

TABLE OF CONTENTS

EXECUTIVE SUMMARY	i
LIST OF ACRONYMS	vi
1. INTRODUCTION	1-1
1.1 Strategic Overview	1-1
1.1.1 Purpose.....	1-1
1.1.2 Scope.....	1-2
1.1.3. Assumptions and Constraints.....	1-3
1.1.4 Business Process Reengineering Objective	1-4
1.1.5 Service Center Vision	1-4
1.1.6 Critical Success Factors	1-6
1.1.7 Service Center Mission and Agency Mission Areas	1-6
1.1.7.1 Service Center Mission.....	1-6
1.1.7.2 Farm Service Agency Mission.....	1-7
1.1.7.2.1 Environment.....	1-7
1.1.7.2.2 Mission Area.....	1-7
1.1.7.2.3 Geospatial Component.....	1-8
1.1.7.3 Natural Resources Conservation Service Mission.....	1-8
1.1.7.3.1 Environment.....	1-8
1.1.7.3.2 Mission Area.....	1-9
1.1.7.4 Rural Development Agencies’ Mission.....	1-9
1.1.7.4.1 Environment.....	1-9
1.1.7.4.2 Mission Area.....	1-10
1.2 BPR Methodology and Approach in Support of USDA.....	1-10
1.2.1 BPR Project Roadmap	1-11
1.2.1.1 Establish Leadership Support and Vision (Define Phase).....	1-13
1.2.1.2 Define Baseline (Assess Phase).....	1-13
1.2.1.3 Identify Improvement Opportunities (Analyze Phase).....	1-15
1.2.1.4 Build Future Business Alternatives (Develop Phase).....	1-16
1.2.1.5 Build Business Case (Evaluate Phase).....	1-18
1.2.1.6 Implement Alternatives (Execute Phase).....	1-19
1.2.1.7 Summary	1-19
1.2.2 Tools and Techniques	1-19
1.3 Participants and Team Organization.....	1-20
1.4 Project Plan	1-23
2. CURRENT BUSINESS PRACTICES.....	2-1
2.1 Introduction of the Programs Modeled.....	2-1
2.2 Understanding the Current Activities	2-3
2.2.1 Administer Conservation Reserve Program (CRP).....	2-6
2.2.2 Manage Common Land Units.....	2-7

FEDSIM

2.2.3	Manage Easements.....	2-8
2.2.4	Administer Compliance Programs (Highly Erodible Land and Wetlands)	2-9
2.3	Issues and Concerns.....	2-10
2.3.1	Summary by Category	2-10
2.3.2	Critical Deficiencies	2-18
2.3.2.1	Manual Manipulation of Outdated Paper Maps.....	2-18
2.3.2.2	Redundant Data Entry amongst Agencies and Multiple Hand-Offs Forms ..	2-19
2.3.2.3	Inability to Access and/or Share Information among Agencies/Partners	2-20
2.3.2.4	Time Delays to the Customer	2-20
2.4	Improvement Opportunities and Discussion.....	2-21
2.4.1	Summary of Improvement Opportunities in Response To Deficiencies	2-21
2.4.2	Tactical Objectives and Improvement Opportunities	2-25
2.4.3	Deficiencies to Improvement Opportunities.....	2-28
2.5	Best Practices	2-32
3.	REENGINEER CURRENT BUSINESS.....	3-1
3.1	Vision of Redesigned Business.....	3-1
3.1.1	An Integrated Service Center.....	3-2
3.2	Process Impact of Recommendations	3-8
3.2.1	Program Explanation	3-9
3.2.2	Eligibility Determination	3-10
3.2.3	Application Processing	3-11
3.2.4	Conservation Plan Development	3-11
3.2.5	Contract Preparation/Approval	3-12
3.2.6	Compliance Monitoring.....	3-13
3.3	Overview of Geospatial Recommendations.....	3-13
3.4	Impact of Geospatial Recommendations at the Service Center.....	3-19
3.5	Geospatial Recommendations Link to Service Center Goals.....	3-19
3.6	Detailed Information for Recommendations	3-20

APPENDICIES

A	As-Is Activity Model: CRP Process, Manage Common Land Units, Manage Easements, Administer Compliance Programs (HEL and Wetlands)
B	Integrated Service Center Data Model
C	Programs List
D	Program Outlines/Program Node Trees
E	Activity ICOMs
F	Activity Definitions
G	Activity Deficiencies
H	Integrated Improvement Opportunities to Original Improvement Opportunities Matrix

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- I Improvement Opportunities and Objectives
- J CRP To-Be Process Flows
- K Recommendations to Programs Matrix
- L Programs to Information Matrix
- M Recommendations to Critical Success Factors Matrix
- N Recommendations to Goals Matrix

EXECUTIVE SUMMARY

Forces of Change

Organizations in the coming decade will compete for funding and other resource allocations based on demonstrable and repeatable results. The Government Performance and Results Act of 1993 has further reinforced the idea that measurable improvement or change will be a way of life for Federal agencies in the 21st century.

To meet the challenge, the U.S. Department of Agriculture (USDA) has initiated actions that will result in significant, measurable improvements to core processes that support agencies mission areas by the year 2002.

Decision to Act

The National Food and Agriculture Council, under the leadership of the Deputy Secretary and the respective Under Secretaries of USDA, is reengineering, modernizing, and streamlining the processes of county-based service centers. The Council established the Service Center Implementation Team (SCIT) to design and implement the changes required to achieve an integrated service center environment that will provide customers with “One-stop Service.”

Partner agencies involved in the effort include:

- the Farm Service Agency (FSA)
- the Natural Resources Conservation Service (NRCS)
- the Rural Development (RD) Agencies - Rural Utilities, Rural Housing, and Rural Business and Cooperative Development.

Four Business Process Reengineering (BPR) projects were chartered by the SCIT to identify and evaluate improvement opportunities and recommend changes. The projects are as follows:

- Project 1 - Customer Interface
- Project 2 - Customer Service - Program Delivery
- Project 3 - Geospatial Information Services
- Project 4 - Administrative Management

To ensure that key information and expertise was available for the reengineering project, subject matter expert teams were formed to provide a cross-functional view of service center operations. Representatives were selected from the partner agencies to participate on each of the four BPR teams.

Approach

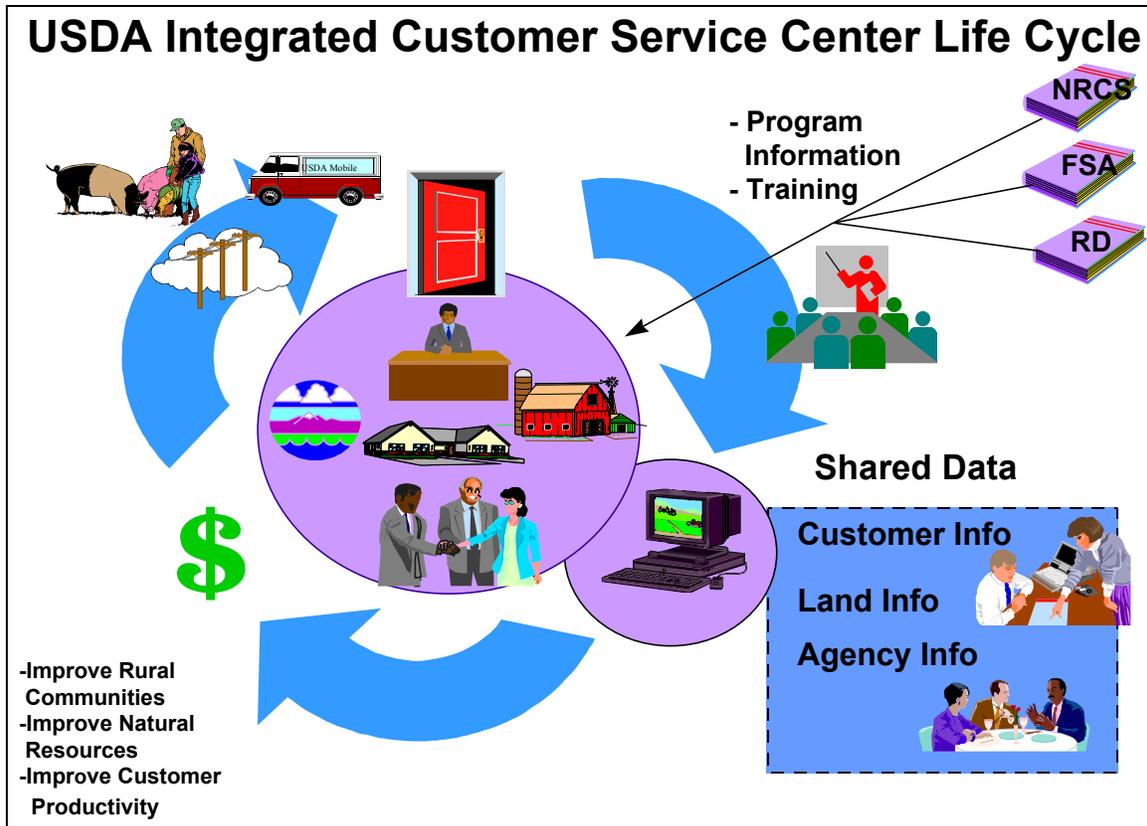
The reengineering projects are divided into three phases, each with specific required outcomes.

- *Design Phase* - During this phase each of the teams focused on assessing existing operations, identifying improvement opportunities, and recommending changes that will support the implementation of an integrated service center. Specific methodologies, tools, and techniques utilized in this phase are detailed in Section 1.2 of this report. All efforts conducted as part of the Design Phase led to the development of specific recommendations.
- *Implementation Phase* - This phase will begin as soon as final recommendations are accepted by the Executive Sponsors, who will continue to provide oversight to the BPR projects until major recommendations are implemented. After the Executive sponsors acceptance of the recommendations, Management Review Board (MRB) and National Food and Agriculture Council (FAC) approval will follow. After full acceptance of the recommendations, the BPR teams will be reorganized and re-chartered to focus on integrating and implementing pilot projects to assess the total impact on USDA before complete implementation. Specific pilot projects and implementation plans will be identified and presented in an Integrated Report (for all four BPR teams) that is drafted for September 1997. In addition, support will be provided to the further development of the Integrated Business Case.
- *Integrated Business Case Phase* – The integrated set of implementation projects identified in the Implementation Phase will contain a high-level plan addressing each of these projects, including identifying the type and level of staffing and resources required, the approach to implementation, and a proposed implementation schedule. A key aspect of the implementation is the use of pilot testing, both as proof of concept of the BPR recommendations, as well as a tool to gather more solid benefit and cost data. The Business Case will contain a discussion of the approach to piloting, required steps to establish and operate pilots, and related success factors. Benefits and costs will be estimated by implementation project as well as rolled up for the entire BPR initiative.

Vision of an Integrated Service Center

The BPR teams share a vision of an integrated service center that would provide customers with quality information and services while meeting legislative mandates prescribed by Congress. Initially, the vision of the future service center appears quite simple: deliver programs to customers in accordance with established rules and procedures. However, the real essence of the vision is not so much in what is stated, but what is tacit. The vision implies that all three service center agencies would project to

the customer a “USDA” image while continuing to meet their separate and distinct agency mission. Illustrated below is the envisioned Integrated Service Center of the future.



Geospatial Team’s Recommendations for Change

In support of the vision the Geospatial Team developed 13 recommendations that when implemented will substantially improve service center operations and result in improved customer service in the future environment. These recommendation are based on a thorough analysis of the current operating environment and a review of customer needs and expectations as reported in numerous USDA customer surveys. Furthermore, the recommendations are considered by the Team to be feasible for implementation with the support of USDA management. The following matrix summarizes the critical needs and expectations reported by customers as they are met by each recommendation.

RECOMMENDATIONS	CUSTOMER NEEDS AND EXPECTATIONS							
	Consistency in answers provided by agencies to customer questions	Accurate information	Timely delivery of program benefits	Simpler and consistent regulations and forms	Advice on available options as a basis for making informed decisions	Access to information in a convenient manner	Flexibility in program requirements	Informed service center employees that receive geospatial information in a timely manner
RECOMMENDATION 1: Increase service center efficiency and improve the quality of services and products by replacing the official paper aerial photography and soil maps with digital geospatial data.	X	X	X		X	X		X
RECOMMENDATION 2: Develop standards to create and maintain land unit boundaries. Implement an initiative to convert common land unit boundaries from paper to digital format to reduce duplication & enable data sharing between agencies and customers.	X	X	X			X		X
RECOMMENDATION 3: Develop and implement the standards to create and maintain a digital wetlands database. Incorporate regional wetland characteristics.		X		X		X	X	X
RECOMMENDATION 4: Reduce time and cost associated with maintaining redundant geospatial information at the service centers by implementing a consistent geospatial information management strategy for service centers.	X	X	X	X		X		X
RECOMMENDATION 5: Increase information accessibility by establishing policy and standards for information exchange with partners and customers.	X	X	X		X	X		X
RECOMMENDATION 6 : Provide the capability for service centers to access, analyze, update, share, and store geospatial information.	X	X	X	X	X	X		X
RECOMMENDATION 7: Provide accessibility to information by service center employees while away from the office at customer locations.	X	X	X		X	X		X
RECOMMENDATION 8: Validate improvements of business processes resulting from service center access to geo-referenced data in a pilot test environment.	X	X	X	X	X	X		X
RECOMMENDATION 9: Establish and implement a training program that provides service center pilot sites with the ability to proficiently use GIS and related tools beginning FY98.	X	X	X		X	X		X
RECOMMENDATION 10: Use geospatial information to more efficiently and accurately identify high priority conservation areas based on environmental indicators and a geospatial watershed database.	X	X	X		X	X	X	X
RECOMMENDATION 11: Provide geospatial information to decision makers enabling them to establish policy and guidelines prior to program sign-ups.	X	X	X	X	X	X		X
RECOMMENDATION 12: Empower service center personnel with improved business tools, training, and enhanced approval authority.	X	X	X	X			X	X
RECOMMENDATION 13: Implement a comprehensive geospatial training program to all USDA service centers to provide improved service and benefit to the customers.	X	X	X		X			X

By implementing the Geospatial Team’s proposed recommendations, USDA will be improving service center operations by streamlining processes that require manipulation of geospatial information. Changes that occur at service centers will have a positive impact on the customers. Customer benefits include, but are not limited to:

- Reduced processing time
- Increased accuracy and consistency of information
- Reduced paperwork
- Increased timeliness of information
- New products and services

The ultimate benefit to the customer is the capability to use geospatial information to make informed business decisions that affect operations.

Report Organization

This report consists of three sections.

Section 1: Section 1 consists of the strategic overview of this project, including: the purpose and scope; a summary of the methodology and approach used by the Geospatial Team; a list of project participants; and a project plan listing all the tasks performed.

Section 2: The focus of Section 2 is on current business practices. The major parts include: an introduction to the programs modeled; a description of the current activities; a discussion of issues and concerns; and a description of improvement opportunities and tactical objectives developed by the Geospatial Team.

Section 3: The focus of Section 3 is on the reengineered business. The major parts include: a description of the reengineered customer life cycle from first contact to delivery of benefits; a description of the To-Be processes; and prioritized recommendations with detailed supporting information.

The report also has 14 appendices referenced throughout the document.

LIST OF ACRONYMS

ABC	Activity Based Costing
AMB	Activity Based Management
ACM	Ag Credit Manager
AMS	Agricultural Marketing Service
AMTA	Agricultural Market Transition Act
APFO	Aerial Photography Field Office
ASCS	Agricultural Stabilization and Conservation Service
B&I	Business and Industry
BBS	Bulletin Board System
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BPR	Business Process Reengineering
CBT	Computer Based Training
CCC	Commodity Credit Corporation
CCE	Common Computing Environment
CF	Community Facilities
CFR	Code of Federal Regulations
CI&OS	Customer Information and Outreach Specialist
CIC	Customer Information Coordinator
CIP	Customer Information Profile
CLU	Common Land Unit
CO	Credit Office
COC	County Office Committee
CONOPS	Concept of Operations
COR	County Office Reviewer
COTS	Commercial-Off-the-Shelf
CPN	Colored Petri Net
CPO	Conservation Plan of Operations
CRADA	Common Research and Development Agreement
CRAT	Civil Rights Action Team
CRIT	Civil Rights Implementation Team
CRP	Conservation Reserve Program
CSREES	Cooperative State Research, Education, and Extension Service
DEM	Digital Elevation Model
DFD	Data Flow Diagram
DLOS	Dedicated Loan Origination System
DoD	Department of Defense
DOI	Department of Interior
DOT	Department of Transportation

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DSG	Decision Support Groupware
EBI	Environment Benefits Index
EDI	Electronic Data Exchange
EENDS	Educational, Environmental/Natural, & Developmental Services
EI	Erosion Index
EMS	Electronic Meeting Systems
EQIP	Environmental Quality Incentives Program
EPA	Environmental Protection Agency
FAC	Food and Agriculture Council
FAIR Act	Federal Agriculture Improvement and Reform Act
FCA	Farm Credit Agency
FEA	Functional Economic Analysis
FEDSIM	Federal Systems Integration and Management
FEMA	Federal Emergency Management Agency
FGDC	Federal Geographic Data Committee
FmHA	Farmers Home Administration
FOCS	Field Office Computing System
FOIA	Freedom of Information Act
FSA	Farm Service Agency
FSC	Field Service Center
FTP	File Transfer Protocol
GAO	Government Accounting Office
GIS	Geospatial Information System
GPRA	Government Performance and Results Act
GPS	Global Positioning System
GUI	Graphical User Interface
HELIC	Highly Erodible Land Compliance
ICOC	County Office Committee
ICOMs	Inputs, controls, outputs and mechanisms
IDEF	Integrated Computer Aided Manufacturing Definition
IDP	Individual Development Plan
IE	Information Engineering
IPR	In-Progress Review
IRM	Information Resource Management
IRS	Internal Revenue Service
IT	Information Technology
ITMRA	Information Technology Management Reform Act
KCMO	Kansas City, Missouri

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LAN/WAN	Local Area Network/Wide Area Network
LT	Loan Technician
MFH	Multi-Family Housing
MOU	Memorandum of Understanding
MRB	Management Review Board
NAPP	National Aerial Photography Program
NARAS	National Archives and Records Service
NDOP	National Digital Orthophoto Program
NFAC	National Food and Agriculture Council
NPR	National Performance Review
NPS	National Park Service
NRCS	National Resources Conservation Service
NRWA	National Rural Water Association
OFR	Office of Federal Register
OIG	Office of Inspector General
OMB	Office of Management and Budget
PQR	Pretty Quick Responses
RADCF	Risk Adjusted Discounted Cash Flow
RBS	Rural Business Cooperative Service
RD	Rural Development
RDBMS	Relational Data Base Management System
RHS	Rural Housing Service
RMA	Risk Management Agency
ROI	Return on Investment
RUS	Rural Utilities Service
SC	Service Center
SCIT	Service Center Implementation Team
SCS	Soil Conservation Service
SCTG	Service Center Training Ground
SDR	Standard Data Repository
SFH	Single Family Housing
SIRMO	Senior IRM Officer
SME	Subject Matter Expert
STO	State Office
SWCD	Soil and Water Conservation District
TDD	Telecommunications Devices for the Deaf
TQM	Total Quality Management

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USDA	United States Department of Agriculture
USF&WS	United States Fish and Wildlife Service
USGS	United States Geological Survey
USLE	Universal Soil Loss Equation
USPS	United States Postal Service
UTM	Universal Trans-metrical
WAN	Wide Area Network
WC	Wetlands Compliance
WDC	Washington, D.C.
WHIP	Wildlife Habitat Incentives Program
WRP	Wetlands Reserve Program
WWW	World Wide Web

1. INTRODUCTION

1.1 Strategic Overview

1.1.1 Purpose

The National Food and Agriculture Council (FAC), under the leadership of the Deputy Secretary and the respective Under Secretaries, is reengineering, modernizing, and streamlining the program delivery processes of county-based service centers. These actions implement the Federal Crop Insurance Reform and Department of Agriculture Reorganization Act of 1994, Federal Agriculture Improvement and Reform Act of 1996, and other national initiatives to improve the quality, responsiveness, and efficiency of Government services.

In addition, the vision of the Secretary of the U.S. Department of Agriculture (USDA) is “one-stop service” in all USDA offices. The vision is to maintain and improve quality customer service and products and ensure adequate legislative cost reductions agency-wide. As a result, USDA will implement one-stop full-service processes at USDA service centers nationwide. The partner agencies in this initiative are the Farm Service Agency (FSA), the Natural Resources Conservation Service (NRCS), and the three Rural Development (RD) Agencies - Rural Utilities, Rural Housing, and Rural Business and Cooperative Development. The service centers will use reengineered business processes to improve service quality, reduce delivery costs, and implement team-based operations.

The Information Technology Management Reform Act (ITMRA) of 1995 provides additional requirements for Business Process Reengineering (BPR). ITMRA directed the Office of Management and Budget (OMB) to establish criteria for the evaluation (and ultimate approval) of major information system investments. The resulting criteria require documentation to demonstrate proposed investments in major information systems. Criteria include:

1. Support core/priority mission functions
2. Cannot be more efficiently supported by private sector or other governmental source
3. Have been simplified or otherwise redesigned to reduce costs, improve effectiveness, and make maximum use of commercial-off-the-shelf (COTS) technology
4. Demonstrate a projected return on investment (ROI) that is clearly equal to or better than alternative uses of available public resources

BPR provides the documentation to address these criteria.

The following four BPR working teams were established across mission lines to continually perform the variety of activities required to establish USDA service center capabilities for program delivery. The teams and areas of focus are as follows:

- Team 1 - Customer Interface
- Team 2 - Customer Service – Program Delivery
- Team 3 - Geospatial Information Services
- Team 4 - Administrative Management

The BPR teams are charged with identifying and implementing effective BPR projects to support “one-stop shopping” at USDA service centers. This report will highlight the activities of Team 3 – Geospatial Information Services, more commonly referred to as the Geospatial Team.

1.1.2 Scope

The scope of this effort was a rigorous BPR effort focused on processes required to acquire, access, annotate, update, and share geospatial information. More specifically, the project reengineered the way the USDA provides and uses map-based information.

The Geospatial Team focused on identifying and improving the program delivery business processes with a view towards enabling those processes by sharing digital geospatial information. The Team recognized that the majority of service center processes used map-based information, but due to time constraints decided to concentrate the first phase of the BPR project in four program/process areas.

The first phase included analysis of the processes required to deliver:

- The Conservation Reserve Program (CRP)
- The Wetlands and Highly Erodible Land Compliance Programs
- The Common Management of Land Units
- The Management of Easements

The Geospatial Team intends to pursue the reengineering of additional service center program and process areas as time and resources permit. The reengineering of additional areas allows improvements related to the use of map-based information to be realized on a larger scale.

The implementation phase will begin when the executive sponsors accept the final recommendations. Approval by the Management Review Board (MRB) and the FAC will occur after acceptance by the executive sponsors. At that time the BPR teams will be reorganized and rechartered to focus on integrating and implementing pilot projects to assess the total impact on USDA before complete implementation. Specific pilot projects and implementation plans will be identified and presented in an Integrated Report (for all four BPR teams) that is drafted for September 1997. In addition, support will be

provided for the further development of the business case.

The following two groups will be established for the implementation phase:

- *Integration Group* - Work to roll recommendations into logical projects. This working group will establish criteria, group recommendations, formulate implementation plans, and assist in writing the integrated report for BPR projects 1-4. This group should include at least one person from each team, an IT representative, and a BPR Project Manager.
- *Pilot Group* - Work closely with the integration group to identify pilot test requirements to implement projects. No pilots should be authorized until integration group recommends and obtains approval for specific projects. Following approval, the pilot group will begin initial planning for pilots, again working closely with integration group responsible for developing project implementation plans. This group should include at least one person from each BPR Team, Pilot coordinator, business case/cost benefit coordinator, an overall BPR Project Manager, and an IT representative.

1.1.3 Assumptions and Constraints

The current business environment is complex and subject to future uncertainties. Stating assumptions during the start-up phase of the BPR project allowed the Geospatial Team to proceed with the analysis without knowing all the facts about the future environment of the service center. The following are the assumptions for this project:

- The missions of the USDA service center partner agencies will remain as currently defined.
- The USDA will remain committed to BPR of its customer service processes.
- The USDA service center partner agencies will actively participate in the project.
- High-level cost data and performance data will be available.
- Digital geospatial as well as other data will be shared directly with partnering agencies and directly with customers.
- Digital ortho-imagery, soils, and other mission critical geospatial data will be acquired for the area of interest for all service centers replacing the user of traditional aerial photography.
- Initial BPR activities will focus on a limited number of program delivery processes among service center agencies. Follow-up BPR activities (after

July 15, 1997) will continue on remaining geospatial processes.

The Geospatial Team was cognizant of potential constraints or barriers that could limit the effectiveness or quality of the overall BPR effort. Potential constraints identified by the team include:

- Limited shelf life of BPR recommendations
- Limited resources may constrain the BPR implementation
- Limited time

1.1.4 Business Process Reengineering Objective

The Geospatial Information Services BPR project focused its reengineering efforts on the processes in which the USDA provides map-based information to their personnel, the non-USDA partners, and the customers. The project encompassed activities required to acquire, access, annotate, update, and share map (and digital geospatial) information. The Team considered voice and textual information communicated in a geospatial context to be included within this process.

The reengineering project will be accomplished in two phases. The results of the first phase of the project are documented in this report. The first phase includes a detailed analysis of the most critical core business activities occurring at service centers and an assessment of the potential for improving those activities with geospatial technology. The team anticipates that the new business processes will be validated in a limited number of pilot test locations prior to full implementation. These sites will replicate the business scenarios developed by the team, test the enabling technology associated with the new business processes, and provide additional quantitative data to support the business case.

The second phase of the project will occur during the next 2 years, or until completed, and will continue reengineering service center activities, validating associated improvements, and implementing improvements at service centers nation-wide.

1.1.5 Service Center Vision

Service centers will support the Secretary's vision of "one-stop service". One-stop shopping will be a cooperative effort among the various service center staff members to provide USDA customers with high quality service. The vision for USDA service delivery is:

USDA service centers, in partnership with people and communities, will deliver agricultural, rural development and natural resources programs with a continuity

*and quality of service that exceeds customer's expectations and achieves maximum efficiency.*¹

The Secretary has determined that “one-stop service”, “quality customer service”, “cost reduction”, and “external partnerships” are the principal service center strategic business goals, articulated below. Therefore, each mission area represented in a service center must ensure that it’s agency’s strategic goals and implementation plans support the Secretary’s strategic business vision. The strategic business goals are defined as follows:

- *One-stop Service.* Where there is a presence, one-stop service centers will be established providing agricultural, rural development, and natural resource conservation programs and exceptional service, as if delivered by a single agency.

Service centers will enhance customer service to farmers, ranchers, rural communities, businesses, and families by providing all programs at all locations. Customer convenience will be improved and enhanced through collocations and the establishment of the service centers. Also, opportunities for greater efficiency will be created through the sharing of staff and technology among partnering agencies.

- *Quality Customer Service.* Service centers will exceed customer expectations by providing courteous, high quality, professional, and personalized service in a timely and effective manner. Customer service is a primary consideration and focus of the service center.

Service centers will strive to achieve the following customer service standards:

- ◇ Customers are treated with courtesy and respect
 - ◇ Customers are given prompt and reliable service
 - ◇ Customers are given information that is clear, reliable, and easy to understand
 - ◇ Customers are given forms that are easy to understand and complete
 - ◇ Customers can expect service centers to work with related state and local offices.
- *Cost Reduction.* Service centers will continue to strive to reduce administrative and program delivery costs to the public by utilizing integrated information systems, and sharing administrative resources to the maximum extent possible.

¹ Concept of Operations for USDA’s Service Centers

- *External Partnerships.* Service centers will continue to strive to develop partnerships with people, communities, other private organizations and Government agencies to maximize the use of limited resources and attain common goals and objectives.

1.1.6 Critical Success Factors

Critical success factors were developed for the BPR project and are based on the Geospatial Team’s knowledge and understanding of what constitutes a successful service center in the future as outlined in the four service center goals. Each of the seven factors represent an area in which the Geospatial Team feels they will affect some degree of improvement; thereby contributing to the successful implementation of the new service center concept. The factors include:

- Shared Information
- Data and Systems Quality
- Information Accessibility/Security
- Consistency to the Customer
- Customer Access
- Customer Satisfaction
- Training

1.1.7 Service Center Mission and Agency Mission Areas

The administrators of the service center agencies—FSA, NRCS, and RD Agencies—are responsible for the strategic coordination and unified implementation of service centers to assure that customers derive maximum value from USDA products and services, and USDA is able to deliver those products and services in a cost effective and efficient manner. As stated earlier, each mission area represented in a service center must ensure that it’s agency strategic goals and implementation plans support the Secretary’s strategic business vision for service centers.

1.1.7.1 Service Center Mission

Each service center delivers a full range of agricultural, rural development, and natural resource programs with a continuity and quality of service that exceeds customer expectations and achieves maximum efficiency. The service center mission consists of the combined missions of each of the partner agencies, and is guided by commonly shared attributes, which include administrative management, cost reduction, and quality customer service.

1.1.7.2 Farm Service Agency Mission

The FSA's mission is to ensure the well-being of American agriculture and the American public through efficient and equitable administration of farm commodity, credit, conservation, environmental, emergency assistance, domestic and international food assistance, and international export credit programs.

1.1.7.2.1 Environment

The FSA improves the economic stability of agriculture and the environment through: commodity programs; farm ownership, operating, and emergency loans; conservation programs; domestic and overseas food assistance programs; and disaster programs. These programs provide a safety net to help farmers produce an adequate food supply, maintain viable operations, compete for export sales of commodities in the world marketplace, and contribute to the year-round availability of a variety of low-cost, safe, and nutritious foods. FSA carefully considers environmental impacts in the development and implementation of program operations to ensure adequate protection of natural, cultural, and historic resources.

FSA programs are delivered through an extensive network of service centers including over 2,386 USDA service centers where FSA is currently present. State and county office elected committees, comprised of farmers in the local area, are responsible for ensuring FSA services are delivered to the farming community.

1.1.7.2.2 Mission Area

FSA's mission area is responsible for providing farm income support through loans and payments; promoting stewardship of soil, water, air, and wildlife resources; and managing the Commodity Credit Corporation's (CCC) commodity acquisition, procurement, and storage activities. FSA has the following strategic goals:

1. *Farm Programs.* Provide an economic safety net through farm income support to eligible customers, cooperatives, and associations to help improve the economic stability and viability of the agricultural sector and to ensure the production of an adequate and reasonably priced supply of food and fiber.
2. *Conservation.* Assist agricultural customers and landowners in achieving a high level of stewardship of soil, water, air and wildlife resources on America's farmland ranches.
3. *Environment.* Administer FSA programs in a manner that protects and enhances the quality of the human and natural environments.
4. *Farm Loans.* Assist eligible individuals and families in becoming successful farmers and ranchers.

5. *Commodity Operations*. Improve the effectiveness and efficiency of CCC's commodity acquisition, procurement, storage, and distribution activities to support domestic and international food assistance programs, and administer the U.S. Warehouse Act.
6. *Equal Employment Opportunity and Civil Rights*. Provide fair and equal treatment in employment and the delivery of FSA programs.
7. *Program Delivery & Outreach*. Provide equal and fully integrated service delivery to customers in USDA service centers and enhance the ability of small, limited resource, and socially disadvantaged family farmers and ranchers to operate successfully.
8. *Administrative Services*. Streamline and improve the effectiveness and efficiency of administrative support functions and fully utilize human, financial, physical, and information resources.
9. *Future Outlook*. Determine the long-term direction of FSA and programs that support production agriculture.

1.1.7.2.3 Geospatial Component

The FSA's automation efforts to date have been limited to the use of tabular (flat) files, or non-geographic information. However, most of the information actually managed by FSA is geospatial (geographically referenced) in nature. An effective and efficient management of this geographic data is critical if FSA is to continue providing timely program information, reducing burdens previously placed on customers, and still be cost effective for FSA and their customers.

FSA's mission area has a direct association between land and producer. Geographic data is used to ensure farm program compliance, maintain land unit records, ensure producer eligibility, establish farm yields, plan farm operations, and identify and appraise disaster effected areas.

1.1.7.3 Natural Resources Conservation Service Mission

The NRCS mission and role in the service center is to provide national leadership in a partnership effort, to help people conserve, improve, and sustain their natural resources and environment.

1.1.7.3.1 Environment

Agriculture and the health of America's land and water resources are vital to the nation's welfare. Approximately 70 percent of the United States (exclusive of Alaska) is privately

owned land. At least half of the Nation's land (about 902 million acres) is cropland, pastureland, and rangeland owned and managed by farmers and ranchers.

Over the past decade, American farmers and ranchers have made significant progress in reducing soil erosion, slowing the loss of wetlands, and otherwise conserving natural resources. This recent progress was built upon the solid foundation of more than one-half century of conservation gains achieved through voluntary cooperation among governments, individuals, organizations, and industry.

The NRCS is proud to be partners in conservation with America's private landowners, conservation districts, state and local conservation agencies, and others. This partnership has stabilized the American landscape, helped increase agricultural productivity, kept agriculture profitable, and improved the environment.

The NRCS, formerly the Soil Conservation Service (SCS), is the lead Federal conservation agency for private land. It is part of the USDA and serves the 50 states, Puerto Rico, the U.S. Virgin Islands, and the U.S.-affiliated Pacific islands.

1.1.7.3.2 Mission Area

NRCS provides conservation technical assistance through local conservation districts to individuals, communities, watershed groups, tribal governments, federal, state, and local agencies and others. At the local level, the NRCS staff works with state and local conservation staff and volunteers in a partnership to assist individuals and communities to care for natural resources. NRCS also develops technical guidance for conservation planning and assistance. This technical guidance is tailored to local conditions and is widely used by NRCS staff and governmental and non-governmental organizations to ensure that conservation is based on sound science. The benefits of these activities are multi-faceted, including sustained and improved agricultural productivity; cleaner, safer, and more dependable water supplies; reduced damages caused by floods and other natural disasters; and an enhanced natural resource base to support continued economic development and recreation.

1.1.7.4 Rural Development Agencies' Mission

The RD mission and role in the service center is to enhance the ability of rural communities to develop, grow and improve their quality of life by targeting financial and technical resources in areas of greatest need through activities of greatest potential.

1.1.7.4.1 Environment

Rural communities are very diverse, but most of them share a common problem—difficulty in obtaining financing for needed improvements. This problem is intensified by: the limited number of available users to support the repayment of debt; the high cost per user of rural projects due to their small scale; the lack of expertise in many rural

communities in the technical aspects of project development and management; and the fact that most small rural communities do not have bond ratings which makes it nearly impossible for them to obtain private sector financing.

1.1.7.4.2 Mission Area

The agencies that constitute the Rural Development mission area include:

- Rural Business-Cooperative Service (RBS)
- Rural Housing Service (RHS)
- Rural Utilities Service (RUS)

RD programs are designed to meet the diverse needs of rural communities and to help them obtain the financial and technical assistance needed to improve the quality of life in rural America and help individuals and businesses compete in the global marketplace. These programs consist of a variety of loan, loan guarantee, and grant programs, plus technical assistance, in the areas of business and industry; cooperative development; rural housing; community facilities; water and waste disposal; electrification; and telecommunications, including distance learning and tele-medicine. The basic tenet of most mission area programs is that they are not to compete with private credit, but rather supplement that credit.

