# AERIAL PHOTOGRAPHY FIELD OFFICE USDA/FSA/APFO FY 2000 ANNUAL REPORT



# aerial photography field office organizational chart 2000

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# Office Of The Director

We are a unique Federal Government organization providing high quality imaging to the Farm Service Agency, other agencies and the private sector. We are a professional, dedicated work team with shared values, committed to continually improving processes and services to exceed our customers' expectations.

# Office of the Director, Ronald B. Nicholls

"... I know nothing so pleasant to the mind, as the discovery of anything that is at once new and valuable"

# Strategy for A Changing Environment

President Abraham Lincoln established the 'People's Department' (USDA) in 1862, with the full realization that science and technology would advance and secure production efforts of the American farmer. This ideology is most evident in this, the millennial year. Farmers now have the most sophisticated tools available, including global positioning systems (GPS), palm computers, genetics, geographic information systems (GIS), and over a century of documented history on what works and what doesn't.

The Aerial Photography Field Office (APFO) continues this rich history of innovation and service in its role as executor of aerial photographic imagery for the USDA. Technological changes in the production of aerial imagery including the migration from analog to digital imagery, coupled with the rapid adoption of GIS tools has created new opportunities for consumers, and places a greater demand on APFO for digital products and services.

The APFO serves as a depository for aerial imagery dating from 1955 to the present. Demand for historical imagery in a digital format is expected to grow as implementation of GIS in the Federal and private sector continues.

Our FY 2000 Annual Report provides each section at APFO the opportunity to define specific strategies, goals, and achievements experienced throughout the year.

# Resource Management Branch

To insure that the Aerial Photography Field Office operates in an efficient, cost effective manner by providing personnel, supplies, equipment and by furnishing fiscal services necessary for the enhancement of the production of aerial photography products.

# RESOURCE MANAGEMENT SERVICES

Resource Management Services provides overall management support for the Aerial Photography Field Office (APFO) in the following areas:

- Procurement
- Building Management
- Shipping / Receiving
- Budget Management
- Property / Inventory
- Training
- Safety / Security
- Human Resources
- Special Emphasis Program

# Strategic Planning

As APFO migrates conventional imagery to digital data, it becomes necessary to provide knowledge, skills, and abilities to meet the new demands our customers have for products and services. Resource Management is committed to providing resources to include, but not limited to, position management, training and new vendor contacts enabling our diversification of products and services.

#### **Procurement**

Through RMS, APFO provided maximum practicable opportunities in acquisitions to small business concerns, small disadvantaged business concerns, and woman owned small business concerns to include:

- Purchase Orders 327
- Small Business Woman Owned / Set Aside, Disadvantage 155

# **Building/Facility Management**

"Ensure a Save Work Environment by Providing Facility Security" - Facility Security Team Mission

Internal facility incidents were reduced to zero as a result of the Security Team efforts. Other accomplishments include but not limited to:

- Compliance with Department of Justice Recommendations and Mandates
- "All Employee" presentations by SL Police on "Violence in the Workplace" and "Personal Safety and Security"
- Improved and increased all employee awareness
- Fully implemented Employee and Visitor ID cards

#### **Human Resources**

Human Resource Personnel worked closely with the Personnel Division at Kansas City Administrative Office (KCAO) to provide a comprehensive program of personnel services to the APFO. Some statistics during FY2000 include:

- Personnel actions processed 37
- Reassignments 1
- Details 6
- Promotions 6
- Staff 80 employees
- Permanent full- time employees 78
- Permanent part-time employees 1
- Temporary student employee (STEP) 1
- New permanent full -time employees 1
- Retirements 3

#### **Personnel Actions**

#### **Awards**

- Bonuses for outstanding performance 9
- Quality Step Increases 13
- Individual Keepsake 70
- Time Off 7
- Spot 3

# **Employee Development**

- Training requests processed 188
- Preventing Sexual Harassment 83

# **Open Season Activities**

- Thrift Savings Plan (TSP)
- Health Benefits Fair

# EEO / CR Activities / Community Awareness and Outreach

# Training / Activities provided for employees at APFO included:

- USDA Food Drive 404 lbs./Food, \$102/Cash
- Take your Daughters/Sons to Work 31 Children participated
- Women's History "History of Women in the West"
- 15<sup>th</sup> Annual Utah Women's Conference "Discovering the Diversity and Unity of Women"
- 6 APFO Classroom volunteers Adopted School Program
- Replaced Partnership banner Adopted School Program
- Sub-for Santa, 2 Families (\$1020) Adopted School Program
- Donated Books, (34) Adopted School Program
- Donated Computer Equipment Adopted School Program
- Annual Ethics Training

