

NRCS Conservation Innovation Grant Final Report

Grantee Name: Resources First Foundation (RFF)

Project Title: Online NRCS Conservation Program Database and Program Finder Search Tool

Period Covered by Report: September 20, 2007 to September 20, 2009

Project End Date: September 20, 2009

Summarize the work performed during the project period covered by this report:

RFF has successfully built the “Conservation Programs Decision Support System,” an online NRCS conservation program database and program finder search tool, currently available in beta form at www.icaer.com. The application offers a means for landowners to explore the conservation opportunities for their land and resources. A landowner that is interested in participating in a conservation program, can go to the web-application, answer a few brief questions, and receive a ranked list of results of possible programs that are most appropriate for their land, resources, and objectives. The work was broken into three distinct tasks to arrive at the finished product: research of content, design of data tables, information and flow of logic, and programming of the web application.

The research involved examining NRCS and FSA programs from the most recent Farmbill and their attributes, to determine the most efficient and effective method of matching landowners to conservation programs. The classes RFF developed based on national resource concerns include: soil erosion, soil condition, water quantity, water quality, air quality, plants not adapted or suited, plant condition, fish and wildlife, and domestic animals. Programs were also organized by their type including: easement, rental/annual payments, technical assistance, and cost share. Once the classes were defined, RFF staff had to further define the limits and condition of each program to determine a chance of eligibility for a specific program. These limits include: type of land, land cover, land use, location, and whether or not the landowner is socially disadvantaged. All of these classifications were applied to the development of the data table of conservation programs and attributes, and the data table of program resource concerns. RFF also created a database of conservation programs including a description.

With the above information classified, RFF staff then designed and developed the structure for the user questionnaire tree that would serve as the outer structure of the online tool, and the interactive component of the application. From that point, RFF staff designed algorithms and a prioritization matrix that was used to order programs based on user input and conservation priorities. RFF staff also developed an administrative interface for NRCS staff to input new program information, and/or change existing program information.

The programming of the web application involved:

- Creation of the physical database model
- Population of database tables with program and supporting data

- Coding and testing of all stored procedures
- Coding of the data access tier
- Coding of the business logic tier
- Design and development of the user interface
- Debugging of web application functions and tasks
- Performance and page load speed tuning
- Compiling and deployment onto a publically available testing server at www.icaer.com

On October 21, 2009 RFF staff participated in a conference call to present the Program Finder Decision Support System to NRCS Staff. RFF walked the NRCS staff through the public portion of the application first, displaying all probable outcomes for different user scenarios. NRCS staff had no comments on the functionality of the client portion of the application and minimal comments on some help features, which have been addressed. Next RFF provided a tour of the administrative section, again NRCS staff understood the functionality and did not have any comments its workings. At the conclusion of the demonstration RFF and NRCS discussed the next steps for the tool.

Describe significant results, accomplishments, and lessons learned. Compare actual accomplishments to the project goals in your proposal:

The significant result is the completion of the online application. The Program Finder Decision Support System is the end goal of the original Conservation Innovation Grant proposal. Many steps leading up to the tool had to be augmented along the way, primarily because of the long delay in the passage of the Farmbill, coupled with the final rulings that took even longer to come out. RFF had envisioned information being custom tailored down to the local NRCS office level, but the resources were not there to support such a specific system. Thus, national priorities trumped state priorities in the application's program descriptions for the simple reason that they were much more readily available, and RFF could trust that the national priorities would be guiding state-specific action. To bring local information and contacts to users, the application provides links to the user's state NRCS programs website, state NRCS offices, and county Conservation Districts. The application also provides a link to the Private Landowner Network, a searchable online directory housing over 12,000 conservation resources, articles, and contacts.

RFF followed its basic outline of work flow and project objectives to arrive at the completed project. Based on the conference call with NRCS staff, the program works to their satisfaction as well. RFF has not received any negative feedback or even suggestions to change the current flow, aesthetic, or system of the current application.

One of the deliverables in the agreement was to attend a meeting hosted by NRCS and present a poster describing the project. Two RFF staff members attended the Soil and Water Conservation Society Annual Meeting in Dearborn, MI, in July, and presented their poster on the Conservation Programs Decision Support System.