USDA United States Department of Agriculture
Farm Service Agency

USDA
Farm Service Agency
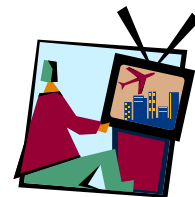
Common **L**and **U**nit

Common Land Units

NAIP

National Agriculture Imagery Program

AERIAL PHOTOGRAPHY FIELD OFFICE
ANNUAL REPORT
FY 2006

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USDA-FSA
Aerial Photography Field Office
Salt Lake City, UT

Office of the Director - Ronald B. Nicholls

Secretary - Rebecca Hammond

Deputy Director -

Management Analyst - Kent Williams

Operations Branch - Ken Koehler

Quality Assurance Branch - Brenda Simpson

Production Services Branch -

Geospatial Branch – Kent Williams Acting

Technological Services Branch - Lori Uhlhorn

Customer Service David Parry

Ortho Imagery Inspection

Photographic

Geospatial Services Hugh McGirt

Digital Data Management Distribution

Contracting Geoffrey Gabbott

Resource Imagery Inspection

Scanning

Service Center Support

Application Development

The APFO's role and responsibility is the Acquisition, Inspection, Distribution and Archiving of USDA imagery needs for USDA, other federal & state agencies and the general public. The staff of employees at APFO strives everyday to improve our performance, from the acquisition of data to the storage & archiving of this data for current and future needs and use. During Fiscal Year 2006, our office completed the production of hundreds of thousands of photos both digital and hardcopy photographs. In addition to this production the APFO was very involved in many other efforts of improvement including the following:

NAIP 2006 (National Agriculture Imagery Program) – Performed the acquisition, inspection, archiving & distribution services that covered the 48 states and over 3000 counties of new digital orthoimagery.

IT Infrastructure Upgrade – This effort started late in the fiscal year by defining hardware and software requirements to store, archive and retrieve imagery data currently being acquired as well as a storage facility for digital imagery acquired on film decades ago.

Installation of a new Data Center – This project also started late in the fiscal year and will be completed in early 2007. This new data center will house the hardware and software stated above, as well as be the archive center for the tens of terabytes of new and historical imagery that will be brought on line.

On-line Imagery Ordering System – Awarded a contract to a small business for an on-line order entry system to provide APFO customers on-line access to our extensive imagery archive. The first pilot effort to be ready for testing in Spring of 2007.

Scanning of APFO's Historical Photo Indexes – This contract awarded to a small business. The project includes the scanning of over 50,000 historical indexes dating as far back as the 1950's, and includes the production of enhanced shape files. The products of this project will become available for customers of APFO with the completion of the on-line ordering system.

NAIP Quality Support Consulting Contract – This contract awarded to provide APFO guidance & recommendations for the improvement of quality of NAIP contract performance and products. The finding to be incorporated in the 2007 NAIP solicitation.

Reorganization of APFO – This process originated in Fiscal Year 2005 and continued throughout FY 2006. The process has moved slower than anticipated, but progress was made. In FY 06 many staff members of APFO were either reassigned or realigned within the new five branch organization structure.

Fiscal Year 2006 was a very defining year and time for the APFO and it's staff. Many major projects and efforts were initiated that will surely define our roles and responsibilities that APFO (one of the five Division Offices of DAFP) will have for decades to come.

OPERATIONS BRANCH

To ensure the Aerial Photography Field Office operates in an efficient, cost effective manner by providing resources necessary for the production of aerial imagery products

<u>**Administrative Accomplishments**</u>

Establishing APFO's 2006-2011 Strategic Plan

Pursuant to Section 3 of the Government Performance and Results Act (GPRA), the Operations Branch, working with the Office of Director, successfully completed a forward-looking Strategic Plan in full compliance with GPRA and OMB Circular A-11, Part 6 requirements. The Strategic Plan provides the map for APFO's Mission, Vision and Strategic Goals.

Mission Statement

APFO's federal responsibility is to ensure data quality, utility, objectivity, and integrity by collecting, archiving, and disseminating geospatial data to Federal, state, and local government entities and to private stakeholders.

Vision Statement

APFO collects archives, organizes, and disseminates a subset of the Government's geospatial data focused on agricultural interests.

Summary of Strategic Goals

APFO's mission and program supports the broader strategic goals included within USDA's FSA Budget. The four strategic goals include:

Maintaining and protecting the Federal database of geospatial agriculture data.

Acting as primary providers of Aerial Imagery for rural and agricultural areas for the Federal government, State and local governments, and private GIS consumers.

Supporting the overall mission of USDA's FSA while providing compliance-related support through the elimination of waste, fraud and abuse.

Complying with the requirements delineated in President's Management Initiative.

Health, Safety, and Security

In compliance with Department requirements, APFO's Operations Branch, Administrative Section, working with Agency guidelines, created a contingency plan for the health and safety of employees and their families, customers, and contractors in efforts to prepare for the possibility of a human influenza pandemic – a global outbreak of a new influenza virus that infects and can be transmitted between humans, and to which humans have little or no immunity.

The purpose of this plan is to define planning responsibilities and actions required to ensure:

Health and safety of USDA/APFO employees and their families, USDA/APFO customers, and contractors within USDA facilities supporting the USDA mission through education and timely dissemination of information, and facility preparation and procedures.
Capability to continue functions in support of the mission.

The Operations Branch administrative staff provided input and coordination as point of contact for APFO and facility co-tenants, meeting Homeland Security Presidential Directive 12 (HSPD-12) compliance requirements and mandates.

Geospatial and Data Center Improvement Projects

In 2006, APFO received congressional funding for the express purpose of expanding its ability to receive, archive and distribute data. The Operations Branch coordinated with General Services Administration (GSA) and building lessor to provide project management for the planning, demolition, construction, management, and, completion of a new Data Center. The new Data Center provides approximately seven times more floor space to accommodate a new library, additional servers and equipment.

Additionally, new offices for the relocation of Geospatial Branch managers and staff were constructed utilizing unused floor space in the Customer Service Section combined with existing floor space in the Geospatial Branch areas.

Reorganization of the Aerial Photography Field Office

At the Directors request, analysis of the APFO organization by the Kansas City Human Resources Office was conducted to determine the most efficient organization for achieving the mission of APFO. Five primary factors contributed to the decision for APFO's reorganization;

- National Agriculture Imagery Program (NAIP)
- New products and services available
- Customer requirements changing
- Photographic supplies and materials being discontinued

Work flow, personnel position management became difficult, non productive and inefficient

NAIP matured into a very popular and successful program, dramatically changing the way business was conducted.

New digital imagery products and services were being added.

Customers were beginning to favor the convenience of technology, preferring the ability to view their area of interest on a monitor or have their imagery provided using digital media, i.e., CD, DVD, or external hard drive rather than on a piece of film or paper.

Photographic vendors supplying photo papers, films, and, chemicals were discontinuing the manufacturing of materials used in the photographic process.

And finally, the demand for digital imagery was equating to the demand for traditional imagery, and in some areas, surpassing the demands requiring several employees to be detailed to other areas, fragmenting workloads to be performed in more than one Branch or Section.

On May 25, 2006 with approvals from both Deputy Administrators of Programs and Management, APFO's current organization structure was dissolved and the new organization was implemented. Branch and Section names were changed to better reflect duties and responsibilities;

- Management Operations Branch changed to Operations Branch having two subordinate sections; Customer Service Section (previously known as Sales Section) and Contracting Section (previously known as Contracting Branch)
- Quality Assurance Section became a Branch having two subordinate sections; Ortho Imagery Inspection Section and Resource Imagery Inspection Section
- Information Technology Branch changed to Technological Services Branch having two subordinate sections; Digital Data Management Distribution Section and Application Development Section
- Geospatial Services Branch changed to Geospatial Branch with two subordinate sections; Service Center Support Section and Geospatial Services Section
- Photo Imaging Branch changed to Production Branch having two subordinate sections; Photo Section and Scanning Section

Procurement

APFO's Operations Branch, administrative staff provided maximum, practicable opportunities in acquisitions to small business, small disadvantaged business, and woman owned small business concerns for FY 06.

Procurement for resources has been through the use of GSA SmartPay Purchase Cards and the Integrated Acquisition System (IAS).

Human Resources

APFO's Operation Branch, Personnel and HR Management worked closely with the Kansas City Human Resource (KCHR) to provide a comprehensive program of personnel services to the APFO employees throughout FY 2006.

