

**2008 Innovations Awards Program  
APPLICATION**

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ID # (assigned by CSG): 08-S-30MD

**Please provide the following information, adding space as necessary:**

**State:** Maryland

**Assign Program Category (applicant):** Natural Resources

**1. Program Name**

Adopting a New Strategy for Ecological Targeting, Ranking and Implementation of Land Conservation

**2. Administering Agency**

Maryland Department of Natural Resources

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**9. Please provide a two-sentence description of the program.**

A new strategy for targeting land conservation and ranking project opportunities has been adopted by the Maryland Department of Natural Resources Program Open Space to improve the allocation of limited funding and achieve the greatest ecological benefits. The new strategy identifies geographic focus areas that describe the State's most ecologically important natural resources lands and defines parcel-scale priorities for each focus area to guide the efforts of partnering land conservation organizations.

**10. How long has this program been operational (month and year)?**

The development of a new land conservation strategy began in April 2007.

**11. Why was the program created? What problem[s] or issue[s] was it designed to address?**

There were three main objectives for developing the new strategy:

- 1) Improve the strategic alignment of limited conservation funding to high ecologically valuable landscapes before resources are fragmented and lost to development.
- 2) Provide the public and key decision makers in the State with transparent and scientifically defensible criteria for land conservation expenditures.
- 3) Develop an internal decision tool for deciding which projects among many to pursue.
- 4) Improve program efficiency through closer collaboration with land conservation partners and more directed conservation

**12. Describe the specific activities and operations of the program in chronological order.**

April 2007 - October 2007: Developing the Targeting Protocol

A multidisciplinary group of ecologists and land conservation experts was formed within DNR to develop an approach for targeting land acquisitions. in April 2007. Over the next few months, an approach emerged that included three screening tiers:

- 1) An **Ecological Screen** that identified "**High Priority Conservation Areas**" within the State  
This screen developed an ecological baseline using four distinct ecological databases and modeling efforts to identify High Priority Conservation Areas, representing the State's most ecologically valuable landscapes and watersheds. The four databases include:
  - a. Green Infrastructure (GI) – an ecological network of large, unbroken blocks of forests and wetlands (hubs) which are connected to each other through forest, wetland and stream corridors. Contains many but not all of the elements listed in b-d.
  - b. Rare Species Habitat – habitats that support Rare, Threatened and Endangered species.
  - c. Aquatic Life Hotspots - watershed lands and streams that support areas of high aquatic biodiversity and fish species sensitive to increases in impervious surfaces.
  - d. Water Quality Protection - sensitive watershed lands, such as forests, wetlands, and steep slopes that are important for providing water quality services
- 2) A **Programmatic Screen** that selects **Annual Focus Areas** from the collection of High Priority Conservation areas using implementation criteria (programming, funding, partners, etc.)
- 3) A **Parcel Screen** to assess multiple benefits and management considerations to prioritize parcels in the Annual Focus Areas. This screen process uses a "Conservation Scorecard" approach and results in a numeric score that can be used to compare relative parcel values.

The approach was presented to Governor Martin O'Malley's BayStat panel and then to Maryland's Board of Public Works (Governor, Comptroller and Treasurer) in August 2007. The approach was further refined based on initial comments and summarized in a power point to be used for the outreach and communication strategy. The power point is provided in the attached file titled MD\_DNR\_POS\_Targeting\_CSG.pdf. The Conservation Scorecard is presented in the attached file titled MD\_DNR\_Scoresheet\_CSG.pdf and shows overall project scores for all projects currently under review by DNR and the decision and priority rank for future action that was determined through the new scoring approach.

#### October 2007 – Present: Implementation through an Outreach and Communication Strategy

The Targeting Protocol and draft annual Focus Area designations were presented to national land trust partners (Trust for Public Lands, The Nature Conservancy and The Conservation Fund) in October 2007. In November 2007, a Program Open Space Summit was held with local governments, local land trusts and State agency partners to describe the process and receive input on the methodology. In the meantime, existing properties that were being sought or acquired were run through the new scoring system, scored and then ranked or put on "STOP" status as a result of the scoring (results shown in MD\_DNR\_Scoresheet\_CSG.pdf). The focus areas are currently being finalized and distributed to conservation partners, local governments, and State agency partners in both hard copy map form and digital GIS data layers.

### **13. Why is the program a new and creative approach or method?**

The Program Open Space Targeting Protocol provides a mechanism for prioritizing land acquisition projects in fee and by purchased conservation easement. Historically, State land conservation initiatives have been focused on broad geographic areas identified within State and local comprehensive plans as well as opportunistic proposals that closely aligned with existing State lands. Beginning with the inception of Program Open Space in 1969, State land conservation initiatives were focused along Maryland's stream valley corridors to safeguard wildlife habitat, protect forest resources, and provide buffers that are essential for water quality of Chesapeake Bay, and ensure increased opportunities for environmental education and passive recreation. While this approach has been largely successful in building a nationally recognized land conservation program; the State of Maryland recognized the need to make its land conservation programs more focused using consistent, objective, science based criterion to obtain maximum benefit for limited land conservation funding.

