



ELRC WHITE PAPER

State Drinking Water Supply Protection Land Acquisition Grant Programs: Challenges and Opportunities

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Introduction

Reporting on the results of a major 1991 American Water Works Association (AWWA) Research Foundation watershed management study, the *AWWA Journal* declared that, “The most effective way to ensure long-term protection of water supplies is through land ownership.” A 2002 study conducted by AWWA and the Trust for Public Land (TPL) provided further evidence in support of AWWA’s original statement. The study, featured in AWWA’s May 2004 edition of *Opflow*, found that on average, for every 10 percent increase in forest cover in the source area (up to 60 percent forest cover), treatment and chemical costs decreased by approximately 20 percent. “A growing understanding of the role that forests and natural lands play in filtering pollutants and maintaining water quality has led many municipalities and water suppliers, particularly those in growing communities, to consider land protection as part of a multiple-barrier approach to providing safe drinking water,” conclude the authors. The Trust for Public Land (TPL) and the American Water Works Association (AWWA) also co-published the second edition of “Protecting the Source” in 2004. “For 60 years, the safety of most of America’s drinking water has been dependent on technology,” acknowledge Will Rogers and Jack Hoffbuhr. “Today, water suppliers are revisiting the idea that watershed protection - the first barrier against contamination—needs to, once again, be an integral part of their water quality protection strategy.” Water suppliers, government officials, and non-profit organizations aren’t the only ones who believe land acquisition is an important tool for protecting drinking water supply sources. Public opinion polls conducted by TPL in 2003 found that protecting drinking water quality was considered the most important reason to permanently protect land, rating higher than wildlife protection or recreational opportunities.

Fifteen years after AWWA’s initial declaration, many communities are facing increased development pressures, the loss of undeveloped land, and new threats to drinking water supply sources. The passage of time has not made AWWA’s initial statement any less true but potentially more difficult to realize. Skyrocketing land prices in many places have made it more difficult for local and state agencies, water suppliers, and non-profit organizations to acquire land which is most critical to protecting a water supply. The federal Source Water Assessment and Protection Program and Drinking Water State Revolving Fund have provided valuable and necessary resources at the state and local level that have advanced source water protection efforts in many communities. However, these resources alone are not enough to fully realize many state’s source water protection goals. Although loans for land acquisition can be provided through the Drinking Water State Revolving Fund (DWSRF), it is not a required use of these funds. In

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Formed in 1983, the Eastern Lands Resource Council (ELRC) is comprised of highly trained public land professionals primarily from the eastern United States. The ELRC provides a collaborative and unique forum for enhancing land stewardship and conservation, and promotes sound policies and practices among those involved in the management and administration of public lands, records and natural resources.

many states, including Massachusetts and Connecticut, loans for land acquisition are not available through the Drinking Water State Revolving Fund.

State-financed grant programs that provide funding at the local level to acquire land within a source water protection area may offer a unique and important opportunity to protect drinking water supply sources. In addition to providing monetary support for land acquisition, grant programs also facilitate partnerships between local government entities and non-profit organizations and leverage additional funds from local and private sources. Unlike more traditional state agency land acquisition programs where the agency ultimately owns the land or an interest in the land, grant programs can also minimize future management and operating costs for state agencies, by shifting primary ownership, care, and control of the land to the grant recipient. This paper will examine the strengths and challenges associated with three state-financed grant programs that help communities acquire critical water supply lands, as well as offer suggestions and considerations for other states that may be interested in developing a drinking water supply protection grant program of their own.

