City's plan was to provide the most flexible procurement process possible. The City enjoyed an overwhelming response to its RFP. Reasons for this were:

- Clear commitment of the Mayor and Municipal Council to fairly evaluating the approach

- Community needed to address the long term capital problems of the wastewater system
- Support from MADEP and USEPA to explore the options
- Clear City objectives
- Completion of an outreach program to neighborhood groups, labor, media, community and other stakeholders
- The City's communication with the Massachusetts Office of the Inspector General
- A Draft RFP which encouraged early private input
- A final RFP that included a clear decision making process and evaluation criteria
- Availability of extensive design data in digital form
- The use of well qualified, expert consultants during the procurement process.

Each proposal was then evaluated using established evaluation criteria for topics such as:

- Proposal content and approach,
- Compliance with City objectives,
- Compliance with key terms and conditions of contract,
- Risk allocation,
- Qualifications and experience, (Design, design/build, operations, key personnel)
- Business experience,
- Financial capacity,
- Schedule, and
- Employee relations.

A Contract was negotiated with the winning team that responded to the RFP and was signed on August 20, 1998. Construction of the \$10,294,000 capital improvements began on October 19, 1998. The Taunton Special Legislation allowing this form of procurement served as a model for the many Design/Build/Operate projects now underway in the state.

2. Privatization of All Municipal Services: Monmouth, IL⁴

The city of Monmouth recently became the largest Illinois community to contract all public works function with a single private sector provider. Monmouth is a community of 9,500 located in Warren County, approximately 50 miles south of the Quad Cities and 70 miles west of Peoria. The city had contracted its wastewater treatment since 1991. The city council had recently renewed the initial agreement for five years and invited the Contractor to conduct an evaluation of all public works services and submit a recommendation for further public-private opportunities.

Local officials determined several important issues that had to be addressed before entering into a privatization agreement. First, privatization had to involve significant cost savings. The city was experiencing severe financial problems and was considering painful remedies such as service reductions, employee layoffs and tax increases. Private

⁴ "Monmouth Enters Into Cutting-Edge Public-Private Partnership", Robin A. Johnson, Alderman, City of Monmouth

provision of public works services had to save money to gain public support and help address the city's financial difficulties.

Secondly, privatization should increase the quality of services provided by the city. It wasn't enough just to save money, although cost savings were certainly important. Officials were looking for technological upgrades and advanced computerization to provide value-added services to residents.

Finally, the agreement could not negatively impact public employees who were members of a union. Local officials required that the private firms hire all current public employees, lay off no one, recognize and bargain in good faith with the union, and provide comparable pay and benefits. This requirement was intended to ensure that employees were treated fairly and not bear the brunt of the city's cost reduction efforts.

Key Components of Privatization Offer

The contractor's proposal covered water and wastewater services, street maintenance, garbage collection and billing. Cost savings were projected at approximately \$315,000 per year compared to average annual expenditures from 1991-1997. This figure was to be reached when the department reaches its ideal staffing level. In other words, the firm agreed to provide public works services for \$1.3 million compared to the city's cost of approximately \$1.6 million. The Contractor's price was guaranteed during the life of the agreement, with yearly increases based upon changes in the Consumer Price Index (CPI).

Service quality was to be enhanced and guaranteed under the terms of the agreement. The Contractor promised to upgrade the computer system and pave the way for a switch to monthly billing of water and sewer users. This would increase efficiency and help the city's cash flow. In addition, The Contractor would conduct a regular program of preventative maintenance and put together a long-term water and sewer capital replacement program. Performance was to be benchmarked with monthly, quarterly and annual reports provided by the Contractor for all affected services.

The Contractor also agreed to hire all current employees, recognize the union and pay comparable pay and benefits. The current workforce of 28 was to be reduced to 24 only through attrition. No layoffs would occur as a result of the agreement. This provision helped to overcome a course of potential opposition and led to union workers endorsing the agreement before final consideration.

The agreement was passed by the City Council in September 1998 and took effect October 1. Length of the contract is 10 years with a 10-year renewal option. Many service enhancements are being implemented already.

3. Privatization of a Water System: Jersey City, NJ⁵

In 1996, Jersey City entered into a public-private partnership with a private contractor to operate its 80 million-gallon-per-day (MGD) water system. The five-year contract is the largest such agreement in the country.

The Jersey City system serves 239,000 residents and consists of two reservoirs containing a total of 11.3 billion gallons of water. The raw water is treated at an 80-MGD conventional water treatment plant and is carried by a 23-mile aqueduct to Jersey City. The distribution system consists of approximately 275 miles of mains ranging in size from 6 to 60 inches. There are approximately 3,500 fire hydrants and 32,000 meters.