FY 06 Personnel statistics include;

Personnel Actions Processed -	174	Realignments -	46
Training Requests -	19	Reassignments -	15
Promotions -	4		
Spot Awards -	19		
Details –	28		

FY06 EEOAC ACTIVITIES

* **Hillsdale:**
  Classroom Volunteer
  Granite Education Foundation Luncheon, Oct. 27th
  Chapters of Hope
      44 (of 279) Library Books Donated
  School Supply Drive
  GIS Day
* **Hispanic Heritage Month:**
  Banner
* **Disability Awareness Month:**
  Banner
* **Breast Cancer Awareness Month:**
  Pink Yoplait Yogurt Lids
  Pink Ribbons
* **Domestic Violence Awareness Month:**
  Purple Ribbons
* **Native American Heritage Month:**
  Banner
  Weber State University -"Valued Traditions"
* **Veteran's Day:**
  Banner
* **Sub-for-Santa:**
  Approximately $1000
  KSL's Angel Tree: 9 Angels
  Utah Food Bank: $179.15 and donation of food stuff (7 boxes)
* **FEMA Disaster Volunteer:**
  APFO Employee
* **Martin Luther King, Jr. Day:**
  Poster
- **Black History Month:**
  Banner
  Handouts
- **Women's History Month:**
  Banner
  Handouts
- **Take Our Daughters and Sons to Work Day:**
  7 children ages 9 - 15
- **Asian/Pacific Heritage Month:**
  Banner

To serve each customer as their primary source of technical information concerning USDA related aerial photography, digital imagery, and common land unit data of the United States and its territories. To account and reconcile funds from all government agencies and the public.

As part of the Operations Branch, the Customer Service Section is responsible for the receipt and processing of work orders and coverage requests for aerial photography, digital imagery, and common land unit products and services. Customer Service is the liaison for the Aerial Photography Field Office (APFO) to other government agencies and the public. Customer Service maintains and monitors all fiscal activity dealing with the sale of aerial photography, digital imagery, and common land units.

Major Work Activities Performed

Activity	Number of Activities
Work Orders Processed	3,165
APFO Internal Work Orders Processed	193
Coverage Requests	566
Walk-In Customers	802
Telephone Calls	12,114
Catalog Registers	963
Billings and Refunds	429
Written Correspondence	4,070
GIS Projects/Searches	85
Digital Products Production	17,571
Total	**39,958**

Special Accomplishments

Digital Imagery Product Production – The Customer Service Section processes NAIP Compressed County Mosaics (CCM's), NAIP Quarter Quads (QQ's), and certified Common Land Units (CLU's) for media requests not available from the USDA Geospatial Data Gateway. APFO has automated these processes to satisfy our customer's delivery requirements. The Customer Service Section manually fills digital orders where automation is not available.

Media orders are provided on CD's, DVD's and External Hard Drives.
Customer Service Produced – 5,280 CCM's / 6,028 CLU's / 6,263 QQ's

EarthWhere – Customer Service received training on the upgraded EarthWhere Version 4.1, a spatial data provisioning tool to conduct NAIP QQ searches and order processing. It is currently in full production for delivering QQ's on CD's and DVD's. We are running a dual EarthWhere and Work Order Entry System (WOES) order process for QQ's.

NAIP Quarter Quad Coverage Maps – Each state QQ shapefiles were used by Customer Service to create a coverage map for each year and posted to the APFO website for quick reference. As an added value, we have also made the shapefiles available to download for GIS applications and selecting coverage to order NAIP QQ's from APFO. This will be a continuing project as some coverage maps will be updated as needed or new ones created for upcoming years.

Detailed Activity – Two employees performed a temporary detail as Customer Service Supervisor. One employee was involved with the Photo Index Scanning and Online Entry System teams. To assist APFO, a Customer Service employee performed NAIP05 2m QQ inspection.

Conservation Reserve Program (CRP) – As a supplemental product to the CLU, APFO provided available CRP shapefiles with calculated acreage only. The CRP data does not include the specific boundaries but will indicate which CLU's contain CRP land.

NAIP Bulk Orders – The APFO has made available NAIP imagery at reduced pricing for CCM and QQ bulk orders of national and statewide coverage on external hard drives.

Total Dollar Volume $1,381,868.11 - Includes all fiscal activity associated with the sale of aerial photography and digital imagery.

Major Categories	Amount
Collections Receipts	$169,854.50
Credit Cards Receipts	$624,295.50
Federal Bills	$157,503.50
Flying Contracts/Products	$434,105.50
Non-Federal Bills	$104,812.00
Miscellaneous	$ -917.64

Fiscal Year Statistical Comparison

Fiscal Year 2006	102 Units per Order
Fiscal Year 2005	60 Units per Order
Fiscal Year 2004	37 Units per Order

FY06 Customers of Aerial Photography Products and Services

Agency	% of Requests	Units	% of Value	Dollar Value
FSA	0.1	903	1	$ 6,336.00
FS	81.6	163,669	58	$422,210.00
NRCS	2.4	4,681	8	$ 60,851.00
NASS	0.0	0	0	$ 0.00
GS	0.1	265	1	$ 1,800.00
Other Federal	2.1	4,047	5	$ 39,040.00
State Agencies	6.5	12,896	8	$ 70,443.00
Public	7.2	14,327	19	$137,406.00
Totals	**100**	**200,788**	**100**	**$738,086.00**

FY06 Customers of Digital Imagery Products and Services

Agency	% of Requests	Units	% of Value	Dollar Value
FSA	69.2	102,978	62	$ 750,671.00
FS	5.7	8,364	7	$ 80,170.00
NRCS	0.4	672	1	$ 6,758.00
NASS	0.6	981	2	$ 28,500.00
GS	1.0	1,572	2	$ 21,655.00
Other Federal	2.3	3,448	1	$ 14,897.50
State Agencies	3.7	5,357	5	$ 66,058.00
Public	17.1	25,436	20	$ 244,302.00
Totals	**100**	**148,808**	**100**	**$1,213,011.50**

Customer Service Activity Report

Activity	Total Hours	% of Time
Annual Leave	1035	10.0
Sick Leave	333	3.2
Other Leave	248	2.4
Section Administration	79	0.7
Training	121	1.1
Processing Work Orders	1091	10.7
Fiscal Operations	830	10.4
GIS Operations	130	1.6
Digital Product Production	170	2.9
Special Projects	39	1.5
Detailed Activity	114	1.1
Support Operations	5574	54.4
Totals	**10,264**	**100**