Grant Program Overview

New Hampshire: Water Supply Land Grant Program

Program History: Established by the New Hampshire legislature in June 2000 (RSA 486-A), the Water Supply Land Grant Program provides grant funds for the acquisition of land or conservation easements to assist in the protection of a community drinking water supply. The need for the program was documented through research funded by the New Hampshire Department of Environmental Services (DES) and performed by the Society for the Protection of New Hampshire Forests (SPNHF). This research concluded that only 11 percent of the lands through which water flows to sources of public drinking water were protected via ownership or conservation easement, and that 39 percent of community water systems did not even own the sanitary protective radius (75' - 400') around their wells.²

Program Design: The Water Supply Land Grant Program is a competitive grant program which provides recipients up to 25 percent of the funds needed to permanently protect critical water supply lands. Municipalities and non-profit organizations having water supply as a principal mission are eligible to apply for funding. Grant recipients are responsible for providing 75 percent of the total project cost in matching funds. Recipients can use federal, local, or private funds; donated land or easements that also lie within the source water protection area; or donated transaction expenses to meet this requirement. No single project may receive greater than 30 percent of the available funding during a specific grant application cycle. Land proposed for protection must be acquired from a willing seller, be currently unprotected, and be within a designated source water protection area serving a community water system or school.³ One grant round is offered per fiscal year although the beginning of the round has varied from year to year. The grant round started in the spring during fiscal year 2005, in the fall during fiscal year 2006, and will start in the fall for fiscal year 2007. Although it is not required, applicants are encouraged to submit an eligibility application prior to submitting a full application for funding.

This program is administered by the Department of Environmental Services (DES), the state's water supply regulatory agency. Support for DES staff comes from funding available through the Federal Safe Drinking Water Act, which makes it possible for all state funding provided for the Water Supply Land Grant Program to be used solely for the purpose of land protection.

² The SPNHF study focused only on certain areas near public water supply wells and surface water intakes; the figures cited here do not take into account public water supply watersheds in their entirety.

³ The source water protection area is defined as the wellhead protection area for groundwater sources or land within the watershed and within five miles of the intake for surface water sources.

Project Selection: Applications are rated and ranked according to specific evaluation criteria and point values outlined in the administrative rules for this program (Env-Ws 394). Approximately 83% of the available points are dedicated to criteria which assess the project's importance in protecting critical water supply lands. These criteria include the proximity of the parcel to the well or surface water intake, the total source water area that will be protected with the completion of the acquisition, the size (*i.e.* number of people served) of the water system, and the size (*i.e.* acres) of the project itself. The remaining 17% of the points are reserved for other characteristics such as the project's natural resource, cultural, and historical attributes, the percentage of match provided by the applicant above the required 75 percent, and the socioeconomic standing of the community served by the water supplier. The highest ranked projects for each grant application cycle are selected for full funding until all available funding for that cycle is depleted.

Project Requirements: Once a project receives approval for funding from the governor and the governor's executive council, the applicant must submit all documentation necessary for closing before the grant is awarded including: a property survey; an appraisal; a title examination; an environmental site assessment (if requested by DES); a stewardship plan and baseline documentation; documentation to support the match provided by the grant recipient, and a finalized conservation easement or deed. The deed or conservation easement must state that the land will be maintained as open space. Forestry and agriculture are allowed on these protected lands provided that best management practices are employed. Passive, dispersed recreation is also allowed on the property although not required. The grant recipient is responsible for monitoring the land and submitting annual monitoring reports to DES program staff. Grant recipients are expected to submit the required documentation within one year of funding approval. Once all of the necessary documentation has been submitted and approved by DES, grant funding is released to the grant recipient.

Program Funding and Project History: During the first three years of the program (July 2000- June 2003), the New Hampshire legislature appropriated \$1.5 million annually to the Water Supply Land Grant Program from the state's general operating budget. Sixteen different projects that protected 3,325 acres of land were funded during this time. Unfortunately, budgetary concerns from July 2003 to January 2005 resulted in only one grant round and one funded project during this time period. To date, the Water Supply Land Grant Program has spent \$3,754,754 and protected 3,364 acres of land. The state's investment has been matched with \$16,495,008 in non-state funds and in-kind contributions.

Since the beginning of the program, demand for grant funding has consistently exceeded the amount of funding available. For example, \$587,300 was available in the most recent grant round and DES received eleven applications with a total funding request of \$2,622,452.