RD loan programs, with an outstanding portfolio of approximately \$77.7 billion, are delivered through a national office for each agency, 47 RD state offices and a network of other service centers. The mission area is supported by a finance office and a centralized servicing center in St. Louis, Missouri, which services the direct single family housing portfolio.

1.2 BPR Methodology and Approach in Support of USDA

The purpose of this section is to outline the methodology and approach used to support the USDA BPR initiative. The methodology utilized Decision Support Groupware (DSG) to collect, analyze, and achieve consensus. DSG is the integration of Electronic Meeting Systems (EMS), modeling and analytical software tools such as BPWin®, ©Micrografx ABC Flowcharter and Microsoft Office, and a skilled integration approach. DSG was used in a workshop atmosphere that enabled the Geospatial Team to identify information needs and develop solutions. The specific approach to the BPR project was developed and tailored to USDA's requirements, and the resources available.

The Geospatial Team worked to improve processes that were not currently performed well. Better performance was defined as improved quality from the customers' perspective as well as improved operational performance such as productivity. The Team used a variety of process improvement techniques to develop recommendations for

improving the service centers business processes, operationally and from the perspective of USDA customers.

The BPR project was initiated by a series of sessions that were developed to open communications with the Team and facilitate collection of information regarding the functional and organizational activities and processes for program delivery. The sessions typically began with some structured brainstorming to collect new ideas and establish a list of actions or issues to examine. Following the brainstorming, the issues were further developed. A mixture of DSG tools were used to collect the information dynamically. When necessary, the group would vote on the issue or subject to establish agreement and document consensus. In subsequent sessions, and throughout the process, the group would continually go through the process of idea generation, organization, and evaluation. The Geospatial Team met 6 times to gather and develop the information required for the BPR initiative. The workshop dates and subjects are listed below in Exhibit 1-1.

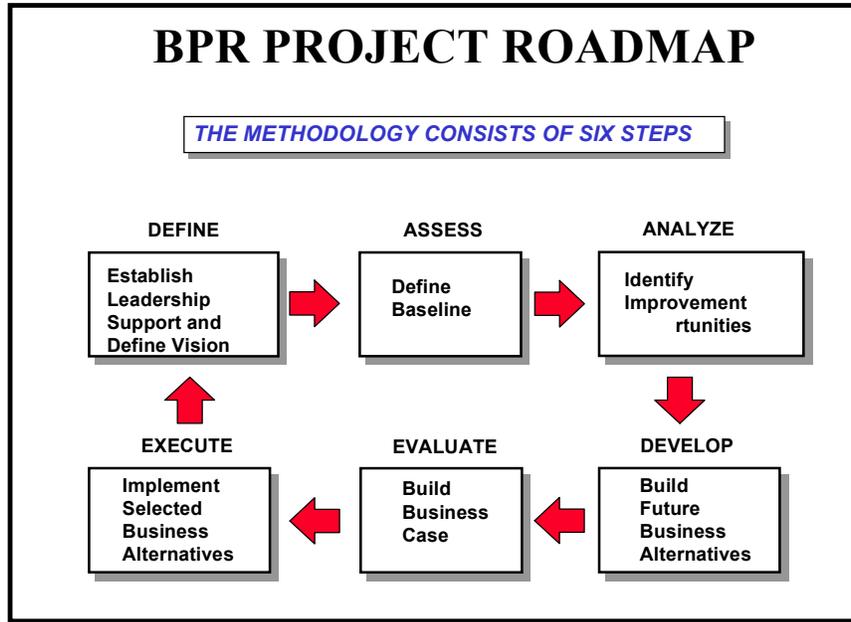
Workshop Number	Workshop Dates	Workshop Subject
1	Feb. 12-14	Planning session
2	Feb 24 - 28	As-Is
3	March 3-7	As-Is
4	March 17-21	To-Be
5	May 5-9	To-Be
6	June 4-5	To-Be

BPR PROJECT WORKSHOPS

Exhibit 1-1

1.2.1 BPR Project Roadmap

BPR involves a series of tasks and events. Exhibit 1-2 presents the six step process that comprises the methodology. Each step builds on the previous step. The roadmap reflects the iterative tasks involved in this BPR Project.



BPR PROJECT ROADMAP

Exhibit 1-2

The steps, scope, and paragraph numbers 1.2.1.1-1.2.1.6 for each step are shown in Exhibit 1-3.

Step	Scope	Paragraph
Establish Leadership Support and Vision	Establish the Scope, Process, Steps, Approach and Boundaries	1.2.1.1
Define Baseline	Research, Interview, Conduct Sessions to Define and Model As-Is	1.2.1.2
Identify Improvement Opportunities	Analyze Current Process; Develop Improvement Opportunities	1.2.1.3
Build Future Business Alternatives	Develop and Model the Desired Processes to Maximize Quality	1.2.1.4
Build Business Case	Develop Case (i.e., cost/benefits) to Select Option	1.2.1.5
Implement Alternatives	Define Plan, Responsibilities, Milestones	1.2.1.6

STEPS AND SCOPE

Exhibit 1-3

1.2.1.1 Establish Leadership Support and Vision (Define Phase)

The basis for a successful BPR project is the role of the leadership. Without a strong commitment from the leadership, a project will not meet its full potential. The vision and leadership support for the project form the foundation and the charter. Second in importance to the vision, are the boundaries for the project. The boundaries establish the issues and operations the leadership wants to include within, and exclude from, the BPR. The other foundation for a successful BPR is the identification of specific organizational goals, objectives, and performance measures the BPR initiatives are attempting to support. The BPR initiative must be tied to the business drivers of the organization which are rooted in the elements of the organization's strategic plan.

The Geospatial Team established a charter and project plan in accordance with the four goals outlined in the Service Center CONOPS. In addition, each agency's strategic plan was carefully considered to ensure recommendations supported the FSA, NRCS, and RD vision.

1.2.1.2 Define Baseline (Assess Phase)

This phase of the engagement encompasses the building of the As-Is activity model and initial analysis. During this phase, the Team developed a baseline, thereby creating the foundation for the development and implementation of newly redesigned business practices of processes. This phase answers the question:

1. "What do we do?"
2. "How do we do it?"
3. "How well do we do it?"

The Geospatial Team developed activities and data points in a workshop atmosphere. Different techniques and EMS tools were used to gather the information from the Team. This team worked in diverse sub-groups (i.e., different agencies and areas of expertise) and each sub-group was assigned a program to develop. The sub-groups developed activities and supporting information for their assigned program. The supporting information included activity: definitions, as well as inputs, controls, outputs, and mechanisms (ICOMs). During, and at the completion of the workshop, the information gathered was used to develop an As-Is activity model for each program. The BPWin® modeling tool was used to support development of the activity model. The detailed activity model is provided in Appendix A.

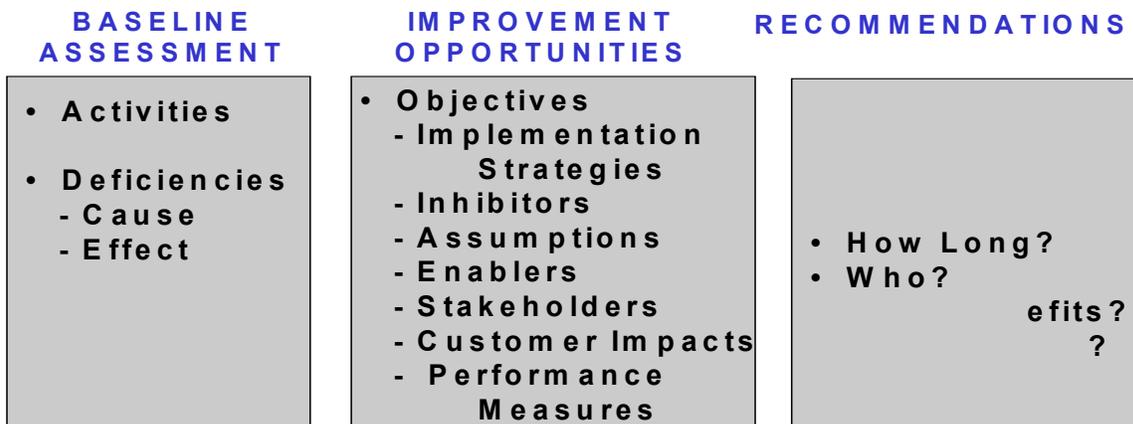
The Team used the As-Is activity models to evaluate which activities were common in all programs; then the highest pay off programs were selected for further decomposition to the process level. Conservation Reserve Program (CRP) was identified as the most representative program in terms of performing the most significant level of activities and was selected for detailed modeling. The Team decided early on that they could only

model one program from top to bottom considering the USDA project timeline. CRP was selected because it was highly visible to Congress and the public, crossed agency or directorate lines, and its major processes were represented in multiple programs. These factors increased the likelihood that any reengineering valid for CRP would be valid and easily adopted to serve other programs. CRP then became the process that is being used to extrapolate potential savings across all programs.

An As-Is and To-Be process model were developed for CRP from information gathered in Geospatial Team Workshops. By looking at CRP at a lower process level (a lower level than the activity model) it was obvious that the recommendations would improve the CRP process. The process models were developed using the ©Micrografx ABC Flowcharter tool. The combination of activity and process modeling is necessary to obtain the full picture of what activities are conducted and how (i.e., steps) those activities are carried out within the organizations.

The next step in this process was to use the activity model to identify deficiencies and the supporting information. The Geospatial Team reviewed the program activities and identified: the activities with deficiencies, the name of the deficiency, a description of the deficiency, the cause of the deficiency, and the effect the deficiency had on the activity. This audit trail justifies the evolving recommendations for improvement. Exhibit 1-4, Approach to Track Recommendations to Deficiencies, depicts the approach used to track recommendations to deficiencies.

Approach to Track Recommendations to Deficiencies



APPROACH TO TRACK RECOMMENDATIONS TO DEFICIENCIES

Exhibit 1-4

1.2.1.3 Identify Improvement Opportunities (Analyze Phase)

Once the current assessment of the programs was completed, improvement opportunities were developed and targeted at correcting deficiencies. The Team identified improvement opportunities to include: provide GIS; provide employee training; empower employees; and modify processes. Many improvement opportunities were program specific; conversely, different programs had similar or identical improvement opportunities. To consolidate similar improvement opportunities, the program specific improvement opportunities were merged together to form integrated improvement opportunities in the areas of training, policy/procedure, empowerment/process, and automation.

The Geospatial Team then developed tactical objectives from these high level improvement opportunities, which are statements that describe specific or desired outcomes or results of the To-Be business environment and track back to the activities and processes they impact. The Team developed one or more tactical objectives for each of the improvement opportunities to specify “how” each would be implemented. Tactical objectives bridge the vision of the To-Be via the identified improvement opportunities and ultimate recommendations. They provide the measurable focus for developing the future business environment.

The Geospatial Team collected the following supporting information for each tactical objective:

- *Success Statements:* What will the future environment be like if the tactical objective is achieved. Statements that describe the “big picture” end result.
- *Implementation Strategies:* Strategies that define the approaches, or steps, to be used to meet the objectives. Approaches include an integrated and coordinated set of actions that will result in achieving the objective. Strategies should meet the following criteria:
 - ◇ Contribute to achieving the objectives
 - ◇ Exist within the capability of USDA to implement successfully and in a timely manner
 - ◇ Be specific enough to provide adequate guidance
- *Inhibitors:* Anticipated obstacles that impede progress toward achieving objectives. Inhibitors can be either internal (i.e., organizational, institutional, or systemic) or external (i.e., resource restrictions or legislative mandates).
- *Enablers:* Technology, organizational change, resources that make the objective possible or effective and may help to resolve an inhibitor.

- *Assumptions:* Realistic statements used to describe the future environment when facts about the environment are unknown.
- *Stakeholders:* Stakeholders are organizations, groups, or individuals that will affect or be affected by a tactical objective.
- *Performance Measures:* Performance measures are results oriented, specific measures that are used to evaluate progress in accomplishing tactical objectives.

1.2.1.4 Build Future Business Alternatives (Develop Phase)

The Team developed recommendations after analysis of the tactical objectives. Improving customer service was the main driver behind developing recommendations with the primary focus being placed on USDA business activities and programs with heavy customer service implications. The tactical objectives, in some cases, were driven down further resulting in several associated recommendations, enabling the costing team to derive the costs associated with each recommendation.

Supporting details collected for each recommendation include:

- *Recommendation Problem Statement.* What issues or concerns will be addressed by the recommendation? Problem statements were developed from summarizing the deficiencies for each program that are supported by the recommendation.
- *Recommendation Steps (Responsible Party).* What are the required steps necessary to accomplish the recommendation including the associated planning, training, policy and implementation? Each recommendation step will have a recommended office or team responsible for its execution.
- *Associated Risks of Implementation.* What are the potential risks associated with implementing this recommendation? What are the potential risks associated with not implementing this recommendation? What circumstances exist that will impede the success of the recommendation?
- *Customer and Business Benefits.* How will the customer benefit if the recommendation is implemented? How will the current USDA business processes be improved and what advantages will the recommendation provide USDA employees?
- *Programs Impacted.* What positive impact or benefit to USDA Programs will the recommendation accomplish?

- *Business Processes Impacted.* What are the current activities performed by USDA which will be facilitated or improved by implementing the recommendation?
- *System Functional Requirements.* If an automated system is required to support a recommendation, what are the functional requirements that must be defined? (This will be defined during the next phase of the project)
- *Information Needs.* What are the information requirements during the data modeling phase of this effort? The teams identified high level information needs associated with each recommendation.
- *Where Recommendation Should Be Carried Out.* Where is the most logical site or level to implement and test the recommendation ?
- *Anticipated Investment Cost Areas.* What are the costs associated with each recommendation to determine both financial and human resource impacts (This data is being further developed by the costing team)?
- *Implementation Period.* The starting and ending fiscal years for implementing the recommendation.
- *Implementation Characteristics.* If the implementation will be phased in, describe the percentage of completion for each year or how phase in will occur (e.g., to 50 percent of service centers, to 50 percent of recommended changes to all service centers).

The recommendations will be integrated and implemented in pilot projects so to assess the total impact on USDA before implementation is completed. Specific pilot projects and implementation plans will be identified and presented in an Integrated Report (for all four BPR teams) that will be drafted September 1997.

The Geospatial Team began development of an integrated service center To-Be activity model to demonstrate the shift and changes in the business process from the baseline (As-Is model). The basis for building a To-Be model will be the specified improvement opportunities applied to the As-Is model. Each of the major issues or problems developed during the As-Is phase were addressed and resolved by the improvement opportunities, tactical objectives, and recommendations. Often the upper level activities of the enterprise remain unchanged, but the underlying activities and processes are altered radically, shifted to other organizations, or eliminated. When the organizational measurements or metrics are applied to the To-Be model, comparisons of value-added and cost per output will be made to build the basis for comparison and evaluation of the business case.

A data team worked to develop an Integrated Service Center Data Model. The Integrated Service Center Data Model can be seen in Appendix B. The primary objective of the

data team was to provide a graphical depiction of the Integrated Service Center's information requirements. The first step was to develop a schedule that mapped out information gathered in sessions with representatives from all four BPR teams. These sessions ranged from one on one to small groups interviews. The data team met individually with all four teams and developed a Conceptual/Logical Data Model that was validated by each BPR team. The Conceptual/Logical Model includes definitions of the elements which an enterprise is interested in keeping data on (Entities) and descriptions of the basic activities in which an enterprise engages (Business Rules).

1.2.1.5 Build Business Case (Evaluate Phase)

The purpose of the business case is to provide justification for implementation of the BPR recommendations and information technology (IT) capabilities required for their implementation. The justification will be provided by comparing benefits with costs and computing financial performance indicators as return on investment (ROI), net present value, and pay back period. In effect, the benefits to customers and process cost savings will be balanced against the cost to implement the BPR recommendations as presented in this report. Because benefits and costs are expected to be realized or incurred in different time periods, inflation and present value factors will be applied to dollar values.

One of the important aspects of the business case is the focus on moving forward by presenting a picture of how BPR recommendations will be implemented. Consequently, individual BPR recommendations as presented in this report will be consolidated across BPR teams into an integrated set of implementation projects. The business case will contain a high-level implementation plan addressing each of these projects, identifying the type and level of staffing and resources required, the approach to implementation, and a proposed implementation schedule.

A key aspect of the implementation is the use of pilot testing, both as proof of concept of the BPR recommendations as well as a tool to gather more solid benefit and cost data. The business case will include a discussion of the pilot approach, required steps to establish and operate pilots, and related success factors. The timely operation of pilots is essential to the overall success of BPR.

The actual quantifiable justification will be contained in the cost benefit analysis section of the business case. Benefits and costs will be estimated by implementation project as well as rolled up for the entire BPR initiative. The benefit cost analysis contains the following major elements:

- ***Estimated As-Is processing cost.*** This reflects the cost of personnel, IT, space, and miscellaneous costs incurred by service centers to deliver program services to USDA customers utilizing existing business processes as they exist *before* BPR recommendations are implemented.

- ***Estimated To-Be processing cost.*** This reflects the cost of personnel, IT, space, and miscellaneous costs incurred by service centers to deliver program services to USDA customers utilizing reengineered business processes as they will exist *after* BPR recommendations are implemented.
- ***Estimated net process cost savings/additions.*** This is the difference between As-Is processing cost and To-Be processing cost.
- ***Cost to implement BPR recommendations.*** This is the non-recurring cost relating to BPR implementation projects, to include developing new policy, conducting training, and developing and implementing additional enabling IT capabilities.
- ***Benefits to customers.*** This is the benefit to USDA customers anticipated to result from reengineered business processes. Benefits to customers may result from time savings on the part of customers in applying for USDA programs, quicker program payments, or better access to information critical to improving the customers' business operations.

1.2.1.6 Implement Alternatives (Execute Phase)

As stated earlier, recommendations from the four BPR projects will be analyzed to determine logical cross functional groupings. Specified criteria will be established to focus consolidation in expected business results rather than from an organizational "turf" perspective. The consolidation will result in a set of implementation projects for which specific project plans will be developed. These projects will be costed, prioritized, and presented to the Executive Sponsors, MRB, and FAC for funding approval.

1.2.1.7 Summary

Managing, organizing, and improving government business is a difficult task. The National Performance Review requires measurable outcomes and a balanced approach focused on customer needs. The team focused on outcomes and a balanced approach with a customer perspective. The BPR approach followed by the team facilitated this focus.

1.2.2 Tools and Techniques

The BPR methodology capitalized on the use of DSG to collect, analyze, and gain consensus on information provided by the Geospatial Team. As stated earlier, DSG is the integration of EMS, analytical software tools like BPWin® 1.8.0 and Microsoft Office and a skilled integration approach. The electronic meeting system environment ensured the maximum amount of information was collected from session participants during the limited amount of time available. The software selected, Group Systems for

Windows by Ventana, expedited consensus among the various participants throughout all phases of this project.

The development of As-Is and To-Be activity models was accomplished using the **I**ntegrated Computer Aided Manufacturing **D**efinition (IDEF) methodology. This Department of Defense standard method enabled a thorough review of the selected programs' activities and functional areas. BPWin® 1.8.0, a software package produced by Logic Works, was used and ensured that IDEF rules were adhered to while automating the modeling process.

The data team utilized the S-Designor modeling tool with Information Engineering (IE) notation for the technical rendering of the data model. The data model has been fully documented in the ERWin modeling tool utilizing the Integrated Definition (IDEF) notation. This approach was implemented by way of interviews with USDA subject matter experts to gather information in order to build the model. Although many of the detailed modeling activities took place during the workshops, refining the model was done with team interviews based on specific data views.

The development of As-Is and To-Be Process Models was accomplished using ©Micrografx ABC Flowcharter 4.0. ABC Flowcharter is a charting program that provided USDA the tools needed for total process management.

Multiple analytical tools and matrices to summarize information were developed and presented in Microsoft Excel throughout the project.

1.3 Participants and Team Organization

Leadership for the Geospatial Team is provided by the Executive Sponsor, Mr. Larry Clark, and a core team consisting of representatives from FSA, NRCS, and RD are listed in Exhibit 1-5. In addition, subject matter experts from service centers across the country have actively participated in assessing the current business environment and recommending improvements.

GEOSPATIAL TEAM PARTICIPANTS			
me	ncy		Location
Larry Clark,	NRCS	Executive Sponsor	National Headquarters Washington, D.C
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Kathy Green	NRCS	District Conservationist	Service Center

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Scott Willbrant	FSA	Program Specialist	Kansas State Office Manhattan, KS
C.W. Scott	NRCS	District Conservationist	Service Center Ft. Morgan, CO

GEOSPATIAL TEAM

Exhibit 1-5

1.4 Project Plan

The Geospatial Team developed a project plan which detailed the tasks to be completed and the time period for performing each task. Exhibit 1-6 presents the plan.

ID	Task Name	Duration	Start	Finish
1	Team 3 -- Geospatial Team Project Plan	128d	2/12/97	8/8/97
2	Conduct Core Team Planning Session	3d	2/12/97	2/14/97
3	Assess Current Business Practices	85d	2/24/97	6/20/97
4	Conduct First AS-IS Workshop (4 program areas)	5d	2/24/97	2/28/97
5	Validate AS-IS Indented List of Activities	1d	2/24/97	2/24/97
6	Identify ICOMs	3d	2/24/97	2/26/97
7	Identify macro-level deficiencies	1d	2/27/97	2/27/97
8	Determine macro-level improvement opportunities	1d	2/27/97	2/27/97
9	Develop AS-IS activity models	3d	2/26/97	2/28/97
10	Develop manpower cost components (time, grade, etc.)	1d	2/27/97	2/27/97
11	Identify Opportunities for Best Practices	1d	2/28/97	2/28/97
12	Conduct Second AS-IS Workshop (3 program areas)	5d	3/3/97	3/7/97
13	Validate AS-IS Indented List of Activities	1d	3/3/97	3/3/97
14	Identify ICOMs	3d	3/3/97	3/5/97
15	Identify macro-level deficiencies	1d	3/6/97	3/6/97
16	Determine macro-level improvement opportunities	1d	3/6/97	3/6/97
17	Develop manpower cost components (time, grade, etc.)	1d	3/6/97	3/6/97
18	Identify Opportunities for Best Practices	1d	3/7/97	3/7/97
19	Develop AS-IS Models	3d	3/5/97	3/7/97
20	Integrate CRP (Team 2 w/ Team 3)	75d	3/10/97	6/20/97
21	Receive Feedback / Refine AS-IS Models	31d	3/7/97	4/18/97
22	Obtain Executive Approval to Proceed	1d	6/12/97	6/12/97
23	Conduct Benchmark Activities (Related to Geospatial Technology)	36d	3/17/97	5/5/97
24	Reengineer The Current Business	78d	3/17/97	7/2/97
25	Conduct TO-BE "Transition" Workshop	65d	3/17/97	6/13/97
26	Establish Critical Success Factors (Geospatial)	1d	3/17/97	3/17/97
27	Review AS-IS Teams input on Deficiencies	1d	3/17/97	3/17/97
28	Determine Cause and Effect for Defined Deficiencies	2d	3/18/97	3/19/97
29	Identify Improvement Opportunities	2d	3/19/97	3/20/97

ID	Task Name	Duration	Start	Finish
30	Develop Primary Tactical Objectives	2d	6/12/97	6/13/97
31	Develop Performance Measures for Tactical Objectives	2d	3/20/97	3/21/97
32	Map Improvement Opportunities to Success Factors	1d	3/21/97	3/21/97
33	Analyze Information / Provide Feedback to Core Team	11d	3/24/97	4/7/97
34	Team 2 & Team 3 Integration	1d	4/10/97	4/10/97
35	Team 2 & Team 3 Integration	1d	4/22/97	4/22/97
36	Conduct TO-BE Workshop (4 program areas)	5d	5/5/97	5/9/97
37	Integrate Improvement Opportunities across Programs	1d	5/5/97	5/5/97
38	Review / Refine Objectives	1d	5/5/97	5/5/97
39	Prioritize Objectives (Pilot Projects)	3d	5/5/97	5/7/97
40	Develop Implementation Strategies	3d	5/5/97	5/7/97
41	Develop Success Statements	1d	5/7/97	5/7/97
42	Identify Inhibitors / Constraints / Enablers/ Analyze Risk	1d	5/7/97	5/7/97
43	Determine Customer Impacts & Stakeholders	1d	5/7/97	5/7/97
44	Develop Performance Measures	1d	5/7/97	5/7/97
45	Determine Preliminary Recommendations	2d	5/8/97	5/9/97
46	Provide Supporting Information for Recommendations	2d	5/8/97	5/9/97
47	Select areas for Process Flow / Business Sceario Development	1d	5/9/97	5/9/97
ID	Task Name	Duration	Start	Finish
48	Engineer CRP AS-IS Process Flow (Business Scenario)	10d	5/12/97	5/23/97
49	Team 2 & Team 3 Integration	1d	6/12/97	6/12/97
50	Team 2 & Team 3 Integration	1d	5/28/97	5/28/97
51	Conduct Core Team Workshop	2d	6/4/97	6/5/97
52	Review / Revise Recommendations	1d	6/4/97	6/4/97
53	Prioritize Recommendations	1d	6/4/97	6/4/97
54	Revise Recom. & Tactical Obj. Information	2d	6/4/97	6/5/97
55	Develop Recommendation to SC Goals Matrix	1d	6/5/97	6/5/97
56	Develop Information Needs to Program Matrix	1d	6/5/97	6/5/97
57	Develop Customer Survey Questions	1d	6/5/97	6/5/97
58	Develop Recommendations to Critical Success Factors Matrix	1d	6/5/97	6/5/97
59	Develop preliminary CRP TO-BE Process Flow	1d	6/5/97	6/5/97
60	Refine / Validate CRP Business Scenario	20d	6/5/97	7/2/97
61	Support Cost Benefit Analysis Data Collection Effort	85d	4/14/97	8/8/97
62	Prepare Report	85d	4/14/97	8/8/97
63	Provide Report Template	1d	4/14/97	4/14/97
64	Provide Section 1 of Report for Formatting	1d	6/9/97	6/9/97
65	Provide Section 2 of Report for Formatting	1d	6/16/97	6/16/97
66	Review of Sections 1 & 2 by the Team	1d	6/24/97	6/24/97
67	Provide Section 3 of Report for Formatting	1d	6/30/97	6/30/97
68	Complete formatting report/distribute to Red Team	4d	6/30/97	7/3/97
69	Red Team Review of Report	1d	7/7/97	7/7/97
70	Make changes to report	3d	7/7/97	7/9/97
71	Provide report for reproduction	1d	7/9/97	7/9/97
72	Provide Draft Report	1d	7/15/97	7/15/97
73	Revise Report	6d	8/1/97	8/8/97
74	Provide Final Report	1d	8/8/97	8/8/97

PROJECT PLAN

Exhibit 1-6 (cont')

2. CURRENT BUSINESS PRACTICES

2.1 Introduction of the Programs Modeled

The Geospatial Core Team identified 19 business applications/processes that had a strong link to maps or geospatial data. The 19 business applications/processes that were selected are listed below in Exhibit 2-1. Refer to Appendix C to view all 50 programs that are administered at service centers across the country.

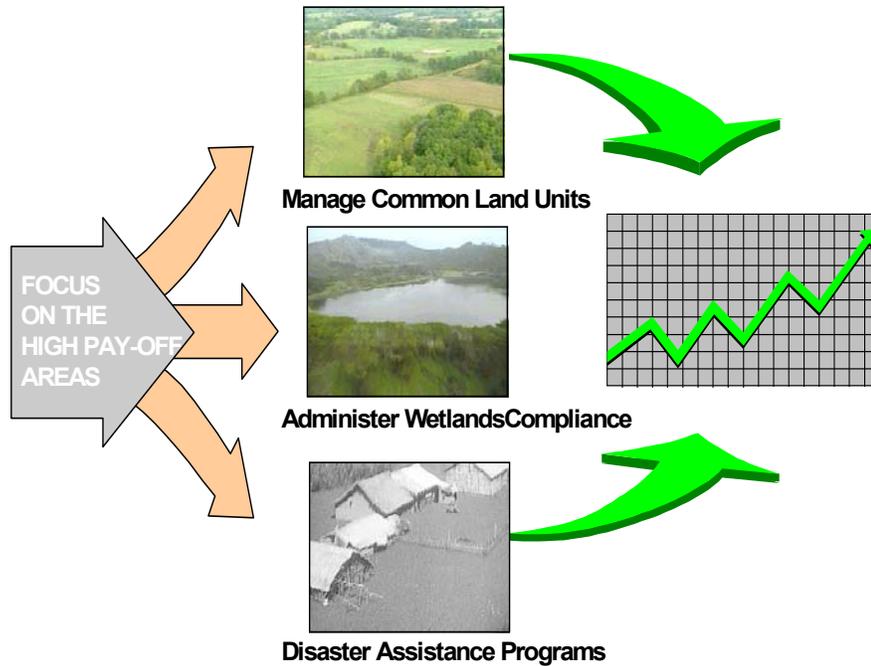
- | | |
|------------------------------------|---|
| • Administer CRP | • Provide Measurement Services |
| • Manage Easements | • Administer Price Support/Commodity Loan |
| • Maintain Land Unit Records | • Cash Flow and Production Planning |
| • Administer HELC Compliance | • Farm Appraisal Reviews |
| • Administer Wetlands Compliance | • Yield Establishment |
| • Administer EQIP | • Support Community Planning/Local Partnerships |
| • Conservation Planning | • Administer AMTA |
| • Disaster Assistance Programs/CAT | • Inventory Hazardous Waste Sites |
| • Administer Acreage Compliance | • Inventory Cultural Resources |
| • Collect Resource Inventories | |

BUSINESS APPLICATIONS/PROCESSES SELECTED FOR DEVELOPMENT

Exhibit 2-1

The processes were a mix of cross-agency and single agency functions. Due to the time restrictions for the BPR, the team selected a limited number of business processes to reengineer in the first BPR phase. Initially the team ranked the business processes using 17 criteria and weighted each criterion according to its relative importance to the team's mission. The team felt that this would assist in selecting processes to address first. Exhibit 2-2, Select Processes, illustrates the selection process.

SELECT PROCESSES



SELECT PROCESSES

Exhibit 2-2

The first general category of criteria dealt with the potential improvements in customer service and reductions in workload for field service centers. The business processes were assigned a value based on its potential to reduce the time it takes to serve customers. A higher rank was given to processes that showed greater potential for saving time and improving customer service. The relative ability to reduce the cost of the current business application was considered along with the number of existing agency to agency hand-offs in the process. Again, a higher value was placed on processes with a larger potential for cost and time savings. Processes used in the majority of service centers were considered more desirable than those that would affect fewer offices. A seasonal process received a lower score than one that continued throughout the year.

Secondly, the potential overall impact on the agencies' business was addressed. Processes were ranked higher when they were considered essential to one or more agencies' key mission areas; had a higher potential for linking to other processes; or were likely to share data with public or private partners. The potential for state and headquarters use of data created by service centers was also considered. In support of the team's focus, the degree to which the process relied upon or used geospatial data was

also taken into account, with more points awarded for processes with a greater geospatial component.

Finally, the perceived relative difficulty in reengineering the process and determining the results was scored. The greater a process' need for data from legacy systems and its requirements for geospatial themes (that would need to be created before it could be applied effectively) the lower the process was rated. A lower score was also assigned to processes that appeared to require more time to reengineer because of their relative complexity. The same rule was applied to processes that would require a longer time to modify/enhance COTS software. This meant that processes viewed to be very dissimilar from known COTS packages received a lower score. Also, processes whose baselines would be difficult to establish or whose reengineered results would be difficult to quantify were ranked lower.

As a result of the scoring process, 10 processes received a score of 84 or above out of a possible 112 total points. The Team then selected 5 of the 10 processes for the initial BPR effort, after reviewing their relative merits. Two of the selections, Highly Erodible Land Compliance (HELIC) and Wetland Compliance (WC) were later combined into one. HELIC/WC was selected because it had a high potential for increase in customer satisfaction and time savings, in addition to affecting numerous programs, as it applies to all three agencies and has a major geospatial component. The CRP was selected because it is a long-term program with a high level of interaction with customers; involves a number of hand-offs between NRCS and FSA; and has a major potential for savings in Environmental Benefit Index (EBI) assessment. Due to the similarities between CRP and EQIP, it was felt that many of the improvements to CRP could easily be transferred to EQIP. The Team addressed Easements that process affects both Wetlands Reserve Program (WRP) for NRCS and the Farm Credit side of FSA, and offers the possibility of sharing data with other agencies who have an interest in tracking conservation easements. In addition, it offers the possibility for improving the accuracy and monitoring of easements. Common Management of Land Units was selected because it has a high potential for improvements in customer satisfaction due to reducing data redundancies among agencies and reducing the reporting burden on customers. In addition, it is an essential process for building other processes.