Operations Branch
Customer Service Section
Activity Report
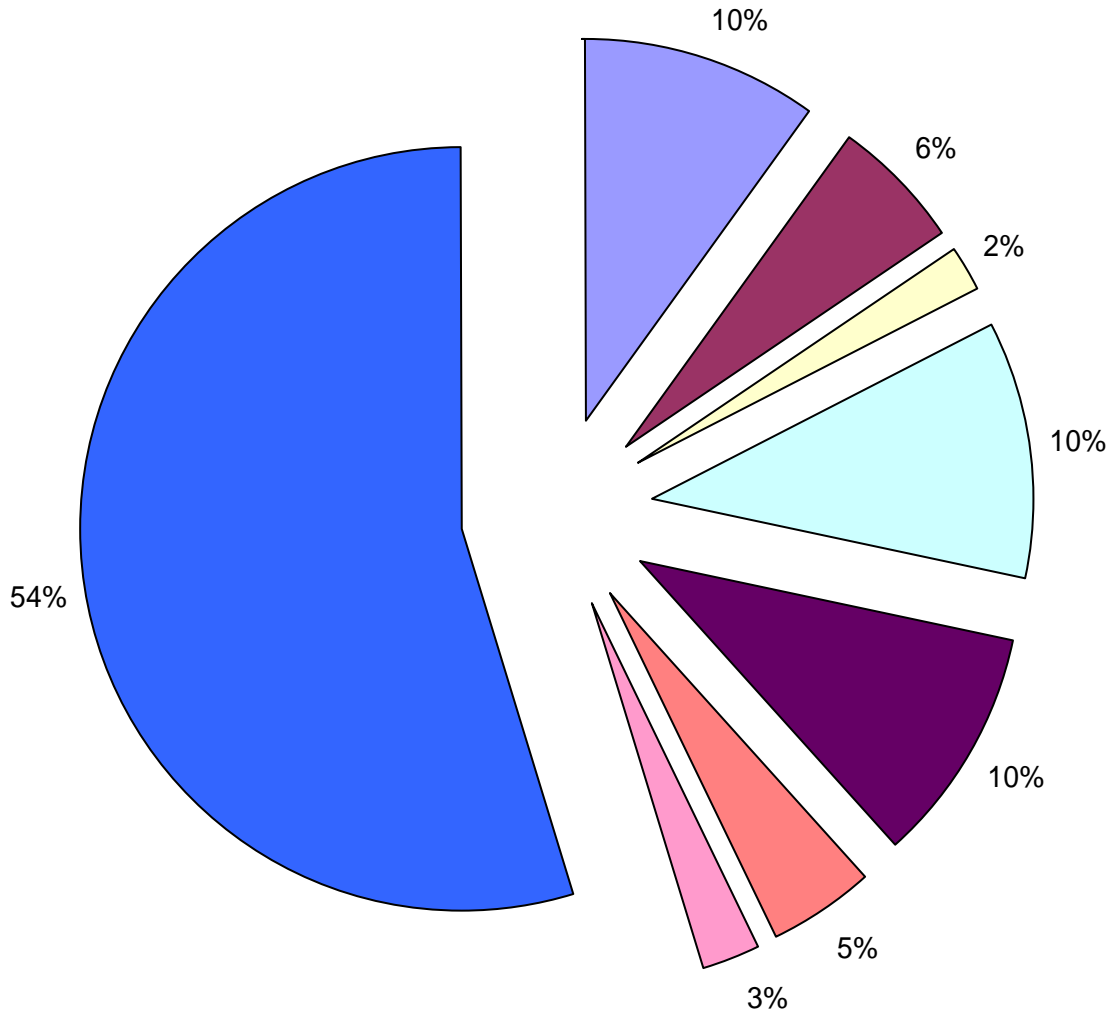
- Annual Leave
- Section Admin/Training
- Fiscal Operations
- Special Projects/Detailed Activity
- Sick Leave/Other Leave
- Processing Work Orders
- GIS Operations/Digital Product Production
- Support Operations

Mission Statement: *To provide quality procurement services which exceed customer expectations by promoting cooperative partnerships and excellence in customer service and products.*

The Contracting Section is responsible for providing contracting services, supplies, and products in support of aerial imagery programs of USDA and other Federal Agencies. Primary functions include coordinating requests for new aerial photography and digital imagery, establishing partnerships, acquisition planning, requirements preparation, source selection procedures, and administering the subsequent contracts. The Contracting Section is also responsible for the procurement of APFO Information Technology acquisitions, special requirement purchases, and other procurement support activities.

Fiscal Year 2006 Procurement Achievements Summary:

- Total Contracts Awarded – **78 Contracts** (38 aerial photography contracts and 36 IT related contracts, and 4 special service/product contracts)
- Total Contract Value – **$38,622,514.44** ($36,609,101.33 aerial imagery contracts and $2,013,413.11 information technology and special service/product contracts)
- Administrative Charge Revenue – **$101,036.38**
- APFO Furnished Products (Estimated) – **$58,450.00**
- Total Coverage Contracted – **2,698,866 Square Miles**
- Contract Administration – **52 Aerial imagery projects were administered** (38 were new contracts and 14 were carried over from prior fiscal years)

Fiscal Year 2006 Procurement Achievements:

1. **Small Business Concern Programs**:

   The Contracting Section solicited sources for program requirements under a 100% Set-aside for Small Business Concerns where applicable. This resulted in Small Business Concerns receiving 26% of the overall total prime contract

dollar amount, with Large Business Concerns receiving 53% of the total, and North American Free Trade Agreement (NAFTA) Business Concerns receiving 21% of the total. Distribution of the contracts by program is shown below.

	Small Business Concerns	Large Business Concerns	NAFTA Business Concerns
NAIP Contracts	19%	53%	28%
Resource Contracts	42%	58%	0%
SAAP Contracts	43%	57%	0%
Other Contracts	64%	36%	0%
ALL CONTRACTS	**26%**	**53%**	**21%**

2.   **National Agriculture Imagery Program (NAIP)**:

Provided contracting services to FSA and other contributing partners for one meter and two meter digital orthoimagery covering 3,015 counties (2,601,081 square miles) in 48 states. Awarded NAIP contract task orders for a total value of $28,491,561.61. Approximately $7.15 million was contributed by state and federal agencies through partnership agreements, and the balance of $21.34 million funded by FSA. Aerial photography was acquired using both precision mapping film cameras (46%) and large format digital cameras (54%). Also facilitated ortho-imagery agreements for $473,047.00 with Foreign Agriculture Service (FAS) for satellite imagery covering portions of Hawaii, Alaska, and the Pacific Island Basin. The overall weighted average price for NAIP contracts was $10.95 per square mile ($156.58 per DOQQ, $35.47 per linear mile).

3.   **Resource Aerial Photography Contracts**:

Contracted a total of 8,619 linear miles of conventional aerial photography services for the Forest Service (12,999 square miles). Contracted a total of 1,877 linear miles of Alaska aerial photography/ortho-imagery for NRCS (6,550 square miles). Awarded a total of 12 resource aerial photography contracts for a total value of $767,868.75. Included in those contracts were 6 U.S. Forest Service (USFS) projects, and 7 Natural Resource Conservation Service (NRCS) projects. The overall weighted average price for resource aerial photography contracts was $24.80 per square mile ($37.40 per linear mile).

4.   **Small Area Aerial Photography (SAAP) Contracts**:

Provided contracting services to NRCS to acquire small area aerial photography and scanning services. NRCS required three projects including the National Resources Inventory (NRI) program covering 69,636 NRI Sites and scans, Puerto Rico & Virgin Islands covering 450 NRI Sites and scans, and the Wetland Reserve Program

(WRP) Project covering 3,207 easements in 17 states (8,150 exposures & scans). This was the second year of a 5-year Indefinite Delivery Indefinite Quantity (IDIQ) contract with a FY2006 total value of $6,876,623.98. An administrative charge for the NRI program was waived for product in-kind. An administrative charge of $39,438.16 was assessed for the remaining programs. The overall weighted average price for small area aerial photography contracts was $87.90 per site including acquisition and scanning.

5. **Automated Crop Cultivation Assessment Tool Contract**:

    Awarded a contract to provide radar imaging services for Yazzoo County, MS using their GeoSAR system. This procurement was a Congressional earmark to explore the viability of the system to provide FSA with compliance imagery. It is scheduled for acquisition during the 2007 NAIP regular flying season.

6. **Online Order Entry Software Contract**:

    Awarded a contract for development of an online order entry system to provide APFO an image provisioning system. This system is for the purpose of providing customer access to APFO's extensive imagery archive.

7. **APFO Vault Index Map Scanning Services Contract**:

    Awarded a contract for the scanning and production of enhanced shapefiles of the index maps to APFO film vault. This project is the initial concept for the future scanning of all APFO's film holdings.

8. **NAIP Quality Support Consulting Services Contract**:

    Awarded a contract to develop product specifications and recommendations for improving the radiometric quality of NAIP imagery.