Massachusetts: Drinking Water Supply Protection Grant Program

Program History: Created as a new initiative under former Executive Office of Environmental Affairs (EOEA) Secretary Ellen Roy Herzfelder in 2004, the Drinking Water Supply Protection Program provides grant funds for the acquisition of land or interests in land for the purposes of protecting a current or future drinking water supply source. Currently, only 20 percent of the total Zone II land and 44 percent of the Zone B land in the Commonwealth is permanently protected, with approximately 80,000 acres of unprotected, undeveloped Zone II land located within one-half mile of a public wellhead.⁴ Due to state budget shortfalls, funding for traditional land acquisition programs within state agencies decreased in 2003. State-funded grant programs, like the Drinking Water Supply Protection program, became a

⁴ Zone II refers to the area of an aquifer that contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated (180 days of pumping at approved yield, with no recharge from precipitation). Zone B refers to the land area within one-half mile of the upper boundary of a Class A surface water source (defined in 314 CMR 4.05(3)(a)) or the edge of the watershed, whichever is less.

significant and effective way to protect important land, while using a smaller state investment and lowering future management costs and responsibility for the state. Grant programs for land conservation also support and promote the state's Smart Growth initiative, by awarding additional points during grant application evaluation to the municipalities that have implemented Smart Growth consistent land use practices.

Program Design: The Drinking Water Supply Protection Program is a competitive grant program administered by the Executive Office of Environmental Affairs (EOEA) in cooperation with the Department of Environmental Protection (DEP), which provides recipients up to 50 percent of the funds needed to permanently protect critical water supply lands. Municipalities and other entities recognized by a legislative act of the Commonwealth of Massachusetts, which were created to provide drinking water infrastructure and services to the public, are eligible to apply.⁵ All applicants must have an approved Source Water Assessment and Protection report (SWAP) on file with the DEP to be eligible for funding. Unlike the New Hampshire program, the Drinking Water Supply Protection Program is a reimbursement grant program. Grant recipients must expend 100 percent of the costs associated with an approved project and complete the project before grant funding is released to the recipient. The program offers grant recipients reimbursement up to 50 percent of the total project cost, including associated due diligence costs such as appraisals and title work. Individual grant awards may not exceed \$500,000. Grant recipients must show the use of funds from non-state sources equal to two times the amount of funds sought for reimbursement.⁶ Land proposed for protection must be currently unprotected and may be purchased from a willing seller or acquired through an eminent domain taking. One grant round was offered in fiscal year 2005, and two grant rounds in fiscal year 2006 due to a smaller than expected number of funding requests received during the first application cycle. The beginning of the grant round and award announcement date has varied in the first two years of this program. During fiscal year 2005, proposals were solicited from late September to early December and grant awards were announced in mid-February. During the first grant round in fiscal year 2006, proposals were solicited from late June to late September and grant awards were announced in late November. During the second grant round in fiscal year 2006, proposals were solicited from late October to mid-January and grant awards were announced at the beginning of March.

Project Selection: Applications are rated and ranked according to evaluation criteria outlined in the annual grant Request for Response. Applications are evaluated by a review team consisting of staff from EOEA and DEP. In order to encourage municipalities to implement Smart Growth consistent land use practices, Governor Romney launched an incentive policy known as Commonwealth Capital. Discretionary grant programs, including the Drinking Water Supply Protection Program, must include a Commonwealth Capital Score in their rating systems. The Commonwealth Capital score accounted for 20 percent of the total project score in the fiscal year 2005 grant cycle, and 30 percent of the score in the fiscal year 2006 cycle. During the fiscal year 2005 grant round, approximately 29 percent of the available points were dedicated to criteria which assessed the project's importance in protecting the water supply. Fifty-one percent of the possible points were dedicated to other project characteristics such as the socioeconomic standing of the community served by the water supplier; the portion of the total project cost provided by the applicant above the required 50 percent; the ability of the applicant to maintain and monitor the property in the future; the project's natural resource, cultural, and historical attributes; and the project's compatibility with other state, regional, and local conservation and water supply management plans. In fiscal year 2006, the point distribution was shifted so that 48 percent of the available points were dedicated to criteria which assessed the project's importance in protecting the water supply, and 22

⁵ Such entities include, but are not limited to, Water Districts and Fire Districts. The Massachusetts Water Resources Authority and state agencies (e.g. the Department of Conservation and Recreation) are not eligible for funding through this grant program.