2.2 Understanding the Current Activities

A list of the current activities was identified by the Geospatial Team for four program/process areas. The node tree which graphically depicts the activities is presented at Exhibit 2-3, Indented List of As-Is Activities. A node tree is a list of activities, tasks, or processes starting at the highest level (A-0) and decomposing to a lower and more detailed level. As the node tree decomposes, the activities get more specific and more detailed. The team identified for each activity: inputs, controls, outputs, and mechanisms (ICOMs). The node tree, activity ICOMs and activity

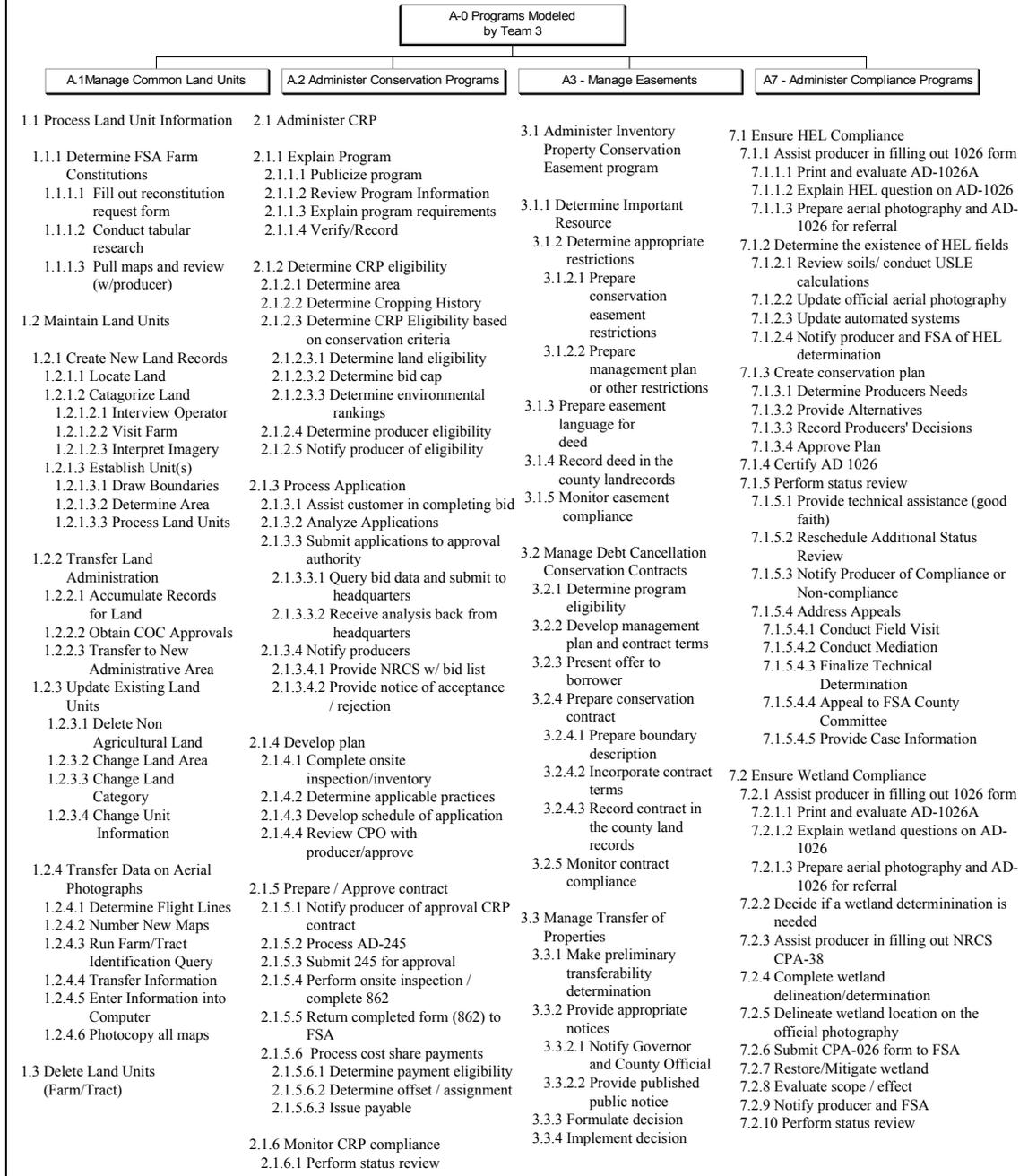
definitions were used to develop a current, or As-Is activity model, which can be found in Appendices D, E, and F.

An activity model is a graphical depiction of the node tree and its ICOMs. The programs that were developed into a node tree, activity model, and for which recommendations were developed include:

- Administer Conservation Reserve Program (CRP)
- Manage Common Land Units
- Manage Easements
- Administer Compliance Programs (Highly Erodible Land and Wetlands)

Exhibit 2-3 presents an abbreviated version of the node tree for the four program areas. Refer to Appendix D for a complete indented list of program activities.

INDENTED LIST OF AS-IS ACTIVITIES



INDENTED LIST OF AS-IS ACTIVITIES

Exhibit 2-3

2.2.1 Administer Conservation Reserve Program (CRP)

The CRP program is a voluntary program administered by USDA that offers rental and cost-assistance payments to reduce soil loss, improve water quality and provide adequate wildlife habitat. The program encourages land owners to plant long-term resource-conserving cover or establish other conserving practices. The goal of the program is to correct targeted environmental problems on cropland at the lowest possible cost.

A customer enters a bid to place cropland into a multi-year contract outlining conservation practices to be established and rental rates requested by the customer. The customer agrees to establish permanent cover (paid for in part by the government) and maintain these practices for the duration of the contract. For land and customer to be eligible under the CRP, they must meet both program and technical requirements. Examples of program requirements would include cropping history, cropping potential, and ownership/operating guidelines. Technical requirements would entail meeting universal erosion criteria as determined by NRCS.

CRP is administered through county FSA and NRCS offices with program sign-up dates and requirements mandated by Congress. Announcements to local farmers/ranchers are made through mediums such as direct newsletters, public meetings, radio, and Television. Interested customers apply at their local FSA offices. Their records are pulled and reviewed from FSA's automated records to determine if they meet the minimum eligibility requirements. If a positive program determination is made by FSA, the application is referred to NRCS for further review. NRCS reviews the applicant's soils maps and farming practices against known erodible criteria and compares it to national environmental criteria. If this process results in a positive determination, the customer will assign a bid rental rate to the application and submit it for approval through the FSA office. After the sign-up date expires, local FSA offices query the applications and submit total acres, bid rates, and environmental ranking to their national office for review. The national office will analyze data and respond back to the local FSA offices with notification of which applications were selected, based on highest environmental benefits for the lowest possible rental rates. FSA offices notify customers as to whether their application was accepted or not (the latest sign-up resulted in approximately 20 million acres being accepted into the CRP).

After approval, customers work closely with NRCS to finalize which conservation practices should be applied to the cropland. NRCS, in conjunction with the customer, develops a CPO (conservation plan of operations) outlining the specifics of each conserving practice the customer will establish to meet the requirements of the CRP contract. Most practices are completed within the first year of the contract and maintained throughout the life of the contract. FSA provides the customers with cost assistance in establishing these practices, followed by yearly rental payments throughout the life of the contract. Throughout the contract's duration, including the initial approval stage, 80 percent of the steps performed by NRCS and FSA are manually accomplished.

This would include pulling historical records, delineating hard copy maps for analysis, analyzing data maps for eligibility, photocopying, transferring data between agencies and customers, field visits, and data entry. The remaining automated steps would include check writing and maintaining basic administration farm records and the CPO.

During times of natural disasters resulting in a loss of potential food resources, Congress has allowed customers to hay or graze CRP land, going against the requirement that customers not produce a commodity on the land under contract.

2.2.2 Manage Common Land Units

Administration of all USDA farm programs begins with management of customer data on common land units. Local FSA and NRCS offices maintain both tabular records and geospatial records on each customer interested in the potential of enrolling in government farm programs. Tabular records are those records that contain the customer's name and address, social security number, map references, and farm acreage totals. Geospatial records includes locations of farm, tract, and field boundaries. The tabular records are maintained in each service center agency's automated system, while the geospatial records are maintained on the respective agency's aerial maps. Unfortunately, the same customer data is maintained simultaneously by several of the service center agencies.

Customers, when entering their service center for the first time, must complete a basic information form, followed by locating their acreage on the appropriate aerial maps. The customer works with service center staff to delineate the farm, tract, and field boundaries on the aerial maps. These records will be referred when the customer requests enrollment into a farm program. The delineation must be accurate because payments are based on total measured acreage. Field measurements are derived directly from the aerial maps using hand held planimeters and digitizers. Aerial maps are also used to pinpoint grain bins, silos, barns, turn rows, terraces, and easements, all of which affect government payments.

Part of the customer's geospatial record is conservation compliance data. This data is derived from Agency's determinations from soil records and wildlife habitat data and applied directly to the customer's aerial maps. The customer and office staff agree which land shall be protected from further soil erosion or a reduction in wildlife habit.

Customers can also request a change to their basic information when their tabular data changes, acreage is either sold or purchased, or when there is a change in the customer's farming operations that affects their land use classifications. FSA assists the customers in redefining their acreage and farming operation on the aerial maps. After approval by the local county committee, the resulting changes are downloaded into the automated system and the aerial maps are finalized. Maintaining basic customer records is an integral part of the service center operation and demands a large portion of staff time, particularly the geospatial data. Since all geospatial data is established and maintained

manually, this process would benefit greatly from reengineering and applying technologies.

2.2.3 Manage Easements

An easement is defined as “a right held by one entity to make use of the land of another for a limited purpose, as right of passage.” All three service center agencies have some form of easement management in their business activities. However, FSA’s Farm Credit Agency (FC) conducts the greatest amount of easement management. Farm Credit, along with Rural Development, oversee easements on land that is under a farm ownership loan. Documentation of these easements is usually included in the original loan agreements to allow right of passage by another individual across the land or to guarantee that a specific portion of the land under the loan is maintained to certain requirements.

NRCS assists FC in determining which lands should be placed under an easement clause before a loan is approved. Lands would come under direct NRCS easement supervision by virtue of endangered species, historical sites, soil types and classifications (HELC/Wetlands), hazardous waste sites, and scenic rivers and trails. Easement clauses are contained in the original loan agreement and guarantee that the land is maintained in a specified manner. The easements must be managed to maintain the loan collateral’s value.

Before FC and the customer develop the loan agreement, the customer completes an AD-1026 form, allowing NRCS to check the land submitted against environmental criteria. If specific parts of the land submitted for a loan are found to have environmental sensitive rankings, NRCS will instruct FC to specify this land for an easement, to be maintained as outlined in a CPO.

NRCS works in conjunction with the perspective land owner to develop a CPO detailing the exact requirements to maintain the land under easement. In most cases, maintenance includes establishing erosion-controlling vegetation cover or non-farming use of established wetlands. Once the loan is approved, and the easement lien is filed with the county clerk’s office, FC records the easement on the aerial photographs and ensures that the easements are recorded with the appropriate USDA agencies. FSA maintains the official photographic record of easements. All these processes are performed manually to a great extent: the loan originating process; environmental rankings; developing the CPO; and tracking. Remodeling these processes to take advantage of new automation technologies will result in extensive benefits.

2.2.4 Administer Compliance Programs (Highly Erodible Land and Wetlands)

The conservation provisions of the 1996 Farm Bill continued previous incremental efforts to retarget existing conservation programs toward more environmental concerns, and improved their flexibility and efficiency. The conservation compliance provisions will affect farmers into the next century and will build on the conservation advances made by landowners over the past decades.

The conservation compliance provisions of the 1996 Act, regarding the highly erodible land and wetlands, discourages the continued production of crops on highly-erodible cropland and wetlands where the land is not carefully protected from soil erosion or environmental impacts. If crops are produced on such fields without applying an approved conservation system, customers may lose eligibility for certain USDA program benefits. Beginning January 1, 1995, customers must have a fully applied conservation system on their highly erodible cropland when it is planted with an agricultural commodity in order to receive program benefits. Customers are allowed to modify conservation practices in their conservation system if they can demonstrate that the modifications will meet the established erosion control requirements.

Land is considered highly erodible if potential erosion is more than eight times the rate at which the soil can maintain continued productivity. One-third or more of a field must be considered highly erodible, or the highly erodible area must be at least 50 acres. Land is considered wetlands if so determined by NRCS in conjunction with local wildlife agencies.

Local FSA offices, together with NRCS, oversee the conservation compliance provisions of the 1996 act. Customers who enroll for USDA benefits must request a highly erodible land and wetland determination on their farm. NRCS works with the customers to review their farming/ranching operations, in an effort to determine if highly erodible land or wetland is present. The determination process will consider soil types, wildlife habit and cover, crop rotations and other farming practices, and haying and grazing routines. If highly erodible land or wetland is found, NRCS will work jointly with the customer to develop a CPO. The CPO will provide detailed instructions on which farming/ranching practices are best suited for the land, while limiting the amount of soil loss or encroachment on wildlife from these practices.

FSA maintains the official record of HEL and wetlands in the county on hard copy maps. This manual process accounts for approximately 60 percent of the time spent processing the conservation compliance provisions of the 96 Act; the other 40 percent is spent on updating customers' farm program applications and basic farm records in FSA's automated system. Both NRCS and FSA are responsible for ensuring that customers are aware of the HEL and wetland provisions, as well as overseeing customers' compliance in applying the practices described in their CPO. The CPO can be modified to incorporate new owners/operators and their new farming and/or ranching operations.

2.3 Issues and Concerns

The Geospatial Team reviewed the activities within the scope of the first phase of the BPR and identified a number of deficiencies within the processes. The term “deficiencies” is a general label used by the team to indicate lack of efficiency associated with conducting business within the current operating environment. To begin this process, each activity was analyzed, focusing on the major problems that inhibit USDA from providing efficient and effective service at service centers. The Team identified more than 120 deficiencies associated with the activities that compose the four program/process areas. Some deficiencies were activity specific, while others could be associated with a number of activities conducted at a service center. For each deficiency, the team examined the cause and the overall effect of the deficiency. Exhibit 2-4 provides an example of one deficiency, its cause, and effect, and the activity impacted. See Appendix G for the detailed information for each of the activity deficiencies.

CRP - Deficiency 45:	
D	rocess for determining acreage by soil type. Staff time is inefficiently spent counting dots on a paper map to scale soil acreage. Personnel are required to count the dots eight separate times to get what is considered to be the correct answer. The process is too dependent on judgment calls by field personnel when calculating scour erosion.
Cause: Lack of automated method for calculating acreage and weighted erosion index	
E	eligibility determination. Erroneous determination leads to enrollment of ineligible acres, resulting in program funding being allocated to farms that do not meet program requirements.
Activity: Determine land eligibility (A2.1.2.3.1)	

EXAMPLE OF ONE DEFICIENCY, CAUSE, EFFECT, AND THE ACTIVITY IMPACTED

Exhibit 2-4

2.3.1 Summary by Category

The large number of deficiencies made it necessary to concentrate on the commonalities among deficiencies. The Team’s focus was on the most critical of the deficiencies, those which seriously hinder the service center personnel from providing the highest quality of services and products to the customer. To accomplish this, deficiencies were grouped into four categories:

- Process/empowerment
- Policy/procedure
- Training
- Automation

The process/empowerment category includes deficiencies that identify the steps of an established process as unnecessary or in need of simplification. In many cases, these deficiencies result from multiple paper hand-offs from one agency to another, duplication of activities among agencies, or long approval processes. Policy/procedure deficiencies are generally related to activities that are required by regulation or legislation. Some policy requirements may be outdated, causing a more cumbersome process than is practical and/or needed. The category of training highlights those areas in which a process may be significantly improved if training were provided to service center staff.

Automation is the final category and represents the majority of deficiencies identified by the Team. Deficiencies in this category relate mostly to processes in which paper maps are used as a source of land information. Paper maps are bulky, require extensive storage space, are not easily updated, and are often inaccurate. Personnel must analyze data by manually entering geospatial information into a calculator or terminal, and the process of updating information on paper maps is time-consuming and labor intensive. Information such as land boundaries is hand drawn on the maps and must be re-drawn any time a new map is issued. The manual nature of the current process makes it possible for one agency to inadvertently erase information that is required by another agency. As a result, the cartographic products created by hand and delivered to the customer are inconsistent in quality and accuracy.

The following Exhibit 2-5 presents summarized deficiencies, associated categories, reference numbers contained in Appendix G, and affected activities. The first column, Summarized Deficiencies, contains the narrative of the deficiency. Column Two includes either an “A” to denote the automation category; “P” to signify policy/procedure; “T” to indicate training, or “Process” for the process/empowerment category. Column Three, Reference Number, gives an unique number by which to reference the detailed deficiency information (i.e., description, cause, effect) in Appendix G. Reference numbers for the CRP begin with number 39. The Customer Support - Program Delivery BPR Team (Team 2) and the Geospatial Team (Team 3) have worked together to identify deficiencies associated with CRP. Consequently, deficiencies 1 through 38 were examined by Team 2. The last column presents the activity with which the deficiency is associated.

SUMMARIZED DEFICIENCIES	CATEGORY	REF. NO.	ACTIVITIES
<i>Administer Conservation Reserve Program</i>			
Lack of timely information to the field	A/Process	39	Publicize CRP

SUMMARIZED DEFICIENCIES	CATEGORY	REF. NO.	ACTIVITIES
			program
Lack of timely training for employees to administer program	Process	40	Review CRP program information
Lack of complete information being provided to clients	P/A/T	41	Explain program requirements/Review program information
Farm records changes on ASCS-155 is outdated/not integrated	A	42	Verify/record basic customer information
Outdated photography & land unit information	A	43	Determine area
Manual accessing & ineffective tracking of crop records	A	44	Determine cropping history
Dependency on judgment calls by Service Center staff when calculating scour erosion	A	45	Determine land eligibility
Inefficient use of staff time spent counting dots to scale soils acreage	A	46	Determine bid cap
Manual process of determining environmental ranking is cumbersome	P/A/T	47	Determine environmental rankings
Complex program and supporting forms	A	48	Process 502
Time delays for COC approval process	Process	49	Approve 502
No on-line data access with crop insurance agencies	A	50	Verify crop insurance status
Delayed determination notifications (positive)	A	51	Notify customer of positive determination
Delayed determination notifications (negative)	A	52	Notify customer of negative eligibility
Manual processing of customer's bid	A	53	Assist customer in completing bid
Redundant process of accuracy of information to be transmitted	A	54	Analyze applications
Time delays for entering information that should have been entered in prior steps	A	55	Query bid data and submit to headquarters
Prolonged turn around time from submission to notification	A	56	Receive analysis back from headquarters
Bid list must be copied and hand delivered to affected agencies	A	57	Provide NRCS with bid list
Customers must wait for all agencies to be informed of acceptance	A	58	Provide notice of acceptance/rejection
Excess travel time between farms results in inefficient use of staff time	A	59	Complete on-site inspection/inventory
Duplication of practices for conservation plan (NRCS) and CRP-2 (FSA) -- non cost share	A	60	Determine non-cost share practices

SUMMARIZED DEFICIENCIES	CATEGORY	REF. NO.	ACTIVITIES
Duplication of practices for conservation plan (NRCS) and CRP-2 (FSA) -- cost share	A	61	Determine cost share practices
Tabular format of application schedule is difficult for customers to review & track each year	A	62	Develop schedule of application
Time delays notification/signatures process & format of conservation plan is difficult to understand	Process	63	Review CPO with customer/approve
Reentry of information from the CRP-2 to the AD-245	A	64	Process AD-245
Information from AD-862 is manually recorded in the system on AD-245	Process	65	Submit AD-245 for approval
Excess travel time between farms results in inefficient use of staff time	A	66	Perform on-site inspection /complete 862
Reentry of 862 data to the AD-245	A	67	Return completed 862 form to FSA
Manual, non-streamlined process to verify that the customer is eligible for payment & completed practice	A	68	Determine payment eligibility
No link to ACP payment process that verifies if a customer has a receivable/claim	A	69	Determine offset/assignment
No link to the assignment system so all assignments must be done manually	A	70	Determine offset/assignment
Manual calculation of customer payment information into the accounting system	A	71	Issue payable
Manual verification/update/correction of info. prior to payments	A	72	Run pre-payment report
Time consuming process for customer to complete CCC-578 or provide info. to county office	A	73	Complete acreage certification
Manual process to verify/check/calculate special situations (e.g., successor in interest)	A	74	Determine non-standard payment
No on-line access to update eligibility info. for customers operating in multiple counties	A	75	Verify multi-county status
Time consuming process for special payments	A	76	Issue rental payments
Excess travel time between farms/duplication of files between agencies/process of tracking ineffective	A	77	Perform status review
Duplication of efforts for tracking status reviews between FSA and NRCS	A	78	Notify FSA of change in monitoring responsibility
<i>Manage Common Land Units</i>			

SUMMARIZED DEFICIENCIES	CATEGORY	REF. NO.	ACTIVITIES
Redundant data entry	A	1	Fill out reconstitution request form
Too many steps for some types of reconstitution	A	2	Conduct tabular research
Difficulty in locating appropriate photo map and locating property	A	3	Pull maps and review with customer
Delay in providing updated land unit boundaries to all USDA agencies	A	4	Redefine land boundaries & Change land area
No formal, systematic transfer of new records to NRCS	A	5	Update reconstitutions in the system
Manual updating of photomaps - information on maps may not be needed by both agencies	A	6	Update aerial photographs
Other agencies and customers are not aware of the entire process until it is finished by FSA	A	7	Notify customers /agencies that reconstitution is complete
Determination of what needs to be moved is confusing because data resides in FOCS which references map location data	A	8	Update conservation plan records
Unable to determine what tract information needs to be transferred because data is held on different databases	A	9	Transfer Tract Information
Field definition and field numbers may be different between agencies	A	10	Add/change/delete field data
Access to internal records that reside in separate agency databases is cumbersome	A	11	Check internal records
Access to external records being maintained outside USDA offices is cumbersome	A	12	Check external records
Difficulty in obtaining an initial resource assessment	Process	13	Interview operator
Difficult to assemble adequate resource information in preparation for the farm visit	A	14	Visit farm
Accurate and consistent interpretation of the imagery is difficult	A	15	Interpret imagery
Difficult to draw accurate boundaries	A	16	Draw boundaries
Different area measurements are determined by more than one agency	A	17	Determine area
Lack of a standardized, interagency system for processing land units	A	18	Process land units
Time delays to accumulate tabular data	A	19	Accumulate records for land

SUMMARIZED DEFICIENCIES	CATEGORY	REF. NO.	ACTIVITIES
County offices cannot communicate geospatial data	A	20	Transfer to new administration area
Time consuming transfer of tabular data	A	21	Change land category
Current aerial photos are not indexed for county office use	A	22	Number new maps
Items may be erased from photos or deleted from system 36 that are needed by other agencies	A	23	Delete land units (farm/tract)
Copying original hard copy maps	A	24	Photocopy all maps
Changes in land unit status/boundaries requires a manual review of other records (e.g., hydrological unit boundaries)	A	25	Change land unit information
County staff must mark flight lines on index maps	A	26	Determine flight lines
Land information must be manually mapped in county office	A	27	Transfer information
New flight photography does not match prior Flight photography	A	28	Run farm/tract Identification query
Information is manually measured, collected, or recorded by more than one agency	A	29	Enter information into computer
Determination of what needs to be moved is confusing because data resides in FOCS which references map location data	A	30	Move or delete conservation plan data
NRCS does not have immediate access to updates (e.g., farm/tract) in System 36	A	31	Perform reconstitution in the system
Non-agricultural information may be removed by one agency and then required by another agency	A	32	Delete nonagricultural land
Delays in submitting information to NRCS (i.e., approval by COC)	Process	33	Obtain county committee approvals
<i>Manage Easements</i>			
Unable to access information from other agency sources	A	1	Determine important resources
Lack of survey creates uncertain easement boundaries	A	2	Prepare conservation easement restrictions
Inaccurate inventory of restricted resources and/or boundary of these resources	A	3	Prepare management plan or other restrictions
Inaccurate/inadequate preparation of deed restrictions	A	4	Prepare easement language for deed
Inability to monitor for the life of the easement restriction/reporting requires too much time and does not give a good indication of program	A	5	Monitor easement compliance

SUMMARIZED DEFICIENCIES	CATEGORY	REF. NO.	ACTIVITIES
effects			
Unable to access information from other agency sources	A	6	Determine program eligibility
Inaccurate inventory of restricted resources and/or boundary of these resources	A	7	Develop management plan and contract terms
Offer to borrower may be based on inaccurate information	A	8	Present offer to borrower
Lack of legal recognition of a GPS boundary. Lack of consistency of defining boundaries among counties or areas	A	9	Prepare boundary description
Inaccurate or inadequate contract terms	A	10	Incorporate contract terms
Inability to monitor for the life of the easement restriction/reporting requires too much time and does not give a good indication of program effects	A	11	Monitor contract compliance
Unable to access information from other agency sources to verify information in agency applications	A	12	Make preliminary transferability determination
Manual coordination with agencies making request for transfer to validate their claims	A	13	Notify governor and county official
Unable to access information from other agency sources to verify information in agency applications	A	14	Formulate decision
Inadequate data	A	15	Implement decision
Inability to modify property boundaries digitally when ownership change occurs	A	16	Record deed in county land records
<i>Administer Compliance Programs -- Highly Erodible Land and Wetlands</i>			
System takes too long for information to be updated between two counties	A	1	Print & evaluate AD1026
Clients may not know what fields have HEL determinations	A	2	Explain HEL question on AD1026
Customer may have to wait several weeks for a determination	A	3	Prepare aerial photography and AD1026 for referral
A photocopy of the soil survey results in loss of land features and scale	A	4	Review soils/conduct USLE calculations
Manual updating aerial photography leads to a very high potential for errors	A	5	Update official aerial photography
Time delays in receiving photos and then must transfer information	A	6	Update official aerial photography

SUMMARIZED DEFICIENCIES	CATEGORY	REF. NO.	ACTIVITIES
Redundancy in maintenance of records	A	7	Update automated system
Customer and FSA are not notified of the determination in a timely manner	A	8	Notify customer and FSA of HEL determination
Lack of up-to-date and manual compilation of materials needed can cause inaccuracies	A	9	Determine customers needs
Economic alternatives are not readily available	A	10	Provide alternatives
Data is entered manually/agency databases are not simultaneously updated	A	11	Record customers' decision
Conservation plan is not accessible on-line to the customer, FSA, and Conservation district representatives	A	12	Approve plan
Field visits may be time consuming and information collected is not easily accessible for future reference	A	13	Provide technical assistance (good faith)
Customized notifications that include statutory and regulatory requirements are not readily available in the system	A	15	Notify customer of compliance or non-compliance
On-line access to data while visiting the site is not available	A	16	Conduct field visit
Funding is not provided to support mediation	P	17	Conduct mediation
On-line documentation of the status of the appeals process is not available	A	18	Finalize technical determination
County Committee may not understand the technical aspects for the appeal request	P	19	Appeal to FSA - County Committee
Database is not available to access/ prepare a case file	A	20	Provide case information
System takes too long for information to be updated between two counties	A	21	Print & evaluate AD1026
Customer may not know what fields are wetlands with certain restrictions	A	22	Explain Wetland questions on AD1026
Copies of the submitted 1026 with other documentation must be hand delivered or mailed to NRCS	A	23	Prepare aerial photography and AD1026 for referral
Trained personnel is not readily available to make determinations	A / T	24	Decide if a wetland determination is needed
Redundancy in the customer signing the AD1026 and CPA-38	A	25	Assist customer in filling out NRCS CPA-38
Manual delineation on aerial photocopies may not result in accurate boundaries	A	26	Complete wetland delineation/determinati

SUMMARIZED DEFICIENCIES	CATEGORY	REF. NO.	ACTIVITIES
			on
NRCS and FSA do not have identical records on farm tracts	A	27	Delineate wetland location on the official photography
A photocopy of the soil survey results in loss of land features and scale	A	28	Delineate wetland location on the official photography
The customer and FSA is not notified of the determination in a timely manner	A	29	Submit CPA-026 form to FSA
Restoration and converted site must be evaluated on-site to determine whether proposed restoration site will replace the functions and values for the converted wetland	T	30	Restore/Mitigate wetland
Lack of trained personnel to undertake evaluations	T	31	Evaluate scope/effect
Manual process for notifying the customer and FSA of the results of the determination	A	32	Notify customer and FSA

SUMMARIZED DEFICIENCIES

Exhibit 2-5

2.3.2 Critical Deficiencies

The most critical deficiencies associated with the current environment include:

- Manual manipulation of outdated paper maps
- Redundant data entry among agencies
- Too many hand-offs of paper forms between agencies
- Inability to access and/or share information among agencies and external partners
- Time delays to the customer

The discussions that follow focus on describing, at a macro-level, the cause and effect of each of the critical deficiencies. As previously stated, the description, cause, and effect for activity deficiencies can be found in Appendix G.

2.3.2.1 Manual Manipulation of Outdated Paper Maps

Agencies currently record map information by hand on paper maps. Over time, maps become very cluttered with essential information that is used by each agency to provide

service to customers. Information shared by the service center agencies include such items as ownership and field boundaries; field numbers; land use; land cover; program designations; and conservation planning information. Many times “new” maps are outdated at the time they arrive at a service center. It is not unusual for as much as 2 years to elapse between the time the aerial photograph is taken and when becomes available for service center use. Transcribing information from the old maps to the new maps is a very labor-intensive, time-consuming effort.

In many cases, map information is not readily available to all agencies. The current method for sharing information is to make photocopies of the paper maps. This not only obscures the land features and scale, resulting in the customer receiving erroneous measurement information, but it also renders determining the most recent version extremely difficult. Service center staff may also be required to cut and paste paper together to create items such as soils maps.

At any given point in time, it is quite possible that all three agencies may be providing customers with different information about the same area of land. For example, FSA may calculate a customer’s acreage at 40 acres, while NRCS may calculate the acreage at 50 acres based on the same boundaries. Customers may therefore receive either more or fewer benefits than they are entitled to.

There are two major consequences of continuing to operate in the current manual environment. First, customers and partners will continue to receive inaccurate, inconsistent information from the service centers. In turn, customers will use the information to incorrectly plan their operations. Second, the projected decrease in staffing levels at some service centers will make it nearly impossible to administer the legislatively mandated programs.

2.3.2.2 Redundant Data Entry amongst Agencies and Multiple Hand-Offs Forms

Redundant data entry and the shuffle of resultant paperwork are very closely linked. Each agency currently operates in its own automation environment with very little ability to exchange information electronically. As a result, the customer must repeatedly provide each agency with the same information.

One example of redundant data entry and subsequent paper hand-offs is the 862 form and the AD-245. An AD-245 and a preliminary 862 form are printed from System 36 by FSA to complete the cost share portion of CRP. The preliminary 862 form is provided to NRCS to provide “determinations” information. NRCS provides input and returns the form to FSA. FSA then completes the AD-245 by manually transferring information from the 862 form to the AD-245, which then goes to the County Committee for approval. The 862 form is again returned to NRCS for certification after the conservation practice has been completed by the customer. Finally, the 862 form is returned to FSA, so that payment can be made to the customer.

As another example, NRCS must duplicate practices into the conservation plan that was previously entered by FSA on the CRP-2.

Time delays represent one major effect of redundant data entry and multiple transferring of forms. The process of carrying forms from one office to another office within the same building is inefficient and time-consuming. However, the magnitude of the problem is much larger when agencies are not co-located. In addition to time delays, transferring data manually provides the opportunity for increase in errors.

2.3.2.3 Inability to Access and/or Share Information among Agencies/Partners

The inability to share data between agencies is a major problem not only for the service center staff, but also for the customers. Such items as field definitions and field numbers may be different for each agency. For example, a customer may have a CPO from NRCS that refers to field 7, and the same field is referenced by FSA as field 11. The service center represents USDA to the customer, so discrepancies such as different field numbers are difficult to accept.

The reconstitution process also illustrates the problems that are created by the inability to access and share information. This process involves combining or separating land with/from the original farming unit. FSA performs a combination of time-consuming activities (e.g., conducting research, pulling maps and reviewing, etc.) to complete the reconstitution process. Some information may need to be retrieved from the county assessor's office or another county agency; FSA has no way of acquiring this information electronically at most locations. FSA contacts NRCS once the reconstitution process is complete.

Although the customer may request technical assistance prior to notification, NRCS is unable to provide assistance until it receives all information from FSA. Many times, this causes the customer to make repeated trips to the service center to update the conservation plan. The net effect of this scenario is that NRCS is unable to provide technical assistance in a timely fashion, as mandated by conservation compliance legislative mandates.

2.3.2.4 Time Delays to the Customer

The delays experienced by customers at service centers are largely a result of the time-consuming manipulation of paper maps and overlays to obtain geospatial information. The problem is compounded by the sheer number of processes which require service center staff to locate land on a map and then associate that land with information residing in databases or paper files. The potential to increase the efficiency of the processes is limited without enabling technology.

Substantial delays in processing, approving, assisting, and notifying the customer were the overall effect noted in 33 percent of the identified deficiencies.

2.4 Improvement Opportunities and Discussion

2.4.1 Summary of Improvement Opportunities in Response To Deficiencies

The Team identified and developed deficiencies for the four program activities, categorizing them as follows:

- Process/empowerment
- Policy/procedure
- Training
- Automation

The participants identified a description of each deficiency, its cause, and its effect on the program’s activity. After identifying all deficiencies, the Team developed improvement opportunities for them. Improvement opportunities are areas and situations in which things can be improved or changed for the better of the organization. Both a short title and detailed description were developed for each improvement opportunity. The original improvement opportunities were program-specific and therefore categorized by the same four labels as deficiencies.

The Team examined improvement opportunities in each category, it became evident that there were duplicative improvement opportunities across the programs and across the categories. The duplicative original improvement opportunities were merged into integrated improvement opportunities that were no longer program specific, but instead applied to multiple programs, with an audit trail to the original opportunities, deficiencies, and activities. See Appendix H for the matrix of original improvement opportunities mapped to the integrated improvement opportunities. Refer to Exhibit 2-6 for an illustration of an integrated improvement opportunity with its associated original improvement opportunities and affected activities.

INTEGRATED IMPROVEMENT OPPORTUNITY: Automate geospatial information
<i>ORIGINAL IMPROVEMENT OPPORTUNITY SHORT TITLE: GIS with Digital Ortho Photography</i>
<i>ORIGINAL IMPROVEMENT OPPORTUNITY DESCRIPTION: Agencies now record all map information on hard copy maps with pen/ink. These maps are usually altered by each agency for its own specific needs. While sharing of this information can occur, it</i>

must be done via copies of the original hard copy map. As these hard copy maps are changed to reflect changes in cooperator activities, this "new" information is not available to others agencies unless the single source hard copy map is referenced or recopied to reflect current changes.

Digital Ortho-imagery quadrangles are being aggressively acquired across the country by numerous partnership efforts, resulting in the commitment of millions of dollars from local, state, and federal agencies. The Digital Ortho-imagery will replace paper maps and will serve as the foundation for a multi-agency GIS. Joint agency development of a GIS will provide enabling technology to USDA.

REPRESENTATIVE ACTIVITIES AFFECTED BY THE OPPORTUNITY:

- 1.1.1.7 Update Aerial Photographs
- 1.2.4.2 Number New Maps
- 1.1.1.3 Pull Maps and Review (with customer)
- 1.2.1.3.1 Draw Boundaries

ORIGINAL IMPROVEMENT OPPORTUNITY SHORT TITLE: GIS

ORIGINAL IMPROVEMENT OPPORTUNITY DESCRIPTION: Have a Graphical User Interface (GUI) readily available to FSA and NRCS with Digital Ortho-imagery, soils and land use layers available including HEL and wetland. Utilizing a GIS, clients and staff will be able to readily identify all information linked to the farm or the client. GIS allows information to be gathered at one location versus tracking down hard copy, which is currently being done. GIS can reduce cost by reducing time spent on updating data and information in a more timely fashion. Currently, it may take 2 years to transfer data on hard copy maps to new photography. Once the GIS layers of this information are established, new Digital Ortho-imagery can be entered into the system without erasing the other layers or information.

REPRESENTATIVE ACTIVITIES AFFECTED BY THE OPPORTUNITY:

- 7.1.1.2 Explain HEL Question on AD-1026
- 7.1.1.3 Prepare Aerial Photography and AD-1026 for Referral
- 7.1.2.1 Review Soils/Conduct USLE Calculations
- 7.1.2.2 Update Official Aerial Photography

INTEGRATED IMPROVEMENT OPPORTUNITIES

Exhibit 2-6

The 10 improvement opportunities and a summary description for each are listed below. Some of the improvement opportunities have notes to the reader attached to further describe the thought process during the development of the improvement opportunity.

1. IMPROVEMENT OPPORTUNITY SHORT TITLE: Automate geospatial information

DESCRIPTION: A computer-based system to collect, store, manage, display, and analyze spatial or map-based information, to include Digital Ortho-imagery, to improve the service center processes (i.e., measuring trends, tracking status reviews, practice applications, cropping histories, planning travel routes, conservation planning, farm/tract reconstitutions, watershed planning and calculations based on soil types). Have a GUI readily available to FSA, NRCS, and RD with digital imagery, soils and land use layers available. GIS will improve both the utilization of the service center staff time and resources, as well as improve customer satisfaction.