Savings in Jersey City result from selling unused water to neighboring utilities, enhancing bill collection, and downsizing the workforce by 40 percent while allowing workers to move to other city jobs, and from installing a computerized maintenance management system. As a result of this public-private partnership, broken pipes are fixed quickly, beneficial sludge reuse disposal and corrosion control programs have been implemented, and water system facilities have standby power for the first time in years, according to city officials.

Jersey City was saving \$3.5 million per year on its water at the time the story used for this case study was written and they were anticipating savings totaling \$17.5 million by the year 2001.

The operations and maintenance savings coupled with improvements to infrastructure made through the public-private partnership translated into real relief for ratepayers and long-term improvements for the water system.

4. Water/Economic Development/Open Space Partnership: New York⁶

In 1998, led by Governor George E. Pataki, New York State joined with the Conservation Fund, The Trust for Public Land and The Forestland Group (TFG) in a public-private partnership to permanently conserve 144,300 acres of the northwest Adirondack Mountains for public recreation and timber production. One of the principal drivers for the agreement was the fact that it was less expensive to use the watershed as a passive water treatment system for New York City's water treatment needs than it would have been to add to the existing water treatment infrastructure.

The agreement is the largest land conservation transaction in the state's history. Using a combination of land acquisition and conservation easements, the agreement will stimulate

⁵ "Jersey City, NJ is saving \$3.5 billion per year through its public-private water partnership", U.S. Water News Online October 1998

⁶ "PRESERVING VIRGINIA'S HERITAGE: APPROACHES FOR PROTECTING OPEN SPACE", Gregory Evans, August 1999.

the creation of a harvestable hardwood forest to support a forest products industry in the area; conserve river corridors, wetlands, and forests; and provide recreational opportunities on land that has been closed for more than a century. New York will pay \$24.9 million for the conservation easement using funds from a \$1.75 billion Clean Water and Clean Air Bond Act passed by New York voters in 1998.

The agreement was one of the first products of a January 1997 NYC Watershed Memorandum of Agreement (MOA) signed by, Governor Pataki, New York City Mayor Giuliani, the EPA Regional Administrator and dozens of officials from state agencies, and county, town and village governments, as well as representatives from environmental organizations. The Agreement represented a comprehensive effort to protect and preserve the high-quality water supply produced by the watershed of the City of New York while preserving and enhancing the economic vitality and social character of the communities within the watershed. The MOA includes a wide array of programs to be implemented in watershed areas both East and West of the Hudson River. These programs include acquisition of land and easements, implementation of new regulations affecting activities in the watershed, and more than two dozen watershed protection and partnership programs.

VIRGINIA EXAMPLES

1. Conservation Reserve Enhancement Program (CREP)

The CREP program is the result of a partnership agreement created to reduce the amount of sediment and nutrients in runoff from agricultural land and to improve wildlife habitat by encouraging the development of streamside buffers and wetland restoration throughout the Commonwealth. The goal of the program is cleaner water; improved habitat for threatened and endangered species and other wildlife, and eventually, better yields from the bay's fisheries. Virginia's CREP partners are the U.S. Department of Agriculture, the Chesapeake Bay Foundation and Ducks Unlimited. Under CREP, the partners provide funding for targeted watersheds throughout the Commonwealth, including the Chesapeake Bay's basin.

The total cost of the 15-year program is expected to reach \$91 million. Of that amount, \$68 million will come from the federal government and \$23 million from Virginia. The Chesapeake Bay Foundation and Ducks Unlimited will provide \$1.5 million for additional incentives to landowners choosing to install selected conservation measures within the Chesapeake Bay watershed. The program provides for voluntary agreements with farmers to convert cropland and marginal pastureland adjacent to streams to native grasses and trees, in return for rental payments and other incentives.

Statewide, the program targets 35,000 acres, which includes 25,000 acres in the Chesapeake Bay watershed and 10,000 acres in the Southern Rivers basin in southwestern Virginia. The ultimate goal is to reduce nitrogen contaminants in streams

and rivers by nearly 650,000 pounds per year, phosphorus by more than 98,000 pounds and sediment by more than 50,000 tons per year.

CREP offers rental payments to farmers who voluntarily remove agricultural lands from production for 10 or 15 years. Conservation practices in the program cover the planting of grass filter strips and forested buffers adjacent to waterways as well as the installation of wetlands restoration measures. Permanent conservation easements totaling 8,000 acres statewide also are planned. Land enrolled may earn rental rates of up to \$100 per acre in the Chesapeake Bay CREP and up to \$90 per acre in the Southern Rivers CREP. Participants may also receive 75 to 100 percent of the cost of installing eligible conservation practices through the Water Quality Improvement Fund when funding is available.