⁶ Non-state funding sources include, but are not limited to, the appraised value of an eligible land or conservation easement donation, federal Community Development Block Grants or Revenue Sharing, additional grants from private or non-profit foundations, cash contributions from local land trusts, community groups or individuals, and Community Preservation Act funds expended on the project.

percent of the possible points were dedicated to other project characteristics. The highest ranked projects for each grant application cycle are selected for full funding until all available funding for that cycle is depleted.

The grant amount awarded is based largely upon the approved appraised value of the property. One contracted appraisal is required for properties with an estimated value of \$500,000 or less and two appraisals for properties with an estimated value in excess of \$500,000. Appraisals must be dated no later than one year prior to the application submission deadline. Applications submitted without the required appraisals are not eligible for funding.

Project Requirements: All lands or interests in land acquired under this program must be open to the general public for appropriate passive recreation and permanently protected open space for the purposes of water supply protection under Article 97 of the Amendments to the Constitution of the Commonwealth of Massachusetts.⁷ Only facilities needed to extract water from the source (*e.g.* a well head or pumping station) are allowed on properties acquired through this program. Executive Office of Environmental Affairs approval is required before any portion of the acquired property or interest can be transferred to a different ownership or control, or before the property can be changed to a different use. Grant recipients must complete approved projects on or before the end of the fiscal year in which the grant was awarded to be eligible for reimbursement.

Program Funding and Project History: In fiscal year 2005, the Drinking Water Supply Protection program received \$3.1 million in funding from the 2002 Environmental Bond. Twelve applications were received with a total funding request of \$3,222,650. Ten projects, totaling \$3,022,650, were selected for grant funding. Eight of the ten grant recipients successfully completed their projects by the end of the fiscal year, resulting in the protection of 590 acres of land with a final state investment of \$1,839,509. This state investment was matched with \$14,905,802 in additional funds.

In fiscal year 2006, the Drinking Water Supply Protection program received \$3 million in bond funding. Six applications were received with a total funding request of \$1,234,833. One project was determined to be ineligible and four projects, totaling \$665,130, were selected for grant funding. Due to a lower than expected response to the grant announcement, EOEА reissued the grant request for response and accepted a second, separate set of applications. In the second round, eight applications were received with a total funding request of \$1,866,594. All eight projects were selected for funding in the second round; bringing the total number of projects selected for funding in fiscal year 2006 to 12 with a total grant value of \$2,531,724. Grant recipients have until June 30, 2006 to complete their approved projects. Three hundred and eight acres of water supply land will be protected if all 12 projects are successfully completed.

Connecticut: Open Space and Watershed Land Acquisition Grant Program

Program History: Established by the Connecticut General Assembly in 1998 (C.G.S. Section 7-131d to 7-131k, inclusive), the Open Space and Watershed Land Acquisition Grant Program provides grant funds for the acquisition of land or interests in land for open space preservation. Connecticut has a goal of preserving 21 percent of the land base as open space by the year 2023 in state, municipal, private non-

⁷ In November 1972 the citizens of Massachusetts approved at the ballot Article 97, which became the 97th Amendment to the State Constitution. The amendment reads: "The people shall have the right to clean air and water, freedom from excessive and unnecessary noise, and the natural, scenic, historic, and esthetic qualities of their environment; and the protection of the people in their right to the conservation, development and utilization of the agricultural, mineral, forest, water, air and other natural resources is hereby declared to be a public purpose. Lands and easements taken or acquired for Article 97 shall not be used for other purposes or otherwise disposed of except by laws enacted by a two thirds vote of the Massachusetts general court."

profit, water utility, and federal ownerships. The state has already committed \$69.5 million in funding and protected 19,257 acres through this grant program in an ongoing effort to realize this goal.