2. IMPROVEMENT OPPORTUNITY SHORT TITLE: Share databases

DESCRIPTION: Computer systems must be compatible and portable, so that data can be shared and geo-referenced between USDA, customers and other groups such as historical societies, the Corps of Engineers, fertilizer dealers, tax offices, utility companies, the U.S. Geological Survey, U.S. Forestry Service, the Bureau of Land Management, the Agricultural Marketing Service, local planning bodies, BIA, and the U.S. Fish and Wildlife Service. This would eliminate the need for visits to the county office to manually search through records. This greatly expands the availability of information to authorized users and empowers service center staff to make quick and informed decisions in a less time consuming and more accurate manner.

3. IMPROVEMENT OPPORTUNITY SHORT TITLE: Provide portable automation systems

DESCRIPTION: Utilize technology such as laptop computers, global positioning systems (GPS), personal data assistants (PDA), and cellular capabilities to provide more accurate information to the customer in the field. This will enable the service center staff to provide the customer with Digital Ortho-imagery, farm boundaries, soils, other natural resources and more effective and timely program administration.

4. IMPROVEMENT OPPORTUNITY SHORT TITLE: Provide technical training

DESCRIPTION: Establish a training program that provides Service Centers with the ability to proficiently administer, use, manage, manipulate, research and analyze data, and be able to generate reports and produce maps from GIS and related tools for Service Center applications. GIS training will result in more consistent information shared across agencies, and trained Service Center staff that will be able to provide the customer with more consistent and timely information, resulting in increased information for the customer. This additional information will assist the customer in planning their operations.

5. IMPROVEMENT OPPORTUNITY SHORT TITLE: Provide timely training

DESCRIPTION: Provide a training program at the county level to educate staff in the administration of programs and new program information (i.e., effected laws and regulations, national/state policy and procedures, customer education on the program, forms, and supporting documentation), as well as training for the operating systems, networking environment, and various software packages. The current environment lacks timely program information, program background, and enabling of technology training.

NOTE: This training was mentioned here as a "place holder" to elevate its importance. The Team recommends that the SCIT training initiative cover this topic. All training objectives are based on the assumption that this type of training will be in place prior to GIS training.

6. IMPROVEMENT OPPORTUNITY SHORT TITLE: Process modification

DESCRIPTION: Remote and alternative access will allow modification of the current process, which requires a customer interview at the county service center. A GIS environment will enable the customer, various agencies, and USDA to access information through various means and media. Remote and alternative access to GIS information will provide the customer and USDA with a more efficient way of executing tasks.

7. IMPROVEMENT OPPORTUNITY SHORT TITLE: Empowerment

DESCRIPTION: Give the local level staff the approval authority now held by the County Committee or the Conservation District. Currently, Service Center staff reviews appropriate documentation and recommend the customers approval or disapproval. The COC and Soil and Water Conservation District (SWCD) (the SWCD board is the governing body) are required to approve the forms, which often results in a time delay of the final decision and response to the customer, which pushes back the schedule for the rest of the application process. By empowering the service center staff with the approval authority, the customer will experience a more efficient and expeditious approval and notification process.

8. IMPROVEMENT OPPORTUNITY SHORT TITLE: Restructure ranking process

DESCRIPTION: Consistent guidelines and policies need to be developed for a simplified ranking process. Currently, program requirements for ranking are too complex and confusing, which leads to not only confusion among the service center staff, but loss of time in completing the ranking processes. The current situation leads to an increase in the number of appeals by the customers and a decrease in customer satisfaction with programs.

9. IMPROVEMENT OPPORTUNITY SHORT TITLE: Wetland appeals

NOTE: This improvement opportunity concentrated on training the County Committee on technical information needs. In order to improve the appeals process, an additional opportunity for improvement is through the regionalization of wetland data.

DESCRIPTION: The FSA County Committee needs training in the appeals process within the area of technical determination. Currently the FSA County Committee is making decisions on the technical determination made by NRCS, for which they are not trained and for which they do not have accurate or consistent information. A policy to regionalize wetland data needs to be created to provide the decision makers with the consistent and more accurate technical information necessary to improve the appeals process.

10. IMPROVEMENT OPPORTUNITY SHORT TITLE: Funding for mediators

NOTE: This improvement opportunity was identified by the team as an important issue, and an area that needs to be reviewed for possible improvement. However, the Team decided that its efforts would be better utilized for other improvement opportunities, where there was a greater prospect of improving the current situation and processes.

IMPROVEMENT OPPORTUNITY: Funding must be provided for the training and hiring of mediators as required by the 1996 Farm Bill. Currently, mediator training is not readily available because funding is not provided. As a result, it is difficult to provide customers with the requirements mandated by law and it creates delays in providing customers with requested services.

2.4.2 Tactical Objectives and Improvement Opportunities

Tactical objectives were developed to identify how the improvement opportunities will be accomplished. Tactical objectives are statements that describe specific or desired outcomes, or results in relationship to the improvement opportunity. Objectives may address the actual actions or mechanisms for achieving those outcomes within a pre-established time frame. The objectives describe “how” the improvement opportunities are going to be accomplished. Improvement opportunities may have one or several objectives. Exhibit 2-7 clearly shows the correlation between objectives and improvement opportunities (also refer to Appendix I). The improvement opportunities and objectives provide the foundation for specific recommendations (as described in Section 3).

Geospatial Objectives	Geospatial Integrated Improvement Opportunities									
	GIS with Digital Ortho Photography	Sharing of Databases	Provide Portable Automation	Technical Training	Process Modification	Empowerment	Restructure Ranking Process	Wetlands Appeals	Funding for Mediators	Provide Timely Training (Note 1)
Provide all service centers with digital ortho-imagery by 2002.	X									
Provide basic core USDA data and other base cartographic data (e.g., administrative boundaries, streams, roads, utilities) for all service centers in coordination with digital ortho-imagery by 2002.	X									
Establish rules and policy for development of core national Geospatial data sets by the end of fiscal year 1998.	X									
Create common Geospatial data creation standards and definitions within USDA agencies by end of FY 1998.	X									
Note 1: This improvement opportunity was addressed by both Team II and Team III										

IMPROVEMENT OPPORTUNITIES WITH ASSOCIATED OBJECTIVES

Exhibit 2-7

Geospatial Objectives	Geospatial Integrated Improvement Opportunities									
	GIS with Digital Ortho Photography	Sharing of Databases	Provide Portable Automation	Technical Training	Process Modification	Empowerment	Restructure Ranking Process	Wetlands Appeals	Funding for Mediators	Provide Timely Training (Note 1)
Provide hardware and software to all service centers to create, view, analyze, print, and edit geospatial data consistently within all service centers in coordination with the deliver of ortho-imagery and cartographic data completed by 2002.	X									
Provide linkage to Geospatial and tabular data sets, across all service center agencies by 1999. This would include connectivity and/or bridging for various agency legacy systems.		X								
Enable the exchange of Geospatial data with partners and customers by 2002.		X								
Provide access and use of Geospatial information to conduct business at remote locations for all service centers by 2002.			X							
Provide remote electronic access to all service center Geospatial information by partners, customers, and the public by 2002.			X							
Provide customer access to geo-referenced minimum data sets in pilot sites by March 30, 1999.			X							
Build a training framework that provides service centers with the ability to proficiently use, manage, manipulate, and analyze data, and be able to generate reports, and produce maps from GIS and related tools for Service Center applications in FY 1998.				X						
Provide internal access to geo-referenced minimum data sets in set number of pilot sites by September 30, 1998.					X					
Empower service center staff to approve or make decisions in pilot sites as required instead of requiring final approval by another level (COC, area committees, soil and water conservation district boards, states, headquarters etc.) by September 30, 1998.						X				
Establish national policies which will define the ranking criteria to the most important environmental factors relative to regions.							X			
Use new technologies to enable decision makers to establish policy prior to sign up.							X			
Revise FSA policy to eliminate review process by COC of wetland appeals.								X		
Provide NRCS decision makers with consistent, more accurate technical information in order to improve the appeals process.								X		
Develop policy to regionalize wetland definition.								X		
Provide for systems administration training concurrent with the implementation of Common Computing Environment (CCE). Such as, training for the operating systems, networking environment and various software packages provided.										X
No objective provide.									X	
Note 1: This improvement opportunity was addressed by both Team II and Team III										

IMPROVEMENT OPPORTUNITIES WITH ASSOCIATED OBJECTIVES

Exhibit 2-7 (cont.)

2.4.3 Deficiencies to Improvement Opportunities

Exhibit 2-8 demonstrates the extent to which the improvement opportunities address multiple deficiencies in multiple programs.

DEFICIENCIES	Geospatial Integrated Improvement Opportunities									
	GIS with Digital Ortho-Imagery	Sharing of Databases	Provide Portable Automation	Technical Training	Process Modification	Empowerment	Restructure Ranking Process	Wetlands Appeals	Funding for Mediators	Provide Timely Training (Note 3)
CRP										
Lack of timely information to the field				X						X
Lack of timely training for employees to administer program										X
Lack of complete information being provided to clients										X
Farm records changes on ASCS-155 is outdated/not integrated (Note 1)										
Outdated photography & land unit information	X									
Manual accessing & ineffective tracking of crop records	X									
Dependency on judgment calls by field office staff when calculating scour erosion	X									
Inefficient use of staff time spent counting dots to scale soils acreage	X									
Manual process of determining environmental ranking is cumbersome (Note 2)							X			X
Complex program and supporting forms (Note 2)										
Time delays for COC approval process						X				
No on-line data access with crop insurance agencies				X						
Delayed determination notifications (positive)(Note 2)										
Delayed determination notifications (negative)(Note 2)										
Manual processing of producer's bid (Note 1)										
Redundant process of accuracy of information to be transmitted (Note 2)										
Time delays for entering data that should have been entered in prior steps				X						
Prolonged turn around time from submission to notification				X						
Bid list must be copied and hand delivered to affected agencies (Note 1)										
Customers must wait for all agencies to be informed of acceptance				X						

Note 1: This deficiency has an "Integrated Databases" improvement opportunity which is being addressed by Team II.

Note 2: This deficiency has an "Application/Form Automation" Improvement Opportunity being addressed by Team II.

Note 3: It was decided that these improvement opportunities were outside the scope of Team III and were already being addressed by other USDA initiatives.

DEFICIENCIES TO IMPROVEMENT OPPORTUNITIES

Exhibit 2-8

Geospatial Deficiencies to Improvement Opportunities (continued)

DEFICIENCIES	Geospatial Integrated Improvement Opportunities									
	GIS with Digital Ortho-imagery	Sharing of Databases	Provide Portable Automation	Technical Training	Process Modification	Empowerment	Restructure Ranking Process	Wetlands Appeals	Funding for Mediators	Provide Timely Training (Note 3)
CRP (CONT.)										
Excess travel time between farms results in inefficient use of staff and customer time	X									
Duplication of practices for conservation plan (NRCS) and CRP-2 (FSA) - non cost share (Note 1)										
Duplication of practices for conservation plan (NRCS) and CRP-2 (FSA) - cost share (Note 1)										
Tabular format of application schedule is difficult for producers to review & track each year	X									
Time delays notification/signatures process & format of conservation plan is difficult to understand	X					X				
Reentry of information from the CRP-2 to the AD-245 (Note 1)						X				
Information from AD-862 is manually recorded in the system on AD-245						X				
Excess travel time between farms results in inefficient use of staff and customer time (Note 1)	X									
Reentry of 862 data to the AD-245		X								
Manual, nonstreamlined process to verify that the producer is eligible for payment & completed practice (Note 2)										
No link to ACP payment process that verifies if a producer has a receivable/claim (Note 2)										
No link to the assignment system so all assignments must be done manually (Note 2)										
Manual calculation of producer payment information into the accounting system (Note 2)										
Manual verification/update/correction of info. prior to payments (Note 2)										
Time consuming process for producer to complete CCC-578 or provide data to county office				X						
Manual process to verify/check/calculate special situations (e.g., successor in interest)(Note 2)										
No on-line access to update eligibility data for customers operating in multiple counties				X						
Time consuming process for special payments (Note 2)										
Excess travel time between farms/duplication of files between agencies/process of tracking ineffective (Note 1)(Note 2)	X									
Duplication of efforts for tracking status reviews between FSA and NRCS (Note 1)										

Note 1: This deficiency has an "Integrated Databases" improvement opportunity which is being addressed by Team II.

Note 2: This deficiency has an "Application/Form Automation" Improvement Opportunity being addressed by Team II.

Note 3: It was decided that these improvement opportunities were outside the scope of Team III and were already being addressed by other USDA initiatives.

DEFICIENCIES TO IMPROVEMENT OPPORTUNITIES

Exhibit 2-8 (cont.)

Geospatial Deficiencies to Improvement Opportunities (continued)

DEFICIENCIES	Geospatial Integrated Improvement Opportunities									
	GIS with Digital Ortho-Imagery	Sharing of Databases	Provide Portable Automation	Technical Training	Process Modification	Empowerment	Restructure Ranking Process	Wetlands Appeals	Funding for Mediators	Provide Timely Training (Note 3)
Manage Common Land Units										
Redundant data entry		X								
Too many steps for some types of reconstitution		X								
Difficulty in locating appropriate photo map and locating property	X									
Delay in providing updated land unit boundaries to all USDA agencies	X									
No formal, systematic transfer of new records to NRCS		X								
Manual updating of photomaps - data on maps may not be needed by both agencies	X									
Other agencies and customers are not aware of the entire process until it is finished by FSA		X								
Determination of what needs to be moved is confusing because data resides in FOCS which references map location data										
Unable to determine what tract information needs to be transferred because data is held on different databases		X								
Field definition and field numbers may be different between agencies	X	X								
Access to internal records that reside in separate agency databases is cumbersome		X								
Access to external records being maintained outside USDA offices is cumbersome		X								
Difficulty in obtaining an initial resource assessment					X					
Difficult to assemble adequate resource information in preparation for the farm visit		X								
Accurate and consistent interpretation of the imagery is difficult	X									
Difficult to draw accurate boundaries	X									
Different area measurements are determined by more than one agency	X									
Lack of a standardized, interagency system for processing land units		X								
Time delays to accumulate tabular data		X								
County offices cannot communicate geospatial data		X								
Time consuming transfer of tabular data		X								
Current aerial photos are not indexed for county office use	X									
Items may be erased from photos or deleted from system 36 that are needed by other agencies	X									
Copying original hard copy maps	X									
Changes in land unit status/boundaries requires a manual review of other records (e.g., hydrological unit boundaries)	X									
County staff must mark flight lines on index maps	X									
Land information must be manually mapped in county office	X									
New flight photography does not match prior flight photography	X									
Information is manually measured, collected, or recorded by more than one agency		X								
Determination of what needs to be moved is confusing because data resides in FOCS which references map location data		X								
NRCS does not have immediate access to updates (e.g., farm/tract) in System 36		X								
Non-agricultural information may be removed by one agency and then required by another agency		X								
Delays in submitting information to NRCS (i.e., approval by COC)					X					

Note 1: This deficiency has an "Integrated Databases" improvement opportunity which is being addressed by Team II.
 Note 2: This deficiency has an "Application/Form Automation" Improvement Opportunity being addressed by Team II.
 Note 3: It was decided that these improvement opportunities were outside the scope of Team III and were already being addressed by other USDA initiatives.

DEFICIENCIES TO IMPROVEMENT OPPORTUNITIES

Exhibit 2-8 (cont.)

Geospatial Deficiencies to Improvement Opportunities (continued)

DEFICIENCIES	Geospatial Integrated Improvement Opportunities									
	GIS with Digital Ortho-imagery	Sharing of Databases	Provide Portable Automation	Technical Training	Process Modification	Empowerment	Restructure Ranking Process	Wetlands Appeals	Funding for Mediators	Provide Timely Training (Note 3)
Manage Easements										
Unable to access data from other agency sources		X	X							
Lack of survey creates uncertain easement boundaries			X							
Inaccurate inventory of restricted resources and/or boundary of these resources		X	X							
Inaccurate/inadequate preparation of deed restrictions		X	X							
Inability to monitor for the life of the easement restriction/reporting requires too much time and does not give a good indication of program effects	X									
Unable to access information from other agency sources		X	X							
Inaccurate inventory of restricted resources and/or boundary of these resources	X									
Offer to borrower may be based on inaccurate information		X	X							
Lack of legal recognition of a GPS boundary/lack of consistency of defining boundaries among counties or areas			X							
Inaccurate or inadequate contract terms		X	X							
Inability to monitor for the life of the easement restriction/reporting requires too much time and does not give a good indication of program effects	X									
Unable to access information from other agency sources to verify information in agency applications		X	X							
Manual coordination with agencies making request for transfer to validate their claims										
Unable to access information from other agency sources to verify information in agency applications		X	X							
Inadequate data		X	X							
Inability to modify property boundaries digitally when ownership change occurs	X									

Note 1: This deficiency has an "Integrated Databases" improvement opportunity which is being addressed by Team II.

Note 2: This deficiency has an "Application/Form Automation" Improvement Opportunity being addressed by Team II.

Note 3: It was decided that these improvement opportunities were outside the scope of Team III and were already being addressed by other USDA initiatives.

DEFICIENCIES TO IMPROVEMENT OPPORTUNITIES

Exhibit 2-8 (cont.)

Geospatial Deficiencies to Improvement Opportunities (continued)

DEFICIENCIES	Geospatial Integrated Improvement Opportunities									
	GIS with Digital Ortho-Imagery	Sharing of Databases	Provide Portable Automation	Technical Training	Process Modification	Empowerment	Restructure Ranking Process	Wetlands Appeals	Funding for Mediators	Provide Timely Training (Note 3)
Administer Compliance Programs -- Wetlands and Highly Erodible Land										
System takes too long for information to be updated between two counties		X	X							
Clients may not know what fields have HEL determinations	X									
Customers may have to wait several weeks for a determination	X									
A photocopy of the soil survey results in loss of land features and scale	X									
Manual updating aerial photography leads to a very high potential for errors	X									
Time delays in receiving photos and then must transfer information	X									
Redundancy in maintenance of records		X	X							
Producer and FSA are not notified of the determination in a timely manner		X	X							
Lack of up-to-date and manual compilation of materials needed can cause inaccuracies	X									
Economic alternatives are not readily available		X	X							
Data is entered manually/agency databases are not simultaneously updated		X	X							
Conservation plan is not accessible on-line to the producer, FSA, and Conservation district representatives		X								
Field visits may be time consuming and information collected is not easily accessible for future reference		X	X							
Persons may be ineligible and continue to be paid when they do not meet the conservation requirements		X	X							
Customized notifications that include statutory and regulatory requirements are not readily available in the system		X	X							
On-line access to data while visiting the site is not available	X									
Funding is not provided to support mediation									X	
On-line documentation of the status of the appeals process is not available		X	X							
County Committee may not understand the technical aspects for the appeal request								X		
Database is not available to access/prepare a case file		X	X							
System takes too long for information to be updated between two counties		X	X							
Customers may not know what fields are wetlands with certain restrictions		X	X							
Copies of the submitted 1026 with other documentation must be hand delivered or mailed to NRCS	X									
Trained personnel is not readily available to make determinations	X			X						
Redundancy in the customer signing the AD1026 and CPA-38		X	X							
Manual delineation on aerial photocopies may not result in accurate boundaries			X							
NRCS and FSA do not have identical records on farm tracts	X									
A photocopy of the soil survey results in loss of land features and scale	X									
The producer and FSA is not notified of the determination in a timely manner		X	X							
Restoration and converted site must be evaluated on-site to determine whether proposed restoration site will replace the functions and values for the converted wetland	X			X						
Lack of trained personnel to undertake evaluations				X						
Manual process for notifying the customer and FSA of the results of the determination		X	X							

Note 1: This deficiency has an "Integrated Databases" improvement opportunity which is being addressed by Team II.

Note 2: This deficiency has an "Application/Form Automation" Improvement Opportunity being addressed by Team II.

Note 3: It was decided that these improvement opportunities were outside the scope of Team III and were already being addressed by other USDA initiatives.

DEFICIENCIES TO IMPROVEMENT OPPORTUNITIES

Exhibit 2-8 (cont.)

2.5 Best Practices

Benchmarking is a technique used to learn from others by describing the end-state in terms of industry standards, success stories, historical records, lessons learned, or other established standards relative to time, cost, quality, or other metrics. Benchmarking

selects those companies or organizations that are performance leaders in a particular process or aspect of a process. Benchmarking is not appropriate for all processes, but when used, benchmarking facilitates reverse engineering of the process, and establishes a quantifiable goal. The client team is taught methods to limit research and determine if benchmarking is appropriate for the target process. Based on their determination, they may require facilitation to apply benchmarking techniques.

One of the questions that should be addressed early on is who one benchmarks with. One of the options is to benchmark internally. Internal benchmarking is the analysis of existing practices within the three mission areas to look for best performance as well as to define baseline activities and drivers. Drivers are the causes of work; the triggers that set activities into motion.

Another benchmarking option is external benchmarking. External benchmarking can view both “industry” as well as “best in class.” Industry benchmarking focuses on trends. The basic assumption is that industry is basically “playing by the same rules” and the organization should adopt an industry default/standard for conducting business. This is a risk-averse approach to adopting new procedures. A second type of external benchmarking is “best in class.” This focus is on new innovative practices no matter what the source. This supports high risk high returns on investment.

Benchmarking builds off of existing sources of information. Informally, benchmarking can be accomplished by using published materials, insights gained from trade meetings, and information gained from discussions with industry experts, customers, and others. The more traditional method of external benchmarking is with other government agencies and private industry. Organizations participating in benchmarking visits should be ready to outline their current practices as well as the goals they are attempting to achieve. As part of a cycle of continuous process improvement, each separate benchmarking project moves through a series of defined steps:

1. Identify the core issues
2. Establish the baseline internal performance levels and information
3. Gather external information
4. Analyze information and benchmarking results
5. Implement changes in exiting processes to reflect these results

Initial efforts were made by the Geospatial Team to identify possible benchmarks and best practices for further research. More extensive development was not done due to time limitations, but may be further studied in the pilot site environment. Identified below are representative organizations and possible areas of interest:

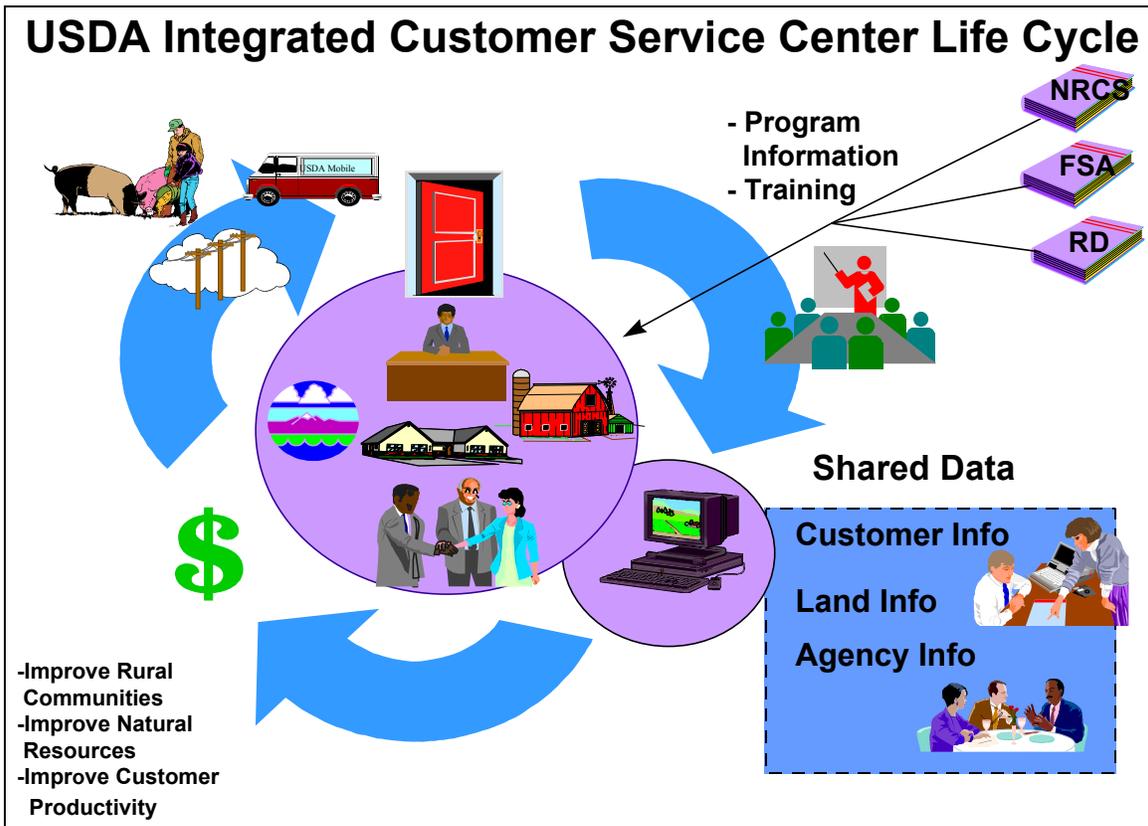
- Advisory Council on Historic Preservation for historical and archaeological sites
- Border Patrol
- Conservation Districts in Minnesota - GIS systems in operation

- Corps of Engineers in Iowa for water drainage
- DoD - utilization of satellite imagery
- Ecological Services Divisions of state governments
- Environmental consultants - biological and wetland delineation's
- Environmental Protection Agency and state affiliations
- Eros Data Center - South Dakota
- Fertilizer companies - using GPS for field mapping and fertilizer applications
- FSA, Credit division, Instruction 1940-G state supplement has extensive list
- Minnesota Departments of Health and Agriculture
- National Park Service, Wild and Scenic Rivers
- Precision farming companies
- Sewell's in Oldtown Maine - Forestry Management (photographic imagery)
- State Technical Committee (EQIP Partners)
- Texas Department of Agriculture
- Texas Natural Resources Conservation Commission
- Texas Parks and Wildlife Service
- U.S. Fish & Wildlife Service
- USF&W - digitizing geographic information on WRP easement
- USF&W - highly technical photographs
- USF&W - land survey cost

3. REENGINEER CURRENT BUSINESS

3.1 Vision of Redesigned Business

The three BPR teams share a vision of an Integrated Service Center that will provide customers with quality information and services while meeting legislative mandates prescribed by Congress. Initially, the vision of the future service center appears quite simple: deliver programs to customers in accordance with established rules and procedures. However, the real essence of the vision is not so much in what is stated, but what is tacit. The vision implies that all three service center agencies will project to the customer a “USDA” image while continuing to meet their separate and distinct agency mission. Presented in Exhibit 3-1, USDA Integrated Service Center, is the envisioned Integrated Service Center of the future.



USDA INTEGRATED SERVICE CENTER

Exhibit 3-1

The true test of an organization’s vision is to balance feasibility of attainment with the significant challenge necessary for an organization to change business “as usual.” In the case of USDA, the vision will require many sweeping changes. USDA’s current

operating environment does not allow for the three agencies to speak “with one voice” to the customer because they are not able to communicate effectively amongst themselves. Information sharing is the foundation for an integrated environment which will enable the service centers across the country to conduct business much more efficiently and effectively.

3.1.1 An Integrated Service Center

Each of the three BPR teams’ viewed the service center from the customer perspective to determine their needs. The teams then used a systematic approach to identify those activities involved in satisfying the needs of the customer, and the service center’s organization which will deliver those satisfiers. The BPR teams viewed program delivery as a system and focused on the outcomes produced by that system; examining the interrelationships of the activities rather than individual items, and patterns of change rather than static snapshots.

After identifying customer requirements, each team examined their current processes to determine if they satisfied those needs; examined the alignment of tasks and processes with common goals, objectives and outcomes; and identified the measures of success with a focus on improving those processes considered critical to customer satisfaction.

Since requirements are driven by the customer and results are measured by customer satisfaction, the teams focused on the customer lifecycle to develop their recommendations. Consequently, the best means for understanding the reorganization phases that will transform the service centers of today into the Integrated Service Centers of the future is to consider the customer lifecycle. At each stage of the lifecycle the customer receives a product or service to be used as the basis for decision making. Recommendations proposed by all the BPR teams present the proposed changes which will take place throughout the customer lifecycle and indicate the anticipated benefits to the customer. Major stages of the customer lifecycle include:

1. Customer without USDA Information
2. Customer Needs Additional Information
3. Customer Desires Program Eligibility Determination
4. Customer Applies for a Program
5. Customer works with USDA to Develop a Plan
6. Customer Contracts with USDA
7. Customer Reacts to Compliance Issues

To illustrate this customer lifecycle, we have developed the scenario of a potential USDA customer in need of program assistance.

Scenario: As beneficiary of her mother’s will, Joan Lewis is bequeathed land, previously recorded by USDA, but located in two separate counties in Mississippi.

Joan's situation is reasonably straightforward and the assumption is that CRP sign-up is in progress.

Customer without USDA Information

In the current operating environment, for Joan to determine available USDA programs she has two options. Assuming that Joan is aware that USDA offers programs which may assist her with her newly acquired land, she can phone the service center to ask questions about available programs or she can drive to the service center. Unfortunately, neither of these two options offer Joan convenient access to program information. She may be required to explain her situation numerous times to various agencies and program experts, particularly if she is not familiar with the current programs offered by USDA. Consequently, Joan's first encounter with USDA may turn out to be a frustrating experience. In the future service center, USDA will provide multiple options "to bring USDA" to Joan. Examples of recommended changes include:

- By receiving program information prior to sign-up periods, USDA could contact Joan to inform her that she was potentially qualified to participate in a USDA program. Customer and Community Outreach will ensure that Joan was aware that USDA program benefits were available to her.
- Providing an "Electronic Gateway to USDA" which will include unmanned, stand-alone sites in service centers or other public locations where Joan could access basic information on all USDA programs.
- Reducing Joan's number of trips to the service center for information by providing Hotlines (1-800 numbers) to answer specific questions or concerns, or increasing outreach efforts by disseminating information through local media measures (newspapers, radio, community meetings and gatherings, etc.) and sponsoring conferences to expose USDA program and services.
- Providing mobile vans that take USDA services to Joan's home and rural or under-served areas. Providing handicap access and service to non-English speaking persons.

These efforts will allow USDA to provide information to Joan at her convenience while reducing service center contact time. By implementing recommended changes Joan will receive consistent and accurate information from a single informed source.

Customer Needs Additional Information

Joan is now aware of the USDA programs that are available to her. In the current environment Joan may be required to visit a service center to obtain more detailed program requirements and pick up application forms. Inefficiencies which currently exist may include:

- If the program required multiple agency involvement Joan will be required to meet with multiple representatives from the respective agencies and supply redundant customer information to each agency.
- Appropriate staff from each agency may not be accessible when Joan is there.
- In all likelihood, Joan is not aware of the information or documentation required to process her application and will be required to revisit the service center after obtaining the necessary information.

Consequently, Joan spends much of her time unproductively waiting for USDA staff only to discover she has to return to repeat the experience. In the future service center, USDA will make all the necessary processing information available to Joan prior to her visit to the service center or scheduled appointment with a program specialist. Additionally, Joan could acquire and complete application forms, at her convenience, prior to her scheduled appointment, further reducing service center staff involvement. Joan will no longer be required to wait or make unproductive visits to service centers. Specific changes include:

- Provide a USDA Home Page which will include detailed USDA program information to include benefits, basic eligibility requirements, process check list, required documentation, application forms, etc. Joan could submit her questions electronically directly to USDA and enter much of her own customer information which will then be accessed by the program specialist scheduled to process Joan's application.
- Central points of contact will schedule an appropriate specialist to meet with Joan to provide program guidance and expertise. The appointment may be scheduled at the service center or, in certain circumstances, directly with Joan at home. One USDA staff, in one visit, could complete the application process.
- If Joan visits the service center without an appointment or prior to obtaining available forms or information, she will be greeted by a Service Center Information Coordinator located at the service center who will be cross-trained in basic information for all programs. The Service Center Coordinator will provide Joan with general information referrals on applicable USDA programs and schedule her an appointment with the appropriate specialist. Program fact sheets describing programs will be available that include benefits, basic eligibility requirements, process check list, required documentation, etc. In addition, since Joan is a new customer, the Information Coordinator will enter her customer

information into the Shared Data Repository. This customer profile information will be accessed whenever necessary by all agencies and counties.

These changes will ensure that USDA has maximized Joan's use of time and reduced the number of erroneous contacts and visits to the service center. Joan will have an appointment and be aware of the information that is required for processing her application prior to arrival at a service center. In addition, there will be a reduction in the program specialist's time spent on answering general questions and entering basic customer information.

Customer Desires Program Eligibility Determination

Through her previous contacts with USDA (either through the toll free phone number, information on the Internet, or discussions with the Service Center Information Coordinator) Joan has determined that she will apply for the Conservation Reserve Program (CRP). Currently, for USDA to determine customer and land eligibility Joan must supply information previously provided and service center staff must review numerous paper forms, maps, and aerial photos. In the future Joan may already have an appointment with a program specialist to discuss program eligibility when she arrives at the service center, possibly for the first time. Specific changes which will ensure that USDA provides a program eligibility determination in a timely manner include:

- Streamlining ownership determination and land eligibility process.
- Streamlining map distribution process.
- Providing centralized employee training focusing on customer service.
- Providing remote access to customer and land eligibility information.
- Provide the capability for service centers to access, analyze, update, share, and store necessary geospatial data to determine eligibility.

As a result, Joan will receive timely responses, consistent rankings, accurate data and be required to fill out less paperwork. Joan will be able to access her customer eligibility information and check the status of her determination. The recommendations will allow service center employees to improve time management and develop customer planning business parameters more accurately and efficiently.

Customer Applies for a Program

To apply for CRP in the current environment, if eligible, Joan is not only required to coordinate amongst agencies but in her case, amongst two counties. It is necessary for Joan to fill out numerous paper forms with redundant information and wait for that information to be manually passed between agencies and counties. This environment does little to provide Joan with timely approval notices or a quick delivery of benefits. In the future, Joan will have an appointment with a program specialist at a service center (or have the specialist visit her residence to process the application), have access to applicable forms and information, and have provided basic customer information prior to

a meeting at the service center. The following recommended changes will assist in her CRP application process:

- Make automated forms available to the customer via the Internet.
- Reduce the amount of redundant data collected from the customer.
- Reduce the approval steps for programs (make decisions at local levels vs. national); approvals made on-line (no need to pass paper forms from one office or agency to another).
- Streamline the information retrieval processes.
- Provide bid and payment rates to Joan prior to sign up.
- Streamline Joan's customer information targeted at reusability.
- Provide the capability for service centers to access, analyze, update, share, and store necessary geospatial data required to complete and approve her application.

The recommendations will result in a more timely approval process and a more efficient planning cycle for Joan. This will allow Joan to make informed business decisions and improve her profitability. Accurate, consistent, and current customer and geospatial data is available to all levels of USDA staff throughout the application and contract approval processes. If approved, she is notified of her bid approval the same day (anticipated savings as opposed to current cycle time of 1 to 3 months).