# EEO / CR Activities / Community Awareness and Outreach Cont'd.

- Alternative Dispute Resolution
- Preventing Sexual Harassment
- Basic Training for EEO Advisory Committee Members
- Special Emphasis Program Management Workshop
- 2<sup>nd</sup> Annual National FSA EEO Advisory Committee
- Deaf Awareness Conference
- Deaf Awareness and Sensitivity Training
- Cultural Heritage Week "Year of the Dragon" / South and Southeast Asia Recognition
- Toy Donations Family Support Services
- FSA Listening Session
- HEADS-UP Workshop Utah Hispanic Youth and Unity Leadership Conference Participation
- Affirmative Employment Plan Assessment completion
- APFO EEO/CR Webpage

# Information Technology Services

Provide the Aerial Photography Field Office with timely and effective computer services to successfully and efficiently aid in meeting the mission of APFO.

# INFORMATION TECHNOLOGY SERVICES

Information Technology Services (ITS) supports the APFO by providing computer facilities planning and management services, computer security, computer operations, software development, and customer support services.

Digital imagery products and services in support of Agency initiatives continue to drive IT budgeting, acquisition, integration, development and support services. Priorities are established to meet critical digital imagery production goals and are deterred only by other Agency initiatives, including FFIS, PCMS, BRIO, and FTS2001.

# **FACILITIES PLANNING AND MANAGEMENT**

Key activities included the installation of a new air conditioning unit and assisting in preparations to install digital imagery scanners and additional workstations to be located in Quality Assurance.

# **COMPUTER SECURITY**

IT personnel continually monitor activity to assure computer security, and network equipment procured in FY2001 has secure communications.

#### **COMPUTER OPERATIONS**

Computer operations activities included the installation and upgrade of digital imagery scanners, upgrade to RAID array, switch from FTS2000 to FTS2001, deployment of laptops, APFO FTP-Internet and Intranets configured, and an ortho-stereo workstation upgrade. Generic operations included software upgrades, maintenance, systems backups, and installation and integration of new equipment.

Software development continued on the Digital ortho Photography Production System (DOPPS), Work Order Entry System (WOES), and Inventory Control System (ICS). Programming continues to enhance APFO's web presence.

#### **EXTERNAL CUSTOMER SUPPORT**

External customer support extended into development of processes for digital imagery product integration, Meta data standards development and FSA data management.

The following calendar denotes primary activity and milestones achieved by Information Technology staff in FY2001.

#### October

- Maintenance Agreements (research and updates)
- Received and Inventoried IT Procurements for FY00
- Fiscal Year Data Changes
- DOQ Catalog / Latitude and Longitude values calculated for record headers
- Application Development (Project Management Digital, Hawaii)
- Application Development (Project Management Digital, MDOQ)
- Application Development (Project Mgmt Digital Project File Started)
- Application Development (WOES Optimize)
- Application Development (WOES Marrying Work Orders)
- Application Development (Purchase Order / Requisition Forms)
- RDBMS Redo Logs (Done Weekly every Month)
- FSA Data management Team Meetings

#### **November**

- Designed Business Card Templates for APFO personnel
- Updated Agency Security Report to include Y2K Contingencies
- APFO Internet came online through Kansas City
- Internet Presentation for Aerial Photography Coordination Meeting
- APFO7, CMS, and Catalog developed for Internet
- CASHLINK system upgraded
- Network switch from FTS2000 Services (ATT) to FTS2001 (MCI)
- Oracle Open World Conference
- Completed Personal Computer Upgrades for full Y2K Compliance
- Application Development (Cost Analysis)
- Application Development (Project Management Digital, MDOQ)
- Application Development (DOQ Headers changed to Key Word for Catalog)
- NAPP RDBMS Updates (Done 2 3 times a month every Month)
- Rebuilt Annual Report Charts to continue access to historical data
- Taught Access to FSA BBS through Netscape
- FSA Data Management Team Meetings
- WOES Team Meetings for Digital Product Integration