Program Design: The Open Space and Watershed Land Acquisition Grant Program is a competitive grant program administered by the Connecticut Department of Environmental Protection, the state's water supply regulatory agency. This grant program provides financial assistance to municipalities and nonprofit land conservation organizations to acquire land for open space and to water companies to acquire land to be classified as Class I or Class II water supply property.⁸ Unlike the New Hampshire and Massachusetts programs, grants are not only for the protection of drinking water supply sources. Grants may be used for the purchase of land that is: 1) valuable for recreation, forestry, fishing, conservation of wildlife or natural resources; 2) a prime natural feature of the state's landscape; 3) habitat for native plant or animal species listed as threatened, endangered or of special concern; 4) a relatively undisturbed outstanding example of a native ecological community which is uncommon; 5) important for enhancing and conserving water quality; 6) valuable for preserving local agricultural heritage; or 7) eligible to be classified as Class I or Class II watershed land. Municipalities may receive grant funding up to 65 percent of the fair market value for Class I or Class II water supply properties, while water companies may receive up to 40 percent of the fair market value for water supply properties. Non-profit land conservation organizations may receive funding up to 50 percent of the fair market value for properties which provide watershed protection and 65 percent of the fair market value if the property proposed for protection lies within a distressed or targeted investment community.⁹ Land proposed for protection must be from a willing seller. One grant round is currently offered per fiscal year. Proposals are solicited during a defined period of time, presently the spring beginning in February or March and ending in May or June. Proposals are reviewed during the summer and awards made generally in the late fall after the advisory board has made their funding recommendations.

Project Selection: Applications are rated and ranked using a scoring system which incorporates the elements of primary concern as they relate to the acquisition of open space as defined in the general statute (C.G.S. 7-131c-k). Applications are evaluated by a review team consisting of personnel from the various resource management divisions of the Department of Environmental Protection, Department of Health, and the Department of Agriculture. Unlike the New Hampshire and Massachusetts programs, only 6 percent of the overall project evaluation points are dedicated to criteria which specifically assess the ability of a project to protect water supply land. This, however, is not unexpected given the depth and breadth of this land acquisition grant program. The selection of applications for funding is based on the scores and comments provided by the review team in addition to considerations such as: cost; fulfillment of a resource need; geographic distribution; proximity to urban areas or areas with a deficiency of public open space; compatibility with the State Plan of Conservation and Development and other state environmental plans, policies, goals and objectives; and proximity to other protected open space. Typically, grant award amounts for individual projects within a particular grant round are adjusted so that funding can be provided to all qualified and high-value projects.

The grant amount awarded is based upon the approved appraised value of the property. One appraisal is required for properties with an estimated value of \$100,000 or less and two appraisals for properties with an estimated value in excess of \$100,000. All appraisals must be in a self-contained format, as defined by USPAP, and must comply with Federal appraisal standards in accordance with the Uniform Appraisal Standards for Federal Land Acquisition (Yellow Book). The effective date of the appraisals must be within six months of the application deadline. Applications submitted without the required appraisals are

⁸ Class I water supply properties are defined as properties directly adjacent to reservoirs and critical feeder streams. Class II water supply properties are defined as properties within 150 feet of a reservoir or water supply.

⁹ A "distressed municipality" means any municipality in the state which, according to the United States Department of Housing and Urban Development meets the necessary number of quantitative physical and economic distress thresholds which are then applicable for eligibility for the urban development action grant program under the Housing and Community Development Act of 1977, as amended, or any town within which is located in an unconsolidated city or borough which meets such distress thresholds.

subject a 5 percent reduction of the grant amount for appraisals received 1 to 15 days after the deadline, and a 15 percent reduction for appraisals received 16 to 30 days after the deadline. Applications that do not have appraisals 30 days after the deadline are not eligible to receive a grant.