While Maryland continues to lead in the area of land conservation, the current administration has identified new administrative policies to enhance Maryland's land conservation programs. Accordingly, the Department of Natural Resources will focus its land conservation programs to be more strategic since conservation opportunities exceed available funding. The Department has implemented a new "POS Targeting" land conservation protocol based first on ecological priorities. The creation of a more transparent process will be supported by science, management priorities and public needs (recreational, historic, and cultural access; and resource-based economies).

The "targeting protocol" influences decision making in two distinct ways – projects introduced to the Department for consideration are screened against the criteria established through the protocol. If criteria and scoring thresholds are not met, the project will not be pursued. Valuable staff time will be focused on other high ranking conservation projects. Secondly, focus areas and

parcel targets, ranked by value, within focus areas, have been delivered to land conservation partners to guide their efforts, making certain that projects they bring to DNR meet the established criteria.

**14. What were the program's start-up costs? (Provide details about specific purchases for this program, staffing needs and other financial expenditures, as well as existing materials, technology and staff already in place.)**

The POS Targeting approach was built upon four datasets that already existed in the department. These included the Green Infrastructure Assessment and datasets representing rare, threatened and endangered species; watershed areas that support aquatic biodiversity; and areas that provide water quality services. Development of these databases cost approximately \$285,000. Considerable staff time was also required to assess these databases for this approach and to formulate the approach. This is estimated to have cost approximately \$94,000.

**15. What are the program's annual operational costs?**

Annual costs are about \$100,000 to maintain the databases and \$59,000 to staff workgroup meetings and perform analyses.

**16. How is the program funded?**

Funding comes from many sources to support the development and maintenance of the resource assessment databases. These include: USDA Forest Service State and Private Forestry, other federal programs, and state funding from wildlife grants, tax check-offs and general funds.

Program Open Space is the existing land conservation program which implements the new land conservation strategy. Program Open Space is a nationally recognized program administered through the Maryland Department of Natural Resources that provides funding for Maryland's state and local parks and conservation areas. Administered under the umbrella of DNR's Land Acquisition and Planning (LAP) unit; the program acquires parklands, forests, wildlife habitat, natural, scenic and cultural resources for public use. Established in 1969, Program Open Space (POS) symbolizes Maryland's long-term commitment to conserving natural resources while providing exceptional outdoor recreation opportunities.

Program Open space is funded through a real estate transfer tax of one half of one percent of the purchase price of real estate in the State of Maryland. The transfer tax is based upon a philosophy that a person who buys a home or other property for private use hastens the decline of available open land. Thus, by paying a small percentage of the purchase price to protect open space, the buyer helps improve the quality of their residential community and the State as a whole. The transfer tax revenues for Fiscal Year 08 for the State of Maryland totaled \$ 68.218 Million.

**17. Did this program require the passage of legislation, executive order or regulations? If YES, please indicate the citation number.**

This program was developed in response to Governor Martin O'Malley's February 14, 2007 Executive Order to create BayStat and is DNR's first programmatic response to this bold initiative to improve the State's approach to Chesapeake Bay restoration and protection (<http://www.baystat.maryland.gov>). The chief function of BayStat is to evaluate state initiatives

directed at improving the health of the Chesapeake Bay. BayStat uses innovative data collection, mapping technology and coordinated interagency program review to provide state agencies the information they need to track, coordinate, target and refine restoration efforts. DNR's Program Open Space Targeting Protocol was Maryland's first demonstration of how a major funding program could be strategically refocused to achieve desired results; in this case, protection of the State's most ecologically valuable lands and the protection of important water quality services that they provide.

**18. What equipment, technology and software are used to operate and administer this program?**

The targeting approach has been developed using personal computers along with Microsoft Office software and ESRI GIS (geographic information system) software. Specifically, Microsoft Excel, Access, PowerPoint and Word were used to develop the approach and to compile the data. Actual analysis of the datasets was performed using ESRI's ArcView 3.2, ArcMap 9.2 and the Spatial Analyst extension.

**19. To the best of your knowledge, did this program originate in your state? If YES, please indicate the innovator's name, present address, telephone number and e-mail address.**

Yes – this protocol is the unique product of the State of Maryland. The credit for innovation rests with the Department's leadership, Secretary John R. Griffin. Secretary Griffin charged his staff to work in partnership with each other and develop a scientifically defensible targeting protocol designed to effectively achieve ecological land conservation objectives.

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The follow through work for Secretary Griffin's initiative does not rest with a single person. The development of the targeting protocol and its implementation has been through the combined efforts and teamwork of many individuals throughout the Department and also through private consultation. Team members include staff from the following DNR organizational units (<http://www.dnr.state.md.us/orgchart.html>): Land Acquisition and Planning, Office for a Sustainable Future, Chesapeake and Coastal Watershed Services, Wildlife and Heritage Service, Resource Assessment Service and the Maryland Forest Service. In addition, Tim Searchinger, a private consultant to the Department during the summer of 2007, made significant contributions towards the parcel Conservation Scorecard.