#### December

- FSA Data Management Team Meetings
- TANGENT Scanner Installed
- DSW300 Scanner Installed
- SLC to NITC Circuit Initiated
- Socet Set 4.2 installed on Test System
- Y2K DAY 1 Strategies Finalized
- APFO IT Investment Documentation and Budget Updated
- APFO Annual Report Cover Designed
- Support for APFO Annual Report Documents, Charts, and Graphs
- APFO Annual Report Converted to Internet Format for APFO Internet/Intranet
- Time System Updated to Handle Additional Flex Schedules
- RDBMS Y2K Readiness Confirmed
- Monocomparator Personal Computers Replaced for Y2K Compliance
- CD Catalog PC Replaced for Y2K Compliance
- Photographic Inventory Support
- Application Development (Time Sheet)
- Application Development (County Coverage)
- Application Development (WOES Digital Products)
- Application Development (LOTUS123 Cost Recovery)
- Application Development (Digital MDOQs Cataloged by Spot Number)
- Ft.Worth NCGC Digital Production Research Visit

# January

- FSA Data Management Team Meetings
- Interviewed Candidates for Advertised Computer Specialist Position
- PCTare Software Upgrade installed for Credit Hours
- CCE PC's Received, Inventoried, Accounts established and Placed
- Employees were Upgraded to Netscape 4.6 and Adobe Acrobat Reader 4
- DEM disk rebuilt for Contracting
- ES3000 SCSI Controller Installed
- Disk Array (8x36Gb) Chassis Installed
- LAN Switch Interfaces Installed
- DSW300 Camera Replaced by LH Systems (upgrade to DSW500)
- DSW200 Ultra 10 Configuration Tested by LH Systems
- Application Development (Ship Service)
- Application Development (Project Management Digital)
- Application Development (WOES Digital Products)

# **February**

- FSA Data Management Team Meetings
- Filled Computer Specialist Position
- 440Mhz Ultra10 Processor to fast for DSW300, replaced w/Ultra60
- Customer Codes updated (FSA County Offices)
- NAPP Indexing System updated
- Inventoried Excess Office Property
- EEO Training for all ITS Staff
- Received and Reviewed ITS Budget Allocation
- Application Development (Leave Balance)
- Application Development (Digital Hawaii)
- Application Development (Digital DOQQ, MDOQ)
- Application Development (Y2K Leap Year)

#### March

- FSA Data Management Team Meetings (File Naming Standards Established)
- Netscape 4.61 added Tech Staff
- Replaced mice on CCE Gateways (fire hazard)
- DSW300 upgrade to DSW500, Kodak6.2i completed
- NAPP Index System updates (recovered lost DWG, created file system for PLT files, updated batch utilities for DLG names)
- Created PDF of USDA Photo Symbols for Customer Use
- Digital America Seminar
- Photographic Inventory Support
- Degrees to NAD1983 Utility developed
- Application Development (Rectify)
- Application Development (Project Management Digital Project File Documentation)
- Application Development (Digital Hawaii)
- Application Development (Meta Data Coordinate Conventions)
- Application Development (Digital Products added to Value Reports)

# <u>April</u>

- FSA Data Management Team Meetings
- Completed Programming for FGDC Metadata compliance
- CCE Laptops Received, Inventoried, Released to ArcView Trainees
- Leave Balance available Reports and APFO20 Entry
- SCITMASTER MSExcel spreadsheet added to Intranet site
- 2 Accounts for Digital section personnel established for DSW500
- Hawaii Project Management and Imagery Inspection (in Test)
- 'Take your Kids to Work Day' 2 children in ITS
- CSU/DSU Reconfigured by MCI to eliminate 'Data Latch Loop Back'
- ArcView Training PC and Laptop Configurations
- Prepared 2001 IT Budget Request
- Internet Links to CBDnet Advertising Aerial Photography Contracts Initiated
- Presented APFO Electronic Access Requirements at EAI Meeting in Washington
- Application Development (Inventory WANDS)
- Application Development (ArcView Hawaii)
- Application Development (Project Management Digital)
- Application Development (DOQQ Extraction from CD & Tapes Automated from the Project File)

#### May

- FSA Data Management Team Meetings
- Computer Room Air Conditioner replaced
- Two Ortho Accounts Initiated
- DNS Entries Requested for APFO FTP, Internet & Intranet
- Server Reconfigured for APFO FTP, Internet & Intranet
- Completed APFO EAI Business Requirements
- CCE Laptops Re-Inventoried and Deployed (Most to CLU Inspection)
- Pyramid Export and Home File Systems were expanded
- Modified Sort/Inspection on WOES for QA of FSA County Orders
- Application Development (Workload Reports)
- Application Development (FSA County Offices)
- Application Development (WOES, Point-of-Contact)
- Application Development (Project Management Hawaii)
- Application Development (Project Management PSU)