CREP is an element of a larger federal effort, the Conservation Reserve Program, which was established in the 1985 Farm Bill. That program has enrolled about 70,000 acres in Virginia to date. Virginia's total CREP package has two components. The Chesapeake Bay Watersheds CREP is funded at \$65.4 million, of which \$49.4 million is federally funded and \$16 million is state funded. The other component, the Southern Rivers Watersheds CREP, is funded at \$25.5 million. This includes \$18.8 million in federal funds and \$6.7 million in state money. Landowners also will cover about 25 percent of costs for installing the conservation practices.

2. Water Quality Improvement Fund – Private/Public Partnerships

The Water Quality Improvement Fund was created as a cooperative grant program under the Authority of the Virginia Water Quality Improvement Act of 1997. The law was enacted to restore and improve the quality of state waters and to protect them from impairment and destruction for the benefit of current and future citizens of the Commonwealth.⁷ The purpose of the Water Quality Improvement Fund (WQIF) was to distribute responsibility among state and local governments and individuals for the cleanup of Virginia's waterways envisioned by the Act.

The funding formula for the WQIF was twenty percent of the surplus dollars available over state budget requirements. This created a \$57 million dollar pool in 1998 from which the state could draw to address environmental priorities and encourage private sector investment in environmental best management practices.

By leveraging a good percentage of the dollars available through partnership agreements with landowners to use best management practices to control runoff from their lands and in public education and technical programs to promote environmental stewardship, Virginia was able to meet state and federal regulatory requirements for controlling point-source pollution going into its waterways and it was beginning to make substantial progress in developing and implementing strategies for controlling non-point source pollution.

⁷ Virginia Water Quality Improvement Act of 1997

Ten municipal wastewater treatment plant owners in the James, York, and Rappahannock River basins upgraded their facilities with nutrient removal technology capabilities and five others had indicated their interest in constructing nutrient removal systems.

The WQIF has provided the seed capital required to stimulate private sector investment in areas that achieve a public good. However, if continued private sector investment is to be encouraged, a multi-year funding capability is necessary and that means finding another source of funding that is more dependable than relying only on state surplus situations. For example, there were no funds included in the state budget for FY 2002 for cost sharing for the installation of agricultural best management practices. This is in spite of the fact that:

- To support its obligations under the Chesapeake Bay 2000 Agreement, Virginia needs to begin implementation of the five strategy plans for each of its major watersheds. DCR and other organizations have estimated this cost at \$22.7 million for each of the next ten fiscal years.
- Similar needs for agricultural BMPs are required in the Southern Rivers Watersheds, which lie outside of the Chesapeake Bay. The same groups project that \$11 million is needed each year to protect water quality in these Watersheds.

Savings achieved from privatizing other services could be applied to the WQIF.

3. Volunteer Water Quality Monitoring⁸ - Investing in Train the Trainer Programs

Many of Virginia's citizens are concerned with the quality of the Commonwealth's streams, lakes, rivers and estuaries and they have been volunteering to provide general information about water quality within the Commonwealth. This has allowed Virginia to work with these citizens to provide manpower to implement solutions to water quality problems.

The Citizen Monitoring Support Network was developed by the state to assist citizen groups interested in water quality. The program is a cooperative effort between agencies of the Secretary of Natural Resources, citizen organizations, federal water quality partners and others interested in cleaner streams, lakes, and rivers to provide usable environmental information to state water quality agencies.

The basis for the program comes from two agreements signed by the Department of Conservation and Recreation, the Department of Environmental Quality, and the Virginia Division of the Izaak Walton League of America, Virginia Save Our Streams Program. These agreements lay out the strategy for developing a citizen monitoring program in full cooperation with interested entities.

⁸ Virginia Department of Conservation public information

This program is a very good example of how one can invest limited state financial resources in “train the trainer” types of programs to achieve a public good at a fraction of the cost associated with hiring full time public employees. To illustrate the cost/benefit calculation consider that the Governor recently announced grants totaling \$65,000 to 23 organizations aimed at preserving water quality in Virginia's waterways.⁹ The grants will be used to recruit and train volunteers to collect water data and to educate the public about the importance of water quality. When one considers that the same \$65,000 would finance one \$45,000 full-time government employee when all benefits are factored in, the value of leveraging is obvious. The table on the next page illustrates what investing in a good “train the trainer” type of program can deliver.