Customer Works with USDA to Develop a Plan

At this point Joan is ready to work with USDA to develop a Conservation Plan of Operations for her land. She requires information about conservation practices, non-cost share practices, planning information, and program options. In the current environment, a service center representative must inspect Joan's land without the benefit of program or customer information to develop the schedule that Joan is to follow. Information is sent back and forth between Joan and NRCS. The following recommended changes will expedite this process in the future by:

- Provide field conservationists on-site assistance to the customer including development and printing of a complete plan and associated conservation plan map.
- Provide planning information over the Internet to allow customers to develop their own plans at their convenience.
- Provide program and associated planning information to enable the farm consultant to work with the customer in developing plans to be submitted to NRCS for certification.
- Provide the means to share conservation and related compliance information among service center and Conservation District personnel through a common computing environment.
- Provide remote accessibility to planning and geospatial information.

As a result of the proposed changes, Joan's requirement to visit the service center will be minimized; options will be available to assist Joan develop the required plan. In addition, her plan will be developed with more accurate information and be developed more quickly. The ability to manipulate the information in an electronic environment will provide Joan the basis for making informed business decisions, improve her profitability, protect the natural resource base she stewards; and maximize the use of service center staff time in developing the conservation plan.

Customer Contracts with USDA

Once FSA approves her contract, Joan is notified and is qualified for benefits. The approval process for the contract and issuing of payment is a tedious, multiple step process. In the current environment, Joan must wait for multiple paper forms to be exchanged between agencies. Information on the forms is repeatedly entered by the various agencies. In addition, Joan must wait for the County Committee (COC) and national office to manually receive the required information so they can approve or disapprove her contract, or level of cost sharing. Consequently, Joan's need of timely approval notification, more efficient payment practices and a simplified method to track her contract status are not met. The following proposed changes will assist USDA to meet Joan's needs in the future:

- Providing increased information accessibility
- Providing implementation standards
- Automating contract forms and/or contract application process
- Streamlining CRP and loan processes
- Providing remote access to contract status

Analysis of existing geospatial data is crucial to timely approval. The proposed changes will provide Joan with on-line status updates, timely payments, informed timely business decisions, and improved business planning.

Customer Reacts to Compliance Issues

Joan's interaction with USDA while participating in CRP continues through the monitoring of her land for program compliance. USDA's monitoring of compliance is performed annually by either NRCS or FSA. Currently, the process is manual and requires coordination between the two agencies. Joan needs to understand the compliance procedures and actions, receive her appeal rights (if she is not in compliance), and receive timely and accurate notification. Proposed changes in the future include:

- Providing electronic access to information to speed compliance processes.
- Empowering service center employees to provide information to customers by cutting review approval steps.
- Providing implementation standards via a mixture of communication needs.

In the future environment, Joan will receive an improved response time for compliance issues and consequently be able to make improved business decisions.

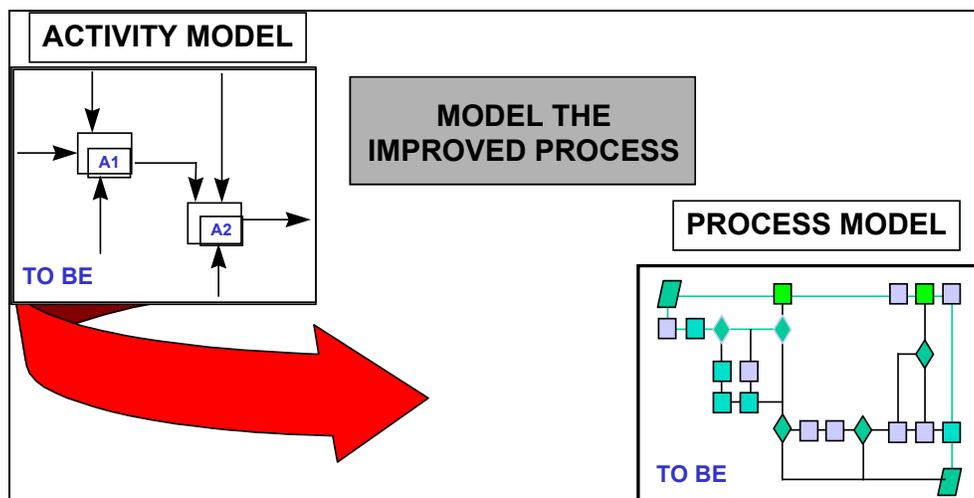
Summary

This section of the report addressed the benefits derived from the BPR teams' vision of an Integrated Service Center and the impacts as they apply to the program delivery system and customer lifecycle. As stated earlier, customers drive requirements, and results are measured by customer satisfaction. Consequently, the BPR teams focused on the customer's needs and lifecycle to develop their recommendations. Based on the impacts of the recommended changes described in this scenario, it can be assumed that Joan has successfully completed her first interaction with a USDA program.

Recommendations for changes in the future have been designed to meet her needs as a customer and provide satisfiers for those needs, and as a result reduce the demand on service center staff.

3.2 Process Impact of Recommendations

In addition to identifying customer needs and requirements, the teams examined the processes to determine if they satisfied those needs. Substantial process changes are at the core of the BPR recommendations. However, many of those changes are not apparent by simply reviewing an activity model. An activity model presents "what" activities will be performed in the Integrated Service Center of the future, but does not provide a sequential, step by step understanding of "how" those activities will be performed (See Exhibit 3-2, Activity and Process Models). That is to say, service centers will continue to determine customer eligibility and process applications as part of program delivery; however, the process by which eligibility is determined and applications are processed will dramatically change.



ACTIVITY AND PROCESS MODELS

Exhibit 3-2

The BPR teams' challenge was to demonstrate process changes as a result of their proposed recommendations. In other words, show the true impact of the recommendations. To meet this challenge, the Customer Service - Program Delivery Team (Team 2) and the Geospatial Team (Team 3) put their resources toward a joint effort of constructing As-Is and To-Be process models for the delivery of the Conservation Reserve Program (CRP). Both teams created the As-Is Model representing the current delivery of CRP. To process model the To-Be environment of an Integrated Service Center, Team 2 addressed the impacts of their recommendations in the areas of customer service and program delivery, while Geospatial Team concentrated on the areas of CRP where geospatial information was utilized. The CRP To-Be Process Model is contained in Appendix J and illustrates the transition from the As-Is to the To-Be environment. The model reflects the steps eliminated and time savings associated with each step of the process.

It was realized early in the project that not all program areas could be modeled to the process level in the limited time available. The CRP was addressed because of its importance to USDA customers, high visibility to Congress and the public, and because it crosses agency or directorate lines. Benefits realized by this program will be repeatable for similar programs which are administered at service centers nationwide.

Currently, service center staff must execute more than 200 steps to complete the CRP delivery process. It is estimated that 80 percent of those steps are performed manually and require customers to spend a substantial amount of time either providing information or awaiting notification of approval, with numerous paper forms being exchanged between participating agencies, staff and customers.

There are six major functional areas that comprise CRP. They are:

- Program explanation
- Eligibility determination
- Application processing
- Conservation plan development
- Contract preparation and approval
- Compliance monitoring

The following paragraphs describe proposed process changes by functional area.

3.2.1 Program Explanation

The current process begins with the customer arriving at a service center to obtain program information. Customers many times leave a service center with unanswered questions because the staff does not have information to disseminate until final directives are received from the national offices.

In the future customers will be able to choose the method by which they receive program information and that information will be provided in a timely manner. Mobile offices (i.e., outfitted vans) will be provided to distribute program information to under-served areas, handicapped, disabled, or non-English speaking customers. Unmanned, electronic booths will be strategically located for customers to access at their convenience to obtain basic program information with toll free hotlines to answer specific questions. Program information will also be available on the Internet with the capability for customers to submit electronic queries to USDA, retrieve forms, and access all program information necessary to complete the application process prior to visiting a service center. These alternatives will eliminate most of the need for customers to visit a service center prior to application and as a result, reduce time demand on service center staff. Also, directives from the national offices will be distributed electronically to the service centers, constituting a 90 percent reduction in time and facilitating the delivery of information to customers with an estimated reduction in time of 50 percent.

3.2.2 Eligibility Determination

Currently it is not possible to determine program eligibility prior to the start of the sign-up period. Numerous paper forms and approval steps are required to determine customer and land eligibility. In the integrated environment service center staff will be able to notify eligible customers prior to the beginning of the sign-up period. This changes the process from reactive to proactive and allows the customer to decide whether or not to pursue program participation without making a trip to the service center.

Another significant process change will occur in collecting, updating, and reviewing information from those customers who visit the service center. Information will be collected once and maintained in a standard database repository which will be accessible to all agencies. This will eliminate the need for the customer to provide the same information to individual agencies. Time delays and erroneous data associated with manually notifying each agency of changes to customer information will also be eliminated. Please refer to the CRP process model in Appendix J for the time reductions associated with each step of determining CRP eligibility.

The Integrated Service Center will eliminate more than 20 steps from this process, including:

- Filling out the 578 Form
- Pulling hard copy maps
- Copying maps
- Changing map scales
- Making and filing copies of 502 form
- Attaching copies of 156 form to crop reports

The two BPR teams estimate a 50 - 80 percent reduction in time and 50 percent reduction in paper processing currently required to determine eligibility by eliminating, combining, and automating many manual steps.

3.2.3 Application Processing

The time associated with processing applications in the future will be significantly reduced from the current time of one to three months to the same day that the application is submitted. This reduction is possible for two reasons. First, in the future environment all program requirements such as eligible acres, maximum bid rates, and environmental criteria will be announced before sign-up is initiated. Customers will be able to submit a reasonable bid based on the applicable program requirements. Secondly, many redundant approval steps will be eliminated from this process. Applications will no longer be reviewed by the County Committees against hard copy documentation prior to submission to Washington, DC.

Many of the remaining steps in the streamlined process will be performed electronically which will eliminate the need for sending paper forms between agencies and reduce the time required to notify both customers and other agencies. The following critical steps in the process will be performed electronically.

- Transmit CRP-1 to Washington, DC
- Review bid determinations
- Notify customer of acceptance or rejection
- Notify NRCS to proceed with conservation plan development

3.2.4 Conservation Plan Development

The conservation plan of operations, referred to as the CPO, is developed after the customer's application is approved. NRCS works in partnership with the customer to identify conservation options, establish a schedule, and determine the conservation costs that will be shared by USDA. Service center staff spend many hours manually gathering information at customers' sites. The process deficiency is the inability to use the collected information to determine the appropriate conservation options while at the customer's site. Without sufficient information on options, customers cannot make an informed decision or adequately plan for future operations.

The improved process will incorporate the ability to remotely access information and provide customers with conservation options in real time and 60 percent faster. An added benefit will be the capability to perform "what-if" scenarios for customers. For example, a customer may want to combine elements of three options into one option to determine whether the portion of the cost paid by USDA is increased or decreased. Customers will electronically sign the CPO after an agreement is reached on the practices, schedule, and cost share.

Another improvement to the process is in the on-line approval capability. State conservation districts and county committees will be able to electronically access and approve CPOs. On-line approval will not only reduce the amount of paper passed between various organizations, but will also significantly reduce the amount of time the customer must wait to enter into a contract with USDA.

3.2.5 Contract Preparation/Approval

Two major changes will occur in the contract preparation and approval process. First, the manual process of passing paper forms back and forth between agencies will be eliminated. For example, the AD-862 form is passed back and forth between agencies for information to be added. This is a very time consuming process and does not add value to any services or products provided to the customer.

In the future, information stored in the standard data repository will be accessed to populate a new form designed to combine the AD-862 and AD-245. In addition to the benefit of single source capture, all agencies will be able to determine contract status information as needed.

The second major improvement is achieved by applying geospatial technology. Steps will be eliminated that require hard copy aerial maps to be manually updated, consuming an extraordinary amount of service center staff time. Digital imagery will provide real-time, accurate geospatial information 80 percent faster and will be accessible by all agencies simultaneously.

The two BPR teams estimate that the following reductions will occur as a result of implementing the above mentioned process changes.

- 80 percent reduction in the time associated with updating forms and maps after conducting field inspections
- 50 percent reduction in the time required to certify acreage
- 50 percent reduction in the time required to prepare the CRP-1
- 50 percent reduction in the time required to notify customers of appeal rights
- 50 percent reduction in the time required for the customer to review/approve automated form
- 80 percent reduction in the time required to verify multi-county status
- 50 percent reduction in the time required to compute non-standard payments

Most importantly, benefits/payments will be processed 80 percent faster and electronically deposited directly to the customer's financial institution. Service center staff will have access to customer information and payment reports, facilitating their workload by eliminating paperwork and manual processing of payments.

3.2.6 Compliance Monitoring

In the current process NRCS conducts annual status reviews for the two years following contract approval. At the end of the two year period NRCS transfers monitoring responsibility to FSA. Notification is manual and requires that the LTP-13 form be sent from NRCS to FSA. In addition, compliance information is manually maintained by both agencies and cannot be accessed by the other. The major change to the compliance monitoring process will be in the ability of NRCS and FSA to electronically access accurate, complete compliance records.

Electronic access in the integrated environment will:

- Reduce by 20 percent the time required for NRCS to conduct status reviews and notify customers of compliance/non-compliance
- Eliminate the need for NRCS to manually send FSA the LTP-13 form
- Reduce by 20 percent the time required for FSA to conduct field inspections and notify customers of appeal rights

3.3 Overview of Geospatial Recommendations

This section of the report represents the Geospatial Team’s contribution to the overall BPR effort and has been reflected in the vision of an Integrated Service Center, the customer lifecycle and CRP delivery. The following Exhibit 3-3, Summary of Recommendations, presents the thirteen recommendations proposed by Geospatial Team in the area of Geospatial Information. Also presented with each recommendation is a paragraph which briefly explains the current business deficiencies which were addressed and the customer benefits that will be realized through implementation. The tab number in the last column corresponds to the tabbed section of this report which presents the detailed information collected for each recommendation.

The thirteen recommendations are prioritized based on their importance to providing efficient, effective GIS capability at a service center. It should not be assumed that the prioritized list of recommendations is a priority list for implementation. Several of the recommendations are linked in such a manner that the implementation must occur concurrently rather than progressively to achieve success.

<i>Recommendations</i>	<i>Summary Paragraph</i>	<i>Tab</i>
RECOMMENDATION 1: Increase service center efficiency and improve the quality of services and products by replacing the official paper aerial photography and soil maps with digital geospatial data.	Currently, each agency has their own set of maps (such as aerial photographs or soils maps) which they are responsible to collect, record, and evaluate data. Because the maps used by different agencies are not always the same scale, it can be very confusing for the customer. When a change takes place on a farm, generally the customer reports the	1

	<p>change to one agency, who makes the update to their records. Since the change is not communicated to all agencies, the result is only one agency has correct and up-to-date records.</p> <p>By providing the service center staff with geospatial imagery and detailed supporting tabular data in a centralized business system, both the customer and service center staff will be able to access current, up-to-date records. Because this is a centralized system, when one agency corrects the data, all agencies will have access to the same updated information. Also, an open system provides additional means to access geospatial information than by going to the nearest service center.</p>	
<p>RECOMMENATION 2: Develop standards to create and maintain land unit boundaries. Implement an initiative to convert common land unit boundaries from paper to digital format to reduce duplication and enable data sharing between service center agencies and customers.</p>	<p>Currently agencies are using GIS for different purposes, and in different ways, which results in the customer receiving inconsistent, inaccurate, and unreliable geospatial data, and inadequate land boundary information. Each agency may provide the customer with different boundaries for the same land.</p> <p>By sharing geospatial information between agencies the customer receives more consistent, accurate, and reliable data. Customers will receive service in a more timely manner as a result of technology (i.e., higher resolution digital data) and improved access to the customers information (i.e., electronically). By implementing this recommendation the customer will receive the same land boundary information from each agency.</p>	<p>2</p>
<p>RECOMMENDATION 3: Develop and implement the standards to create and maintain a digital wetlands database. Incorporate regional wetland characteristics.</p>	<p>Currently service centers keep Wetland information in files as hard-copies that are often damaged or destroyed over time due to extensive manual use. This often leads to a breakdown in the ability to track wetland data, and makes it difficult to provide the customer with the information they request. Wetland evaluation is based on a non-standard set of characteristics that often produce</p>	<p>3</p>

	<p>determinations that result in the customer pursuing the appeals process.</p> <p>By implementing this recommendation Wetland data will be more accurate when obtained from one common database. Reducing the manual process in the service center will result in a quicker response time to the customer. Customers will be evaluated on characteristics that apply to only their region (versus other regions with non-applicable characteristics) and thus the customer will receive a more equitable evaluation. By receiving a more equitable evaluation, this may reduce the number of customer appeals.</p>	
<p>RECOMMENDATION 4: Reduce time and cost associated with maintaining redundant geospatial information at the service centers by implementing a consistent geospatial information management strategy for service centers.</p>	<p>Currently service center agencies spend time and money maintaining redundant data. In addition there is a lack of core data sets which limits the options available to the customer.</p> <p>By implementing a consistent geospatial information management strategy for service centers there will be no duplicate data to collect and maintain, which will simplify the process (i.e., number of times forms are exchanged) and reduce the cost. The management of essential data sets will enable USDA to provide customers with data for their area of operation and as a result the customer will receive more timely service and have access to a broader range of information.</p>	4
<p>RECOMMENDATION 5: Increase information accessibility by establishing policy and standards for information exchange with partners and customers.</p>	<p>Currently inconsistent program rules have led to inconsistent and inaccurate information which is passed on to the customer. The program delivery process is complicated and time intensive due to inconsistent policy. Customers currently experience delays when trying to obtain access to geospatial information and about their status.</p> <p>By increasing information accessibility and establishing policy and standards for information exchange there will be a</p>	5

	<p>consistency in program rules and regulations regarding information, therefore the information provided to the customer will be consistent and accurate. By improving agency to agency communication, it will resolve conflicting data between agencies, and as a result the customer will receive accurate, consistent and timely data. There will be a reduction in program delivery process time as a result of clear and consistent policy. Customers will be able to access geospatial data on-line thus eliminating the delays in obtaining geospatial and status information.</p>	
<p>RECOMMENDATION 6 : Provide the capability for service centers to access, analyze, update, share, and store geospatial information.</p>	<p>Currently the geospatial data provided to the customer is at times inaccurate, inconsistent, non-standard and lacks detail. Work processes are delayed due to manual service center steps as well as customers having to make multiple trips to as service center to deliver and obtain geospatial information.</p> <p>Customer benefits associated with implementing this recommendation include:</p> <ul style="list-style-type: none"> • detailed, accurate, consistent and standardized information • reduced paper work and manual processing through utilization of technology • reduce the number of customer trips to the office due to availability of remote access (i.e., “one stop shopping”). 	<p>6</p>
<p>RECOMMENDATION 7: Provide accessibility to information by service center employees while away from the office at customer locations.</p>	<p>In many cases service center staff must manually collect information at a customer location and then take that information back to the service center for processing. This results in a delay in providing options to the customer. It also results in additional trips to the service center for the customer.</p> <p>By providing service center staff with accessible geospatial information, while away from the office, customers will receive more accurate information in a timely manner.</p>	<p>7</p>

<p>RECOMMENDATION 8: Validate improvements of business processes resulting from service center access to geo-referenced data in a pilot test environment.</p>	<p>Due to manual processing (i.e. redundant processes, etc.) and a decrease in staffing, the service centers are unable to provide the customer with adequate program benefits in an acceptable amount of time.</p> <p>By validating business process improvements in a pilot site environment USDA can ensure that the customer will receive improved response time and increased benefits (i.e., specialized reports, analysis, plans, etc.) in the actual service center environment. The customer can expect increased accuracy and consistency among the geospatial data. Agency employees can spend more time on “individual attention.”</p>	<p>8</p>
<p>RECOMMENDATION 9: Establish and implement a training program that provides service center pilot sites with the ability to proficiently use GIS and related tools beginning FY98.</p>	<p>Currently the staff is not always trained in the necessary areas or in a timely manner and as a result the customer does not receive the most beneficial service possible. Customer has a lack of trust and confidence in service center staff.</p> <p>Cross trained and better trained staff will be more knowledgeable and will provide more accurate information and better customer service. Staff will have a more thorough understanding of the information and how it can be applied in particular situations.</p>	<p>9</p>
<p>RECOMMENDATION 10: Use geospatial information to more efficiently and accurately identify high priority conservation areas based on environmental indicators and a geospatial watershed database.</p>	<p>Currently ranking criteria and selection of priority areas are based on inconsistent data resulting in customers not receiving equitable consideration and not fairly distributing tax/program dollars.</p> <p>Consistent ranking and selection will allow tax/program dollars to be spent on the “true” priority areas based on factual geo-referenced data, rather than based on political factors.</p>	<p>10</p>
<p>RECOMMENDATION 11: Provide geospatial information to decision makers enabling them to establish policy and guidelines prior to program sign-ups.</p>	<p>Currently there are time delays in notifying customers of program eligibility, application acceptance, contract approval, etc. This hinders the customer in planning operations and making decisions. The entire process</p>	<p>11</p>

	<p>can cause the customer to delay decisions for several months.</p> <p>As a result of implementing this recommendation the customers will receive, at the time of sign-up, information (e.g., bid rates, etc.) that will help them to make informed decisions regarding participation in the program.</p>	
<p>RECOMMENDATION 12: Empower service center personnel with improved business tools, training, and enhanced approval authority.</p>	<p>Currently customers experience a delay in response time as a result of having to pass the information “up the chain of command” to receive a decision.</p> <p>By empowering the service center employees with increased decision making authority, the customer will receive a much faster response. This is a customer requirement/expectation that has been identified through USDA customer surveys. It is expected that delegation to trained personnel will provide increased efficiency and greatly improved customer service, both internal and external to USDA.</p>	<p>12</p>
<p>RECOMMENDATION 13: Implement a comprehensive geospatial training program to all USDA service centers to provide improved service and benefit to the customers.</p>	<p>When the service center staff is not trained to the fullest extent possible they are not equipped with the necessary knowledge to serve the customer to the greatest extent possible. This may translate into customers not being provided with all possible information on which to base economic decisions.</p> <p>The customer will receive an improved, faster, cost-effective service, and a wider spectrum of opportunities and options from a better trained service center staff. When the customer receives appropriate and beneficial service, they receive a fair return for their tax dollar and have more confidence and trust in the well trained service center staff.</p>	<p>13</p>

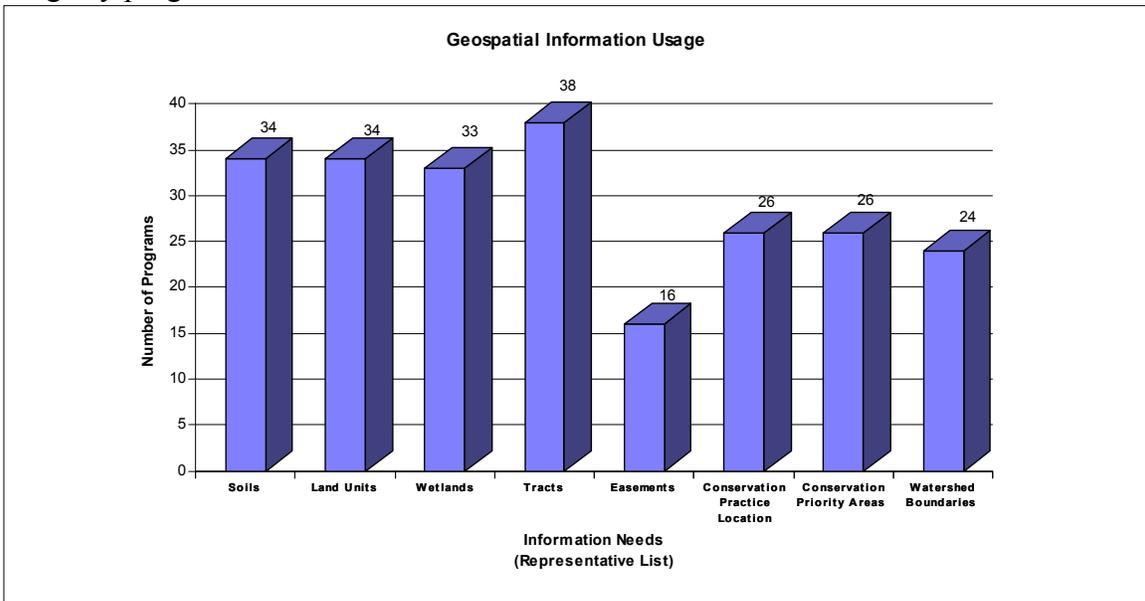
SUMMARY OF RECOMMENDATIONS

Exhibit 3-3

3.4 Impact of Geospatial Recommendations at the Service Center

The recommendations proposed by the Geospatial Team will require changes that will affect more than the four program/process areas analyzed during the first phase of the BPR. Approximately 50 programs are administered at service centers across the country. Service center staff must use geospatial information to adequately administer most of the programs. Therefore, process changes associated with accessing, sharing, and/or using geospatial information will result in benefits to nearly all service center programs. Appendix K presents a matrix illustrating USDA programs which are impacted by the proposed recommendations.

Presented in Exhibit 3-4, Geospatial Information Usage, is the number of programs which require the use of specific types of geospatial information. For example, more than 35 of the 50 programs administered at a service center require the use of soils information. It is important to note that the information needs included in the bar chart are representative and do not indicate an inclusive list of geospatial information that may be required at a service center. See Appendix L for a listing of geospatial information usage by program.



GEOSPATIAL INFORMATION USAGE

Exhibit 3-4

3.5 Geospatial Recommendations Link to Service Center Goals

As stated in Section 1, the Secretary of Agriculture has shared his vision of “One Stop Service” in all USDA offices, while at the same time ensuring adequate legislative cost reductions, striving to maintain and improve the quality of services and products for all

customers of the involved agencies. As a result, USDA will implement one-stop, full-service processes at USDA service centers nationwide and incorporate the following strategic business goals: “One Stop Service”, “Quality Customer Service”, “Cost Reduction”, and “External Partnerships”. In addition, the BPR teams developed critical success factors to determine the conditions necessary to overcome today’s problems and roadblocks to meeting the established service center mission and goals.

Since it was imperative that the recommendations developed by the BPR teams address both the strategic business goals of USDA and incorporate critical success factors, the BPR teams created the following matrices.

- The “Critical Success Factors to Recommendations Matrix” indicates where there is a high, medium, or low correlation between the recommendations and critical success factors. Most of the recommendations were perceived to have high, to high/medium, dependency on critical success factors. The matrix can be viewed in Appendix M.
- The “Service Center Goals to Recommendations Matrix” demonstrates the extent to which the recommendations support the service center goals. The majority of recommendations help realize all of the goals; however, all of the recommendations support the service center goals to some magnitude. Refer to Appendix N to view the matrix. The Geospatial Team also used this matrix as a tool in prioritizing the recommendations based on their support of the four service center goals.

These matrices help to ensure that all recommendations from the BPR teams share a common vision of the future, work toward the same goals and objectives, and ensure that customers continue to receive quality support from USDA service centers.

3.6 Detailed Information for Recommendations

The Geospatial Team based the development of recommendations on a structured methodology that included identifying and categorizing activity deficiencies and developing improvement opportunities targeted at correcting those deficiencies. One or more tactical objectives were identified for each of the improvement opportunities to specify “how” each improvement opportunity will be implemented. Tactical objectives provided the “bridge” from improvement opportunities to recommendations.

The following supporting information was collected for each Tactical Objective:

- ***Success Statements:*** Statements that describe the “big picture” end result. What will the future environment be like if the tactical objective is achieved.
- ***Implementation Strategies:*** Strategies which define the approaches, or steps, that will be used to meet the objectives. Approaches include an integrated and

coordinated set of actions that will result in achieving the objective. Strategies should meet the following criteria:

- ◇ Contribute to achieving the objectives
 - ◇ Exist within the capability of USDA to implement successfully and in a timely manner
 - ◇ Be specific enough to provide adequate guidance
- ***Inhibitors:*** Anticipated obstacles that impede progress toward achieving objectives. Can be internal, such as organizational, institutional, or systemic; or external, such as resource restrictions or legislative mandates.
 - ***Enablers:*** Technology, organizational change, resources that make the objective possible or effective. May help to resolve an inhibitor/constraint.
 - ***Assumptions:*** Statement used to describe the future environment when facts about the environment are unknown. Assumptions must be realistic.
 - ***Stakeholders:*** Stakeholders are organizations, groups, or individuals that will affect or be affected by this objective.

After analysis of the tactical objective's implementation strategies, recommendations were developed by the Team. Improving customer service was the main driver behind developing recommendations with the primary focus being placed on USDA business activities and programs which could benefit from its implementation. The tactical objectives, in some cases, were driven down further resulting in several associated recommendations. This was necessary to enable costs to be associated with each recommendation. The Geospatial Core Team recognizes that certain portions of the supporting data included in this report will be further developed as more information becomes available.

Supporting details collected for each recommendation include:

- ***Recommendation Steps (Responsible Party):*** The process steps necessary to accomplish the recommendation including the associated planning, training, policy and implementation. Each recommendation step will have a recommended office or team responsible for its execution.
- ***Associated Risks of Implementation:*** What are the potential risks associated with implementing this recommendation? What are the potential risks associated with not implementing this recommendation? What circumstances exist that will impede the success of the recommendation?
- ***Customer and Business Benefits:*** How will the customer benefit if the recommendation is implemented? How will the current USDA business

processes be improved and what advantages will the recommendation provide USDA employees?

- **Programs Impacted:** Accomplishment of the recommendation will have a positive impact or provide a benefit to these USDA Programs.
- **Business Processes Impacted:** These current activities performed by USDA will be facilitated or improved by implementing the recommendation.
- **System Functional Requirements:** If an automated system is required to support a recommendation, the functional requirements must be defined. Although this project has not defined this specific functionality, it will be defined during the next phase of the project.
- **Information Needs:** The data team will determine all the information requirements during the data modeling phase of this effort. The BPR teams identified high level information needs associated with each recommendation.
- **Where Recommendation Should Be Carried Out:** Where is the most logical site/level to implement the recommendation (includes testing).
- **Anticipated Investment Cost Areas:** The costing team will continue to refine the costs associated with each recommendation to determine both financial and human resource impacts.
- **Implementation Period:** The starting and ending fiscal years for implementing the recommendation.
- **Implementation Characteristics:** If the implementation will be phased in, describe the percentage of completion for each year or how phase in will occur (e.g., to 50 percent of service centers, to 50 percent of recommended changes to all service centers).
- **Performance Measures:** Performance Measures are results oriented, specific measures that are used to evaluate progress in achieving objectives. Performance measures will also indicate progress in implementing recommendations.

RECOMMENDATION 1: Increase service center efficiency and improve the quality of services and products by replacing the official paper aerial photography and soil maps with digital geospatial data.

Problem Statement: Currently, each agency has their own set of maps (such as aerial photographs or soils maps) which they are responsible to collect, record, and evaluate data. Because the maps used by different agencies are not always the same scale, it can be very confusing for the customer. When a change takes place on a farm, generally the customer reports the change to one agency, who makes the update to their records. Since the change is not communicated to all agencies, the result is only one agency has correct and up-to-date records.

Benefit Summary: By providing the service center staff with geospatial imagery and detailed supporting tabular data in a centralized business system, both the customer and service center staff will be able to access current, up-to-date records. Because this is a centralized system, when one agency corrects the data, all agencies will have access to the same updated information. Also, an open system provides additional means to access geospatial information than by going to the nearest service center.

Recommendation Steps (*Responsible Party*):

For the acquisition of digital ortho-imagery quarter quads by 2002 and development of seamless county coverage:

1. Continue cost share and cooperation with National Digital Orthophoto Program (NDOP). (*NRSC and FSA coordinating with USGS via the NDOP steering committee and program sub-committee*)
2. Develop plan for the acquisition of digital ortho-imagery using 1994 or earlier NAPP photography and fund the FSA/NRCS acquisition priorities. (*NRCS and FSA coordinating with USGS via the NDOP steering committee and program sub-committee*)
3. From individual digital ortho-imagery, develop seamless ortho-image coverage for each county. (*FSA Aerial Photography Field Office (APFO)*)
4. Delivery of seamless digital ortho-imagery to service center. (*FSA and NRCS*)

Associated Risks of Implementation:

- Until the proper hardware and GIS software are acquired, digital ortho-imagery coverage can not be utilized. If the hardware and software acquisition does not occur, digital ortho-imagery can not be used at the service center.
- If NAPP photography cycle is delayed by funding or weather, not all areas will have digital ortho-imagery by 2002.
- The digital ortho-imagery creation takes 14 months from the time FSA/NRCS transfers funds and identifies requirements to USGS. This long lead time may create problems if the program is not fully funded in advance of 2002.
- If not budgeted for, the service center will not be able to implement GIS.

- May require customers to accept a change in the way they do business (e.g., move from paper to screen display).

Customer and Business Benefits:

- Will provide a consistent image base map for service center automated geospatial data that is common to service center agencies and partners. The common image basemap will allow essential geospatial data to be created and shared.
- The high resolution digital ortho-imagery, combined with hardware and software will present a more detailed, quality representation of customer land, resulting in higher accuracy for acreage measurements and better service to the customer.
- The existing hard copy method requires the producer to be serviced at one service center. With digital ortho-imagery base, the customer will have access to relevant data outside a single service center, may have access to information over the Internet, and will have access to a wider variety of data and higher resolution data.
- Enables one stop shopping.
- Will allow more information to be exchanged between service centers and customers as well as provides alternative methods for information to be passed.
- Other Federal Agencies (Forest Service, BLM, National Park Service, EPA), state and local agencies will be able to use the digital ortho-imagery funded by the NDOP. These agencies will be able to obtain copies of the digital ortho-imagery at the cost of reproduction vs. \$1020 per black and white quarter quad.
- Allow all service agencies to jointly manage a land unit layer which will provide consistent information to the customer.
- Will provide a higher quality printed map for their use in managing their operation.
- Acreage values will be consistent across agencies and more accurate as a result of digital ortho-imagery.
- Interpretations by the customer will be facilitated by the use of digital ortho-imagery.