#### June

- FSA Data Management Team Meetings
- Initiated Efforts to Have Training Facility Ready for FFIS
- SCAN File system was completed
- Hawaii Status Maps added to Intranet
- Met with Kansas City Personnel Staff on Customer Service
- Conference with FFIS/CORE Personnel
- IT Budget Call Completed (IT#72, IT#84)
- IT Budget Call Completed (ITSS)
- Modified Quad Search Sorts by Date vs. Roll Number
- Evaluated Potential for APFO to House Security Imaging System
- Digital Product Functionality Audit
- WOES Audit
- APFO Internet and Intranet Sites moved to APFO Server
- APFO/FS FARGO ID Printer Installed in Admin
- Quarterly Inventory/Reconciliation Support
- ESRI Conference (2 ITS Personnel)
- Application Development (Inventory)
- Application Development (Project Management Digital)
- Application Development (Project Management PSU)

# July

- FSA Data Management Team Meetings Ortho Stereo Workstation Upgraded
- APFO45 Updated to Handle Alphas
- Accounts for 2 personnel updated on Ortho3 and Ortho5
- SocetSet 4.2.1.1 Updates on Ortho 3, Ortho 5, Ortho 9, Ortho 11
- New Products and Services Team completed Task, presented to Leadership Team, accepted and added to APFO Intranet Site
- FIPSCODE PDF Tool added to Internet and Intranet Sites
- PSU Status Maps added to Internet and Intranet Sites
- Identified w/Kent APFO ESRI product requirements
- Application Development (TIME Time Off Award)
- Application Development (Catalog WEB)
- Application Development (GIS)
- Application Development (Project Management Digital)
- BSC3270 Communications Upgrade

# August

- BPR Participation on GIS Data Warehouse Initiatives
- ES3000 RAID Disk Configurations and Allocations
- Socet Set
- Maintenance Agreements
- PCMS
- Application Development (FFIS)
- Application Development (Project Management Digital)
- Application Development (DLT)
- Ultra5 / Solaris OS
- Metadata Process shared with Forest Service

- **September** Received FY2000 IT Allocation
  - FY2000 IT Procurement
  - Application Development (Effective Dating MISC)
  - Application Development (Meta Data Digital)
  - Application Development (Meta Data FGDC)
  - Application Development (Digital MDOQ Batch Process Automated from Project File)
  - Application Development (DLT)
  - Ultra5 Configurations **HP** Inventory

# **Contracting Section**

To procure quality aerial photography which exceeds customer expectations by promoting positive partnerships and excellence in customer service and products.

# CONTRACTING SECTION

Contracting is responsible for the procurement of aerial photographic services and related materials for the USDA and other Federal Agencies. Coordinating requests for new aerial photography with existing coverage, flight planning projects, preparing solicitations, proposals and administering the subsequent contracts are among the Contracting Section's primary functions. Contracting is also responsible for providing contract authority for Information Technology acquisitions, special requirement purchases, and other procurement support activities.

# **FY00 ACHIEVEMENTS INCLUDE:**

- New Aerial Photography/Imagery Applications Processed 27
- Flight Planning 34,745 linear miles 52,160 square miles
- PSU Site Photography Contracted 37,520 Sites
- Solicitations Prepared and Issued 16
- Contracts Awarded 31 covering 38 project areas
- Contract Value \$4,212,342.57
- Administrative Charge \$197,558.49

# **FY00 PROJECTS SUMMARY**

AGENCY	PROJECTS	LINEAR / SQUARE MILES	CONTRACT VALUE	PERCENT OF TOTAL
USFS	22	31,034 / 48,600	\$1,036,681.32	25%
NRCS-NRI	15	37,520 Sites	\$3,019,112.89	71%
NRCS-WI	1	3,711 / 3,560	\$157,012.41	4%
TOTALS	38	34,745 / 52,160	\$4,212,342.57	100%

# **CONTRACT ADMINISTRATION**

Sixty-seven project areas were administered in FY2000. Of the 67 project areas, 31 were accepted during the fiscal year and 36 will carry over into FY2001. Of the 36 projects carried over, 26 have been 100% flown pending inspection, 5 were partially flown requiring completion in FY2001, 4 were active projects with flying seasons still open, and 1 to be terminated for the convenience of the government.

# **CONTRACT PRICING**

The average price per linear mile of blocked aerial photography (weighted according to project size) decreased by 5% compared to FY99; from \$36.03 to \$34.34. The average price per PSU Site aerial photography/imagery decreased by 23%, from \$104.09 to \$80.47, compared to FY98 (no PSU Sites were contracted in FY99). The overall weighted average price per unit for FY2000 was \$58.29.