Project Requirements: All lands or interests in land acquired under this program must be preserved in perpetuity predominantly in their natural scenic and open condition for the protection of natural resources while allowing for recreation consistent with such protection and, for lands acquired by water companies, allowing for the improvements necessary for the protection or provision of potable water. A permanent conservation easement must be granted to the state to ensure that the property remains in a natural and open condition for the conservation, open space, agriculture, or water supply purpose for which it was acquired. The easement includes the requirement that the property be made available to the general public for appropriate recreational purposes. Selected projects are expected, but not required, to be acquired within one year after funding approval. On average, projects typically take 8 to 16 months after funding approval to be acquired.

Program Funding and Project History: Funding for this grant program is determined each year by the Connecticut General Assembly's Bonding Committee. The average annual allocation for this program is \$9 million although annual allocations for this program have been as low as \$4.5 million in fiscal year 2002, and as high as \$12 million in fiscal years 2000, 2001, and 2002. On average, 15 to 20 percent of the applications received are for projects which primarily focus on drinking water supply source protection and an estimated 10 to 15 percent of the 19,257 acres protected through this grant program can be classified Class I or Class II watershed land.

Requests for grant funding typically exceeded the amount of funding available, although grant award amounts are often adjusted to provide funding to all worthwhile projects. For example, in spring 2005, the program received 35 applications for funding. Four applications were rejected because they were insufficient or incomplete and two additional applications were rejected because too many applications had been received from those particular towns. If the highest ranked projects received the maximum amount of funding allowed, only 19 projects would have been funded, which would have protected 1,627 acres. Instead, individual grant awards were capped at \$500,000 and all funding requests were reduced by 10 percent. As a result, all 29 eligible projects received funding, which will ultimately protect 2,007 acres.

Program Strengths and Challenges

Scope

One of the most striking differences between the grant program in Connecticut and the programs in New Hampshire and Massachusetts is the scope of the Connecticut program. Connecticut offers funding for a larger array of open space protection projects and makes funding available to a larger variety of entities (e.g. municipalities, water suppliers, and non-profit organizations) than either the New Hampshire or Massachusetts programs.¹⁰ One of the advantages of a broad-based program is a larger application pool, which ensures a higher degree of competition among projects and confidence that the most well-rounded projects are selected for funding. However, if the goal is to protect water supply lands specifically, then a broad-based program in which all applicants compete for the same funding and are evaluated using the

¹⁰ In addition to the Drinking Water Supply Protection program, Massachusetts also offers state-funded grants to municipalities for open space conservation and recreation (Self-Help Program), and for park acquisition and construction (Urban Self-Help Program). Each program has a maximum grant award value of \$500,000. Massachusetts also offers a state-funded grant program to non-profit land conservation organizations for open space protection projects, called the Conservation Partnership Program. This program currently has a maximum grant award value of \$35,000. Massachusetts also has an application-based Agricultural Preservation Restriction program which purchase all the "non-farm" rights to a farm in an easement. This program generally has a \$10,000 per acre maximum state investment.

same rating system may not be the best model. A grant program with a narrow focus and a tailored scoring rubric ensures that all projects selected for funding will protect water supply areas. A program that focuses on one particular type of open space, such as water supply land, also makes the evaluation process more straightforward because “like” projects are compared to one another (*i.e.* water supply protection project are compared to other water supply protection project and not agricultural preservation projects or rare species habitat protection projects). A narrowly focused grant program does, however, exclude many other types of high-quality open space protection projects. If the program focus becomes too narrow or exclusive, the program runs the risk of receiving too few applications, decreasing competitiveness among projects, and ultimately losing support and funding.

Perhaps one way to maximize the advantages and minimize the disadvantages associated with these two types of grant program models would be a broad-based, open space protection grant program that has separate evaluation criteria and rating systems for the various categories of open space protection projects (*e.g.* water supply protection, rare species habitat protection, agricultural preservation). This type of program design would promote a larger application pool overall but would still allow “like” projects to be compared to one another. Flexibility in the distribution of funds to the various categories of open space protection projects from the funding allocated to the program as a whole would allow for changes in the distribution of applications received for a particular category of open space project as well as the changing needs or priorities of an agency or administration. For example, a portion of the funding committed to the grant program as a whole could be equally distributed among the various categories of open space protection projects at the beginning of the grant cycle, which would guarantee a minimal level of funding for all project types. The remaining portion could then be distributed to the open space project categories that are the highest priority of a particular agency or administration, or to the project category that received a higher number of quality applications in a particular grant cycle. Alternatively, the entire allocation of funds for the grant program could be dispersed (evenly or unevenly) among the different open space protection project categories at the beginning of the grant cycle, and would only be redistributed to a different project category if money remained after all projects were selected for funding within a particular category.