Programs Impacted:

- Commodity Loans and Loan Deficiency Payments
- Agricultural Market Transition Act (AMTA) Payments
- Dairy Refund Payment Program
- Dairy Indemnity Payment Program
- Sugar Program
- Tobacco and Peanut Price Support and Production Control Program
- Conservation Reserve Program
- Environmental Programs
- Farm Loan Programs
- Commodity Warehouse Activities
- Noninsured Crop Disaster Assistance Program

- Emergency Conservation Program
- Flood Risk Reduction Program
- Catastrophic Insurance
- Boll Weevil Eradication Program
- Soil Surveys
- Snow Survey and Water Supply Forecasts
- Plant Material Centers
- Grazing Lands Conservation Initiative
- Water Resources Assistance (Watersheds surveys and Planning and the Watershed and Flood prevention Operations program)
- Watershed Operations and Small Watersheds
- Emergency Watershed Protection Program
- Forestry Incentive Program
- Resource Conservation and Development Program
- Water Bank Program
- Wetlands Reserve Program
- Colorado River Basin Salinity Control Program
- Great Plains Conservation Program
- Environmental Quality Incentives Program
- Highly Erodible Land Conservation
- Wetland Conservation
- Farmland Protection Program
- Wildlife Habitat Incentives Program
- Conservation Farm Option
- Stewardship Incentive Program
- Outreach and Assistance for Socially Disadvantaged Farmers and Ranchers
- Rural Housing - 502

Business Processes Impacted:

- A1.1.1.3 Pull Maps and Review (with Producer)
- A1.1.1.4 Redefine Land Boundaries
- A1.1.1.7 Update Aerial Photographs
- A1.1.1.9.3 Add/Change/Delete Land Unit Data
- A1.2.1.2.3 Interpret Imagery
- A1.2.1.3.1 Draw Boundaries
- A1.2.1.3.2 Determine Area
- A1.2.3.2 Change Land Area
- A1.2.3.4 Change Unit Information
- A1.2.4.1 Determine Flight Lines
- A1.2.4.2 Number New Maps
- A1.2.4.3 Run Farm/Tract Identification Query
- A1.2.4.4 Transfer Information
- A1.2.4.6 Photocopy All Maps

- A1.3 Delete Land Units (Farm/Tract)
 - A2.1.2.1 Determine Area
 - A2.1.2.2 Determine Cropping History
 - A2.1.2.3.1 Determine Land Eligibility
 - A2.1.2.3.2 Determine Bid Cap
 - A2.1.4.1 Complete Onsite Inspection/Inventory
 - A2.1.4.3 Develop Schedule of Application
 - A2.1.4.4 Review CPO with Producer/Approval
 - A2.1.5.4 Perform On-site Inspection
 - A2.1.6.1 Perform Status Review
- A3.1.4 Record Deed in the County Land Records
- A3.1.5 Monitor Easement Compliance
- A3.2.2 Develop Management Plan and Contract Terms
- A3.2.5 Monitor Contract Compliance
- A7.1.1.2 Explain HEL Question on AD-1026
- A7.1.1.3 Prepare Aerial Photography and AD-1026 for Referral
- A7.1.2.1 Review Soils/Conduct USLE Calculations
- A7.1.2.2 Update Official Aerial Photography
- A7.1.3.1 Determine Customers Needs
- A7.1.3.1 Determine Customers Needs
- A7.1.3.2 Provide Alternatives
- A7.1.5.4.1 Conduct Land Unit Visit
- A7.2.1.2 Explain Wetland Questions on AD-1026
- A7.2.1.3 Prepare Aerial Photography and AD-1026 for Referral
- A7.2.2 Decide if a Wetland Determination is Needed
- A7.2.5 Delineate Wetland Location on the Official Photography
- A7.2.7 Restore/Mitigate Wetland

System Functional Requirements:

- System must create county digital ortho-imagery mosaics.

Where Recommendation Should be Carried Out:

We know that the scale and resolution of digital ortho-imagery are useable at service centers from previous pilots. The use of county mosaics has not been piloted however, county mosaics should be used in all future pilot service centers. How best to segment county mosaics needs to be analyzed. To exploit this data, memory plus swap space cannot exceed file size.

Anticipated Investment Cost Areas:

- *Digital ortho-imagery Acquisition:* The initial cost to complete 48 states was \$180,000,000 including money already invested by FSA/NRCS/NDOP. The \$180,000,000 cost is being shared by federal, state and local government agencies.
To complement first time conterminous digital ortho-imagery United States \$40,000,000. Estimates to complete areas needed in Alaska and Hawaii are not available. Recent NAPP photography is not available for all areas of Alaska. Recent NAPP photography is not available for Hawaii. FSA and NRCS requires digital ortho-imagery for areas in Alaska, NRCS requires digital ortho-imagery for Hawaii.
- *For county image mosaics:* \$4,000,000. This includes hardware, software and personnel housed at the FSA/APFO.

We cannot, at this time, adequately determine the cost of serving all Mosaics to anyone in order provide the infrastructure for service to any customer at any service center location or over the Internet. This cost needs to be addressed in conjunction with making land unit, and soils GIS layers and attributes available.

Costs to serve all county mosaics if they are to be provided on-line: \$2-6 million.

- Since this is a data generation recommendation, IT costs may be outside the service center. Hardware and software costs are APFO specific. GIS hardware and software costs are specified in other recommendations.

Implementation Period:

- For digital ortho-imagery acquisition, 1994-2002.
- For County Mosaics, 1997-2002.

Implementation Characteristics:

- APFO personnel needs to be trained in the use of Mosaicking software. The Mosaicking process cannot adversely impact the production of hard copy NAPP photography that is still being produced for the service centers.

Performance Measures:

- Increase accuracy of the geospatial information provided to the customer – reduce error rate
- Increase readability/resolution of the products provided to the customer
- Reduce amount of time staff spend accessing and manipulating geospatial information

Tactical Objective: Provide all service centers with seamless county digital ortho-imagery by 2002.

Success Statements:

- Digital ortho-imagery will replace paper photos/maps and will serve as the foundation for all service centers
- Digital ortho-imagery is kept current within a 5-10 year cycle.
- Digital ortho-imagery is provided to service centers as a ready to use package.
- Quadrangles are replaced by seamless county image by 2002.

Implementation Strategies:

1. Establish budget for digital ortho-imagery acquisition by 2002.
2. Maintain priority list for digital ortho-imagery acquisition.
3. Appropriate edge matching is performed to create seamless coverage for the county.
4. Work with USGS to insure delivery of digital ortho-imagery for all service centers by 2002.
5. Continue to partner with state and local agencies to offset the high budget outlays for digital ortho-imagery .
6. Create seamless county mosaics to eliminate edge matching and map projection zone problems.

Inhibitors:

- Long time frame for contracting, processing and delivering digital ortho-imagery.
- Digital ortho-imagery from the national program are quality checked and may require remakes, which can delay delivery.
- Current lack of hardware to effectively utilize digital ortho-imagery.
- Budget for digital ortho-imagery acquisition may drop.
- Lack of funding and staff for mosaic process.

Enablers:

- Technology to use digital ortho-imagery is rapidly advancing.
- More digital ortho-imagery sources are available.
- Digital ortho-imagery contractors are increasing production capacity.
- Budget dollars are increasingly available.
- Increasing acceptance and support of the digital ortho-imagery program from Federal, State and Local sources.

Assumptions:

- Adequate quality control for digital ortho-imagery will continue to be done by United States Geological Survey (USGS).
- Assume necessary budget will be allocated for completion of the objective.
- Assume ortho-imagery will be delivered and available by 2002.
- Assume the need for digital ortho-imagery remains within the business scope of the service center agencies.
- Assume APFO can staff the mosaicking process.

Stakeholders:

- Service Center Agencies - FSA and NRCS currently are the lead agencies for funding, directing, prioritizing, and implementing digital ortho-imagery within the service centers.
- USDA Forest Service materially participates in the digital ortho-imagery program, helping set standards, etc.
- USGS administers and contributes funding to the digital ortho-imagery program. They handle the contracting and quality control. They also distribute digital ortho-imagery to the public.
- State and Local Government agencies share funding and direction of the digital ortho-imagery program.
- Customers benefit from digital ortho-imagery.
- Other Federal agencies use digital ortho-imagery and some assist with funding (e.g., BLM, BIA, NPS, EPA).

RECOMMENDATION 2: Develop standards to create and maintain land unit boundaries. Implement an initiative to convert common land unit boundaries from paper to digital format to reduce duplication and enable data sharing between service center agencies and customers.

Problem Statement: Currently agencies are using GIS for different purposes, and in different ways, which results in the customer receiving inconsistent, inaccurate, and unreliable geospatial data, and inadequate land boundary information. Each agency may provide the customer with different boundaries for the same land.

Benefit Summary: By sharing geospatial information between agencies the customer receives more consistent, accurate, and reliable data. Customers will receive service in a more timely manner as a result of technology (i.e., higher resolution digital data) and improved access to the customers information (i.e., electronically). By implementing this recommendation the customer will receive the same land boundary information from each agency.

Recommendation Steps (*Responsible Party*):

1. Receive resource commitment from management (*FSA/NRCS will be responsible for all steps. RD and RMA will have concurrence responsibilities.*)
2. Review previous land unit documentation
3. Develop additional standards and policies for land unit finalization
4. Incorporate new standards/policies and or edit exiting standards and policies into land unit document.
5. Solicit management review and approval of land unit document. (*National FAC will have final approval of land unit document*)
6. Develop implementation plan incorporating land unit standards with hardware/resources/time schedule/funding.
7. Solicit management's review and approval of implementation plan.
8. Submit plan to IRM Review Board for funding approval. (*SIRMO's will have final approval of funding approval*)
9. Disseminate land unit document and implementation plan to STO and service center.
10. Acquire hardware/software/contractor. (*FSA/NRCS contracting division will be responsible for acquisition*)
11. Begin implementation.
12. Revise plan/standards as required, continue plan until nationwide theme is complete. (*Data Team will be involved when attribute data standards are developed for the land unit.*)

Associated Risks of Implementation:

- Data created not standardized.
- Non-shareable data if standards are not followed (i.e., metadata).
- Duplicate work.
- Possible re-work when new digital ortho-imagery are obtained.
- Suitable hardware/software to utilize the common land unit is not acquired to implement recommendation.

Customer and Business Benefits:

- Increase in data accuracy, reliability and consistency between all service center agencies and the customer due to higher resolution digital data.
- Reduced number of times customers must submit data (One-Stop Shopping).
- Faster response time by service center.
- Improved data accessibility for both producer and service center's.
- Elimination of redundant and duplicative data.
- Reduced workload and time maintaining and updating customer information.
- Customers will receive service in a more timely manner as a result of improving technology and access to the customers information.
- Customers will have electronic access to program information, regulations, resource interpretations, etc.
- Customers will be able to provide data to service centers (e.g. spreadsheets, documents, etc.).

Programs Impacted:

- All programs with the possible exception of Soil Surveys and Snow Survey and Water Supply Forecasts

Business Processes Impacted:

- A1.1.1.3 Pull Maps and Review (w/Producer)
- A1.1.1.4 Redefine Land Boundaries
- A1.1.1.7 Update Aerial Photographs
- A1.1.1.9.3 Add/Change/Delete Land unit Data
- A1.2.1.2.3 Interpret Imagery
- A1.2.1.3.1 Draw Boundaries
- A1.2.1.3.2 Determine Area
- A1.2.3.2 Change Land Area
- A1.2.3.4 Change Unit Information
- A1.2.4.1 Determine Flight Lines
- A1.2.4.2 Number New Maps
- A1.2.4.3 Run Farm/Tract Identification Query
- A1.2.4.4 Transfer Information
- A1.2.4.6 Photocopy All Maps

- A1.3 Delete Land Units (Farm/Tract)
 - A2.1.2.1 Determine Area
 - A2.1.2.2 Determine Cropping History
 - A2.1.2.3.1 Determine Land Eligibility
 - A2.1.2.3.2 Determine Bid Cap
 - A2.1.4.1 Complete Onsite Inspection/Inventory
 - A2.1.4.3 Develop Schedule of Application
 - A2.1.4.4 Review CPO with Producer/Approval
 - A2.1.5.4 Perform On-site Inspection
 - A2.1.6.1 Perform Status Review
- A3.1.4 Record Deed in the County Land Records
- A3.1.5 Monitor Easement Compliance
- A3.2.2 Develop Management Plan and Contract Terms
- A3.2.5 Monitor Contract Compliance
- A7.1.1.2 Explain HEL Question on AD-1026
- A7.1.1.3 Prepare Aerial Photography and AD-1026 for Referral
 - A7.1.2.1 Review Soils/Conduct USLE Calculations
 - A7.1.2.2 Update Official Aerial Photography
- A7.1.3.1 Determine Customers Needs
- A7.1.3.1 Determine Customers Needs
- A7.1.3.2 Provide Alternatives
- A7.1.5.4.1 Conduct Land Unit Visit
- A7.2.1.2 Explain Wetland Questions on AD-1026
- A7.2.1.3 Prepare Aerial Photography and AD-1026 for Referral
- A7.2.2 Decide if a Wetland Determination is Needed
- A7.2.5 Delineate Wetland Location on the Official Photography
- A7.2.7 Restore/Mitigate Wetland

System Functional Requirements:

- Seamless link between GIS and RDBMS
- Ability to access large data sets (digital ortho-imagery)
- User friendly interfaces

Information Needs:

- Basic producer geospatial data.

Where Recommendation Should Be Carried Out:

- Initially in SCIT pilot service centers and States with available hard/soft wares, if successful, then full scale implementation to follow.

Anticipated Investment Cost Areas:

- FSA/NRCS resources
- Hard/software/contractors to complete project
- Common Research and Development Agreement (CRADA) (projected)

Implementation Period:

- Concurrently and following pilot service center testing.
- 6 months to start up process - 24 months after to complete nationwide.
- 1-3 months for training of contractors/staff to begin data creation; 18 - 36 months to complete.

Implementation Characteristics:

- System capable of storing large amount of data (digital ortho-imagery and systems)
- System processing speed of 200 Mhz or greater
- Software package with digitizing functions
- RDBMS
- Connectivity capabilities with legacy systems
- CRADA
- Policy changes after management's approval of land unit (2 months)
- Decision by management on which strategy to pursue for developing land unit (2 months)
- IRM Review Board Approval (1 month)

Performance Measures:

- Increase accuracy of the geospatial information provided to the customer - reduce error rate
- Percentage of digitized land boundaries by service centers
- Percentage of service center agencies that use on-line geospatial information as sole source for land boundary determination

Tactical Objective*: Provide hardware and software to all service centers to create, view, analyze, print, and edit geospatial data consistently within all service center agencies in coordination with the deliver of digital ortho-imagery and cartographic data completed by 2002.

**This tactical objective also supports Recommendation 2 - "Provide the capability for service centers to access, analyze, update, share, and store geospatial information."*

Success Statements:

- Service center personnel going to remote locations have appropriate, rugged technology to complete their tasks efficiently.

- Technology is updated on a regular cycle.
- Technology is useful for every service center employee.
- Software systems are flexible, easy to use, and easily interface with customers systems.
- Response time for computing systems is acceptable to users.
- All service center agencies use the same commercial software packages.
- Access to data is quick and efficient.
- Appropriate security is in place for data and systems.
- Printers of adequate speed, size, resolution, and color are available (e.g. 600 dpi, color, 8.5x11 inch, 8 ppm).
- Appropriate media exists for exchanging information with partners and customers (e.g. CD writer).

Implementation Strategies:

1. Identify system requirements (e.g., system performance/speed, stability, mean time between failures, etc.).
2. Test hardware/software environment.
3. Agree on the common computing environment.
4. Procure agreed on hardware and software.
5. Install hardware and software.
6. Phase out legacy systems.

Inhibitors:

- Lack of budget resources.
- Legacy systems may require maintaining two systems.
- Agreement on common computing environment (CCE).
- Procurement process does not keep up with technology.
- Lack of appropriate training.
- Volume of data for large service centers.
- Non-implementation of a common land unit theme.

Enablers:

- Rapid advance of information technology.
- Decreasing costs of computing and storage resources.
- Increasing data warehousing capabilities.
- Increasing high volume media capabilities (e.g. dvd, cd).
- Increasing delivery capabilities via the Internet and World Wide Web.
- Customers are increasingly aware and want geospatial information.

Assumptions:

- Necessary budget and training will be allocated for completion of the recommendation.
- Hardware and software selected will meet identified geospatial processing needs.
- A common land unit theme will be established.

Stakeholders:

- service center Agencies - all must agree to the common computing environment, installation procedures, training, system administration, maintenance, and technology refresh cycles.
- Customers will benefit from faster service, greater flexibility, consistent data, and a mobile computing.
- State and local partners will benefit by sharing equipment and data.

RECOMMENDATION 3: Develop and implement the standards to create and maintain a digital wetlands database. Incorporate regional wetland characteristics.

Problem Statement: Currently service centers keep Wetland information in files as hard-copies that are often damaged or destroyed over time due to extensive manual use. This often leads to a breakdown in the ability to track wetland data, and makes it difficult to provide the customer with the information they request. Wetland evaluation is based on a non-standard set of characteristics that often produce determinations that result in the customer pursuing the appeals process.

Benefit Summary: By implementing this recommendation Wetland data will be more accurate when obtained from one common database. Reducing the manual process in the service center will result in a quicker response time to the customer. Customers will be evaluated on characteristics that apply to only their region (versus other regions with non-applicable characteristics) and thus the customer will receive a more equitable evaluation. By receiving a more equitable evaluation, this may reduce the number of customer appeals.

Recommendation Steps (*Responsible Party*):

1. Get feedback on need for current recommendation before proceeding. (*FSA/NRCS - Core Team*)
2. Get approval to develop a standard. (*NRCS, Natural Resources Inventory Division*)
3. Assemble a team to develop a digital wetlands and wetland easements mapping and digitizing standard, incorporate regional participation. (*NRCS, Natural Resources Inventory Division*)
4. Request review by other agencies. (*NRCS*)
5. Establish standard as policy. (*NRCS, Chief*)
6. Develop a plan to digitize wetlands for the nation. (*NRCS*)
7. Submit budget request to fund the mapping and digitizing initiative. (*NRCS*)

Associated Risks of Implementation:

- Digital wetlands data need to be maintained in a secure computer environment to prevent corruption or misuse.

Customer and Business Benefits:

- NRCS will have accurate maps showing where wetland easements are located.
- Immediately be able to inform customer/landowner whether a wetland was located on their property or in which land unit the wetland was delineated. This will result in delivering program benefits and conservation practice services faster and more efficiently.

- Quickly determine accurate wetland acreage.
- Eliminate the need to keep files of hard copy maps in the office.
- Quickly generate reports on wetlands gains and losses.
- Re-establish the location of wetland delineation that have been destroyed by a land owner.
- Use GPS to locate the wetland delineation on digital ortho-imagery.
- Use digital wetland data with other natural resource data layers to quickly and more accurately produce resource management options and plans.
- Having the wetlands in a digital format allows a second copy to be more easily stored off-site. Current wetland maps are stored as a single hard copy map, if photo is damaged/destroyed records are permanently lost.
- Reduction in paperwork.
- Standards incorporating regional wetland characteristics will cause less time to be spent on appeal cases as well as a reduction in the number of appeals filed.
- Less time spent by NRCS in making and maintaining wetland delineation for the entire nation.
- Consideration in evaluation of wetlands and application of policy will be more equitable.
- Target program activities to specific regions based on environmental needs.

Programs Impacted:

1. Conservation Reserve Program
2. Environmental Programs
3. Emergency Conservation Program
4. Flood Risk Reduction Program
5. Soil Surveys
6. Grazing Lands Conservation Initiative
7. Water Resources Assistance (Watersheds Surveys and Planning and the Watershed and Flood Prevention Operations Program)
8. Watershed Operations and Small Watersheds
9. Emergency Watershed Protection Program
10. Resource Conservation and Development Program
11. Water Bank Program
12. Wetlands Reserve Program
13. Colorado River Basin Salinity Control Program
14. Great Plains Conservation Program
15. Environmental Quality Incentives Program
16. Highly Erodible Land Conservation
17. Wetland Conservation
18. Farmland Protection Program
19. Wildlife Habitat Incentives Program
20. Conservation Farm Option
21. Stewardship Incentive Program
22. Outreach and Assistance for Socially Disadvantaged Farmers and Ranchers

23. Rural Housing - 502

Business Processes Impacted:

A2.1.2.3.3 Determine Environmental Rankings

Additional processes not captured in activity model: resource and conservation planning, resource inventories, and developing and recording Wetland managing, Wetland easements, and providing analysis of wetlands gains and losses, acreage, agency reporting, easier to tract program activities to specific regions based on environmental concerns/needs.

System Functional Requirements:

- Create a digital wetland geospatial database that all service center agencies will have access to from a common database.
- Hardware and GIS software capable of digitizing wetlands.

Information Needs:

- Wetlands data

Where Recommendation Should be Carried Out:

- Service Center pilot sites

Implementation Period:

- After the mapping and digitizing standards are developed. Approximately Spring 1998.

Implementation Characteristics:

- A draft standard could be prepared by the Spring of 1998.
- Local offices (GS/CO-7-12) query data (5-15 days).
- National office (GS-12-13) program specialist will analyze the data, determine specific region definitions, compose policy papers and recommendations, and submit to Supervisor for approval. (14-21 days).
- National Office (GS-14-15, SES) reviews paper and approves new policy. (2 hours)
- National Office, program specialist will disseminate information on new definitions to regional office. (1-2 days).
- Local office will incorporate new determinations into handbooks (one day).

Performance Measures:

- Reduce number of appeals cases that result from an unequitable evaluation
- Increase accuracy of wetland databases within each region
- Percentage of regions that with a standard set of wetland characteristics

Tactical Objective: Develop policy to regionalize wetland delineation.

Success Statements:

- A mapping and digitizing standard incorporating regional wetland characteristics may reduce some appeals because current policy is a "one size fits all".
- Program activity and information can be regionalized.

Implementation Strategies:

1. Identify the regions that should be used.
2. Review information available for EQIP Programs, CRP, WHIP, FP, etc. that will have established priority areas.
3. Determine the wetlands that exist in different regions of the country.
4. Develop a wetland mapping and digitizing standard and adopt as policy. Incorporate regionalized wetlands definitions in the standards for mapping and digitizing wetlands.
5. Utilize the TQM/overall business process remodeling process at all decision making levels. Everyone has equal input to policy changes.

Inhibitors:

- Decision makers resistance to changing policy.
- Unforeseen ramifications of existing policy.
- Delays in making new standard agree with existing policy.
- Lack of acceptance by others.
- Potential for standards policy to be in conflict with other mapping and digitizing standards.
- Knowledgeable and experienced staff in Wetlands and GIS background.
- This objective requires additional training for NRCS service center and clerical support personnel, prior to an wetland appeal, to identify acreage as "wetland".

Enablers:

- National Environmental Protection Act - will assist in; identifies a variety of wetland types across the nation.

- National Wetland Inventory developed by U.S. Fish and Wildlife Service - a national wetland inventory that includes hard copy maps with some digitized maps.
- Knowledgeable and experienced staff in Wetlands and GIS background.

Assumptions:

- Resources will be available to provide training.
- Essential data in place at all service centers.
- Compatible hard/software in place to provide necessary connectivity to review data layers.

Stakeholders:

- service center Agencies
- Customers (Farmer, Ranchers, Special Interest, Schools)
- Local and State Governments
- Federal agencies (COE, EPA, USF&W)

RECOMMENDATION 4: Reduce time and cost associated with maintaining redundant geospatial information at the service centers by implementing a consistent geospatial information management strategy for service centers.

Problem Statement: Currently service center agencies spend time and money maintaining redundant data. In addition there is a lack of core data sets which limits the options available to the customer.

Benefit Summary: By implementing a consistent geospatial information management strategy for service centers there will be no duplicate data to collect and maintain, which will simplify the process (i.e., number of times forms are exchanged) and reduce the cost. The management of essential data sets will enable USDA to provide customers with data for their area of operation and as a result the customer will receive more timely service and have access to a broader range of information.

Recommendation Steps (*Responsible Party*):

For establishment of essential data:

1. Reach concurrence on list of essential geospatial information for service centers. This information will follow national standards and be present in each service center. (*Geospatial team in conjunction with agency experts, Data Team, and agency management. {Consult previous GIS Pilot service centers}*)
2. Develop plan for creation or procurement of each geospatial category (essential theme) for pilot service centers including quality control and acceptance of each theme [implementation plan]. (*Geospatial team in conjunction with agency experts, contractors and SCIT*)
3. Determine the strategy for maintaining each data set and theme. This strategy should address:
 - Providing data for national distribution of service centers (digital ortho-imagery, land units, soils).
 - Providing national standards for selected data collected at service centers.
 - Providing flexibility for locally important data.
 - Ensuring the quality of service center geographic information by establishing metadata standards and policies compatible with Federal Geographic Data Committee requirements for Geospatial data.
 - Providing data format and transformation conversions between service centers.
 - (*Interagency team*)
4. Create or procure each theme for pilot service centers and perform quality control measures on essential themes. (*Geospatial team, agency management, SCIT, and contractors*)
5. Formally accept essential themes for pilot service centers. (*Quality control team*)

6. Provide essential themes to pilot service centers at the same time as hardware and software are installed. (*Contractor staff*)
7. Analyze results of process, modify implementation plan and obtain approval for nationwide implementation plan. (*Geospatial team in conjunction with agency experts, SCIT, and agency management*)
8. Begin nationwide development/procurement of essential themes. (*Agency management, SCIT, and contractors*)

Associated Risks of Implementation:

- Without consensus, data sharing will not be possible. Without essential geospatial data, automated geospatial systems will not work for all agencies.
- Failure to timely install essential themes in pilot service centers will cause pilot service center tests of most applications to fail as necessary data to use application will not be available. This will hold up cost/benefit analysis.
- Failure to timely install essential themes in pilot service centers will cause service center personnel to spend a year or more establishing essential themes which will discourage personnel and increase the pay back schedule.
- Failure to establish list of essential themes will impede the creation and installation of essential themes in pilot service centers.
- Failure to obtain agency input and approval for essential themes could reduce the viability of test results for that agency.
- Failure to establish national standards and policy on themes where consistency is critical will result in service centers wasting time and frustration over reworking existing data to meet a newly established national standard.

Customer and Business Benefits:

- Cost of efficiency for full data sharing.
- No duplicate data creation and collection, and reduced number of times forms are exchanged.
- Consistency of geospatial information for the customer.
- Support of One-stop shopping for customer.
- Availability of essential themes in pilot service centers allows service centers to begin servicing customers when new hardware and software is installed.
- Standard or essential data sets in service centers will enable commercial vendors offering USDA customers software and/or services based on standard data that will be accessible by the customer.
- Standards for essential data will enable customers to provide USDA with data for their area of operation. For example, customers may bring land unit boundaries they digitized with their own GPS unit.
- The customer will receive service in a more timely fashion.
- The customer will have a broader range of information available by which to base his/her decisions involving program participant or resource management/implementation.

- Will provide for the privacy of individual customer information.

Programs Impacted:

All programs are supported by this recommendation with the possible exceptions of:

- Dairy Refund Payment Program
- Dairy Indemnity Payment Program
- Commodity Warehouse Activities
- Snow Survey and Water Supply Forecasts
- Housing Repair - 504
- Home Improvement and Repair Grants and Loans
- Rental Assistance
- Community Facilities Loans and Loan Guarantees
- Business and Industry Guaranteed Loans
- Business and Industry Direct Loan Program
- Intermediary Relending Program Loans
- Rural Business Enterprise Grants
- Rural Business Opportunity Grants
- Rural Economic Development Loans and Grants
- Rural Cooperative Development Grant
- Cooperative Services

Business Processes Impacted:

- A1.1.1.3 Pull Maps and Review (with Producer)
- A1.1.1.4 Redefine Land Boundaries
- A1.1.1.7 Update Aerial Photographs
- A1.1.1.9.3 Add/Change/Delete Land unit Data
- A1.2.1.2.3 Interpret Imagery
- A1.2.1.3.2 Determine Area
- A1.2.3.2 Change Land Area
- A1.2.3.4 Change Unit Information
- A1.2.4.1 Determine Flight Lines
- A1.2.4.2 Number New Maps
- A1.2.4.3 Run Farm/Tract Identification Query
- A1.2.4.4 Transfer Information
- A1.2.4.6 Photocopy All Maps
- A1.3 Delete Land Units (Farm/Tract)
- A2.1.2.1 Determine Area
- A2.1.2.2 Determine Cropping History
- A2.1.2.3.1 Determine Land Eligibility
- A2.1.2.3.2 Determine Bid Cap
- A2.1.4.1 Complete Onsite Inspection/Inventory

- A2.1.4.3 Develop Schedule of Application
- A2.1.4.4 Review CPO with Producer/Approval
- A2.1.5.4 Perform On-site Inspection
- A2.1.6.1 Perform Status Review
- A3.1.4 Record Deed in the County Land Records
- A3.1.5 Monitor Easement Compliance
- A3.2.2 Develop Management Plan and Contract Terms
- A3.2.5 Monitor Contract Compliance
- A7.1.1.2 Explain HEL Question on AD-1026
- A7.1.1.3 Prepare Aerial Photography and AD-1026 for Referral
- A7.1.2.1 Review Soils/Conduct USLE Calculations
- A7.1.2.2 Update Official Aerial Photography
- A7.1.3.1 Determine Customers Needs
- A7.1.3.1 Determine Customers Needs
- A7.1.3.2 Provide Alternatives
- A7.1.5.4.1 Conduct Land Unit Visit
- A7.2.1.2 Explain Wetland Questions on AD-1026
- A7.2.1.3 Prepare Aerial Photography and AD-1026 for Referral
- A7.2.2 Decide if a Wetland Determination is Needed
- A7.2.5 Delineate Wetland Location on the Official Photography
- A7.2.7 Restore/Mitigate Wetland

Where Recommendation Should Be Carried Out:

- Pilot service centers.
- The installation of essential themes, integration between themes, and basic management tools used to maintain essential data should be tested before they go to pilot service centers.

Implementation Period:

- Acquiring all essential data for every service center in the United States to be completed by 2003.
- Acquiring all framework data for every service center in the United States may not be completed until after 2003.
- Finished by 2002 or 2003.

Performance Measures:

- Reduce maintenance costs by percentage
- Percentage of “essential” geospatial information that is maintained in a single location

Tactical Objective: Provide basic core USDA data (Digital Soils, Land unit Boundaries) and provide a framework to collect other base cartographic data (e.g., wetland boundaries, administrative boundaries, streams, roads, utilities) for all service centers in coordination with digital ortho-imagery by 2002.

Success Statements:

- Land unit information is consistent among service center agencies and conservation partners.
- Essential cartographic themes are provided and updated to service centers as a ready to use package.
- Soil data is available and meets applicable standards.
- Essential data themes are identified, completed, and meet agreed to standards.

Implementation Strategies:

1. Establish common land unit definition and delineation standard for use by all service center agencies.
2. Fund the digitizing of land units for all service center locations.
3. Establish policy for geospatial data creation in all USDA service centers.
4. Determine essential data sets and appropriate scale, projection, datum and format.
5. Establish or adopt standards for delineation of core data themes (e.g., easements, wetlands, ownership, and others).
6. Establish best data distribution methodology for service center use (e.g., local/regional servers).
7. Format and distribute digital ortho-imagery data for use in service centers and access by the public.
8. Format and distribute base cartographic data for use in service centers.
9. Develop metadata to comply with Federal Geographic Data Committee (FGDC) standards.
10. Complete soil digitizing for all service center locations.
11. Work with USGS to adjust base cartographic data to fit digital ortho-imagery.
12. Provide data format and transformation services for service centers at a state/national level.
13. Complete digitizing for land units for all service centers.
14. Establish procedures and centers for the conversion of data layers to the same UTM projection that is used in the service center. These data layers will then be stored in a common database so that they can be shared by others.

Inhibitors:

- Lack of budget resources.

- Wide variety of data quality and formats of available data sets. Some data sets may not be worth converting to UTM.
- Long time frames for developing data themes (e.g. land units).
- Lack of appropriate training.
- Lack of experience at service center in working with geospatial technology and data.
- Multiple agencies without established joint decision making processes.
- Need additional analysis on what data can be made public.

Enablers:

- Federal Geographic Data Committee (FGDC) is increasing cooperation among federal agencies for using, acquiring, and creating geospatial data.
- USDA agencies are increasingly agreeing on core data themes.
- Increasing availability of contractors to create data.
- Increasing coverage of desired geospatial data by other agencies.
- FGDC framework is increasing funding priorities for core data.
- Open GIS industry standards are emerging.
- Precision agriculture is increasing the need and availability of geospatial data.

Assumptions:

- Assume necessary budget will be allocated for completion of the recommendation.
- Land units and other USDA essential data will be created and installed when hardware/software is placed in sites.
- Land unit boundary themes for the nation will be created before sites begin working in a GIS environment.
- Appropriate training will be provided.

Stakeholders:

- NRCS is the lead for creating soil boundaries.
- service center Agencies - FSA is the lead agency for initially creating land unit boundaries.
- All service center agencies will participate in maintaining land unit boundaries.
- State and Local Government agencies may provide some essential data elements and may also use some of USDA's essential data.
- Customers will benefit from USDA essential data.
- Service center agencies may contract with vendors to create or furnish essential data themes.

RECOMMENDATION 5: Increase information accessibility by establishing policy and standards for information exchange with partners and customers.

Problem Statement: Currently inconsistent program rules have led to inconsistent and inaccurate information which is passed on to the customer. The program delivery process is complicated and time intensive due to inconsistent policy. Customers currently experience delays when trying to obtain access to geospatial information and about their status.

Benefit Summary: By increasing information accessibility and establishing policy and standards for information exchange there will be a consistency in program rules and regulations regarding information, therefore the information provided to the customer will be consistent and accurate. By improving agency to agency communication, it will resolve conflicting data between agencies, and as a result the customer will receive accurate, consistent and timely data. There will be a reduction in program delivery process time as a result of clear and consistent policy. Customers will be able to access geospatial data on-line thus eliminating the delays in obtaining geospatial and status information.

Recommendation Steps (*Responsible Party*):

1. An analysis will need to be developed to facilitate in the understanding of what policy needs to be established and who it will pertain to. (*A National Office task force group comprised of all agencies.*)
2. An Ad hoc group will need to discuss alternatives. (*A National Office management and program member from each agency*)
3. Management will have to review the alternatives and select from the best policy to adopt. (NOTE: An assumption is made that there will not be any need for Congressional review or approval at this stage.) (Since the ramifications are department wide, the ultimate policy decision should rest with the Secretary.)
4. USDA wide policy will have to then be written and published. (*Writing of the policy will then need to be a shared venture between all agencies. Probably those involved in number 2 above.*)
5. Communication and implementation of new policy to all agencies involved. (*Communication to the service centers will rest with the individual agencies*)

It has been suggested by the BPR core team that they should constitute the National Office Task Force.

Issues involved needing policy clarification include: privacy on what data, security, will service centers accept data from customers, will service centers hold data given to us by customers that may have limited use for USDA programs.

Logistical issues include - how will customers get/give data from/to service centers, CD?, WWW?, diskettes? etc. What datum, projections, and formats will service centers give to the public?, accept from the public? Will USDA charge handling fees for data exchange? if so, how much? How will the public pay? - credit card acceptance?

Associated Risks of Implementation:

- There could be a lack of consensus among agencies regarding a policy for what information and to who it will be exchanged.
- Policy may result in violation of individual privacy rights through information exchange without their express consent.
- If we fail to exchange data with customers, we will have failed to meet a critical success factor for the service center.

Customer and Business Benefits:

- USDA will be able to reduce financial and human resources through information sharing.
- Customers will be able to gather and process information that they trust will be accurate.
- There will be a consistency in program rules and regulations regarding information, and answers to customers regarding information will be consistent.
- Information exchange will provide customers with an immediate status so they will be aware of what steps have been accomplished to date and what remains to be completed.
- Program delivery processing time will be reduced due to the instant access to information from sister agencies.
- Staff members will be able to obtain more customer information without referrals to other agencies, promoting one-stop shopping for customers.
- Customers want access to USDA data. They are frustrated at the inability to tap into our vast data stores. They want digital ortho-imagery, soils, and wetlands data. They want the land unit boundaries and resource inventory information we collect about their land. They want access to data because more and more customers are becoming sophisticated in GIS technologies for their own management needs.
- Service centers could accept data from customers.
- Directly impacts the customer by allowing timely needs, personal flexibility, and options directly affecting the individuals.
- Security feature of data implementation will protect data consistency and integrity.
- Automation will assist available staff to deliver specific customer needs, especially during staff reductions.
- Interested parties are trained within 6 months of full implementation of hardware/software.