4. Department of Forestry Contracting Practices

The Department of Forestry (DOF) has been a leader in private sector outreach. They maintain programmatic quality control and assurance, but organize projects such as tree planting, aerial spraying and pre-commercial thinning into packages for private contracting. Tract information such as location, acreage, sensitive areas and landowner contact information is bundled into packages and bids are solicited from the private sector for delivery. This approach is business friendly in that the data provided is the necessary data required to evaluate the scope of work and submit a bid. The landowner benefits by enjoying economy of scale operations that result in direct financial savings and the state benefits in that they maintain quality control and accomplish their responsibilities with significantly reduced personnel cost. In addition, the DOF periodically conducts internal reviews to determine if private sector capacity has increased or could be encouraged to address new program elements that had previously been provided by their agency. Prior to new staffing, agencies should be required to conduct a similar audit to identify those activities that are routine in nature that could be contracted out while assuring the state's responsibilities are satisfied.

⁹ Grants for Water Quality Improvement, Governor's Press Release May 25, 2001

Table One
2001 Water Quality Improvement Grants

Assateague Coastal Trust \$3,000 Recruit and train volunteers to establish a water quality monitoring program in Chincoteague Bay.

Chesterfield County \$3,000 Continue Stream Watcher volunteer water quality monitoring program in Chesterfield County.

Clean Virginia Waterways \$3,000 Continue to collect volunteer water quality data and allow additional monitoring for toxics in Appomattox River watershed.

Culpeper SWCD \$3,000 Recruit and train volunteers to establish a comprehensive water quality monitoring program in upper Rappahannock River watershed.

Elliott Creek Watershed Protection Council \$400 Use volunteers to collect water quality data in Elliott Creek Watershed.

Friends of Chesterfield's Riverfront \$3,000 Recruit volunteers to implement a chemical water quality monitoring program in Chesterfield County.

Friends of Claytor Lake \$3,000 Continue to collect baseline water quality data in Claytor Lake.

Friends of the North Fork Shenandoah River \$2,945 Recruit volunteers to implement a water quality monitoring program on Smith Creek.

Friends of the South Fork Holston River \$2,810 Recruit and train volunteers to establish a water quality monitoring program in South Fork of the Holston River.

Headwaters Association \$3,000 Use volunteers to collect baseline data of fecal coliform bacteria in Upper Levisa River watershed.

Hoffler Creek Wildlife Foundation Inc. \$1,725 Continue collecting volunteer water quality data in Hoffler Creek watershed.

John Marshall SWCD \$3,000 Recruit volunteers and develop a water quality monitoring program in Upper Rappahannock River watershed.

J. R. Horsley SWCD \$3,000 Continue collecting volunteer water quality data in Nottoway River watershed, along with educating public about water quality issues.

Lake Anna Civic Association \$3,000 Recruit volunteers and develop water quality monitoring program on Lake Anna.

Loudoun Wildlife Conservancy \$2,335 Expand existing volunteer water quality monitoring program in Loudoun County.

New River SWCD \$3,000 Use students in Carroll County to collect water quality data in Little Reed Island watershed.

Northern Virginia SWCD \$2,811 Support training of volunteers to expand water quality monitoring Program in Fairfax County.

Page County Water Quality Advisory Committee \$3,000 Use volunteers to collect water quality data in Hawksbill Watershed, along with educating public about water quality issues.

Piedmont Region TMDL Initiative \$2,599 Engage volunteers in conducting stream walks in Appomattox River watershed.

Reedy Creek Coalition \$3,000 Assess an inexpensive method for citizen monitors to measure fecal coliform levels and conduct training workshops.

The River Foundation (Virginia's Explore Park) \$3,000 Support recruitment and training of volunteers to expand Save Our Streams water quality monitoring program in Roanoke River watershed.

Rockbridge Area Conservation Council \$3,000 Continue collecting volunteer water quality data in Maury River Watershed and educate public about water quality issues.

Virginia Tech Museum of Natural History Save Our Streams Program \$3,000 Support recruitment and training of volunteers to expand Save Our Streams water quality monitoring program in New River watershed.

5. *Virginia Land Conservation Foundation/Virginia Outdoors Foundation*

In 1999, the General Assembly and the Governor established the Virginia Land Conservation Foundation (VLCF) to help fund the protection of Virginia's open space. Funds from the Foundation are used to establish permanent conservation easements and to purchase open spaces and parklands, lands of historic or cultural significance, farmlands and forests, and natural areas. State agencies, local governments, public bodies and registered (tax-exempt) nonprofit groups are eligible to receive matching grants from the Foundation. The Virginia Outdoors Foundation (VOF) was created by the General Assembly in 1966. The VOF's purpose is to promote the preservation of open space lands and to encourage private gifts of money, securities, land or other property to preserve the natural, scenic, historic, open-space and recreational areas of the Commonwealth." Both Foundations are run by appointed Boards.

