

U.S. DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C. 20250

DEPARTMENTAL REGULATION		Number: 3170-001
SUBJECT: End User Workstation Standards	DATE: December 12, 2007	
	OPI: Office of the Chief Information Officer	

1. PURPOSE

The objectives of the United States Department of Agriculture's (USDA) End User Workstation Standards requirements are: (a) to ensure cyber security protection, (b) to increase effectiveness in acquiring and administering resources by promoting compatibility and interchangeability of workstation hardware and software, (c) to ensure that these standards are aligned with the enterprise architecture business goals and processes of USDA, and (d) to meet the policy requirements of OMB Circular A-130 and OMB policy memorandum M-07-11.

2. SPECIAL INSTRUCTIONS/CANCELLATIONS

This regulation will remain in effect until superseded. Appendices are forthcoming.

3. BACKGROUND

The Clinger-Cohen Act of 1996 (40 U.S.C. (11101 et seq.)), as amended by the Information Technology Management Reform Act (ITMRA) and OMB Circular A-130, "Management of Federal Information Resources", require Federal agencies to build and maintain a Profile of Standards and Technical Reference Model that supports IT investment management and development of enterprise architecture. More recently, the Office of Management and Budget issued policy memorandum M-07-11, "Implementation of Commonly Accepted Security Configurations for Windows Operating Systems," which stated: "agencies with these operating systems [Windows XP and VISTA] and/or plans to upgrade to these operating systems must adopt these standard security configurations by February 1, 2008." Established standards for workstation hardware and software are vital to ensure that USDA complies with these and other workstation mandates.

4. POLICY

This policy requires the agencies and offices under the administrative oversight of the Department of Agriculture to follow a set of standards regarding workstation computers. The Chief Information Officer of the USDA (CIO USDA) is required

to establish standards to ensure the cyber security of the agencies', Department, and Government-wide networks. These standards include hardware, operating systems, and applications.

The workstation standards are contained as appendices to this general policy. Each appendix is to be established within 90 days of the approval of this policy with comments from agencies, and reviewed quarterly in the first year of this policy. After the first year, a review of each of the appendices are to be conducted in the first month of the second quarter; reviewed for comment by the agencies for 30 days; and finalized prior to the end of the second quarter.

The USDA CIO is to ensure the following during the annual review:

- a. support for the continuity of operations to the USDA programs;
- b. focus areas and training maximizing the use of the standard workstation configuration;
- c. centralized support of operating system and application patches to maintain the cyber security protection of over 130,000 workstations;
- d. establishing an enterprise architecture standard;
- e. meeting the workstation security requirements of the Office of Management and Budget;
- f. achieving discounts by volume purchasing;
- g. providing automated inventories through vendor information transfer;
- h. supporting smartcard based security;
- i. supporting the Department's thin client, mobile technology, and teleworking policy;
- j. ensuring consistency to provide users better Tier 1 helpdesk service;
- k. creating a functional workstation that will assist our employees with their daily work requirements; and
- l. minimize the expense of workstation rotation and replacement.

Agencies and offices of the United States Department of Agriculture shall procure computer workstation hardware and software consistent with the standards identified in the appendices of this regulation. Exceptions to these standards may be requested through specific procedures identified in Paragraph 7 of this regulation.

The following appendices provide the detailed selection specifications for conforming to the policy requirements of this regulation:

- a. Appendix A, "End User Workstation Hardware Standards"
- b. Appendix B, "End User Workstation Security Standards"
- c. Appendix C, "End User Workstation Software Standards"
- d. Appendix D, "End User Workstation Peripheral Standards"

- e. Appendix E, “USDA Conservation and Green Standard Requirements for Workstations”
- f. Appendix F, “USDA Standards for Acceptable Disposal of Batteries and Other Workstation Components”
- g. Appendix G, “Other Workstation Standards”

5. **BENEFITS**

The benefits to the Department, agencies, and users from the standardization of workstations include better security for the Government’s networks, better helpdesk support, increased inventory management capabilities, support of USDA telework and mobile computing technologies, adherence to OMB workstation security requirements, lower operating costs, and volume based purchasing discounts.

USDA uses information technology (IT) to assist in achieving program objectives and reporting requirements. Consistency in USDA’s IT allows the development of safe, efficient and cost-effective methods for supporting programs and in planning for upgrades, migrations, staff training, and future technology installations. In addition, these standards promote cross-agency information sharing, increase interoperability, and improve Departmental communication and collaboration.