**20. Are you aware of similar programs in other states? If YES, which ones and how does this program differ?**

Many states have completed ecological assessments, developed conservation priorities and have created conservation scorecards. Many academic and non-profit conservation organizations similarly have embarked on the development of targeting models and conservation assessments. The number of targeting protocols that have been developed across the nation are too numerous to

count. The application of these protocols to inform decision making and cause a fundamental change that will improve a program's outcome is rare. Land conservation tends to be opportunistic. Regardless of how effective a targeting model may be, successful projects still depend on landowner willingness to sell and the ability to find available properties that meet specific targeting criteria. Because of this dynamic, there is a tendency by conservation programs to consider a broad range of conservation projects that may not necessarily fit within a targeted land conservation framework.

DNR is changing this traditional paradigm by using its targeting protocol to proactively identify projects in partnership with the land trusts and local governments that have the one-to-one relationships with landowners. DNR's land conservation partners have been given maps identifying eligible focus areas and parcel priorities and now know which parcels are worth pursuing and bringing to DNR's attention. In addition to revamping this "parcel recruitment" strategy, DNR also has a clear set of criteria that it can use to deny further pursuit of a parcel opportunity. Finally, DNR will rank eligible opportunities against each other to determine which projects get funded. These decisions will be based on the numeric scoring generated through the protocol

**21. Has the program been fully implemented? If NO, what actions remain to be taken?**

No. Over the next couple of months, both digital and hard copy maps of focus areas and parcel priorities will continue to be distributed to the same partners to assist them as they seek conservation opportunities that meet Program Open Space criteria. Future refinements to focus areas and scoring routines are expected to occur as resource assessment databases are updated and as the protocol continues to be tested.

**22. Briefly evaluate (pro and con) the program's effectiveness in addressing the defined problem[s] or issue[s]. Provide tangible examples.**

Pros:

- 1) Protocol provides objective, transparent and justifiable land conservation criteria for both the public and fiscal decision makers: This is important for both the general public and for the State's Board of Public Works, who's sitting members include the Governor, the Treasurer and the Comptroller. DNR has stated to the public that the projects it pursues for ecological values will meet the criteria established through the targeting protocol. This provides a level of accountability that gives the public assurances that public funds are being spent effectively. The Board of Public Works also asks for this assurance when projects are brought to them for approval. Since the completion of the protocol, four (4) acquisitions have been sent to the Board and were approved with the understanding that targeting criteria were met.
- 2) Re-evaluation of projects under consideration: Over 150(?) projects are currently being considered for funding. Upcoming budget projections will fall far short of the funding needed to pursue all of these projects. The new targeting criteria will be used to elevate high ranking opportunities for funding.
- 3) Improved program performance: Implementing the protocol and refining the protocol as DNR learns through experience will result in improved ecological outcomes that is backed by rigorous tracking and documentation through BayStat.

Cons:

- 1) Parcel scale targeting: DNR has been unable to achieve precise parcel characterizations because digital mapped boundaries do not exist. Rather, zones within a focus area have been designated as “good”, “better” or “best” as a guide to DNR’s conservation partners. However, this lack of precision is not a huge impediment and may actually be helpful in preventing escalating real estate prices that might otherwise increase if certain parcels were known to be highly valuable to the State.
- 2) Missing some targeting objectives: Targeting criteria are based on readily available geographically prioritized resource assessments. Critical shoreline and tidal watershed areas important for protecting fisheries habitats and SAV and oyster beds were not available during the initial development of the protocol, but will be integrated during future refinements.

### **23. How has the program grown and/or changed since its inception?**

The overall structure has remained the same. Refinements in parcel scoring occurred throughout the development process. Of particular note, zoning issues were evaluated by DNR’s sister State agency, the Maryland Department of Planning, to determine whether protective/complementary zoning was in place, both within and adjacent to the parcel. An outreach and communication strategy has also been developed and included one-on-one meetings with national land trust organizations and a summit open to all land trusts and local governments to present the new targeting strategy. It is anticipated that more changes will occur following lessons learned through experience.

### **24. What limitations or obstacles might other states expect to encounter if they attempt to adopt this program?**

- 1) Availability of resource assessment databases: States will need to have either the resource assessment databases developed or have the capacity or funding to develop the models needed as a foundation for science-based ecological targeting.
- 2) Willing land conservation programs: Maryland has an established and well funded land conservation program that was able and willing to adopt a revised approach to its land conservation efforts.
- 3) Established network of land conservation partners: Because of Maryland’s long history in land conservation, the Department has a well developed network of land conservation partners composed of local governments, local and national land trusts, and regionally dedicated staff that further build these relationships with partners and landowners. Alterations to how land conservation funds are administered can be quickly and effectively communicated and acted upon by these partners.
- 4) Single agency umbrella: Developing the targeting protocol required piecing together several resource assessment databases to develop an overarching set of geographic priorities. The databases were all developed within the same agency that also manages the land conservation program. Regular meetings, often at weekly or bi-weekly intervals were necessary during much of 2007 in order to coordinate and refine the work. Accomplishing as much as this agency did over a fairly short period of time would have been much more difficult if different agencies were involved.