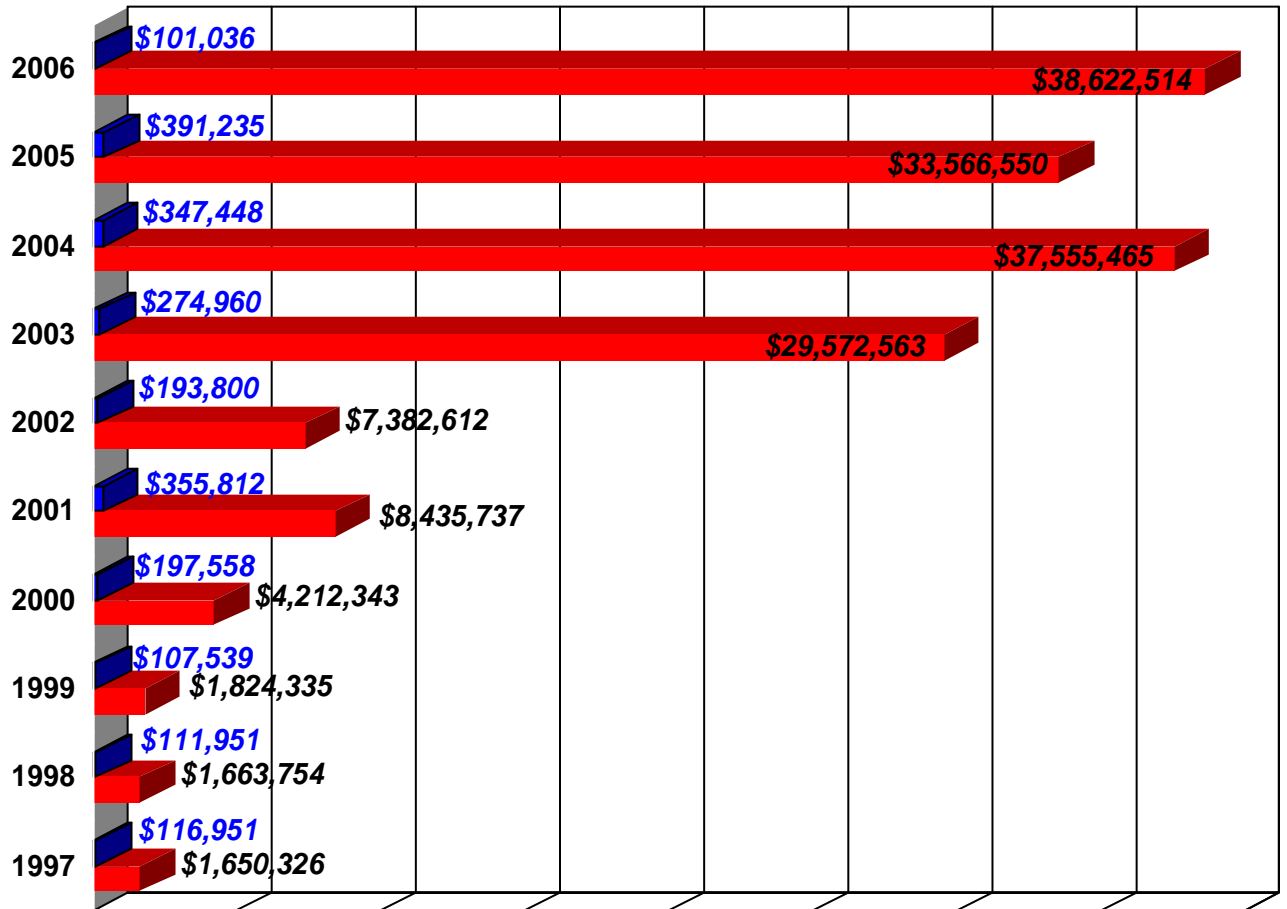9. **Computer Equipment & Maintenance Contracts**:

    Provided contract authority and services for the purchase of computer equipment, software and IT Maintenance Agreements at the APFO.

10. **Quality Assurance Inspection Services of Contract Imagery**

    NAIP: Provided preliminary inspection services on 3,015 Compressed County Mosaics (CCM), covering 2,601,081 square miles (181,957 DOQQs), and inspection management services for all other NAIP deliverables. Inspection and acceptance of contracted deliverables is currently being performed.

SAAP: Inspected and accepted the following small area aerial photography site imagery: National Resources Inventory (NRI) and Scanning Services for NRI 69,636 sites. 450 NRI Sites for Puerto Rico and Virgin Islands, and 8,150 WRP Sites (exposures) in 17 states awarded for acquisition and scanning during the 2007 flying season.

APFO Contract Awards History:

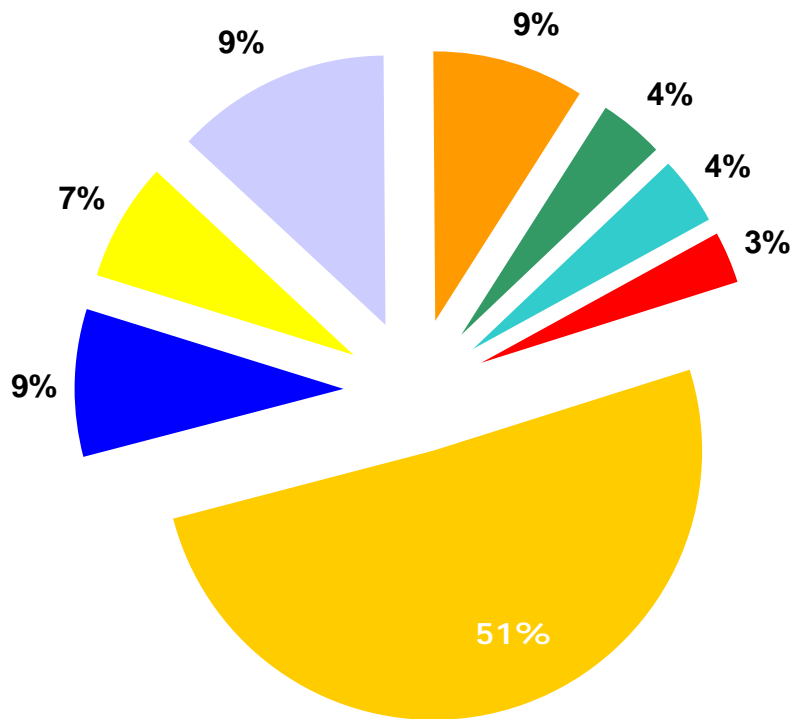| Year	Administrative Charges	Contract Awards
2006	$101,036	$38,622,514
2005	$391,235	$33,566,550
2004	$347,448	$37,555,465
2003	$274,960	$29,572,563
2002	$193,800	$7,382,612
2001	$355,812	$8,435,737
2000	$197,558	$4,212,343
1999	$107,539	$1,824,335
1998	$111,951	$1,663,754
1997	$116,951	$1,650,326

■ **Contract Awards** ■ **Administrative Charges**

Fiscal Year 2006 APFO Contract Awards Summary:

TOTAL CONTRACT AWARDS: $38,622,514

18%

4%

3%

1%

73%
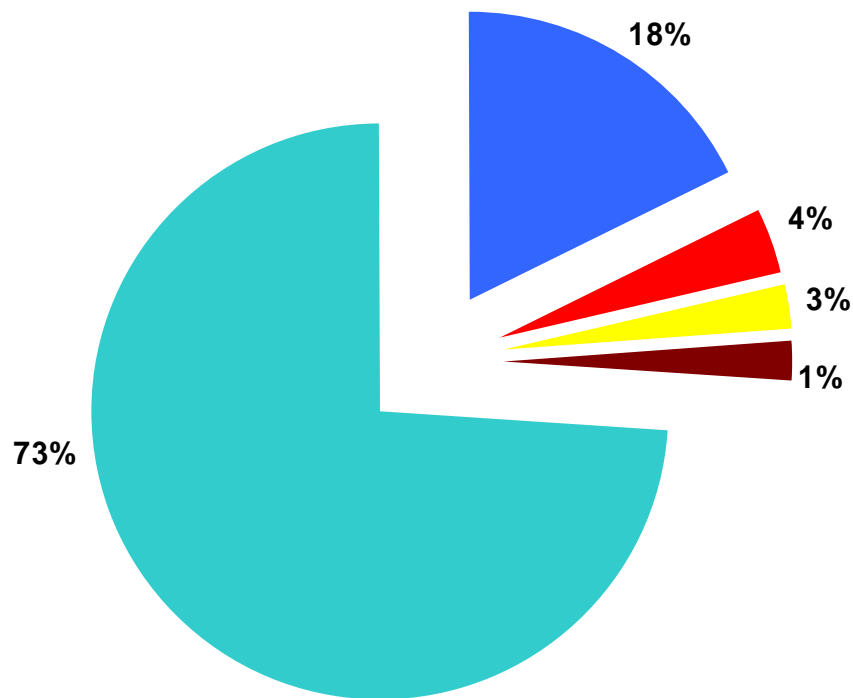
■ Sm Area AP (NRI, PR, WRP)
■ Other Projects
■ USFS Resource/APFO IT Purchases
■ NRCS Satellite/Alaska Orthos
■ USDA NAIP IMAGERY

Fiscal Year 2006 Contracting Section Activity Report:

9% — Annual Leave
4% — Sick Leave
4% — Other Leave
3% — Section Admin/Training/EEO
51% — Contracting
9% — Coordination
7% — Contract Support
9% — Contract QA

Legend:
- Annual Leave
- Sick Leave
- Other Leave
- Section Admin/Training/EEO
- Contracting
- Coordination
- Contract Support
- Contract QA

Assure customer needs are met through the application of Government Performance Results Act (GPRA) methods and procedures to inspect contracted products received and released from the Aerial Photography Field Office.