Partnerships

One of the greatest strengths of these grant programs is the opportunities they provide for the formation of partnerships between a variety of entities and organizations. In all programs, grant recipients are responsible for funding 35 to 75 percent of the project, a burden they often cannot shoulder alone. In New Hampshire, multiple towns have cooperated on projects which met multiple purposes while still being consistent with water supply protection. Furthermore, drinking water suppliers often do not have expertise in the areas of land acquisition, negotiations with landowners, or applying for grant funding, whereas non-profit land conservation organizations often do. In Massachusetts, the most successful water supply protection projects involved a local land-trust partner that provided assistance with the preparation of the application, negotiations with the landowner, financial assistance for the acquisition itself, assistance with the long-term maintenance and monitoring of the protected property, or a combination of one or more of the above. When designing a grant announcement and outreach strategy to promote the program and generate applications, it is important to include non-profit organizations and other groups that are not directly eligible for funding - they may be able to provide the support needed for an entity that would not otherwise apply.

Water supply protection grant programs also offer an opportunity for partnerships and cooperative efforts between agencies that have expertise in the areas of water supply protection and regulation, such as New Hampshire’s DES or a state’s DEP, and agencies that have expertise in the area of land acquisition, such as the Massachusetts Executive Office of Environmental Affairs or a state’s conservation and recreation department. Just as partnerships and cooperative efforts among local entities and organizations can strengthen a grant application and increase the likelihood of project success, partnership and cooperative efforts among state agencies can strengthen the effectiveness and increase the success of the grant program itself.

Funding

One challenge faced by both the New Hampshire and Massachusetts programs is the lack of consistent or reliable funding. Although both programs are relatively new, New Hampshire has already experienced a year in which the grant program received no funding. Although the Massachusetts program has received level funding in its first two years, the annual budget approval process, which dictates when grants are awarded, may be finalized as early as August or as late as November. When combined with the Massachusetts requirement that projects be completed during the same fiscal year in which the grant was awarded, this budgeting process can impact the length of time grant recipients have to complete their projects and their likelihood of success. In the fiscal year 2005 grant cycle, the two incomplete projects in Massachusetts failed because they did not have enough time to complete the acquisitions.

The best, although perhaps not the easiest, solution to this problem is to create a dedicated funding stream for a grant program. For example, the citizens of Colorado voted in 1992 to create the Great Outdoors Colorado (GOCO) Trust Fund. GOCO receives 50 percent of the proceeds from the Colorado Lottery, the trust's only source of funding, and provides grants for projects that preserve, protect, and enhance Colorado's wildlife, parks, rivers, trails, and open spaces. Since it began awarding grants in 1994, GOCO has awarded almost \$489 million for 2,100 projects throughout the state. Another potential funding stream is the sale of land conservation license plates, which are currently being used in at least 20 states to generate revenue to purchase conservation land. A land conservation plate in Indiana has funded the purchase of over 30,000 acres with \$17 million over the past ten years, while a plate in Kentucky has funded the purchase of 23,000 acres with \$28 million since 1995.

Appraisal Requirements

Connecticut and Massachusetts both require appraisals at the time an application is submitted, while New Hampshire requires an appraisal only after a project is selected for funding. An appraisal certifies the market value of the property and ensures the state is "getting what it's paying for." Requiring an appraisal with the application will help the grant administrator calculate a grant award amount that meets the requirements of the program as well as the expectations of the award recipient and other applicants. Once a grant award value is established, adjusting an award up or down to accommodate an appraisal that comes in higher or lower than the estimated value may be difficult if not impossible in some cases. However, because there is no guarantee that a grant will be awarded, the cost of the appraisal then becomes the cost to apply for funding. In cases where a project would be impossible without state assistance, a community may decide that it is not worth the time or money needed to complete the application process. In addition, appraisals take time to schedule and complete and application deadlines are firm. In Massachusetts, three projects were not considered for funding because the required appraisals were not completed in time.