6. **RESPONSIBILITIES**

- a. The USDA CIO is:
 - (1) The final, approving authority on the adoption of IT standards to ensure the security of Government networks, maximize the benefit of technology purchases, and minimize investment and operating expense.
 - (2) The final reviewer and approver of exceptions to the workstation standard requested by the agencies or staff offices.
- b. The Office of the Chief Information Officer (OCIO) will:
 - (1) Develop basic policies and standards for the end-user workstation environment.
 - (2) Provide management and oversight activities related to workstation operating system configurations, to include but not limited to:
 - (a) Providing periodic updates to all operating system configurations to ensure systems security posture is maximized;
 - (b) Reviewing and monitoring compliance with established operating systems policy;

- (c) Testing all configurations in a non-production environment to ensure compatibility with legacy applications;
 - (d) Supporting the agencies by testing operating system software;
 - (e) Creating a software update architecture that is able to receive and approve patches and updates from the Department of Homeland Security for deployment to the USDA enterprise;
 - (f) Creating and maintaining a security configuration guide for each operating system; and
 - (g) Reporting compliance and deviations to OMB.
- (3) Establish enterprise-wide contracts for standard hardware and software.
- (4) Establish and maintain the green policy, recycle policy, and energy conservation policy for computer workstations, in accordance with applicable Government-wide policies and standards.
- c. Department agencies and staff offices will:
- (1) Adopt the policies and standards for the end-user workstation environment by:
 - (a) Establishing procedures and controls to ensure the use of these standards;
 - (b) Ensuring effective communication between local systems administrators and OCIO; and
 - (c) Incorporating these standards in each agency's and office's capital planning and investment control process.
 - (2) Implement and maintain operating system and security configuration settings by:
 - (a) Scanning and providing periodic updates to all operating system configurations to ensure systems security posture is maximized;
 - (b) Documenting all deviations from these standard operating systems settings with a detailed rationale for the deviations, and requesting a waiver from the Cyber Security Division in OCIO;
 - (c) Providing corrective action plans for the timely remediation of issues not authorized as an approved deviation;
 - (d) Ensuring only qualified and trained personnel are granted elevated privileges;
 - (e) Ensuring that elevated privileged accounts are not mail or Internet enabled;
 - (f) Ensuring all custom or commercial off the shelf (COTS) applications are written to be run as "user";
 - (g) Creating an authorized software list that includes all the software that can be used on these configurations; and

- (h) Employing the use of the National Institute of Standards and Technology (NIST) Security Content Automation Protocol (S-CAP) tool to help evaluate providers and perform self evaluations.
- (3) Procure standard hardware and software from enterprise-wide contracts as they are made available.
- (4) Request acquisition of hardware and software using the Acquisition Approval Request (AAR) process prior to any procurement. The AAR must identify whether or not the acquisition of hardware or software to be procured meets the USDA standards, the contracts to be used and must provide a detailed rationale if the product(s) being purchased does not meet the standard, regardless of whether the standard is a product or a specification(s).

7. EXCEPTION REQUEST PROCESS

Some agencies may have special conditions or requirements that prevent full compliance with this regulation. Agencies may request a special exception by submitting written justification to the USDA CIO for review and decision. The justification must include the business reasons that show a different option is in the best interest of the agency and USDA for cyber security, technology development, and expense reduction. All requests must be signed by the Agency CIO.

The written exception request is to be in the form of a decision memorandum and is to include:

- i. Indication of Request for Exception
- ii. Name of submitting agency
- iii. Name and contact information of submitting person
- iv. Information technology description (hardware/software exception)
 - v. Justification to show good cause for the exception. The request should document the justifications for the exception and the impact of granting versus not granting the request.
- vi. Cyber security management plan
- vii. Technology development summary
- viii. Technology refresh plan
- ix. Cost justification
- x. Signature of Agency CIO.
- xi. Date of the request.

8. DEFINITIONS

- a. Workstation. Desktop, laptop, or other computer used by the employee to complete their daily tasks.
- b. Desktop Computer. A computer made for use on a desk in an office or home, and is distinguished from portable computers such as laptops or Personal Digital Assistants (PDA). Desktop computers are also known as microcomputers.
- c. Laptop Computer. A small mobile computer, which usually weighs 2-18 pounds (1-6 kilograms), depending on size, materials, and other factors.
- d. Thin Client. Server-centric computing hardware in which the application software, data, and CPU power resides on a network server rather than on the client computer.