The Inspection Section is directly responsible for the quality assurance inspection, monitoring, and disseminating of imagery and geospatial data for the National Agriculture Imagery Program (NAIP), Resource Aerial Photography and Common Land Unit (CLU) digitizing as well as APFO website update information including status maps and data for these programs. This section also maintains the Service Center GIS priority (SCIT) and Catalog Listings.

Fiscal Year 2006 Achievements Summary:

National Agriculture Imagery Program (NAIP)

The Quality Assurance Branch provided 25,865 hours of inspection services for 2295 NAIP05 Compressed County Mosaics (CCM) and 196,250 Quarter Quads. Inspection of NAIP05 was completed in early October of FY07.

2338 Hours were used to inspect, catalog and archive 1754 rolls of original film for the NAIP05 and NAIP06 program.
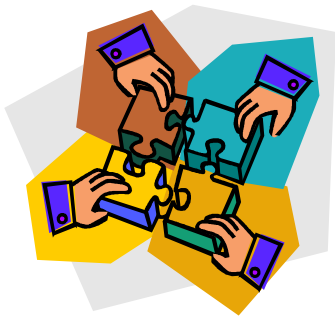
Resource Aerial Photography

Another FY06 achievement included providing flight planning and contract monitoring services for 12 resource aerial photography projects covering 19,549 square miles (10,496 linear miles).

Inspection and acceptance of 15 resource projects at 100%, and 8 projects in various stages of completion is currently being performed.

Common Land Unit (CLU) Digitizing

Inspected and accepted 68 counties produced by contract vendor. Inspection and acceptance is complete for this contract.

Other Branch Accomplishments

Performed comprehensive review and corrections to data contained in the APFO Catalog Listing.

Three employees served on the Equal Employment Opportunity Advisory Committee during FY06. Chairperson, Federal Women's Program Manager, Committee member.

QUALITY ASSURANCE BRANCH ACTIVITY REPORT

Activity	Hours	% of Time
NAIP Inspection	25,865	61
Resource Inspection	3276	8
Film Inspection	2338	6
CLU Inspection	636	2
QA Contract Management	245	1
QA Support	1204	2
Cartographic Technical Support	434	1
Other Section Activities	824	2
Training	589	1
Annual Leave	3540	8
Sick Leave	1477	3
Other Leave	2026	5
Total	42,454	100%

Quality Assurance Branch Activity Report
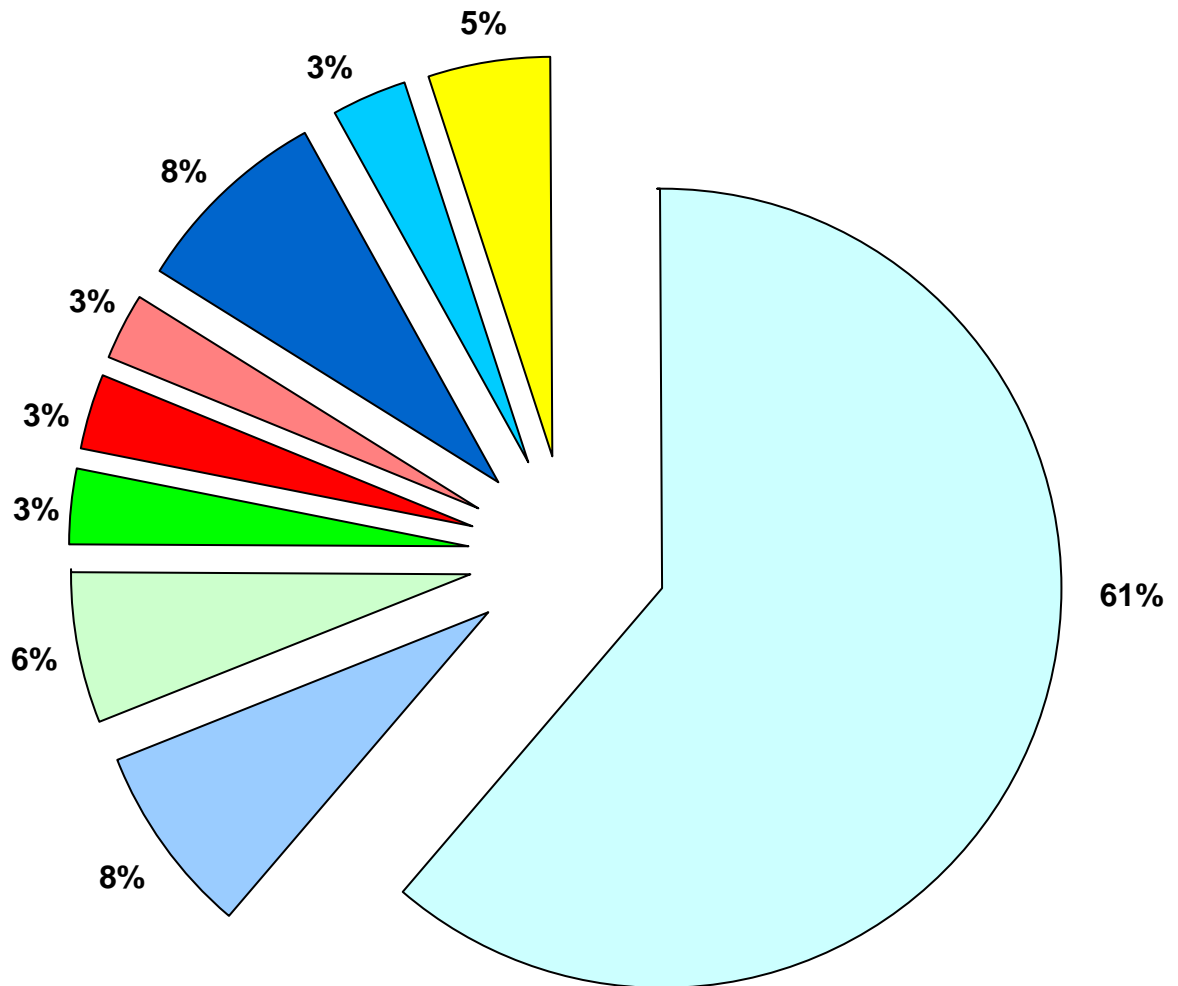
Legend:
- ☐ NAIP Inspection
- ☐ Resource Inspection
- ☐ Film Inspection
- ■ CLU Inspection/QA Contract Mgmt
- ■ QA Support/Training
- ■ Cartographic Tech Support/Other Section Activities
- ■ Annual Leave
- ■ Sick Leave
- ■ Other Leave

Percentages shown: 61%, 8%, 6%, 3%, 3%, 3%, 8%, 3%, 5%

Photographic Section

The Production Services Branch mission is to provide Quality in the form of Value, Service and Customer Conformance. Working in unity with our customers in order to meet their expectations. Providing the highest quality B&W and Color aerial photographic and digital products available.

Production Services Branch

The Production Services Branch is responsible for generating color and black and white aerial photographic products and digital imagery for various customers, including FSA, NRCS, Forest Service, other Federal and non federal agencies and the public. Also responsible for chemical mixing, electronic and mechanical maintenance and maintaining APFO's Film and Media Library.

Technical Support

The Tech Support staff has been involved in the following activities during FY06:

1. Removed all contact print equipment in the Black and White contact print area in preparation for the IT expansion. To include 13 Log E printers, 5 Versamat processors and all related support equipment: power, water, chemistry lines, WYSE connection, water panels, air lines, eye wash stations, dark room doors, furniture, and air scrubbers. This cleared an area of over 3,000 square feet for the IT office expansion.

2. Moved and reinstalled scanner section and support equipment, two separate moves.

3. Converted 3 older Log E contact printers and the MK5 automated roll paper printer from 9"to 10" roll paper stock allowing the continuation of the color roll paper program which is the largest work load.

4. Designed and submitted for fabrication a filter mounting system for poly contrast paper allowing the continuation of the paper print product in B&W section.

5. Modified the densitometers in QA and the Inspection sections to allow them to read on new pc driven data base.

6. Cleared two warehouse sections of photographic spare parts for the expansion of the new IT server room and UPS power unit.