Geographical Distribution of Projects and Application Generation

To date, selected projects in Massachusetts and New Hampshire have been concentrated in areas of the state that are experiencing the greatest development pressures. This, however, seems to be a natural result of the scope and purpose of these grant programs. Communities facing increased development pressures, as well as increased pressure on and threats to their water supply, are more likely to be pursuing source water protection measures than communities that are not experiencing these same pressures. However, this observation does not help us understand why other communities, which are also experiencing increased development pressures, do not submit applications. One of the largest challenges the Massachusetts program faces is a lack of competitiveness in a program designed to be competitive. Data shows that the majority of unprotected, undeveloped source water supply areas in Massachusetts are located in areas of the state that are facing the highest rates of growth and the greatest development pressures. Yet the grant program has only received grant requests equal to or slightly less than the funding available in each grant cycle. There are several possible explanations for this including the relative newness of the grant program, the timing of the application cycle announcement, the length of the application period, the time allowed for project completion, a lack of local funding or project partners, or

lack of a local water supply area land acquisition plan. Although it is not yet clear which of these or other factors have the greatest impact on the number of applications received, EOEPA will attempt to address some of these issues by implementing the following changes: 1.) Lengthen the application period from 90 days to 120 days; 2.) Announce the availability of the grant Request for Response and application during the spring preceding the start of the fiscal year, instead of waiting for the summer after the start of the fiscal year (as they did in fiscal year 2006) or waiting until the fall when the final budget has been approved (as they did in fiscal year 2005); 3.) Work more closely with DEP to conduct a broader and more thorough outreach campaign, including informational workshops at DEP's four regional offices.

Maximize Available Funding

On a large scale, the amount of funding needed to protect all drinking water supply source areas throughout a state would be far greater than the funding realistically available to a grant program, even over the course of many years. On a small scale, the amount of funding needed to award grants to all high-quality projects is often greater than the annual funding allocation for the program. To maximize the impact of available funding on both the large and small scale, it is vital to have a clear sense of what the protection priorities are and a specific, realistic protection goal that will help guide and evaluate the success of the grant program over time. In more traditional state agency land acquisition programs, agencies identify high-priority parcels for protection and are then able to pursue the acquisition of these parcels directly. A water supply protection grant program, alternatively, does not have the same level of direct control over the specific parcels pursued for protection, but can use application eligibility requirements and the application evaluation criteria to target and protect the most valuable water supply lands. In Massachusetts, the evaluation criteria are designed to award the highest scores to projects that eliminate an existing or potential threat to the source, have the highest threat of immediate development, and are located closest to the drinking water supply source.

Grant programs can also facilitate and launch land conservation efforts that may continue even without state funding. Once a community makes a commitment to source water protection, develops a land acquisition plan, and has experience buying land, they can continue their land acquisition efforts even in the absence of state-funded grant programs by using water rates or other local sources of funding to pursue and achieve their water supply protection goals.

Conclusions

State-financed grant programs offer an opportunity to protect critical water supply areas with a smaller state investment and lower future management and operating costs than more traditional land acquisition programs. Grant programs do, however, have a unique set of challenges and limitations that need to be considered and addressed before launching a new program. The information presented here is not intended to be a self-contained, "how-to" guide for grant program development, but rather a resource for state agencies that may be interested in developing a drinking water supply protection grant program of their own. The grant programs highlighted here offer three different program models that share as many similarities as they do differences. The ultimate success and effectiveness of an individual grant program will depend on many factors including the political, administrative, and fiscal context in which the program exists. We hope that the information presented here provides a starting point for new drinking water supply protection grant programs.