- A wider range of services will be available to customers which were previously not available.

Programs Impacted:

- All programs should be impacted by information exchange. (i.e., CRP, Wetland, Lending, etc.)

Business Processes Impacted:

- A1.1.1.1 Fill Out Reconstitution Request Form
- A1.1.1.2 Conduct Tabular Research
- A1.1.1.5 Perform Reconstitution in the System
- A1.1.1.8 Notify Customers/Agencies that Reconstitution is Complete
- A1.1.1.9.1 Move or Delete Conservation Plan Data
- A1.1.1.9.2 Transfer Tract Information
- A1.1.1.9.3 Add/Change/Delete Land Unit Data
- A1.1.16 Update Reconstitution in the System
- A1.2.1.1.1 Check Internal Records
- A1.2.1.1.2 Check External Records
- A1.2.1.2.2 Visit Farm
- A1.2.1.3.3 Process Land Units
- A1.2.2.1 Accumulate Records for Land
- A1.2.2.3 Transfer to New Administrative Area
- A1.2.3.1 Delete Non Agricultural Land
- A1.2.3.3 Change Land Category
- A1.2.4.5 Enter Information into Computer
- A3.1.1 Determine Important Resource
- A3.1.2.2 Prepare Management Plan or Other Restrictions
- A3.1.3 Prepare Easement Language for Deed
- A3.1.3 Prepare Easement Language for Deed
- A3.2.1 Determine Program Eligibility
- A3.2.3 Present Offer to Borrower
- A3.2.4.2 Incorporate Contract Terms
- A3.3.1 Make Preliminary Transferability Determination
- A3.3.3 Formulate Decision
- A3.3.4 Implement Decision

System Functional Requirements:

- Policy establishment will lay the foundation ground rules for proper USDA use of GIS technology. Functions in the service center that are enhanced:
 1. Information sharing should streamline the processing of any service center activity.

2. Data gathering and analysis time will be reduced exponentially.
3. Bulky map overlays and paper documents will no longer need to be stored.
4. Management of the system should be easier than the current method.

Information Needs:

- Since all information systems will be linked, 100% of data will be required.

Where Recommendation Should Be Carried Out:

- Testing should not be required to establish the policy. Testing should be completed in conjunction with the piloting of another activity in service centers and policy established as a result of the pilot. However, a test policy must first be developed to set ground rules for the pilot service centers. This will be a starting point for the project.

Anticipated Investment Cost Areas:

- Although specific amounts of investment costs are unknown, process changes will minimize resources.

Implementation Period:

- Testing should be done as a minimum for one calendar or fiscal year, and may go on for several, with a three to six month review period to evaluate results before policy is established.
- Complete implementation should be completed within a two year period from approval. Again, pilot for 1 year or more, policy establishment and publication 6 more months and 100% implementation within the next 6 months.

Implementation Characteristics:

- The IT requirements will be established by another activity. However, whatever is decided should correlate with the policy established.
- The IT requirement for this activity is a CD writer (or DVD writer?) in each pilot service center. - roughly \$500-700 in equipment costs.
- All of the time necessary to implement policy will be non-IT, although it will be tied to IT terminology and procedures. Total time to implement should be around 6 months to 1 year.

Performance Measures:

- Number of customers exchanging information with service centers
- Number of partner exchanging information with service centers

- Percentage of customers with access to geospatial information
- Percentage of partners with access to geospatial information

Tactical Objective: Enable the exchange of geospatial data with partners and customers by 2002.

Success Statements:

- Implementation of hardware/software platform to enable seamless data exchange between interested or participating groups.
- Establish exchange standards for geospatial data.
- Appropriate security is in place for data and systems.

Implementation Strategies:

1. Identify data formats and determine standard formats to be utilized.
2. Convert nonstandard formats into standard data formats.
3. Determine the types of information that is available for public access and develop security restriction accordingly.
4. Develop public viewer for specific data sets.
5. Identify the types of data exchange mechanisms (e.g. Web Browser, ftp site, CD, tapes) that will be needed for customers and partnerships.
6. Safety features to protect all data.
7. Develop metadata to comply with Federal Geographic Data Committee (FGDC)
8. standards.
9. Establish policy for the exchange of external data.
10. Determine the policy related to the charge for data.

Inhibitors:

- Systems and/or software not compatible.
- Failure to provide a common data format.
- Failure to provide usable public viewer.
- Failure to timely define information available to the public.
- Lack of data security.
- Failure to agree on/implement policy.

Enablers:

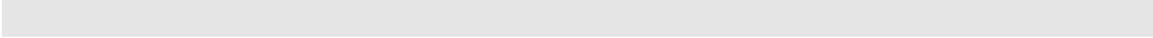
- Technology becoming available allows increased accessibility.
- Efficient network (fast, flexible, easily accessible).

Assumptions:

- Necessary funding will be allocated to meet recommendation.

- Timely consensus on data and standard format.
- Customer requirements are identified.
- Training needs of customers are well defined and provided for.
- Security of the system is well established.

Stakeholders:

- Customers. (e.g. farmers, public)
 - Federal, State and Local Governments.
- 

RECOMMENDATION 6: Provide the capability for service centers to access, analyze, update, share, and store geospatial information.

Problem Statement: Currently the geospatial data provided to the customer is at times inaccurate, inconsistent, non-standard and lacks detail. Work processes are delayed due to manual service center steps as well as customers having to make multiple trips to a service center to deliver and obtain geospatial information.

Benefit Summary: Customer benefits associated with implementing this recommendation include:

- detailed, accurate, consistent and standardized information
- reduced paper work and manual processing through utilization of technology
- reduce the number of customer trips to the office due to availability of remote access (i.e., “one stop shopping”).

Recommendation Steps (*Responsible Party*):

1. Identify system requirements to support business operations as defined within this BPR (e.g., display, digitize, edit, print, analyze, measure). (*Joint procurement effort lead by the Common Computing Environment Team of the service center agencies*)
2. Test hardware/software environment
3. Agree on the common computing environment
4. Procure agreed on hardware and software (*Agency's contracting divisions*)
5. Install hardware and software at pilot service centers for testing
6. Install hardware and software at service centers
7. Phase out legacy systems

Associated Risks of Implementation:

- Data purchased (digital ortho-imagery) cannot be used without the hardware and software platform.
- Without the process, USDA will not be able to supply its customer base with a quality, updated, standardized product.
- Limited BPR performed will not supply the full functionality (system requirements) insights to be able to acquire a product that meets our TOTAL need.

Customer and Business Benefits:

- More detailed, accurate, consistent and standardized information data availability for customers throughout the service centers.
- More efficient service to the service center customers.

- Reduced paperwork and duplication of effort in the service centers by utilizing electronic capabilities and technology.
- Reduced number of customer trips to the office by implementing remote access capabilities.
- Customers will receive service in a more timely manner as a result of improving technology and access to the customers information.
- Customers will have electronic access to program information, regulations, resource interpretations, etc.
- Customers will be able to provide data to service centers (e.g., spreadsheets, documents, etc.).

Programs Impacted:

- This recommendation impacts all or nearly all USDA programs.

Business Processes Impacted:

- A1.1.1.3 Pull Maps and Review (with Producer)
- A1.1.1.4 Redefine Land Boundaries
- A1.1.1.7 Update Aerial Photographs
- A1.1.1.9.3 Add/Change/Delete Land unit Data
- A1.2.1.2.3 Interpret Imagery
- A1.2.1.3.1 Draw Boundaries
- A1.2.1.3.2 Determine Area
- A1.2.3.2 Change Land Area
- A1.2.3.4 Change Unit Information
- A1.2.4.1 Determine Flight Lines
- A1.2.4.2 Number New Maps
- A1.2.4.3 Run Farm/Tract Identification Query
- A1.2.4.4 Transfer Information
- A1.2.4.6 Photocopy All Maps
- A1.3 Delete Land Units (Farm/Tract)
- A2.1.2.1 Determine Area
- A2.1.2.2 Determine Cropping History
- A2.1.2.3.1 Determine Land Eligibility
- A2.1.2.3.2 Determine Bid Cap
- A2.1.4.1 Complete Onsite Inspection/Inventory
- A2.1.4.3 Develop Schedule of Application
- A2.1.4.4 Review CPO with Producer/Approval
- A2.1.5.4 Perform On-site Inspection
- A2.1.6.1 Perform Status Review
- A3.1.4 Record Deed in the County Land Records
- A3.1.5 Monitor Easement Compliance
- A3.2.2 Develop Management Plan and Contract Terms
- A3.2.5 Monitor Contract Compliance

- A7.1.1.2 Explain HEL Question on AD-1026
- A7.1.1.3 Prepare Aerial Photography and AD-1026 for Referral
- A7.1.2.1 Review Soils/Conduct USLE Calculations
- A7.1.2.2 Update Official Aerial Photography
- A7.1.3.1 Determine Customers Needs
- A7.1.3.1 Determine Customers Needs
- A7.1.3.2 Provide Alternatives
- A7.1.5.4.1 Conduct Land Unit Visit
- A7.2.1.2 Explain Wetland Questions on AD-1026
- A7.2.1.3 Prepare Aerial Photography and AD-1026 for Referral
- A7.2.2 Decide if a Wetland Determination is Needed
- A7.2.5 Delineate Wetland Location on the Official Photography
- A7.2.7 Restore/Mitigate Wetland

Information Needs:

- Location information (base map)
- Theme overlays (i.e., soils, roads, CRP areas)

Where Recommendation Should Be Carried Out:

- A possible solution should be selected and used within pilot service centers (5-8) under actual working conditions. Evaluation testing of multiple solutions should occur in hardware test labs. Finally, implement in all service centers.

Anticipated Investment Cost Areas:

- Equipment
- Software
- Networking
- Training
- Data purchase (digital ortho-imagery)
- Data input (digitization)
- Process change (implementation, legacy systems)

Note: Software and hardware per workstation are estimated to be \$5,000 - 4 per pilot service center (does not include portable computers).

Implementation Period:

- The implementation period begins after the CCE has been identified and sources of funding have been secured.
- Implementation should begin in FY99 and end by FY02.

Testing Period:

- Pilot service center validation of business process changes will be an ongoing activity. Initial tests prior to implementation will take around 2 years. Initial results could be obtained from pilot service centers within 3 months.
- Test labs (Fort Collins and Washington, DC) validation of potential hardware/software solutions will take 6 months - 1 year.
- Test labs and pilots could begin by October 1997.

Implementation Characteristics:

- Software requirements at the user and developer level will need to be identified.
- A hardware architecture and user hardware specifications (monitor sizes, disability access, performance standards, etc.) must be identified.
- This will be a large effort.
- Training will be required for a new hardware and software environment, and for use of data.

Performance Measures:

- Reduce number of customer visits to the service center by 33%
- 100% of service centers with compatible equipment by 2002

Tactical Objective*: Provide hardware and software to all service centers to create, view, analyze, print, and edit geospatial data consistently within all service centers in coordination with the delivery of digital ortho-imagery and cartographic data completed by 2002.

**This tactical objective also supports Recommendation 5 - "Develop and implement standards to create and maintain land units that enable sharing data between service center agencies and customers."*

Success Statements:

- Service center personnel going to remote locations have appropriate technology with suitable hardware to complete their tasks efficiently.
- Technology is updated on a regular cycle.
- Technology is useful for every service center employee.
- Software systems are flexible, easy to use, and easily interface with customer systems.
- Response time for computing systems is acceptable to users.
- All service center agencies use the same commercial software packages.
- Access to data is quick and efficient.
- Appropriate security is in place for data and systems.

- Printers of adequate speed, size, resolution, and color are available (e.g., 600 dpi, color, 8.5x11 inch, 8 ppm).
- Appropriate media exists for exchanging information with partners and customers (e.g., CD writer).

Implementation Strategies:

1. Identify system requirements (e.g., system performance/speed, stability, mean time between failures, etc.).
2. Test hardware and software environment.
3. Agree on the common computing environment.
4. Procure agreed on hardware and software.
5. Install hardware and software.
6. Phase out legacy systems.

Inhibitors:

- Lack of necessary budget resources.
- Legacy systems may require maintaining two systems.
- Agreement on common computing environment (CCE).
- Procurement process does not keep up with technology.
- Lack of training.
- Volume of data for large service centers.

Enablers:

- Rapid advance of information technology.
- Decreasing costs of computing and storage resources.
- Increasing data warehousing capabilities.
- Increasing high volume media capabilities (e.g., dvd, cd).
- Increasing delivery capabilities via the Internet and World Wide Web.
- Customers are increasingly aware and want geospatial information.

Assumptions:

- Assume necessary budget and training will be allocated for completion of the recommendation.
- Assume that hardware and software selected will meet identified geospatial processing needs.

Stakeholders:

- Service Center Agencies - all must agree to the common computing environment, installation procedures, training, system administration, maintenance, and technology refresh cycles.
- Customers will benefit from faster service, greater flexibility, consistent data, and a mobile computing environment.
- State and Local partners will benefit by sharing equipment and data.

RECOMMENDATION 7: Provide accessibility to information by service center employees while away from the office at customers' locations.

Problem Statement: In many cases service center staff must manually collect information at a customer location and then take that information back to the service center for processing. This results in a delay in providing options to the customer. It also results in additional trips to the service center for the customer.

Benefit Summary: By providing service center staff with accessible geospatial information, while away from the office, customers will receive more accurate information in a timely manner.

Recommendation Steps (*Responsible Party*):

1. Identify what applications will be enabled at remote locations. (*BPR team*)
2. Identify data server needs to allow for data replication and reconciliation. Customer information must be "checked out", used at remote locations, and then "checked in" when back at the office. (*Data team*)
3. Identify the data structure and model that will facilitate this capability. (*Data team*)
4. *Communication Strategy needs to be developed.*
5. Identify hardware necessary for successful implementation. (i.e. portable computers, personal digital assistants - PDA's, portable printers, cellular phones, Global Positioning Systems - GPS, digital cameras, etc.) (*Common Computing Environment (CCE) team*)
6. Identify software necessary for successful implementation. (*Common Computing Environment (CCE) team*)

The BPR team should be responsible for all steps in the pilot testing phase.

Associated Risks of Implementation:

- Data Security.
- If implemented - data corruption or mismatch.
- If not implemented - The BPR team will have failed to accommodate the business model of several agencies.

Customer and Business Benefits:

- Customers will have to make fewer trips to service centers, and will receive information and products at their location in a more timely fashion. (INCREASED DATA ACCESSIBILITY)
- USDA will benefit by empowering employees at the point of information capture or delivery. Service center employees will no longer have to collect information

on paper and then return to the office and enter it into a computer. Likewise, employees will not have to return to the service center to make a change requested by a customer while at the customer's site. (INCREASED IN TIMELY ACCESS OF DATA)

- Data accuracy will increase due to reduced amounts of manual data entry and producer availability to ensure on-the-spot data inputs. (DATA ACCURACY)
- This objective will impact the customer by allowing service center personnel at a remote location to access customer information and serve customer while at this remote location.
- This objective will impact the customer and our partners by allowing them to self-serve by remotely accessing information at their convenience.

Programs Impacted:

Conservation Reserve Program (CRP)
Emergency Conservation Program
Soil Surveys
Snow Surveys
Plant Material Center
Grazing Lands Conservation Initiative
Water Resources Assistance
Watershed Operations
Emergency Watershed Protection Program
Forestry Incentive Program
Resource Conservation and Development Program
Water Bank Program
Wetlands Reserve Program
Environmental Quality Incentives Program (EQIP)
Highly Erodible Land (HEL) Conservation
Wetland Conservation
Wildlife Habitat Incentives Program (WHIP)
Outreach and Assistance for Socially Disadvantaged Farmers and Ranchers

Business Processes Impacted:

A1.1.5.7.3.2 Determine Multi-county Status
A2.1.1.1 Publicize program
A2.1.2.4.3 Verify Crop Insurance Status
A2.1.3.3.1 Query Bid Data and Submit to Headquarters
A2.1.3.3.2 Receive Analysis Back from Headquarters
A2.1.3.4.2 Provide Notice of Acceptance/Rejection
A2.1.5.7.2 Complete Acreage Certification
A3.1.2.1 Prepare Conservation Easement Restrictions
A3.2.4.1 Prepare Boundary Description
A7.1.1.1 Print and Evaluate AD-1026A

- A7.1.2.3 Update Automated Systems
- A7.1.2.4 Notify Producer and FSA of HEL Determination
- A7.1.3.3 Record Customers' Decisions
- A7.1.5.1 Provide Technical Assistance (Good Faith)
- A7.1.5.2 Reschedule Additional Status Review
- A7.1.5.3 Notify Producer of Compliance or Noncompliance
- A7.1.5.4.3 Finalize Technical Determination
- A7.1.5.4.5 Provide Case Information
- A7.2.1.1 Print and Evaluate AD-1026A
- A7.2.3 Assist Producer in Filling out NRCS CPS-38
- A7.2.4 Complete Wetland Delineation/Determination
- A7.2.6 Submit CPA-026 Form to FSA
- A7.2.9 Notify Producer and FSA

Where Recommendation Should be Carried Out:

- Beginning in the SCIT pilot service centers, the recommendation should be tested and implemented at all service center.

Anticipated Investment Cost Areas:

- This list is exclusive of server and/or office equipment:
 - ◇ Hardware and software for portable computers - \$7,000 - 4 per pilot service center.
 - ◇ PDA - \$1000 - 1 per pilot service center.
 - ◇ printer - \$300 - 2 per pilot service center.
 - ◇ GPS - \$500 - 3 per pilot service center.
 - ◇ Cell Phone - \$200 - 2 per pilot service center.
 - ◇ Digital camera - \$500 - 2 per pilot service center.
 - ◇ Monitors for portable computers - \$700 - 4 per pilot service center.

Implementation Period:

- Probably 1-2 years, however, initial results can be obtained quickly, i.e. 3 months. Testing in pilot locations could probably begin by October, 1997. The implementation period should begin in FY 99 and finish by FY02.

Performance Measures:

- Reduce the number required customer visits
- Reduce average response time
- Reduce service center paperwork
- Percentage of employees equipped with mobile computing capability
- Number of "hits" on agency data from remote locations

Tactical Objective: Provide access and use of geospatial information to conduct business at remote locations for all service centers by 2002.

Success Statements:

- Geospatial data is available in a timely manner between all offices and remote locations.
- Data may be updated and/or viewed by use of various technological and/or electronic devices.
- Customers can access program information via Internet in customized formats (for security purposes).

Implementation Strategies:

1. Evaluate service centers for use of technological remote access needs.
2. Evaluate technology available to best meet needs of the service center (GPS, Laptop, Cell Phones, etc.).
3. Review long term technology investment strategies for each Agency.
4. Acquisition of remote hardware/software for remote access purposes (e.g. replication software, infrared data transfer).
5. Test and debugging by utilizing typical service center applications.
6. Installation of remote hardware/software for remote access purposes in the applicable service center.

Inhibitors:

- Potential system slowdown that results when external customers access system and conflict with internal use.
- Lack of timely funding.
- Failure to agree on technology for remote access.
- Failure to adequately test and debug typical service center applications.
- Failure to adequately train personnel in use of remote techniques.

Enablers:

- Technology becoming available allows increased accessibility.
- Increasing delivery capabilities via the Internet and World Wide Web.
- Customers becoming more receptive to use of remote processing.

Assumptions:

- Adequate funding will be available when needed.
- Agreement on required data, including necessary security.

- There is a demand for remote access by customers and partners.
- Selected hardware and software are adequate to meet projected remote access needs.

Stakeholders:

- Agencies sharing the service center (the composition of service center is not consistent and may or may not include e.g. the Forest Service, or Extension Service)
- Other Federal, State, and Local Agencies
- Congress
- Customer (e.g. Farmers, Realtors, Public) and partners

RECOMMENDATION 8: Validate improvements of business processes resulting from service center access to Geo-referenced data in a pilot service center environment.

Problem Statement: Due to manual processing (i.e. redundant processes, etc.) and a decrease in staffing, the service centers are unable to provide the customer with adequate program benefits in an acceptable amount of time.

Benefit Summary: By validating business process improvements in a pilot site environment USDA can ensure that the customer will receive improved response time and increased benefits (i.e., specialized reports, analysis, plans, etc.) in the actual service center environment. The customer can expect increased accuracy and consistency among the geospatial data. Agency employees can spend more time on “individual attention.”

Recommendation Steps (*Responsible Party*):

1. Rank potential service centers against predetermined criteria and make pilot service center selections. (*Selected members from each BPR team representative of ALL partnering agencies will rank and National FAC will make the selection*)
2. Determine hardware and software needs of pilot service centers necessary to complete test. (*IRM representatives from all partner agencies in conjunction with CCE*)
3. Notify selected pilot service centers. (*Secretary of Agriculture*)
4. Establish "AS IS" baseline in pilot service centers. (*Personnel designated by SCIT and CCE*)
5. Supply required hardware, software (modified if needed), and essential data sets/themes of digital ortho-imagery, DEM, digital soils, land units, wetlands, and tracts. (*Designated support personnel*)
6. Provide all necessary training, performance measurement factors, including to the pilot service center personnel. (*SCIT*)
7. Evaluate the test, validate the results, and report findings to SCIT/CCE. (*Geospatial BPR team in conjunction with SCIT and CCE*)

Associated Risks of Implementation:

- If pilot service centers were not representative, results of test passed to implementation team will be skewed, and national implementation could be adversely affected.
- If security issues are not resolved between agencies before pilot service center implementation, data that should be secured could either be corrupted or undergo unauthorized access.
- If the volume of work associated with being a pilot service center is not supported by adequate personnel considerations, project tests will be flawed.
- If customers are not encouraged to provide input on results of business process changes in pilot service centers, analysis of test results will be incomplete.

Customer and Business Benefits:

- USDA will prove validity of estimated improvements in service and reductions in costs in the business case.
- USDA will have an improved understanding of elements required for nationwide implementation.
- Customers will have an opportunity to react to changes in business processes and provide input for further changes.
- Customers in pilot service centers will receive faster service and benefits for which USDA is unable to provide in other service centers.
- Customers will receive more accurate data from service center.
- Increased need for system within agencies due to decrease in staffing.
- Customers will benefit from the implementation of the system through improved response times to requests for services.
- Customers will benefit from more customized products such as specialized reports, analysis and plans.
- Agencies will be able to offer a more consistent product in the form of reports, analysis and plans.
- Implementation of the system will provide customers with easier access to personnel and data.
- Agency employees can spend more time on "individual attention."
- Less repetitive processes for customers.
- Improved relationships between agencies, as well as between agencies and the customers they serve.

Programs Impacted:

- This recommendation impacts all or nearly all USDA programs.

Business Processes Impacted:

- Land units, acreage determinations, location of areas or places, land use and cover, plus all other processes associated with GIS.

System Functional Requirements:

- Training required will be for four to eight training pilot service centers plus labs in Washington DC and Fort Collins. It will be necessary to train the Washington DC and Ft. Collins personnel, whom in turn will train the county personnel in the pilot service centers. National level personnel (Washington DC and Ft. Collins) must be trained in time to train the county personnel at the pilot service centers. As for quantity this will vary, because we want both big and small offices to test all applications. Customers will perceive consistency between agencies. FSA and NRCS will use the same farm, tract, and unit number.

- Anticipated investments include new hardware and software, measuring tools (GPS units), and training of personnel.

Information Needs:

Where Recommendation Should Be Carried Out:

- Pilot service centers in order to get the actual cost savings from the "AS-IS" to the "TO-BE," and to establish the learning curves needed to establish work measurement formulas.

Anticipated Investment Cost Areas:

- This area will be further addressed by the BPR and costing teams in July.
 - ◇ \$25,000 times the number of workstations in the pilot service centers.
 - ◇ Training costs.

Implementation Period:

- Start the implementation cycle beginning with the fiscal year (Oct 1) to tract costs and time within the budgeting cycle. This may require two fiscal years of data to complete one business cycle, which starts in the middle of one fiscal year and ends in the next year.

Implementation Characteristics:

- Training will involve training key staff personnel at National and State levels to train other personnel. Since this will probably occur in stages, training will be ongoing until all service center personnel are trained.
- Standard minimum data sets could include: digital ortho-imagery, digital soils, digital land unit boundaries, easements, flood plain boundaries, digital elevation models, wetlands, land use, zoning, endangered species, cultural sites, EPA (hazardous waste) sites, etc.
- Obtain National FAC approval for the elements of a standard minimum data sets for pilot service centers by October 1, 1997.

Performance Measures:

- Reduce time required to provide customers with products and services
- Number of process steps eliminated as a result of access to geo-referenced data

Tactical Objective: Provide internal access to geo-referenced minimum data sets in set number of pilot service centers by September 30, 1998.

Success Statements:

- All service center personnel are able to view appropriate Geospatial data from core USDA data sets.
- Service center personnel utilize Geospatial data from core USDA data sets to make decisions.
- Authorized service center personnel edit Geospatial data as necessary from USDA essential data sets.

Implementation Strategies:

It will be necessary to determine the extent of coverage required to pilot. Is it necessary to have full county coverage or can a portion of a county work?

Identify, Define and Resolve:

1. Identify geospatial core data themes. Core is considered the requisite or minimum required data themes necessary to be loaded or present in a system to begin functional operation. [This step is part of Automation Objective] 6-97
2. Define standards, rules, and policy for core Geospatial data sets [themes]. [Also part of Automation Objective] 6-97
3. Identify who will provide service center training, including hard copy and on screen instructional materials, hardware support, software support, troubleshooting, etc. 12-97
4. Insure adequate funding for support is obtained.
5. Resolve security issues and get approval from National FAC. 4-98

Develop and design a plan and schedule of activities for support for each pilot service center: 10-97

1. Provide follow-up to determine adequacy of support.
2. Develop a plan and schedule of activities for training for each pilot service center. 12-97
3. Develop a plan and schedule of activities for activities for procurement and installation of hardware, software, and Geospatial core data sets for each pilot service center. 8-97
4. Develop and implement performance measures including (CRAT) recommendations to determine success of pilot sites using core Geospatial data themes. 6-98
5. Design internal monitoring to track if (CRAT) recommendations and other pilot service center goals are met.

Establish, implement and install pilot sites: 3-98

1. Implement all levels of support prior to installation of systems in pilot sites. 6-98
2. Determine criteria for pilot sites.
3. Select sites based upon these criteria.
4. Assign appropriate tests based upon sites selected procure, modify and install hardware and software.
5. Install security measures for Geospatial core data sets, legacy systems, and other tabular data.
 - Train service center personnel
 - Create support structure for pilot service center
6. Incorporate Civil Rights Action Team (CRAT) recommendations into pilot service center implementation plan.
7. Create, or otherwise obtain, appropriate core Geospatial data sets [themes] , by service centers and linked to legacy systems.
8. Obtain Geospatial core data sets [themes] created outside of service center. [Part of Automation Objective]
9. Implement standards, rules, and policy for core Geospatial data sets [themes] in pilot sites. 9-97

Track and analyze:

1. Track implementation of (CRAT) recommendations and other pilot service center goals. 6-99
2. Analyze results of CRAT and other pilot service center goals. 8-99
3. Provide recommendation to implementation team based on results of pilot service center findings.
4. Conduct outreach implementation strategies.

Inhibitors:

- We will need to determine the extent of coverage required to pilot, as well as determine whether it is necessary to have full county coverage versus only a portion of the county. If an entire county or administrative area coverage is necessary, for core geospatial data sets developed in service center, then implementation will take longer.
- Success of pilot will be affected by the amount of support from all levels of management including funding for adequate personnel. If management support or funding is not available, service center personnel will be unable to devote adequate time to pilot project work.
- The volume of data, both tabular and geospatial, stored on a system may have a negative impact on the response of the system.
- The number of simultaneous users on a system affects the speed and response time of the system.
- External users on a system degrades the speed of the system.
- Budget restraints.

- Turf issues and level of cooperation between agencies.
- Security issues resulting from users outside the system.
- Employees' lack of willingness to accept change.
- Unequal workload priority given by different agency management to this project.

Enablers:

- High levels of support from all agencies.
- Adequate funding.
- State-of-the-art equipment and software that adequately supports the current and future work load.
- A high demand from external customers.
- Positive attitude from the end users (both employees and customers).
- Training and marketing of the recommendation.

Assumptions:

- The pilot sites will be utilized to actively compare various software and hardware platforms rather than as developmental or de-bugging sites.
- Suitable hardware and software, meeting CCE standards will be procured, properly installed and supported in pilot sites.
- Technical requirements and system upgrades will include sufficient storage capabilities.
- Technical requirements are defined to accommodate the maximum potential number of simultaneous local and remote users.
- Hardware and software installation, training, and loading of geospatial core data sets will all occur within a close time frame.
- digital ortho-imagery and geospatial core data sets will pass quality control standards.
- Management will allow employees adequate time to implement and operate the system.
- Congress will continue the project as administrations change.

Stakeholders:

The following agencies will be asked or utilized to complete various data sets:

- NRCS
- FSA
- RD
- USF&WS
- Local Governmental Units
- State Natural Resource Agency
- Pollution Control Agency

- State Historical Preservation Officer
- US Geological Survey
- FEMA (floodplain)
- Corps of Engineers
- National Park Service
- US Forest Service
- Extension Service
- Land Grant Colleges
- Bureau of Land Management
- Bureau of Indian Affairs
- National Agriculture Statistic Service
- Agriculture Research Service
- Federal Crop Insurance

RECOMMENDATION 9: Establish and implement a training program that provides service center pilot sites with the ability to proficiently use GIS and related tools beginning FY98.

Problem Statement: Currently the staff is not always trained in the necessary areas or in a timely manner and as a result the customer does not receive the most beneficial service possible. Customer has a lack of trust and confidence in service center staff.

Benefit Summary: Cross trained and better trained staff will be more knowledgeable and will provide more accurate information and better customer service. Staff will have a more thorough understanding of the information and how it can be applied in particular situations.

Recommendation Steps (*Responsible Party*):

- 1) Name a core multi-agency training team at the national level to oversee training implementation. (*service center Implementation Team*)
- 2) Develop and implement base level training. (*Core Training Team*)
- 3) Develop criteria to determine when sites are ready for more advance training.
- 4) Develop and implement advanced training for pilot sites.

Note: service center Implementation Team is responsible for Departmental oversight and guidance. Core training team will have primary oversight responsibility for development and implementation of pilot service center training. The core team will report to SCIT and cooperate with and maintain open lines of communication with participating Agency management (national, state and local).

Associated Risks of Implementation:

- Use of geospatial technology by service centers will not be successful without a comprehensive training program.
- USDA will not reap full pilot service center benefits of the outlays for expensive hardware/software/digital ortho-imagery procurement without training.
- Time spent developing and implementing the pilot service center training program (including fine-tuning/optimizing) may delay the national roll-out of the technology.
- A potential risk is that adequate resources (i.e. funds, personnel) will not be provided for the training program.
- On-site training must coexist with day-to-day time requirements of the service center employees (serving customers necessitates the frequent interruption and delay of training).

Customer and Business Benefits:

- Training provides service centers with ability to effectively use technology to provide improved service to customers.
- Pilot sites will provide a road map for implementing training at the national level.
- The customer will receive an improved, faster, cheaper service from a better trained service center staff. When the customer receives appropriate and beneficial service, they receive a fair return for their tax dollar.
- Customer has more confidence and trust in a well trained service center staff.
- Information is more readily available to the customer because the service center knows what the customer needs or how to find it.
- The customer is provided with a wider spectrum of opportunities and options. As a result the customer needs and requirements are better met.
- Successful training will reduce the need for intensive support and assistance to the service center.

Programs Impacted:

- Most or all USDA programs will be impacted by the achievement of this recommendation.

Business Processes Impacted:

- A1.1.1.3 Pull Maps and Review (w/Producer)
- A1.1.1.4 Redefine Land Boundaries
- A1.1.1.7 Update Aerial Photographs
- A1.1.1.9.3 Add/Change/Delete Land unit Data
- A1.2.1.2.3 Interpret Imagery
- A1.2.1.3.1 Draw Boundaries
- A1.2.1.3.2 Determine Area
- A1.2.3.2 Change Land Area
- A1.2.3.4 Change Unit Information
- A1.2.4.1 Determine Flight Lines
- A1.2.4.2 Number New Maps
- A1.2.4.3 Run Farm/Tract Identification Query
- A1.2.4.4 Transfer Information
- A1.2.4.6 Photocopy All Maps
- A1.3 Delete Land Units (Farm/Tract)
- A2.1.2.1 Determine Area
- A2.1.2.2 Determine Cropping History
- A2.1.2.3.1 Determine Land Eligibility
- A2.1.2.3.2 Determine Bid Cap
- A2.1.4.1 Complete Onsite Inspection/Inventory
- A2.1.4.3 Develop Schedule of Application
- A2.1.4.4 Review CPO with Producer/Approval

- A2.1.5.4 Perform On-site Inspection
- A2.1.6.1 Perform Status Review
- A3.1.4 Record Deed in the County Land Records
- A3.1.5 Monitor Easement Compliance
- A3.2.2 Develop Management Plan and Contract Terms
- A3.2.5 Monitor Contract Compliance
- A7.1.1.2 Explain HEL Question on AD-1026
- A7.1.1.3 Prepare Aerial Photography and AD-1026 for Referral
- A7.1.2.1 Review Soils/Conduct USLE Calculations
- A7.1.2.2 Update Official Aerial Photography
- A7.1.3.1 Determine Customers Needs
- A7.1.3.1 Determine Customers Needs
- A7.1.3.2 Provide Alternatives
- A7.1.5.4.1 Conduct Land Unit Visit
- A7.2.1.2 Explain Wetland Questions on AD-1026
- A7.2.1.3 Prepare Aerial Photography and AD-1026 for Referral
- A7.2.2 Decide if a Wetland Determination is Needed
- A7.2.5 Delineate Wetland Location on the Official Photography
- A7.2.7 Restore/Mitigate Wetland

Where Recommendation Should Be Carried Out:

- *Joint Development and Integration Centers:* This recommendation can be initially (very short term) carried out in the mock lab depending on the physical makeup of the lab, if there is system capability and live data available. This will be impacted by the number of software/hardware packages that are piloted, the timing of implementations (i.e. staggered vs. all pilot sites at once) and who will give the training (e.g. vendor, in-house, etc.).
- *Pilot service centers:* This recommendation will be primarily carried out in the operational service center. System capability must be in place at time of training. This will be impacted by physical makeup of the pilot service center.
- *Off-site (e.g. at vendor):* Portions of this recommendation can be carried out at a vendor site. However, we must remember that established vendor sites have corrected the system bugs before training has started, and therefore will not have the real world problems that training at the pilot service center may experience.
- Optimum benefits can be realized by having geographically disbursed pilot service centers. While this does not effect training per se, the lessons learned from geographically disbursed pilot service centers will be of more value when national training is implemented.

Anticipated Investment Cost Areas:

- Anticipated costs will be development and implementation of training at pilot service centers. Actual cost of training will have to be determined when the pilot systems are selected.
- Some factors that will be involved:
 - ◊ Is training provided by the vendor when the software is purchased?
 - ◊ If not, will the training be provided by a vendor, in-house resources, or a combination of the two?
 - ◊ Will the training be face-to-face, computer based, or a combination of the two?
 - ◊ Number of pilot service centers and different type of software packages that training needs to be provided for.