# SMALL BUSINESS CONCERNS

The Contracting Section, operating under an extension of the Small Business Competitiveness Demonstration Program, solicited sources for aerial photography under a 100% Set-aside for Small Business Concerns. This resulted in Small Business Concerns receiving 71% of the total contract dollar amount, with Emerging Small Business Concerns receiving 27% of the total.

# SPECIAL ACCOMPLISHMENTS

Revenue totaling \$401,866.70 was generated for APFO furnished products required under the aerial photography contracts awarded. This combined with the \$197,558.49 in administrative charges amounted to a total of \$599,425.19 in cost-recovery revenue.

Contracts for computer equipment, and software acquisition, amounted to \$624,980.46. These purchases were primarily for an automated media storage system to better manage the increasing volume of APFO's digital imagery, and to replace APFO's end-of-life Pyramid System, supporting APFO's automation. Contracts for computer maintenance totaled \$210,248.04. Also provided contracting authority for approximately 350 Purchase Orders covering general and specialized supplies, equipment, and services for the operations and support functions of APFO.

# SPECIAL ACCOMPLISHMENTS Cont'd.

The Contracting Section also provided specialized services to NRCS in support of their National Inventory Program (NRI). Contracts for aerial photography and digital imagery were awarded for 37,520 Primary Sample Unit (PSU) Sites totaling \$3,019,112.89. 26,013 PSU Sites were awarded to aerial film contractors and 11,507 were awarded to a digital imagery contractor. Web based status maps were successfully developed and utilized for project management purposes.

#### **CONTRACT TOTAL PRODUCTION**

AGENCIES	REPORTING YEAR Linear Miles Square miles		PREVIOUS YEAR Linear Miles Square miles	
FSA - HI USFS NRCS - PSU Sites NRCS - WI/HI OTHER	N/A 31,034 37,520 Sites 3,711 N/A	N/A 48,600 37,520 3,560 N/A	N/A 36,882 N/A N/A 7,281	3,225 53,920 N/A 3,225 10,439
TOTALS	72,265	89,680	44,163	70,809

# **CONTRACT TOTAL COSTS**

AGENCY	FISCAL YEAR 00	FISCAL YEAR 99	
FSA USFS NRCS OTHER	0.00 1,036,217.27 3,176,125.30 0.00	330,615.00 955,177.84 330,615.00 207,927.30	
TOTALS	\$4,212,342.57	\$1,824,335.14	

# **Quality Assurance**

Assure customer needs are met through the application of TQM methods and procedures to products received, produced and released from the Aerial Photography Field Office.

# QUALITY ASSURANCE SECTION

QA is directly responsible for monitoring, extrapolating and disseminating status of FSA Counties, NAPP Photography and related data base information. Inspection of FSA County hardcopy enlargements, Common Land Unit (CLU), APFO website update information including; Maintenance of the Service Center GIS priority listing (SCIT), APFO-7 report, Catalogue Listing and Mosaic and CLU status maps are all services provided by the QA Section.

# **ACHIEVEMENTS**

# **NAPP Film Inspection**

- Rolls received 725
- Rolls inspected 715
- Rolls duplicated and inspected 725
- Rolls shipped to EROS Data Center 204

# **FSA Photography**

 Shipped 209 FSA counties of new photography or 49,855 scale accurate enlargements.

# **Common Land Unit (CLU)**

Inspected 112 counties as produced by the Digitizing Centers

# Service Center Initiative Team (SCIT) Listing

• Received the listing in November 1999, imported it into spreadsheet format and built what is today "ScitMaster" listing as posted on the Intranet site.

#### Web site Maintenance

 APFO-7, Catalogue, CLU and Digital Mosaic Status maps are being updated weekly/monthly and posted on the APFO Intranet site.

# **ACHIEVEMENTS** - Cont'd

- Maintained CIRP/NAPP roll inspection service 17 days
- Maintained BW/NAPP inspection service 17days
- Forest Service photographs laminated 12,976
- Contact photographs trimmed 6,829
- FSA Photographs bound 62,918
- FSA Rectified enlargements 49,855
- 20% REDUCTION in sick leave use over FY-99
- Special Request detail to USGS-Reston by USFS-R4-80 Hrs.

# Sales Branch

To serve each customer as their primary resource of technical information concerning USDA related aerial photography and digital imagery of the United States and its territories. To account and reconcile funds from all government agencies as well as private customers.

# **SALES**

The Sales Branch is responsible for the receipt and processing of work orders and coverage requests for aerial photography and digital imagery products and services. Sales is the liaison for the Aerial Photography Field Office to other government agencies and the public. Sales maintains and monitors all fiscal activity dealing with the sale of aerial photography and digital imagery.