In Virginia, open space has traditionally been preserved through governmental actions including zoning, ordinance regulation and fee simple acquisition of federal, state and local parklands; and through voluntary private donations and acquisition of interests in land by private non-profit organizations. Governmental action regarding land use is traditionally reserved to localities.

Voluntary land conservation efforts are being undertaken in the Commonwealth by national, state and local non-profit organizations. These approaches have been very successful in some areas of Virginia, particularly in the eastern region. National organizations like the Nature Conservancy and the Conservation Fund have been very active there in protecting thousands of acres, through purchases, that are now state or federally owned such as battlefields and national wildlife refuges. Other regional land trusts like the Piedmont Environmental Council, the Valley Conservation Council, the Williamsburg Conservancy and the Western Land Trust have also been very effective. Regional land trusts normally work with landowners to preserve open space through zoning and acquisition of conservation easements.

Land trusts represent an innovative revolution in conservation based on the market principle: *If you want to have control over something, own it.* The national groups identify land they believe is important for conservation—land with scenic views, wetlands, habitat for rare species, and so on—and they buy it. However, the value of land in some areas of the Commonwealth, particularly in the increasingly urban centers of Northern Virginia, Richmond, and the Hampton Roads area, is so high that national land trusts with their limited funding, are often unable to compete with the return a landowner can receive in the market. In addition, regional land trusts rarely have the financial resources that are required to purchase land.

The VLCF and the VOF have filled a necessary gap by providing the financial certainty required to negotiate in good faith with private land owners. While the VLCF has the ability to make outright purchases, both Boards have focused their investment strategy on acquiring easements thereby leveraging their capital, combining it with private and other government investment and using it as seed capital. In its last round of financial actions,

the VLCF was able to preserve/acquire close to 3,200 acres for parks, historic preservation and open space for approximately \$3.6 million. This comes out to an average of only \$1,139 per acre and represents a significant return on investment of taxpayer dollars.

CONCLUSION

With local and state government facing issues of un-funded mandates, property tax restrictions, decaying infrastructures and citizen opposition to tax increases many officials are turning to privatization as an alternate service delivery method. While the benefits of privatization usually revolve around financial issues, contracting with private firms also offers economic development advantages for local governments. This is return, could reduce some of the financial pressure on the state government, freeing up previously obligated funds. Natural Resource concerns in the Commonwealth are often required to take a back seat to other state priorities. It has been the objective of this paper to propose ways to expand the financial pie through new approaches so the funding will be there for environmental protection and preservation without sacrificing equally important priorities and without creating new burdens for the taxpayer.

About the Author/Editor

Gregory Evans has been dealing with environmental management issues, both professionally and in public capacities at the national level and in Virginia since 1978. He is Vice President – Federal R&D Programs for The Retec Consulting Group, an environmental consulting firm with offices throughout the United States. He also served under President George Bush at the U.S. Environmental Protection Agency and the U.S. Department of Energy, and under President Reagan at the White House.

Mr. Evans is actively involved in protecting Virginia's natural resources. He is currently serving his second term as an elected Director of the Northern Virginia Soil & Water Conservation District and he chairs the Potomac Watershed Roundtable, a regional government/citizen forum dealing with water quality and land use issues whose members are drawn from all the cities and counties in the Virginia portion of the Potomac River watershed. Mr. Evans was elected in 2000 by Conservation District Directors statewide as Second Vice President of the Virginia Association of Soil & Water Conservation Districts and also co-chairs the Legislative Committee for the Association. He was appointed last year by the Governor to the Virginia Land Conservation Foundation Board of Trustees and served on a state Cap Strategy Committee charged with developing a plan for maintaining at reduced levels, harmful nutrients flowing into the Chesapeake Bay. Other work includes serving as Vice Chair of the Potomac Council, a regional Conservation District coordinating body; as a member of EPA's National Drinking Water Advisory Council Benefits Working Group, the Board of Directors of the Virginia Conservation Association Educational Endowment Foundation, the Steering Committees for the Governor's Operation Spruce-Up and Fall Rivers Renaissance Waterway Clean-up Campaigns, the Fairfax County Tree Commission and as Chairman of the Fairfax County Park Authority Board.

Mr. Evans holds an MBA from The George Washington University and a B.S. from Bryant College.