Implementation Period:

- Test pilots could begin by October 1997. Pilot service center validation of business process changes will be an on going activity. Initial tests prior to implementation will take around two years. Initial results could be obtained from pilot service centers within 3 months.

Implementation Characteristics:

- Timing of training will be associated with pilot service centers implementation and testing phase.

Performance Measures:

- Increase accuracy of information provided to customers
- Percentage of service center employees trained with basic level proficiency within one month of GIS implementation
- Increase employee use of GIS

Tactical Objective: Build a training framework that provides service centers with the ability to proficiently use, manage, manipulate, and analyze data, and be able to generate reports as well as produce maps from GIS and related tools for service center applications beginning FY98.*

**This tactical objective also supports Recommendation 13 - "Implement a comprehensive geospatial training program to all USDA service centers to provide improved service and benefit to the customers."*

Note: Base training addresses items #1-3. Advanced training addresses item #4 below:

- 1) Load layer
- 2) Digitize

- 3) Quality control
- 4) Analysis**

***Analysis: each agency needs proficiency in their area*

Cross-training: each agency provides for sharing of information

Training in specific areas: need proficiency

Success Statements:

- All service center personnel can do basic level GIS applications.
- Intra-agency use: service center staff will proficiently utilize comprehensive shared data sets through the successful implementation of Geospatial technology.
- Inter-agency user and cross-training: All service center staff are able to recognize and understand producer requests and needs, process as applicable using GIS, and/or refer the producer to the appropriate service center specialist to further process the request.
- Customers recognize and trust proficiency of staff with regard to GIS.
- Employee training exit evaluations indicate that the training was sufficient to successfully execute the functions covered in the training.
- Identify the best type of training (i.e. vendor, in-house, other).
- National training strategy is developed using "lessons learned" from successful pilot service centers.
- Training for the service center is always concurrent with applicable hardware and software.
- System and training is available to the service center at least two to three weeks before having to service customers and administer programs with the new system.

Implementation Strategies:

- 1) Identify multi-agency core team for pilot service centers that will oversee training implementation.
 - Establish and maintain open line of communication both horizontally between agencies and vertically among management levels.
- 2) Develop pilot base level training. (Base level training is how to run software and tools, be able to navigate through menus, and perform basic functions.)
 - Identify service centers.
 - Identify training package. (e.g. vendor-provides, computer-based, etc.)
 - Identify schedule.
 - Identify trainers.
 - Develop exit evaluations with training.
 - Revise training based on exit evaluations for next pilot service centers.
- 3) Develop criteria to determine when the pilot service center is ready for the more

advanced level of training.

- Establish time frames for core themes. (i.e. base layers)
- Core theme digitizing work is complete. (e.g. tract, land units, cover)

4) Develop advanced training for pilot service centers.

- Develop agency specific training that provides for manipulation, analysis, ability to generate reports, produce maps from GIS, and use of related tools (GPS).
- Identify what types of customization is needed and required, then build training modules based on that. Guidance will be found in National policy and standards.
- Develop strategy for inter-service center cross training.
 1. Develop schedule by pilot service center.
 2. Identify trainers.
 3. Develop training module.
 4. Develop exit evaluations with training.
 5. Revise training based on exit evaluations for next pilot service centers.

5) Identify core teams for National Implementation.

Establish and maintain an open line of communication both horizontally between agencies and vertically between management levels.

National Level:

Identify National level multi-Agency oversight group to:

- Provide direction to States on implementation expectations.
- Provide deadlines and schedules for implementations that States have to meet.

State Level:

- Identify and name multi-agency core team. (State/service center level)
- Team will ensure sufficient time and personnel resources are provided to ensure appropriate training.
- Identify and set up resource support networks.
- Review exit evaluations and provide recommendations to training teams.
- Develop (with National policy and recommendations to States) criteria to determine when service center is ready for more advance level of training.
 - ◇ Establish time frames for core themes (i.e., base layers)
 - ◇ Core theme work is complete
- Reports back to National Core Team.

6) Develop a nationally based training strategy.

- Identify and draw upon "lessons learned" from successful pilot service center experiences.
- Prioritize service centers.
- Identify and develop training package.
- Develop schedule.
- Identify trainers.
- Develop exit evaluations with training.
- Revise training based on exit evaluations.

7) Develop advanced training for National implementation:

- Identify and draw upon "lessons learned" from successful advanced training efforts provided to pilot service centers.
- Develop strategy for agency specific training that provides for manipulation, analysis, ability to generate reports, produce maps from GIS, and use of related tools (e.g. GPS):
 1. Develop schedules.
 2. Identify trainers.
 3. Develop and customize training modules. (Identify what types of customization is needed and required, then build training modules based on that. Modules developed for pilot service centers can be used and enhanced for the use in actual service centers.)
 4. Develop exit evaluations.
 5. Revise training based on exit evaluations.
- Develop strategy for inter-service center cross training:
 1. Develop schedule by service center.
 2. Identify trainers.
 3. Develop training module. (modules developed for pilot service centers can be used and enhanced)
 4. Develop exit evaluations with training.
 5. Revise training based on exit evaluations for sharing with other service centers.

Inhibitors:

- Hardware, software, digital ortho-imagery and data are not in place.
- Unrealistic timeframe requirements.
- Insufficient funds and personnel are allocated for training programs.
- Small states may not have sufficient personnel nor resources to successfully build core teams and resource support teams.
- Executive support is not provided for training. To maintain any type of data and system integrity, training MUST be a priority.

- Lack of commitment to training from one or more of the service center Agencies (national, state, or local levels).
- Failure to adhere to rigid data development standards.
- Failure of agencies to reach consensus on standards and policies.
- Training exit evaluation information is not shared or built upon to revise and build better training (lessons aren't learned).

Enablers:

- Automated training tools are available for use by training developers.
- Adequate funding is provided to implement a successful training strategy.
- Realistic timeframes and goals are set by top management.
- Commitment is demonstrated by agency heads at the national, regional, and state levels.
- Commitment is demonstrated by local service center agency heads.
- Service center employees demonstrate commitment and buy-in to the GIS training efforts.
- States are provided with flexibility to develop core groups and training programs that meet their needs. (e.g. small states may consider joining with other states to develop core groups and strategies, small districts can look at training for more than one county at one time, etc.)
- Communication lines remain open in both directions (e.g. top down and bottom up) as well as across agencies.

Assumptions:

- GIS technology will be available.
- Properly trained service center employees will provide better customer service.
- All service center agencies agree equally on the importance of GIS to support the concept of one-stop-shopping.
- Adequate and timely monetary and personnel resources will be available to develop and implement successful GIS training.
- Management at the national, regional and state levels all support and buy-in to the importance of good GIS training.
- Members of core training groups (oversight groups) have the authority and resources to implement successful training.
- Training resources will be allocated as fairly as possible to employees of all service center agencies, and will do so in a non-discriminatory manner.
- Recommendations or criticisms of personnel receiving training are evaluated and considered for future enhancements or improvements to training program.

Stakeholders:

- The local customer served by the service center are the beneficiaries of improved service provided from the trained service center employees.
- service center employees are a primary stakeholder and the direct recipients of the training programs.
- The USDA, as well as the individual agencies, are stakeholders. They are perceived as more effective, efficient, and technically proficient by the constituents and by other local, state, and federal government partners.
- Partnership agencies are stakeholders that will benefit by increased cooperation among other government agencies (State, local and Federal).
- Congress is a stakeholder. The more credible the local offices are, the more credible government is perceived as a whole.

RECOMMENDATION 10: Use geospatial information to more efficiently and accurately identify high priority conservation areas based on environmental indicators and a geospatial watershed database.

Problem Statement: Currently ranking criteria and selection of priority areas are based on inconsistent data resulting in customers not receiving equitable consideration and not fairly distributing tax/program dollars.

Benefit Summary: Consistent ranking and selection will allow tax/program dollars to be spent on the “true” priority areas based on factual geo-referenced data, rather than based on political factors.

Recommendation Steps (*Responsible Party*):

1. Conduct survey of states and counties in identifying applicable criteria for use in regionalizing ranking (information gathering effort). (*National office*)
2. Formulate new regionalized criteria with competition based on local levels instead of on a national level (by state or priority area). (*National level is responsible for providing local area with guidelines for ranking.*)
3. At local (service center) level identify areas of environmental concern utilizing geospatial information (such as 14 digit hydrologic unit boundaries, riparian corridors, land use/cover, soils, crop history, land unit). (*Local level is responsible for the assessment of local concerns, formulating priority areas, and assignment of local ranking criteria (within policy guidelines).*)
4. Submit priority area recommendations to state/national for national program ranking/selection.
5. Select "final" priority areas.
6. Revise handbook procedures to reflect new updated policy.

Note: Local may be area(s) of part of one county, more than one county, such as a watershed/hydrological/ecosystem area.

Associated Risks of Implementation:

- Political influence, cultural bias.
- Adequate data is not available to make selection.
- If core data is not in place everywhere, this process will not provide consistent evaluation and ranking of priority areas (e.g., if one area is selected with criteria 1, 2, 3 and another area is selected with criteria 4, 5, 6 then consistency is lost).
- Connectivity to other service center data sets must be in place for success.

Customer and Business Benefits:

- Faster turn around time for customer in knowing whether respective application meets criteria.
- Reduce time spent on ranking process.
- More reliable data is available to partner agencies for the selection of priority areas based on fact rather than emotion.
- More consistent ranking across county or political boundaries (standardization of ranking criteria).
- Equitable competition for program eligibility within each region.
- More equitable expenditure of tax/program dollars to environmental concerns.
- Reduction of paperwork.
- Will facilitate the establishment of ranking criteria and selection of priority areas which will be consistent. This will allow customers to "compete" for participation on an even playing field.
- Consistent ranking and selection of priority areas will allow tax dollars to be spent on the "true" priority areas based on factual geo-referenced data; rather than selection based on political factors.
- Selection of priority areas based on "fact" derived from geospatial data sets will better address the resource problems of customers. This will help the customer who had the priority problem, i.e., "treat the worst first" and also be a benefit to all customers (i.e., all taxpayers, in addition to the direct recipient) by a better allocation of tax dollars to solve an environmental problem.

Programs Impacted:

- Conservation Reserve Program (CRP)
- Environmental Quality Incentives Program (EQIP)
- Environmental Programs
- Wetland Reserve
- Highly Erodible Land Conservation (HEL)
- Wildlife Habitat Incentives Program (WHIP)

Business Processes Impacted:

A2.1.2.3.3 Determine Environmental Rankings

Additional process area: Set priority areas based on the availability of environmental data sets.

System Functional Requirements:

- Needs to provide read access to basis resource data for decisions.

Where Recommendation Should be Carried Out:

- Nationally implemented immediately.

Anticipated Investment Cost Areas:

- Cost dependent upon other BPR recommendations; i.e., need to have digital ortho-imagery and essential data sets available; as well as a computer environment to handle imagery.

Implementation Period:

- One to two years after data, imagery, and technology are available.

Implementation Characteristics:

- To be further addressed by the BPR team in July 1997.
- Minimal amount of training to utilize if core data is provided.
- Processes and guidelines: National level development of guidelines (GS-11-14) 1 week, Local level development of local criteria (GS 5-12) 1 week.

Performance Measures:

- Increase the number of accurately identified high priority conservation areas
- Percentage of regional areas with defined ranking criteria based on factors for that area

Tactical Objective: Establish national policies which will define the ranking criteria to the most important environmental factors relative to regions.

Success Statements:

- National policy is established which establishes ranking criteria which applies to a specific region and allows local assessment of environmental concerns by which to recommend priority areas.

Implementation Strategies:

1. National level will define regions using geospatial essential data and mandate ranking procedures based only on applicable environmental concerns.
2. Live, on-line, accurate data is made available to regions, thus eliminating the need for national intervention.

Note: National Office will set general guidelines based on resource concerns. Examples of resources are air quality, plant, animal, soil, water, human.

Inhibitors:

- Adequate baseline environmental data may not be available.
- Computing environment will not currently facilitate data assembly.

Enablers:

- Essential data sets will provide some baseline environmental data.
- Future directions computing environment will allow processing of geospatial data, sharing of data across political (i.e. county) boundaries, and transmittal to NHQ for decisions. Will also permit the analysis of geospatial data.

Assumptions:

- Essential data sets are in place at all service centers.
- Computing environment permits display, update, analysis, transmittal, etc. of core data to decision maker at all levels.

Stakeholders:

- USDA agencies - aid in the selection process.
- Customers - beneficiary of participation, i.e., customer who gets the help with any problem(s).
- Taxpayers who are providing dollars to receive environmental improvement.
- Customers who will not have to wait as long to know if they were eligible.

RECOMMENDATION 11: Provide geospatial information to decision makers enabling them to establish policy and guidelines prior to program sign-ups.

Problem Statement: Currently there are time delays in notifying customers of program eligibility, application acceptance, contract approval, etc. This hinders the customer in planning operations and making decisions. The entire process can cause the customer to delay decisions for several months.

Benefit Summary: As a result of implementing this recommendation the customers will receive, at the time of sign-up, information (e.g., bid rates, etc.) that will help them to make informed decisions regarding participation in the program.

Recommendation Steps (*Responsible Party*):

1. Implement GIS and develop ‘core’ data set in service centers. (service center *Implementation Team*)
2. Train service center staff of functionality of GIS. (*NRCS/FSA Training divisions*)
3. Appraise management of functionality of GIS. (*NRCS/FSA GIS Core Team*)
4. Formulate strategies for supplying management with appropriate geospatial data. (*NRCS/FSA WDC Support staff*)
5. Develop procedure handbooks and notices on disseminating information to management. (*NRCS/FSA WDC Support staff*)
6. Formulate strategies for timetables on submitting geospatial data to management. (*NRCS/FSA WDC Support staff*)
7. Provide management with geospatial information. (in lieu of program announcement) (*NRCS/FSA WDC Support staff*)
8. Publicize program requirements. (as announced) (*NRCS/FSA service center staff*)
9. Test new procedures and refine policy as needed. (*NRCS/FSA BPR Core staff*)

Associated Risks of Implementation:

- Program announcements will be received too late from Congress.
- Congress will change program requirements mid-stream.
- Data sets from service centers will be too large for WDC’s system to handle.
- Procedure handbooks are misinterpreted, notices are too vague for service center staff to understand.

Customer and Business Benefits:

- Current time required to inform producer of program approval or disapproval will be reduced from 1-3 months to the same day application is submitted.
- Producer will have timely program announcement available in which to plan their farming operations.

- Other federal non-USDA Agencies will have direct access to key data. (EPA, DOT, DOI, etc.)
- Program requirements and information dissemination to customers.
- Program approvals and disapprovals are available quicker to the producer.
- Eliminates time delays in notifying producer of acceptance or denial of contract bid.
- Quicker and more accurate information provided to producer before sign-up, allowing to make a more informed decision whether to apply or not.

Programs Impacted:

- Agricultural Market Transition Act (AMTA)
- Noninsured Crop Disaster Assistance Program
- Conservation Reserve Program (CRP)
- Environmental Quality Incentives Program (EQIP)

Business Processes Impacted:

- Data development
- Data retrieval
- Data transfer
- Data access
- Data security

System Functional Requirements:

- System must have query and analytical functions.
- Capacity to maintain large size data sets
- Connectivity to/through STO's to Headquarters.

Information Needs:

Where Recommendation Should Be Carried Out:

- This recommendation should be carried out nationwide, only after initial testing is conducting at pilot service centers and the results are positive.

Anticipated Investment Cost Areas:

- Costs areas are anticipated in the areas of:
 - ◇ hardware/software acquisition
 - ◇ telecommunications enhancements
 - ◇ procedure and policy edits

Implementation Period:

- Recommendation should start FY 2000 and continue until programs are no longer offered to customers.

Performance Measures:

- Reduce time required for customer notification of contract approval
- 100 % of all program requirements announced prior to sign-up period

Tactical Objective: Use new technologies to enable decision makers to establish policy prior to program sign-up.

Success Statements:

- Program requirements are announced and disseminated PRIOR to sign-up and customers are informed at time of sign-up which acres submitted will be accepted and the bid/payment rates for the county. National office will provide state and local areas with program requirements before sign-up starts.
- Producer's application will be accepted or denied at time of sign-up as opposed to the current 60-90 day determination period from the national level.
- Available eligible acres will be known to the national office, regional and state offices prior to a sign-up opening based on core geospatial data sets.

Implementation Strategies:

1. Develop regionalized geospatial databases.
2. Provide connectivity of automation systems. (LAN/WAN)
3. Develop policy and procedures for disseminating geospatial information to.
4. Headquarters. (through state offices)
5. Develop policy and procedures for disseminating program guidelines from.
6. Headquarters to service centers. (through state offices)
7. service centers develop implementation strategy to inform customers of program sign-up.

Inhibitors:

- Delays in receiving full program regulations from Congress.
- Lack of GIS analysis training for managers.
- Lack of timely submission of geospatial data from service center/State offices.

Enablers:

- LAN/WAN (connectivity)
- News media, etc.

- GIS analysis functionality. (hardware and software)

Assumptions:

- Congress will provide prompt, applicable regulations.
- Management will accept responsibility for providing timely regulations.
- GIS technology will be implemented.
- Staff will be trained on querying data and submitting procedures.

Stakeholders:

- Service Center Agencies
- FSA/NRCS Headquarters
- Non-USDA Federal Agencies (EPA, DOT, DOI, etc.)
- Customers

RECOMMENDATION 12: Empower service center personnel with improved business tools, training, and enhanced approval authority.

Problem Statement: Currently customers experience a delay in response time as a result of having to pass the information “up the chain of command” to receive a decision.

Benefit Summary: By empowering the service center employees with increased decision making authority, the customer will receive a much faster response. This is a customer requirement/expectation that has been identified through USDA customer surveys. It is expected that delegation to trained personnel will provide increased efficiency and greatly improved customer service, both internal and external to USDA.

Recommendation Steps (*Responsible Party*):

1. Review agencies' procedures, regulations, and statutes to construct a matrix (i.e. list) of decisions and their specified authorities affecting service center business processes.
2. Rank list of potential changes in decision authority according to estimated time savings in business process, estimated risk of change, and ease of change.
3. Schedule changes.
4. Implement changes in pilot service centers.
5. Validate and evaluate results of changes
6. Prepare report for SCIT.

Survey will be developed by a joint task force from all agencies' evaluation branch. It will then be distributed to the selected service centers. It will include 3 items:

- What decisions can be delegated?
- What decisions are or are not being delegated?
- Reasons why they aren't delegated?

Results will be validated and reported to SCIT.

The efficiency will be compared between high and low delegating offices and correlation's reviewed to determine levels of efficiency and impact.

Providing list and surveys to be delegated is the responsibility of each Program Evaluation Section of each agency or state level soil and water district governing body. They will report all findings to SCIT.

Associated Risks of Implementation:

- Management's ability is limited in determining that the task is completed accurately and in an efficient manner.

Customer and Business Benefits:

- Quicker decisions tailored to specific geographical areas.
- Eliminate the risk of a lack of consistency and accusations of disparate treatment.
- It is anticipated that the results will reinforce the theory that delegation to trained personnel will provide increased efficiency and greatly improved customer service, both internal and external to USDA.

Programs Impacted:

- All programs are impacted.

Business Processes Impacted:

- All processes, because this identifies who can make the decision (approval/disapproval) on customer requests.

System Functional Requirements:

- The functional requirements determined to support the development of digital ortho-imaging will also apply to this recommendation.

Where Recommendation Should Be Carried Out:

- Service center partners will complete the surveys.
- Operational service center test sites with a minimum of five sites. Suggest one site of best service center, one site of poorer service center, and three sites that are average SC's.

Anticipated Investment Cost Areas:

- The training aspect of this recommendation will be included with other training in program areas and will not be a separate initiative. Although it will require changes in policies, it is very difficult to assign a cost to policy changes. The major costs will include training personnel on: which cases can and cannot be handled, guidelines on approving cases, and follow-up on how these decisions will be reviewed by upper management to see that policies and procedures are being adhered to.

Implementation Period:

- Pilot service centers (small scale) implementation period should be as soon as possible and have initial results in Dec 1997.
- Large pilot service centers implementation should begin January 1, 1998 and last for two years.
- Implementation will start as soon as possible when software was available to test and implementation was authorized to begin.

Implementation Characteristics:

- It will take one business cycle at a minimum to evaluate this. Suggest to run this from Oct 1 to Sept 30, which is to coincide with the government fiscal cycle to make it easier to collect cost data.
- Training will be a major factor in meeting this requirement. This empowerment training probably will not be separate, but included with GIS training. This will be a subset of instructing personnel on their empowered duties and responsibilities.

Performance Measures:

- Reduce processing time for customers
- Reduce time spent in County Committee meetings

Tactical Objective: Empower service center staff to approve or make decisions in pilot service centers as required instead of requiring final approval by another level (i.e., COC, area committees, soil and water conservation district boards, states, headquarters, etc.) by September 30, 1998.

Success Statements:

- Service center personnel will make all decisions where data necessary in the decision making process is resident at the service center or can be reliably obtained by the service center.

Implementation Strategies:

1. Identify authorities that procedure says can be delegated, and select those authorities that have the most impact on the outcome of the task (e.g. the amount of time it takes to finish a process and customer satisfaction).
2. Develop a customized strategy (i.e., by service center, by individual) for demonstrating the value of empowerment to the staff.
 - Determine the proper motivational mechanism.
 - Gain approval to utilize those motivational mechanisms. (i.e. compensation incentives will require supervisory chain)
 - Identify those statutory or procedural authorities that can be delegated to the

- lowest decision making levels. (These are not currently delegated)
3. Select those statutory or procedural authorities that have the most impact on the outcome of the task.

Inhibitors:

- Managers who are unwilling to turn loose of the reins (i.e. a control person).
- Procedural or statutory requirements.
- Lack of staff trained to make decisions.
- Staff who have been discouraged from making decisions in the past and/or punished for taking risks.
- Bureaucratic delays.
- Lack of commitment to empowerment from National, State, and County management.
- Procedural requirements that delay approvals due to "window of opportunity" restraints.

Enablers:

- Self empowerment.
- Revision of procedures or statutes.
- Empowerment training for staff and management.
- The reduced staffing levels already existing in service centers are forcing changes in order to accomplish existing work.

Assumptions:

- Hardware and software will permit adequate review of service center decisions to identify questionable determinations or trends.
- Ability of GIS systems to provide high quality and consistent data analysis which will encourage National, State, and County management to empower employees.
- Increased use of high technology will continue to improve employee confidence levels in data used to make decisions.

Stakeholders:

- Agency staff and decision making committees within the service center.

RECOMMENDATION 13: Implement a comprehensive geospatial training program to all USDA service centers to provide improved service and benefit to the customers.

Problem Statement: When the service center staff is not trained to the fullest extent possible they are not equipped with the necessary knowledge to serve the customer to the greatest extent possible. This may translate into customers not being provided with all possible information on which to base economic decisions.

Benefit Summary: The customer will receive an improved, faster, cost-effective service, and a wider spectrum of opportunities and options from a better trained service center staff. When the customer receives appropriate and beneficial service, they receive a fair return for their tax dollar and have more confidence and trust in the well trained service center staff.

Recommendation Steps (*Responsible Party*):

- 1) Name a multi-agency oversight group at the National level. (service center *Implementation Team is responsible for Departmental oversight and guidance.*)
- 2) Name a multi-agency training team (State and service center level) to oversee training implementation.
- 3) Determination of pilot training service centers.
- 4) Develop and implement base level training. (*Core training team will have primary oversight responsibility*)
- 5) Develop criteria to determine when service centers are ready for more advance training.
- 6) Develop and implement advanced training for service centers.
- 7) Evaluate training at pilot service centers.
- 8) Develop and implement training throughout service centers.

NOTE: The core team will report to SCIT and cooperate with and maintain open lines of communication with participating Agency management (national, state and local).

Associated Risks of Implementation:

- Use of geospatial technology by service centers will not be successful without a comprehensive training program.
- USDA will not reap the full benefits of expensive hardware/software/digital ortho-imagery procurement without training.
- If sufficient time is not spent developing and implementing a training program (including fine-tuning/optimizing) it will negatively impact national implementation.
- A potential risk is that adequate resources (funds, personnel) will not be provided for the training program.

- On-site training must coexist with day-to-day time requirements of the service center employees (serving customers necessitates the frequent interruption and delay of training).

Customer and Business Benefits:

- Training provides service centers with ability to effectively use enabling technology to provide improved service to customers.
- Employees, through training, will be able to proficiently use, manage, and analyze data, generate reports, and produce maps from GIS and related tools for service center applications.
- The customer will receive an improved, faster, cost-effective service from a better trained service center staff. When the customer receives appropriate and beneficial service, they receive a fair return for their tax dollar.
- Customer has more confidence and trust in a well trained service center staff.
- Information is more readily available to the customer because the service center knows what the customer needs or how to find it.
- The customer is provided with a wider spectrum of opportunities and options. As a result the customer needs and requirements are better met.
- Successful training will reduce the need for intensive support and assistance to the service center.

Programs Impacted:

- Most or all USDA programs will be impacted by the achievement of this recommendation.

Business Processes Impacted:

- A1.1.1.3 Pull Maps and Review (w/Producer)
- A1.1.1.4 Redefine Land Boundaries
- A1.1.1.7 Update Aerial Photographs
- A1.1.1.9.3 Add/Change/Delete Land unit Data
- A1.2.1.2.3 Interpret Imagery
- A1.2.1.3.1 Draw Boundaries
- A1.2.1.3.2 Determine Area
- A1.2.3.2 Change Land Area
- A1.2.3.4 Change Unit Information
- A1.2.4.1 Determine Flight Lines
- A1.2.4.2 Number New Maps
- A1.2.4.3 Run Farm/Tract Identification Query
- A1.2.4.4 Transfer Information
- A1.2.4.6 Photocopy All Maps
- A1.3 Delete Land Units (Farm/Tract)
- A2.1.2.1 Determine Area

A2.1.2.2 Determine Cropping History
A2.1.2.3.1 Determine Land Eligibility
A2.1.2.3.2 Determine Bid Cap
A2.1.4.1 Complete Onsite Inspection/Inventory
A2.1.4.3 Develop Schedule of Application
A2.1.4.4 Review CPO with Producer/Approval
A2.1.5.4 Perform On-site Inspection
A2.1.6.1 Perform Status Review
A3.1.4 Record Deed in the County Land Records
A3.1.5 Monitor Easement Compliance
A3.2.2 Develop Management Plan and Contract Terms
A3.2.5 Monitor Contract Compliance
A7.1.1.2 Explain HEL Question on AD-1026
A7.1.1.3 Prepare Aerial Photography and AD-1026 for Referral
A7.1.2.1 Review Soils/Conduct USLE Calculations
A7.1.2.2 Update Official Aerial Photography
A7.1.3.1 Determine Customers Needs
A7.1.3.1 Determine Customers Needs
A7.1.3.2 Provide Alternatives
A7.1.5.4.1 Conduct Land Unit Visit
A7.2.1.2 Explain Wetland Questions on AD-1026
A7.2.1.3 Prepare Aerial Photography and AD-1026 for Referral
A7.2.2 Decide if a Wetland Determination is Needed
A7.2.5 Delineate Wetland Location on the Official Photography
A7.2.7 Restore/Mitigate Wetland

System Functional Requirements:

Where Recommendation Should Be Carried Out:

- On-site at all USDA service centers. System capability and data must be in place at time of training.

Anticipated Investment Cost Areas:

- Actual cost of training can be determined based on evaluation of the training completed at the pilot service centers, determination of type of training to be provided nationally.

Implementation Period:

- This recommendation needs to be initiated (and a good portion completed) before national implementation.
- Implementation of training throughout the service centers will take place after the pilot testing is completed which will take around 2 years.

Implementation Characteristics:

- Training will have a pilot phase. Once the pilot phase is over and pilot training phase has been evaluated and validated, training implementation throughout the service centers will be done.

Performance Measures:

- Increase accuracy of information provided to customers
- Percentage of service center employees trained with basic level proficiency within one month of GIS implementation
- Increase employee use of GIS

Tactical Objective: Build a training framework that provides service centers with the ability to proficiently use, manage, manipulate, and analyze data, and be able to generate reports as well as produce maps from GIS and related tools for service center applications beginning FY98.*

**This tactical objective also supports Recommendation 9 - "Establish and implement a training program that provides pilot service centers with the ability to proficiently use GIS and related tools beginning FY98."*

Note: Base training addresses items #1-3. Advanced training addresses item #4 below:

- 1) Load layer
- 2) Digitize
- 3) Quality control
- 4) Analysis**

***Analysis: each agency needs proficiency in their area
Cross-training: each agency provides for sharing of information
Training in specific areas: need proficiency*

Success Statements:

- All service center personnel can do basic level GIS applications.
- Intra-agency use: service center staff will proficiently utilize comprehensive shared data sets through the successful implementation of Geospatial technology.
- Inter-agency user and cross-training: All service center staff are able to recognize and understand producer requests and needs, process as applicable using GIS,

- and/or refer the producer to the appropriate service center specialist to further process the request.
- Customers recognize and trust proficiency of staff with regard to GIS.
 - Employee training exit evaluations indicate that the training was sufficient to successfully execute the functions covered in the training.
 - Identify the best type of training (i.e. vendor, in-house, other).
 - National training strategy is developed using "lessons learned" from successful pilot service centers.
 - Training for the service center is always concurrent with applicable hardware and software.
 - System and training is available to the service center at least two to three weeks before having to service customers and administer programs with the new system.

Implementation Strategies:

1) Identify multi-agency core team for pilot service centers that will oversee training implementation.

- Establish and maintain open line of communication both horizontally between agencies and vertically among management levels.

2) Develop pilot base level training. (Base level training is how to run software and tools, be able to navigate through menus, and perform basic functions.)

- Identify service centers
- Identify training package (e.g. vendor-provides, computer-based, etc.)
- Identify schedule
- Identify trainers
- Develop exit evaluations with training
- Revise training based on exit evaluations for next pilot service centers

3) Develop criteria to determine when the pilot service center is ready for the more advanced level of training.

- Establish time frames for core themes. (i.e. base layers)
- Core theme digitizing work is complete. (e.g. tract, land units, cover)

4) Develop advanced training for pilot service centers.

- Develop agency specific training that provides for manipulation, analysis, ability to generate reports, produce maps from GIS, and use of related tools. (GPS).
- Identify what types of customization is needed and required, then build training modules based on that. Guidance will be found in National policy and standards.
- Develop strategy for inter-service center cross training.
 - ◇ Develop schedule by pilot service center.
 - ◇ Identify trainers.
 - ◇ Develop training module.
 - ◇ Develop exit evaluations with training.
 - ◇ Revise training based on exit evaluations for next pilot service centers.

5) Identify core teams for National Implementation.

Establish and maintain an open line of communication both horizontally between agencies and vertically between management levels.

National Level:

Identify National level multi-Agency oversight group to:

- Provide direction to States on implementation expectations.
- Provide deadlines and schedules for implementations that States have to meet.

State Level:

- Identify and name multi-agency core team. (State/service center level)
- Team will ensure sufficient time and personnel resources are provided to ensure appropriate training.
- Identify and set up resource support networks.
- Review exit evaluations and provide recommendations to training teams.
- Develop (with National policy and recommendations to States) criteria to determine when service center is ready for more advance level of training.
 - ◊ Establish time frames for core themes (i.e. base layers)
 - ◊ Core theme work is complete
- Reports back to National Core Team.

6) Develop a nationally based training strategy.

- Identify and draw upon "lessons learned" from successful pilot service center experiences.
- Prioritize service centers.
- Identify and develop training package.
- Develop schedule.
- Identify trainers.
- Develop exit evaluations with training.
- Revise training based on exit evaluations.

7) Develop advanced training for National implementation:

- Identify and draw upon "lessons learned" from successful advanced training efforts provided to pilot service centers.
- Develop strategy for agency specific training that provides for manipulation, analysis, ability to generate reports, produce maps from GIS, and use of related tools (e.g. GPS):
 - ◊ Develop schedules
 - ◊ Identify trainers
 - ◊ Develop and customize training modules (Identify what types of customization is needed and required, then build training modules based on that. Modules developed for pilot service centers can be used and enhanced for the use in actual service centers.).
 - ◊ Develop exit evaluations
 - ◊ Revise training based on exit evaluations
- Develop strategy for inter-service center cross training.
 - ◊ Develop schedule by service center.
 - ◊ Identify trainers.
 - ◊ Develop training module (modules developed for pilot service centers can be used and enhanced).
 - ◊ Develop exit evaluations with training.
 - ◊ Revise training based on exit evaluations for sharing with other Service Centers.

Inhibitors:

- Delay in having hardware, software, digital ortho-imagery and data in place.
- Top management sets unrealistic timeframes.
- Sufficient funds and personnel are not allocated for successful training programs.
- Small States may not have sufficient personnel nor resources to successfully.
- build core teams and resource support teams.
- Top management support is not provided for training. To maintain any type of data and system integrity, training MUST be a priority.
- Lack of commitment to training from one or more of the service center Agencies (national, state, or local levels).
- Failure to adhere to rigid data development standards.
- Turf battles exist between agencies.
- Policy and core themes are modified mid-stream.
- Training exit evaluation information is not shared or built upon to revise and build better training (lessons aren't learned).

Enablers:

- GIS provides us with technology capability that is not currently out there.
- Automated training tools are available for use by training developers.
- Adequate funding is provided to implement a successful training strategy.
- Realistic timeframes and goals are set by top management.
- Commitment is demonstrated by agency heads at the national, regional, and state levels.
- Commitment is demonstrated by local service center agency heads.
- Service center employees demonstrate commitment and buy-in to the GIS training efforts.
- States are provided with flexibility to develop core groups and training programs that meet their needs. (e.g. small states may consider joining with other states to develop core groups and strategies, small districts can look at training for more than one county at one time, etc.)
- Communication lines remain open in both directions (e.g. top down and bottom up) as well as across agencies.

Assumptions:

- Properly trained service center employees will provide better customer service.
- All service center agencies agree equally on the importance of GIS to support the concept of one-stop-shopping.
- Adequate and timely monetary and personnel resources will be available to develop and implement successful GIS training.
- Management at the national, regional and state levels all support and buy-in to the importance of good GIS training.

- Members of core training groups (oversight groups) have the authority and resources to implement successful training.
- Training resources will be allocated as fairly as possible to employees of all service center agencies, and will do so in a non-discriminatory manner.
- Recommendations or criticisms of personnel receiving training are evaluated and considered for future enhancements or improvements to training program.

Stakeholders:

- The local customer served by the service center are the beneficiaries of improved service provided from the trained service center employees.
- service center employees are a primary stakeholder and the direct recipients of the training programs.
- The USDA, as well as the individual agencies, are stakeholders. They are perceived as more effective, efficient, and technically proficient by the constituents and by other local, state, and federal government partners.
- Partnership agencies are stakeholders that will benefit by increased cooperation among other government agencies (state, local and federal).
- Congress is a stakeholder. The more credible the local offices are, the more credible government is perceived as a whole.