# **ACCOMPLISHMENTS**

**Salt Lake County Utah - University of Utah (U of U) Digitizing Project -** APFO contracted with the U of U to digitize the Salt Lake County, Utah series of photo indexes and to develop a GIS-based coverage application. Sales assisted the contractor in understanding APFO's technical requirements, provided product evaluations and negotiated changes. Walk-in customers use this software to make coverage selections.

**Digital Work Order Processing and Reporting -** It took a joint APFO effort to accomplish accounting for digital products and services in WOES. Product codes and prices were analyzed, modified, and established. Statistical reports were programmed and tested. Sales backfilled the 1st quarter of the Digital Section's FSA production into WOES. The Sales section processes the APFO Archive, FSA Service Center and NRCS digital work orders. On an order by order basis, Sales began processing work orders/research requests for B&W and Color Digital Image Scans.

**Kings Co., CA Photomap Scans and Plots Project -** APFO participated in a FSA photomap scans and plots pilot project for Kings Co., CA. Managing this project in thirds with a turnaround time of 5-7 days resulted in having minimal impact on Service Centers.

The Ellis Co., KS Digitizing Center analyzed the possibilities of using the scans or plots to digitize from. Two Kentucky Service Centers also participated in receiving scans and plots from the APFO. Sales role was to coordinate these projects with the Service Centers, APFO and the Digitizing Centers.

**FSA Service Center Address Access -** ITS and Sales resolved APFO's growing need to access WOES FSA Service Center address information. The FSA customer code table was revised edited and updated.

**Detailed Activity** - Sales employees throughout the year were detailed to activities to include:

- Printing contact prints Photo Branch
- PSU Inspection Contracting
- Blipping, laminating, zoning, inspecting material Quality Assurance

# **TOTAL DOLLAR VOLUME - \$2,583,465.65**

# **SALES DIRECTLY BILLED**

CATEGORY	BILLED AMOUNT	
Federal users Non-Federal, tax-supported users	\$983,224.50 \$161,153.00	
TOTAL	\$1,144,377.50	

# **COLLECTIONS**

CATEGORY	DOLLAR AMOUNT	
Cash & check receipts Credit cards receipts	\$334,928.55 \$857,040.15	
TOTAL	\$1,191,968.70	

# **TOTAL PRODUCTION & SALES**

AERIAL PHOTOGRAPHY	UNITS	DOLLARS
Photographic products & services	703,598	\$4,023,428.75
DIGITAL IMAGERY		

# STATISTICAL COMPARISON UNITS PER ORDER

FISCAL YEAR 00	FISCAL YEAR 99	
Units per order 54	Units per order 68	

# Photogrammetric Services Branch - AT Section

We are committed to exceeding the expectations of our customers by providing high quality products: rectification data of aerial photographs using aerotriangulation methods; digital indexes of aerial photo coverage and digital orthophotographic mosaics and enlargements. We are committed to meeting the challenge of new technology and to continually improving our products and services

# PHOTOGRAMMETRIC SERVICES BRANCH (AT) Section

# MISSION:

The Analytical Aerotriangulation (AT) Section provides rectification data to the Photo Lab for printing of scale-corrected photomap enlargements. Rectification values (scale of imagery and camera tip/tilt angles) are determined by comparing precise image measurements with known ground distances, and applying correction factors for camera and lens distortion and atmospheric refraction. The (AT) Section also provides Geographic Information Systems (GIS) support through applications programming, systems development, and training.

# **STRATEGIC PLANNING:**

The (AT) Section has continued to provide rectification data for photomap enlargements during the transition to digital products. The number of Service Centers requesting photomaps has been decreasing, with a current carryover workload of 215 counties. The phase-out plan for photomaps is continuing to be developed, which will include the retraining and reassignment of employees, excessing of (AT) equipment, relocation of work areas, and revised production schedule.

Four (AT) employees have been cross-training and working in the Digital Section part-time. This has reduced the rectification production, but increased the digital mosaic and orthogeneration production this year. Two employees have been detailed to the (AT) Section from the Black and White Photo Section.

