
**National Association of State Conservation Agencies**
In Completion of Requirements
Of
Contribution Agreement Number 68-3A75-6-53

# <u>Final Report</u>
On the
# Technology Information Sharing Database Project

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To

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**National Association of State Conservation Agencies**
Contribution Agreement Number 68-3S75-5-105
Final Report
**Technology Information Sharing Database Project**

## Executive Summary

In June 2006, under a Contribution Agreement between the National Association of State Conservation Agencies (NASCA) and the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS), NASCA undertook a cooperative project to compile an inventory of conservation technology-related research, demonstration projects and pilot projects underway at the NRCS and state conservation agency levels. The purpose was to better share information to enhance partners' overall effectiveness. The project represented a first-time attempt at electronic data sharing between these two partnering organizations.

NRCS sources (National Technology Support Centers, National Centers, and State Conservationists**)** and NASCA state conservation agencies were surveyed, using an easy to use, web-based survey instrument, to compile an inventory of ongoing conservation-related technology projects underway at both the federal and state levels. The database inventory is accessible to all of the conservation partnership via the NASCA website. Information collected includes a broad range of resource categories relating to current research, demonstration and pilot projects.

The database inventory compiled 138 records of federal and state research and demonstration projects from 44 project sources in 32 states and territories. The inventory contains records from all categories of research listed in the survey, and includes both applied research and pilot (or demonstration) projects.

The inventory demonstrates that significant work is being performed at both state and federal levels, which may not be readily known to others, but which would be of significant value. This project, while limited in scope, provides interested parties with knowledge of such research and demonstration projects perhaps for the first time, indicating that more effective sharing of information is needed.

The results of this collaborative project also indicate that future efforts in data sharing should consider a number of important factors in their design and conduct. These include proper identification of goals and type of information to share, locating the appropriate sources of information, using the best method to acquire and compile or access information, providing a proper level of data

security, and updating and maintaining partner access to information being shared.

NASCA and NRCS should consider whether the inventory suggests potential benefits of continued collaboration on this type of information sharing. Partners should also consider whether this type of effort supports a possible data sharing agreement.

NASCA appreciates the time and commitment of those who participated in this voluntary inventory project. NRCS and NASCA should further evaluate project results to determine the value and utility of this approach, and how best to craft future efforts in data sharing.

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## Background and Purpose

In June 2006, under Contribution Agreement Number 68-3A75-6-53 between the National Association of State Conservation Agencies (NASCA) and the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS), NASCA undertook a cooperative project to compile an inventory of conservation technology-related research, demonstration projects and pilot projects underway at the NRCS and state conservation agency levels. The project covered a period from June 2006 through September 2007, with a majority of activity from April through September 2007.

The idea for this project grew out of discussions at a Quarterly Partnership Meeting, where NRCS and NASCA agreed that it would be beneficial for the partnership to expand efforts to share information about conservation-related technology projects underway at both the federal and state levels. Improving our ability to share this type of information within the partnership will lead to a better awareness and understanding of new and emerging technology, and will improve application of work where one partner may otherwise be unaware of what is being done by others.

To accomplish this task, NASCA contracted with MapTech, Inc. of Blacksburg, VA to design and deliver to NRCS sources and NASCA membership a brief web-based survey that was used to compile submitted information into a database of active projects that would be accessible to all of the conservation partnership via the NASCA (and NRCS) websites. The electronic survey was designed to collect basic information categorized by natural resource area concerns, about ongoing applied research, demonstrations, and pilot projects. The desired end-product for this joint project was an easy to use web-based inventory of conservation related research underway.

It is important to note that the database is an ***inventory*** of current and ongoing research and field projects. No actual research data or interpretations are included. Nor is it intended that the database contain information on already published projects, such as the NRCS Conservation Initiative Grants and the Grazing Lands Initiative projects; links to already available data and reports may be referenced on NASCA and NRCS websites where the information from this project is housed.

## Methods

Information was sought from sources including NRCS **National Technology Support Centers** (with their various resource teams) and **National Centers**. Related sources in the USDA were also invited to participate. NASCA also sought to make NRCS **State Conservationists** aware of the project and provide for their input. NASCA also used the web-based survey instrument to poll its member **state conservation agencies** to compile a similar research inventory at the state level, including state agencies and **university partners**.

MapTech prepared the web-based survey instrument for use in querying NRCS sources and state conservation agencies about ongoing projects. The survey instrument was designed to be self-explanatory, easy to use, and to require a minimum amount of time to complete. Respondents could submit information in a number of the following pre-selected categories of research, pilot projects and demonstrations:

- Watershed Planning
- Soil Quality/Erosion
- Water Quality
- Water Quantity
- Flood Damage Reduction
- Invasive Species Control
- Grazing/Range Management
- Irrigation
- Wildlife Habitat
- Forestry
- Drainage/Water Management
- Nutrient Management
- Air Quality
- Multi-purpose (Two or more)
- Energy
- Other

The web-based survey was distributed to NRCS directors and staff by **NRCS Bulletin 450.7.15** on August 10, 2007. NASCA membership was requested to participate via an August 14, 2007, NASCA electronic newsletter. Responses were compiled for submissions received by September 14, 2007.