7. Wired, jacked, terminated and tested all computer lines in the new IT office area.

Photographic Section

During FY06 the branch released 200,804 total products, both photographic and digital.

137,799 Color Products
36,375 B&W Products
25,490 Scanned products
1140 Media products
11,700 Services

Achievements In Production

Products produced/Hours consumed during FY05 include:

*Color Photography – 128,127 products / 4059 hours
*Black and White Photography – 36,384 / 2469 hours
*Image Scans produced – 34,725 images / 3124 hours
*Image Scan CD's & DVD's produced –871 products / 336 hours
* Laminating – 11,429 products / 34 hours
* Trimming/Cutting – 92 hours

Accomplishments

* Orders processed and released – 3,199 orders with 7,551 rolls of film
* Products Inspected - 211,536 photographic products

During FY06 Photo Scanning equipment had to be relocated to allow for the new computer room.

In March the section started the process to verify the 65,000+ photo indexes, lines indexes and spot indexes stored in the vault in preparation for a contract to scan the indexes. September 1st a contractor arrived to scan all of the indexes in the vault for future use on line. Two employees were extensively used for 1300 hours to verify and

edit the existing data base and monitor the incoming and outgoing indexes to the contractor for the Vault Index Scan Project.

The Production Services Branch is continually looking for ways to improve their processes and better serve and exceed customer requirements.

PRODUCTION SERVICES BRANCH ACTIVITY REPORT

Activity	Hours	% of Time
Contacts	5371	24
Enlargements	2509	11
Digital Image Scanning	3124	14
Digital Media	336	2
Support Activities/Special Projects	4403	18
Section Administration	210	1
Technical Support	1673	7
Training	200	1
Annual Leave	2809	12
Sick Leave	1138	5
Other Leave	1223	5
Total	22,996	100%

Production Services Branch Activity Report
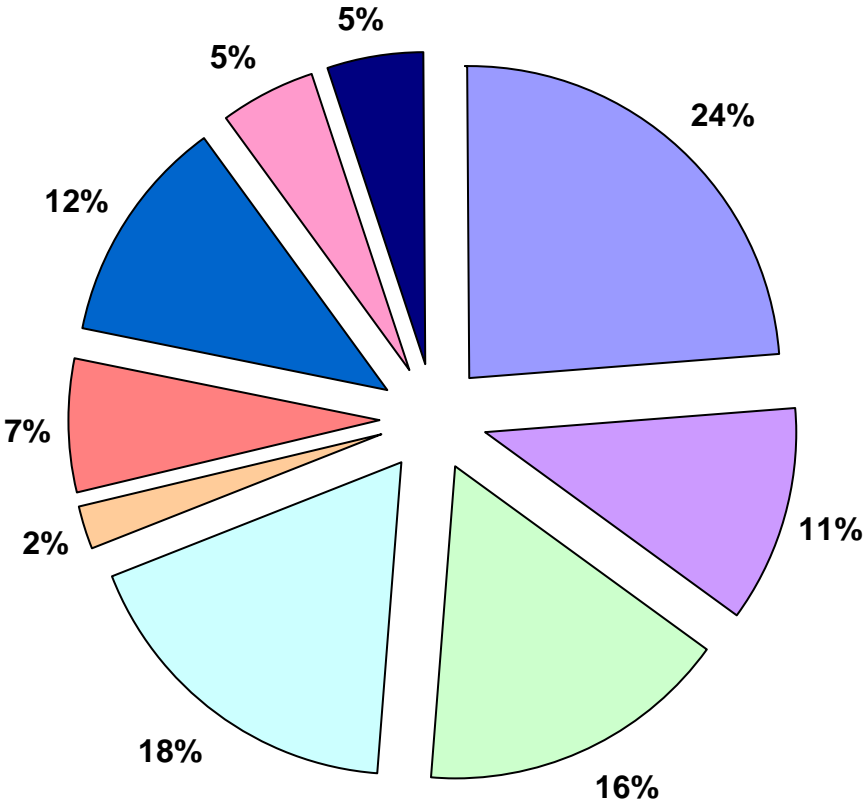
Legend:
- Contacts
- Enlargements
- Digital Image Scanning/Digital Media
- Support Activities
- Section Administration/Training
- Tech Support
- Annual Leave
- Sick Leave
- Other Leave
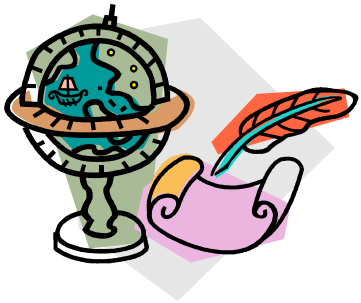
Geospatial Services Section is responsible for producing accurate and quality checked ortho imagery, from a variety of sources. Imagery is made available in soft and hardcopy formats to meet the needs of GIS implementation in support of FSA Service Centers. In addition, the Digital Services Section was tasked to flight plan the acquisition of imagery for the NAIP 2006 year.

Cartographic features such as scales or legends accompany hardcopy digital products, thus enhancing usability. Responsibilities of the Digital section include:

- County Index maps created with quarter quads overlays
- County, State, and National Status Maps containing geospatial information
- Special projects including ortho generation, compressed imagery production, and color balancing of county imagery
- Detailed flight planning status maps by county and state
- National flight planning status map

Strategic Planning

Geospatial Services (formerly Digital Section) completed its sixth year as a section in the Geospatial Branch. Equipment, process improvements, and training were goals established and achieved to include:

Process Improvements

- File manipulation scripts written and improved
- Creation of shape files for flight planning instead of text files

Training

  - Flight Planning - 1 Employee
  - ASPRS Conference - 1 Employee

Accomplishments

Production

Digital Ortho Quarter Quads produced - 177
County mosaics reprojected - 8
Compressed county mosaics produced - 67
Recompressed county mosaics - 5
NAIP 2006 states flight planned - 48
National shapefile of DOQQ coverage for NAIP 2006

Special Projects

Historical imagery for New Orleans
Geospatial One Stop metadata entry
Metadata template update for ccms and county shapefiles
Evaluation of accuracy for 6 inch imagery for Stanley County, North
Carolina

Higher accuracy DEM test for 3 areas in California
Georeferencing of 35mm slides for Hancock County, Iowa
Flight planning software evaluation
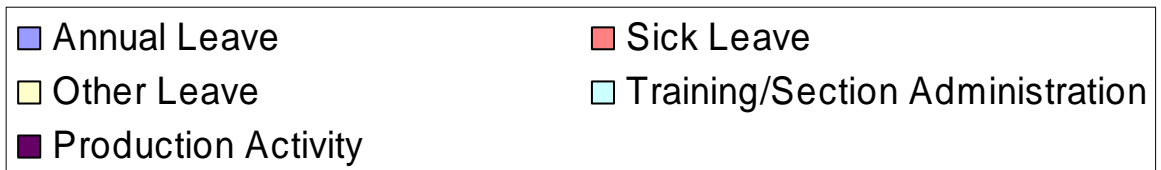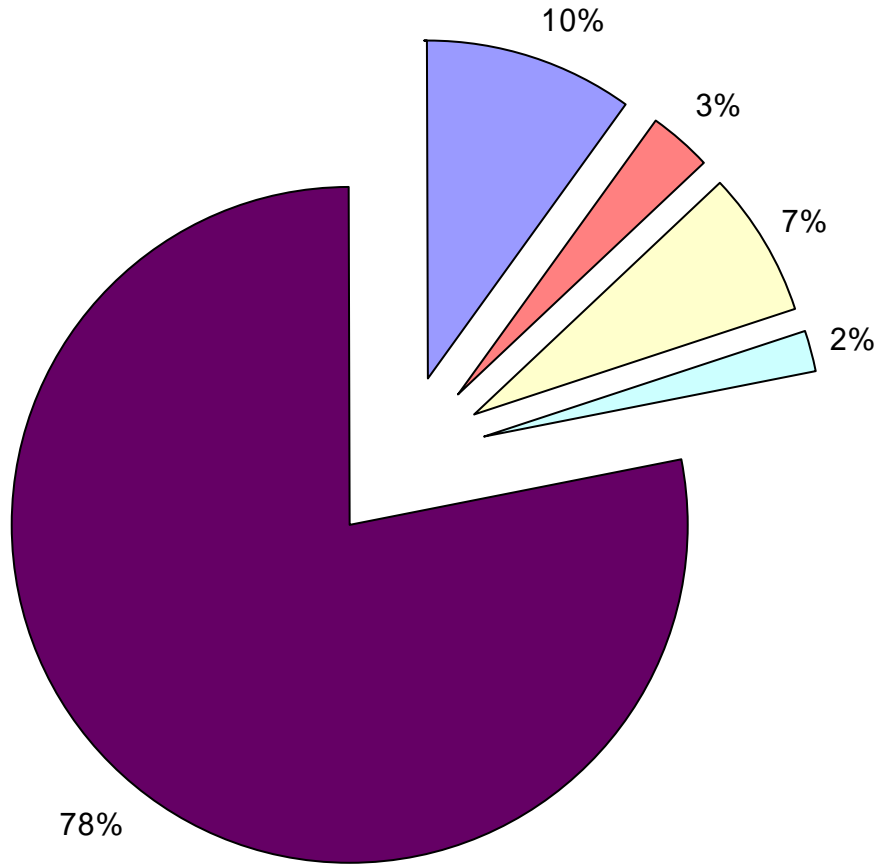Michigan - Converting CIR imagery to false natural color