# **DEVELOPMENT:**

#### **Training:**

	<u>Employees</u>
GIS/ArcView-	7
Socet Set	4
Albany	3
Cartographic	2
Conferences:	
ASPRS National Convention	1
ASPRS Intermountain Region Seminars (2)	5
LH Systems Users Conference.	1

# **ACCOMPLISHMENTS:**

NUMBER OF COUNTIES RECTIFIED	198
SQUARE MILES RECTIFIED	149,532

# **MONTHLY RECTIFICATION PRODUCTION (Square Miles):**

Month	FY-2000	FY-1999
Oct	10,334	15,910
Nov	11,841	13,186
Dec	12,355	13,079
Jan	10,626	13,047
Feb	12,525	14,657
Mar	13,196	18,833
Apr	8,972	13,592
May	14,518	18,045
Jun	12,597	15,759
Jul	11,393	23,582
Aug	16,019	22,698
Sep	15,156	20,348
Totals	149,532	202,736

# **GIS SUPPORT:**

- 1. <u>Index system for digital mosaics</u>. This system was originally developed in FY1999 and completely re-engineered to meet the Digital Sections' requirements. Some of those requirements include a listing of the DOQQ's with their respective catalog, file and media numbers for quick access, and a report that would query the ORACLE RDBMS.
- 2. <u>Status map system</u>. The status map system was developed primarily for the Quality Assurance/Quality Control section. This system allows any user with ArcInfo access to print reports and maps on a national, statewide, and county level. These maps were crucial for the DOQ and DOQQ ordering. When the programs were completed, the production of orders increased two-fold, while reducing the number of employees by 66 percent.
- 3. <u>Systems Support</u>. GIS requirement in order to ensure the programs ran efficiently. The support ranged from setting environment variables in a user's account, to modification of a user's "startup" files.
- 4. <u>Scanning FSA Photomaps</u>. Photomaps from Service Centers have been sent to the APFO for scanning. The photomaps were scanned, plotted onto paper, and then compressed and written to CD-ROM disk for distribution to the digitizing centers. This process is still under development, but has potential for USDA digitized Common Land Units. The overall results were very positive from the Service Centers.
- 5. <u>Digital Ortho Inspection Process</u>: This process is currently being investigated to eliminate any bad DOQ's or DOQQ's before the mosaicking occurs. APFO personnel are considering the possibility of using DLG 1:24,000 road and hydro (rivers) layers to lay on-top of the existing ortho imagery to view their alignment. If no DLG were available, then a process using the DRG (Digital Raster Graphics) topographic maps would be used. This process has big potential, and will continue development through FY2001.

# Photogrammetric Services Branch - Digital Section

We are determined to provide our customers with the highest quality geospatial products, with emphasis on process improvement and customer satisfaction.

# PHOTOGRAMMETRIC SERVICES BRANCH Digital Section

Digital Services Section is responsible for producing scale accurate and quality checked 7.5' tiled mosaics (in county format), from USGS DOQQ's. Imagery is made available in soft and hardcopy formats to meet the needs of GIS implementation in support of FSA Service Centers.

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 quad overlays
- County, State, and National Status Maps containing geospatial information
- Maintain and upgrade DOQ library and county archive on CD and 8mm tape
- Maintain, in county format, archived 7.5' tiles

# Strategic Planning

Digital Services completed its second year as a section in the Photogrammetric Branch. Equipment, staffing, process improvements, and training were goals established and achieved to include:

# Equipment

- 4 additional 8mm tape drives on line
- Ortho12 internal memory upgraded to 256kb
- Video card adaptor cable installed on Ortho4
- 10 CD storage cabinets for CD library

# **Library Additions**

- 4,708 CD's added for a total of 10,945 CD's
- 528 8mm tapes added for a total of 1,262 8mm tapes
- 63,809 DOQQ's added for a total of 126,835 DOQQ's

# **Staffing**

Additional three (3) employees (part time) into Digital Section from AT

# **Process Improvements**

- Batching of CIR to B&W conversion routine
- Batching of mosaicking process
- Batching of jewel case labeling routine
- Upgrade to version 4.2.1.1 of Socet Set software
- Refinement of metadata collection

# **Training**

- 2 employees attended URISA Conference in Orlando, Florida
- 1 employee attended ESRI Conference in San Diego, California
- 3 employees attended Socet Set User Group in San Diego, California

# **Accomplishments**

#### **Production**

- County mosaics completed 189
- Digitizing center projects 109
- SCIT projects 75
- NRCS Soils Explorer projects 3
- Special projects 2
- B&W mosaic plots completed 157
- Square miles completed 143,132
- 7.5' tiles archived 4,442
- DOQQ's seamed 21,026

# Photographic Services Branch

# **Technical Support**

Empowered technicians performing technical services that meet the needs of our internal customers.

# Black and White Section

Working in unity with our customers in order to meet their expectations. Provide the highest quality black and white aerial photography products available.

# Color Section

The Color Lab Mission is to provide Quality in the form of Value, Service and Customer Conformance.