Respondents submitted single or multiple entries in different categories for up to a maximum of nine projects. Selecting a category opened up a second query to indicate whether the project is an applied research project or a pilot project. The respondent was then asked to complete fields for a short project title, project location, project contact information, and a brief project description. Once these fields were completed (for up to nine projects), the respondent submitted their information or returned to the survey to make edits or corrections prior to submittal.

Submitted responses were analyzed and compiled by MapTech to produce a database inventory of responses. The database, in an Excel format, can be reviewed and sorted via simple queries with respect to location, resource concern, etc. Please see the attached MapTech report (*see Appendix A*) for more details about the survey instrument and submitted responses.

## Inventory Database of Information Received

Information sources responding to the web-based survey included NRCS and NASCA sources. The database inventory includes 138 separate entries on conservation research, and demonstration and pilot projects entered by 44 project sources in 32 states and territories, and contains records from all 15 categories of research listed in the survey. Projects include both applied research and pilot (or demonstration) projects. The attached MapTech report

(*Appendix A*) contains detailed entries for this information. The complete database inventory is available on the NASCA website (www.NASCAnet.org).

## Lessons Learned

As this project represents a first-time initiative of this type, many lessons were learned that can apply to future collaborative projects in the area of data sharing. Lessons learned fall into the following categories:

- First and foremost, the project demonstrated that significant conservation research and demonstration work is being performed at both state and federal levels – work that would be of value to others **if they could be made aware of it** prior to completion of the project and posting of a formal report.

- **Identifying common goals associated with sharing of information and type of information to share is critical.** Partners should have clear goals and purpose(s) for bringing together information, and should agree on a list of parameters and type of information to share.

- **It is important to identify, in advance, appropriate information sources who possess this information and who must provide some contributory response to attempts to compile or share information.** Finding the right person to provide information for sharing is more difficult than one might first think. And sources should be identified well in advance, to allow contact and explanation of the purpose of data sharing.

- **Partners should determine the best method to acquire information and to make shared information available within the partnership.** This project was designed to compile information into a sharable database providing access points for sharing by the partnership. Other approaches could be considered that do not require data entry (i.e., survey) or compilation, such as establishing access and searching options and security clearance for partner databases, or design of mutual database access under data sharing agreements. Simpler methods may also be considered, such as joint newsletters providing subject and contact information.

- **It is essential to provide a proper level of access security and data protection.** Concern for data integrity and security is paramount today. No method for sharing information can escape the need for clear security procedures. Security procedures should be reviewed and modified as required to assure that data will be protected and that sharing initiatives will succeed.

- Based on the value of the database inventory product, **NASCA should decide whether it will be maintained and periodically updated** (e.g., new or updated records, new sources), and should determine a protocol for doing

so, together with a funding source. **Partnering organizations must maintain the utility, availability and access to any shared database or other repository.** This project placed a database inventory on the NASCA website. In order for this information to continue to be useful in the future, this database will require periodic updating. This approach is dependent on periodically repeating the process. Also, new users will require access as personnel changes occur in the partnering agencies and organizations – these will require updates in access, and will possibly provide opportunities for acquiring additional project information.

## Conclusions and Future Actions

This project represents a first-of-a-kind effort by NASCA and NRCS to share this type of information. Regardless of the limited scope of the project (and scale of responses to the electronic survey), the inventory demonstrates that significant conservation research and demonstration work is being performed at both state and federal levels that would be of value to others. This project provides interested parties with knowledge of such research, demonstration projects and contact information perhaps for the first time, indicating that more effective sharing of such information is needed.

This project represents a first step in determining the ***value*** of such data-sharing work. The product has a certain value within NASCA – sharing information among state conservation agencies – as well as between NASCA and NRCS. NASCA, in the next year, will determine the value of the inventory database developed in this project to membership, and will consult with NRCS about value to that partnering agency.

Recently, NRCS and sister agencies within the U.S. Department of Agriculture announced data sharing agreements to improve the availability and application of information within the agency. Cooperative efforts such as the Technology Information Sharing Database Project illustrate the desire and need for similar information-sharing initiatives between federal and state conservation agencies. NASCA and NRCS should consider whether the inventory suggests potential benefits of continuing collaboration on this type of information sharing, and whether this type of effort supports a possible future state/federal data sharing agreement.

This project also represents a first step in exploring ***methods*** to compile and present shared information among partnership organizations. NASCA will work with NRCS to evaluate the approach used in this project to collect information. If this type of effort were to continue, NRCS and NASCA should consider the best approach(es) to support improved sharing of information of this or other types, and should identify well in advance the responsible parties (sources) from whom information will be sought.

## Acknowledgements

The activities and work-products of Technology Information Sharing Database Project were made possible in part by a contribution agreement between NASCA and the U.S. Department of Agriculture, Natural Resources Conservation Service (Contribution Agreement Number 68-3A75-6-53). NASCA appreciates the cooperation and assistance offered by NRCS leadership and staff during this project – particularly in achieving a high-quality survey response from NRCS personnel. NASCA thanks NRCS for contributions to this project and to this report.

NASCA thanks those individuals and organizations that participated in the project by responding to the web-based survey. NASCA thanks member state conservation agency representatives who provided leadership in the project, and who shared information about conservation-related projects in their states.

NASCA appreciates the consulting services of MapTech, Inc. of Blacksburg, VA, and David Vogel, NASCA Program Consultant, in assisting in technical and management aspects of the Technology Information Sharing Database Project and in preparing materials for this report.

**Appendix A**
**MapTech Project Report**