Geospatial Services Section Activity Report

Activity	Hours	% of Time
Annual Leave	1,094.75	10%
Sick Leave	361.75	3%
Other Leave	789.75	7%
Section Administration	146.75	1%
Training	40.00	1%
Detailed Activity	00.00	0%
Production Activity	7,152.50	78%
Total	11,286.50	100%

Production Activity Defined

Activity	Total hours
Product Development	1066.25
Mosaicking DOQQ's	13.50
Project Preparation	41.50
Special Projects	413.00
NAIP Flight Planning	1689.25
Special Digital Ortho Projects	2389.75
Ortho Production	1313.00
Special Digital Ortho Projects	1205.00

Geospatial Services Section
Activity Report

10%

3%

7%

2%

78%

■ Annual Leave	■ Sick Leave
■ Other Leave	□ Training/Section Administration
■ Production Activity	

The Service Center Support Section provides technical support and assistance on digital imagery related issues to Farm Service Agency (FSA) Service Centers, State Offices, and Headquarters offices as well as to other government agencies and the public. The Service Center Support Section also supports APFO and FSA in evaluation and testing of software applications and in the development of processes and methodologies to improve efficiency in all aspects of geospatial business.

Planning and Project Management

2006 Index Scanning Project – Participated in the development of the requirements document, contract, inspection process, status report to congress, and recommendations and research for future vault scanning endeavors. Visited the Center for Earth Resources Observation and Science (EROS) in Sioux Falls, South Dakota, to learn how the United States Geological Survey (USGS) is accomplishing the scanning of historical data residing in their vault.

2006 National Agriculture Imagery Program (NAIP) Utah Absolute Control Pilot – Participated in a pilot project to move NAIP from a relative accuracy specification to an absolute accuracy specification. Work included project research and setup, coordination with FSA, Service Center Agencies (SCA), Automated Geographic Reference Center (AGRC) and National States Geographic Information Council (NSGIC) representatives, acquisition of control via existing photo control databases and in partnership with Utah's AGRC, research on cost of purchasing control from private sources, initial database development, inspection process development, and actual inspection of deliverable products for horizontal accuracy. Inspection results and report pending completion of inspection.

2005-2006 NAIP Survey – Developed email-based 2005 survey and collected, scored, mapped, and provided survey results to vendors and the public. Developed web-based 2006 NAIP survey and routed through Washington DC for approval and dispersal. Presently waiting on Washington DC personnel to issue official Notice.

35mm Slide Scanning Project – Piloted methodology and study on scanning, mosaicking, and compressing into county coverages 35mm county compliance slides.

Coordination and follow up with FSA and NRCS state and county personnel. Comprehensive report on the project provided by Geospatial Section.

Information Sheets - Created information sheet on the topic of replacement imagery. Updated and maintained information sheets on topics ranging from NAIP, Common Land Unit (CLU), Geographic Information Systems (GIS), Data Viewers, and compression.

Geospatial Services Branch Construction – Took an active role in the design, inspection and network wiring of the new Geospatial Services Branch. This involved the over all design of the office space, placement of electrical and network outlets, coordination with administration and other APFO branches, coordination with the architect and construction personnel, and midterm and final inspections.

Imagery For The Nation (IFTN) – Maintained good coordination and contact with representatives from the National States Geographic Information Council (NSGIC) on issues related to NAIP, which potentially affect IFTN. Much of this involved the coordination of horizontal and vertical accuracy standards for NAIP and IFTN.

2006 NAIP Contract – Participated in the review and update to the 2006 NAIP Contract. Also began work on proposed or possible changes to the 2007 NAIP contract.

2006 APFO Strategic Plan – Participated in the review of the 2006 APFO Strategic Plan (Draft).

Research

Compression Testing – Performed compression testing on various imagery datasets utilizing numerous software suites, to compress data to primarily MrSID MG3, JP2000, and ECW formats. Reviewed results for potential benefits and pitfalls of one format over another with respect to deliverable products for NAIP. Initial finding presented at the Autumn NDOP meeting.

Data Conversion – Researched processes for converting 3-band natural color imagery to a color infrared product utilizing ERDAS Imaging software.

4-Band Imagery – Researched possible affects of implementing 4-band data acquisition and delivery for NAIP; file sizes, compatibility issues with MrSID MG3 compression, compatibility issues with ArcGIS software, and a 4-band geotiff product.

Accuracy Specifications – Extensively researched absolute accuracy specifications for NAIP with regards to existing criteria and standards, to include but not limited to National Map Accuracy Standards (NMAS), National Standards for Spatial Data Accuracy (NSSDA), American Society for Photogrammetry and Remote Sensing (ASPRS), and other applicable standards.

Elevation Research and Testing – Participated in elevation testing of Interferometric Synthetic Aperture Radar (IFSAR) Digital Elevation Models (DEM) versus National Elevation Dataset (NED) (work completed by Cliff Ruben). Results presented at 2006 ASPRS conference in San Antonio. Extensive research on IFSAR and Light Detection and Ranging (LIDAR) acquisition technologies for creating highly accurate elevation models.

Presentations /Conferences/Training Provided and Received

FSA State Office Training – Delivered introductory presentations (3) on NAIP and a variety of technical issues related to viewing/using digital ortho imagery in ArcGIS, to FSA State GIS Coordinators/Specialists.

ASPRS – Presented National Elevation Dataset (NED) versus IFSAR DEM Elevation Study results and future DEM needs for digital ortho imagery acquisition.

Intermap Technologies – Visited Intermap Technologies in Denver, CO, to discuss and investigate IFSAR acquisition and the current USDA Natural Resource Conservation Service (NRCS) contract.

USGS Center for EROS – Investigated historical film scanning techniques for accessibility.

APFO/NCGC Charter Meeting – Attended APFO/NCGC Charter Meeting and presented overview of the 2006 Index Scanning Project. Recorded minutes for this week-long meeting.

GIS Coursework – Took Advanced Analysis with ArcGIS, and Creating and Editing Parcels with ArcGIS.

USDA Planning Meeting – Attended USDA Planning Meeting, and presented an overview of the 2006 Index Scanning Project as well as an overview of the 2006 NAIP Absolute Control Pilot.

United States Forest Service – Presentation on NAIP at the Forest Service Conference in Ogden, UT on March 31.

Utah Geographic Information Council (UGIC) – Presentation on aerial imagery and NAIP at UGIC annual conference June 7-9.

National Digital Orthophoto Program (NDOP) – Attended general meeting and subcommittee meetings in 2006. FSA representative of general membership and member of technical subcommittee. Presented at the technical subcommittee meeting in Denver, CO. Presented at the general meeting in Tucson, AZ October 23-26.

Community Involvement

-Teaching GIS and geography concepts and software usage to students in grades 3 and 6 at Hillsdale Elementary. This is generally done once a week for a one hour period.
-GPS/GIS workshop for K-12 teachers at Alta, UT. Participation was part of week long training for Utah school teachers involving GPS, GIS, natural resources, and curriculum development.
-GIS Day. Presentation on aerial imagery to about 1600 students over a two day period. Students from elementary and junior high schools from the Wasatch front were given presentation on GIS basics, aerial imagery uses, uses for GIS in city governments and archeology, and GPS basics.
-Participation on the Utah Coalition for Geographic Information Systems Education. This coalition coordinates the training of K-12 teachers in both public and private schools throughout Utah, coordinates and presents GIS Day, and oversees the enterprise ESRI K-12 GIS license for the state.