# PHOTOGRAPHIC SERVICES BRANCH

The Photographic Services Branch consists of APFO's Black and White Photographic Section, Color Photographic Section and Technical Support Section.

The Technical Support Section (TSS) maintains equipment, designs and fabricates electronic systems, monitors laboratory environmental conditions and provides research and development for unique laboratory equipment to support the various functions of the Photographic Sections.

#### STRATEGIC PLANNING

Photographic Services Branch completed the first phase of a Facilities Management Plan that will transition the existing photographic laboratory to an imaging laboratory. The Facilities Management Plan creates space within APFO for film vault expansion and space for imaging activities such as scanning, image mosaics, digital hard copy and future digital products.

Technical Support Section achieved the following objectives under phase one of the Facilities Management Plan:

- Saltzman Enlargers Excessed 2
- Zeiss Enlargers Rebuilt and Relocated 2
- Foster Enlargers Rebuilt/Electronics 3
- Consolidated Enlarger Relocated 1

#### **ENVIRONMENTAL**

TSS represents APFO as liaison with the local sewer authority and participates in a self compliance sampling program that monitors heavy metals being discharged down the drain.

#### SILVER RECOVERY

SOURCE OF	SILVER IN TROY	AVERAGE PRICE	NET VALUE
SILVER	OUNCES	PER TROY OUNCE	
Flake/Sludge/Scrap	2,962	\$4.99	\$14,780

#### **LEARNING AND GROWTH**

As a Branch, learning opportunities were realized that included the following:

- 2 Digital Classes from LH Systems on image scanning
- 1 Aerial Photography and Imaging Class from Kodak
- Trained 3 employees on image scanning

# RESEARCH AND DEVELOPMENT

Researched, tested and installed the first successful bio slime system for treating wash waters on photographic processors.

Researched, tested and completed the first Digital mosaic of Arlington, Texas.

#### INTERNAL CUSTOMER SUPPORT

- Scheduled and completed 45 Preventive Maintenances for photo processors
- Installation of two roll stock paper cutters in Color Section
- Installation of Bio-Slime modification to Black & White Processor

# BLACK AND WHITE SECTION

Black and White Photo Section is responsible for producing black and white aerial photographic products furnished to the USDA/FSA and other Federal and non-federal customers.

# <u>Achievements in Production</u>

The Black and White Section produced **358,568 products** for FY2000, using **18,276 production hours**, through the efforts of fourteen fulltime employees; the lowest production hour total for the Black and White Section in APFO history.

# **Accomplishments**

- Orders processed and released 9,717
- Average turn around time 17.7 working days
- Waste 5.8%, Lowest waste reported in the history of the APFO
- Paper and Film products inspected 280,693 or 78% B&W products produced
- Scanning Functions 2,173 hours

# **Training Provided to Section Employees**

- Civil Rights/EEO
- Workplace Violence
- Scanner Digital Imagery
- Cross Training within Branch and Photogrammetrics

PHOTOGRAPHIC PRODUCTION	FY 99	FY00
Photo Indices	1,036	555
Enlargements / Paper	118,838	89,384
Contacts	289,445	267,626
Enlargements / Film	442	246
Microfilm, Aperture cards, Ozalids	1,624	757
TOTAL REPRODUCTIONS	411,484	358,568

# COLOR PHOTOGRAPHIC SECTION

The Color Section of the Photographic Services Branch is responsible for generating color products for various customers, including FSA, NRCS, Forest Service, other Federal and non federal agencies and the public.

# STRATEGIC PLANNING

The color section purchased a fully automated contact printer and paper cutter to streamline the printing and trimming of rollstock products, which comprises 69% of our yearly workload. The new automated cutter is expected to reduce the 243 hours spent trimming rollstock products.

#### **ACHIEVEMENTS IN PRODUCTION**

The Color Section produced **254,276 units** in FY00, using **7705 production hours**.

#### **ACCOMPLISHMENTS**

- Orders processed and released 1,651
- Average turn around time 22.99 days, improvement of 2.42 from FY99
- External rework total 700 products, less than 1% of all photo products released by color and less than 1% of all orders produced
- Color Products Inspected 25,502
- Scanned Images Produced 1,275

Photographic Production	FY 00
Enlargements/Paper	5,128
Contacts	249,148
TOTAL	254,276

#### **TRAINING/ DETAILS**

- Extensive time was dedicated to training employees on the digital scanning equipment
- PSU inspection One employee, 90 Day Detail to Contracting

The Color Section is continually looking for ways to improve their processes and better serve and exceed customer requirements.