Agency and Department Team/Committee Assignments

-FSA Compliance Team – Participation in teleconferences and assignments related to potential changes or options for the FSA compliance program.
-Color Sample Team – Technical assistance with image samples used for the NAIP program.
-2006-2007 Membership to ASPRS.
-APFO/NCGC Charter Team – Took meeting notes, presentations and general participation in the meeting.
-USDA Planning Meeting – Presentations and general participation in the meeting.
-FGDC Cadastral Subcommittee – Participated in teleconferences, emails, and telephone calls regarding cadastral issues for FSA with special attention to the CLU program.
-2006 Inter-Agency Digital Imagery Working Group (IADIWG) – Coordinated and did much of the preparation for the meeting held at APFO Dec 13-14. Participation on monthly teleconferences and IADIWG assignments.
-Geospatial Data Management Team (GDMT) – 2006 Team Leader. Planned the agenda and lead a monthly teleconference of SCA representatives. Coordinated with team members, subgroups, and the steering committee on a variety of projects and issues. Coordinated between the GDMT and other teams and agencies.
-Monthly GIS teleconferences – Provided technical information and answers to questions from national and state participants.
-Vault Scanning Team – Provided technical and organizational support on issues such as data formats, metadata, naming systems, and time tables.

Data Provided

Reprojection Work – Reprojected several Compressed County Mosaics (CCMs) utilizing GeoExpress 5 and 6.

CLU w/ CRP Work – Filled 5 custom orders for CLU that contains Conservation Reserve Program (CRP) acreage.

Freedom of Information Act (FOIA) Work – Researched, coordinated, and provisioned data to satisfy FOIA request and subsequent legal decision in the State of Montana. This required multiple emails, telephone calls, and face-to-face discussions between individuals in Washington DC, Montana, and APFO.

Service Center Support Section Help Desk Support

Answered over 350 customer questions via email, in person, and phone inquiries.

The Technological Services Branch provides Information Technology security, Project management, data management, Research and Development and support requirements for agency specific applications. Under the Technological Services Branch are two other sections:

The Digital Data Management and Distribution section performs data ingestion, archiving, distribution and fills large custom digital product orders.

The Application Development section supplies specific production application development while providing support and/or development of custom applications.

IT Security

- Certification and Accreditation is being reviewed and maintained for both APFO production systems and GDW, with minimal security risks found for either system.
- There were no IT related security incidents in FY06.
- Disaster Recovery is being reviewed and maintained for APFO and GDW.
- All APFO databases have been reviewed for security levels and user permissions and changes have been made as appropriate.

Application Development/Implementation

In the last year, ITSB has developed and/or implemented the following:

- Resource Data Gateway - APFO continues working with ITC (Fort Collins, CO) to expand and improve the Resource Data Gateway for delivery purposes of CCM's to Services Centers and other USDA agencies upon request.

- APFO implemented a COTS application (EarthWhere) in FY05. This application was originally intended to enhance and increase APFO's internal production systems. EarthWhere became available as a production tool in January 2005.

Since its implementation, EarthWhere has evolved into a Public Delivery tool known as DPS (Data Provisioning System). In FY06, APFO contracted for a new module to be developed in conjunction with the existing EarthWhere application to enhance our ability to provide on-line customer ordering capabilities. Full implementation of this module is expected to be completed by May 2007.

- Inspection applications – Management and maintenance of these applications is ongoing as we continue to improve our inspection processes.

- Shipping applications – APFO purchased and implemented a new shipping system to expedite customer requests of data on media or photographic materials.

- Upgraded existing Oracle databases APFO spent considerable time redesigning Oracle based forms and applications to allow for improved user capabilities.

- Provided application support and development on behalf of Sales Bulk Pricing efforts.

APFO TSB FY2006 Accomplishments

- Customer Help Desk – APFO implemented ITSD's Merlin Magic Help Desk, passing all requests for support of enterprise applications to ITSD personnel. APFO TSB personnel continue to support in-house applications.
- Implemented Project Management process to ensure coordination and implementation of major requests, applications, and new requirements.
- Completed migration of legacy systems; ensuring APFO complies with Security and Accreditation requirements.
- Completed renovation of dark rooms no longer in use, to provide office space for IT staff.
- With the assistance of FSA and ITSD, initiated a project to replace existing legacy telephone system with VOIP system. Installation of the new system is expected to be completed by April 2007.
- Designed and implemented database to support scanning and accounting of over 10,000 photo indexes.
- Implemented Bulk Order Media Storage System to allow for quick release of a state or the entire US within 3 days of request.
- Voluntarily participated in the Rapid Support Working Group (RSWG) which provides a coordinated effort to make imagery available quickly in response to disasters within the US.
- Implemented and developed processes to make NAIP data available as quickly as possible to other Federal agencies during disasters.

- APFO migrated from previous versions of APFO web site to the FSA standard design, adding new features and training additional staff in document and change management of APFO web pages.
- With the assistance of FSA ITSD, APFO received approval for the purchase of new laptops, high end PC's and GIS workstations. Fielding is expected to be completed in April, 2007.
- APFO TSB ingested 23 TB (terabytes) and distributed 70 TB in FY06.
- Implemented a web based customer support application to provide tracking of imagery related issues and questions.

APFO GDW FY2006 Accomplishments

- In FY2006, APFO received funds specifically earmarked 'for the enhancement and management of the agriculture imagery catalog repositories and data warehouses". The Functional Requirements were as follows:

    1) Enhance APFO's ability to archive historical film and to extend the storage capabilities of future annual NAIP acquisitions. APFO acquires approximately 30 TB (terabytes) of imagery annually. With current capabilities, APFO is able to maintain the most recent years of data on line, with all previous years stored "near line" (tape retrieval). This inhibits APFO's ability to meet presidential and E-Gov initiatives of making our data easily retrieved and readily available.
    2) Provide a standardized historical archive online for both federal and public use. This data is currently available only as a hardcopy photo, with several hours of staff labor required to produce a single photo. Providing a web based method of search and retrieval allows the customer to select only his or her Area of Interest.
    3) Provide automated means for long-term archival and retrieval.

- The Solution:

    Based on the established requirements and mandates, APFO quickly realized that the existing server room would not support additional equipment due to lack of space and fluctuating temperatures. APFO determined this project would occur in 2 parts:

    1) Establishment of New Data Center – As stated previously, the existing server room cannot accommodate any more equipment. Over heating has also been a concern. As there is not any workable space located adjacent to the existing server room APFO opted to "retro fit" space recently vacated as a result of the reorganization.

2) Purchased equipment to accommodate archival and distribution of data. This project is expected to be completed and the new data center functional by March, 2007.

- During FY06 the GDW team was tasked with reloading both the entire MDOQ dataset and all of the FY03 and FY04 NAIP imagery, in a compressed format, to enable more economic use of the DMX3000 SAN storage. Over the course of the FY06 time period, approximately 30TB of source imagery was processed and subsequently loaded, using a 5 to 1 compression ratio, into the GDW.
- As part of the MDOQ reloading efforts, coverage gaps were identified and filled with raw DOQs from APFO, NCGC, and ITS inventories, resulting in 99% CONUS coverage for the MDOQ theme.
- Completed loading of the FY05 NAIP 1m dataset.
- Enhanced the GDW data management procedures to enable the loading of preliminary versions of both the 1m and 2m FY06 imagery, to allow more timely access to the NAIP 1m and 2m tiles.
- Continued to work with the FSA GIS Office to replicate the county based CLU datasets to a single national scale dataset within the GDW.

Employee Training

Microsoft TechNet Seminars
Management Training
Oracle
ESRI Conference
FSA GIS Conference
OCIO IT Security Conference

Staff

Two contractors remain on site from Computer Services Corporation (CSC) to assist APFO in development, implementation and management of the Geospatial Data Warehouse. Another contractor is onsite to assist with web based applications in both business and Geospatial environments.

One contracted staff member was transferred to the newly established OCIO ITS organization.

With the recent organizational change, TSB now has a total of six federal employees who continue to support, maintain, and develop production specific applications, database and Web Services for APFO as well as GDW requirements.