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Appendix A

End User Workstation Hardware Standards

1. End User Workstation Hardware Standards

The policy for USDA hardware standards is designed to insure security of the workstation, minimize workstation expense, reduce environmental impact, and increase help desk response. The following are the hardware standards for USDA thin client, desktop, and laptop workstations. Agency Administrators and CIOs are instructed to review work requirements of the employees within their workforce and assign workstations to equal work requirements. The agencies are to purchase thin client workstations unless circumstances detail a work requirement for a more advanced desktop. Due to the risk of data loss and theft, laptops are to be used sparingly. Except in extenuating circumstances, employees are only to be allocated one workstation.

USDA has identified five workstation types, based on function:

Workstation Type	End-User Computing Platform
Standard Office Workstation	Base-Level Desktop Workstation
Standard Office Workstation By 2010	Thin-Client Workstation
Enhanced Office Workstation	Mid-Level Desktop Computer
Specialized Office Workstation	High-end Desktop Computer
Mobile Workstation	Mid-Level Laptop Computer
Specialized Mobile Workstation	High-end Laptop Computer
Ruggedized/Semi-Ruggedized Mobile Workstation	Ruggedized/Semi-Ruggedized Mid-Level Laptop Computer

The standard office workstation will be deployed to all USDA employees unless business requirements justify otherwise.

a. Standard Office Workstation

The end-user computing platform for the standard office workstation is a base-level workstation. The standard office workstation will be deployed to all USDA employees unless business requirements can justify otherwise. Justification for something other than a standard office workstation may include the following:

- (1) The end user is required to conduct regular work-related travel and requires a mobile workstation to effectively perform job requirements.
- (2) The end user is a Continuity of Operations (COOP) responder and requires a mobile workstation to ensure uninterrupted program operations.
- (3) The end user performs job functions (heavy statistical analysis, intensive graphical, or large financial calculations) that requires a high degree of processing on the local desktop.

The following table contains the minimum hardware configuration requirements for the standard office workstation that is deployed to the user:

Processor:	2.8 GHz; 800 MHz FSB; may be a single or dual processor
Memory:	2 GB DDR2 533 MHz upgradeable to 4 GB
Ports:	4 USB 2.0; 1 serial; 1 parallel; 1 external monitor; 2 PS/2; 10/100/1000 Ethernet
Keyboards:	USB Smartcard Keyboard or USB Keyboard if Smartcard Reader is an external device
Monitors:	17 inch Flat Panel
Hard Drives:	80 GB
Mouse:	USB 2-Button Mouse

Components external to the base-level device, such as monitors, keyboards, and speakers can be provisioned through reuse of existing inventory. Based on business need, additional internal and/or external devices, such as CD-ROM and DVD drives may be added to the configuration.

b. Standard Office Workstation By 2010

The “thin client” is a network computer that is designed to be especially small so that the bulk of the data processing occurs on a network server. For the most part, application software, data, and processing reside on this network server rather than on the end user workstation. Thin clients are not as vulnerable to security breaches, have a longer life cycle, use less power, and require less on-site maintenance support. In addition, the average cost of a thin client is less than \$500, almost a third of the cost of the normal base workstation. Agencies are to build their capability to implement thin clients in lieu of base-level desktop computers whenever the end users are located in offices that have sufficient network bandwidth for reliable thin client operation. The thin-client workstation should be the default standard office workstation for all agencies by January 2010.

The thin client can support most administrative and business processing functions including office productivity applications such as e-mail, word processing, spreadsheets, Internet applications, and presentations. Additionally thin clients will support business applications where the user interface is browser or application streaming based.

The following table contains the minimum hardware configuration requirements for the standard office workstation by 2010 that is deployed to the user:

Processor:	1 GHZ; Low Power Consumption
Memory:	512 MB DDR SDRAM upgradeable To 1 GB
Flash Memory:	256 MB Flash RAM upgradeable To 1 GB Flash RAM
Ports	3 USB 2.0; 1 serial; 1 parallel; 1 external monitor (Dual monitor capable);; 10/100Ethernet
Keyboards:	Integrated Smartcard reader or USB Keyboard if Smartcard Reader is an external device
Monitors:	17 inch Flat Panel
Mouse:	2-Button Mouse
OS:	No embedded operating system (e.g., XPe)

Components external to the thin client device, such as monitors, keyboards, and speakers can be provisioned through reuse of existing inventory. Based on business need, additional internal and/or external devices, such as CD-ROM and DVD drives may be added to the configuration.

c. Enhanced Office Workstation

The end-user computing platform for the enhanced office workstation is a typical mid-level desktop computer. The enhanced office workstation is deployed to the end-user only when the standard office workstation will not support the business functions being performed by the end-user.

This enhanced office workstation supports office productivity applications such as e-mail, word processing, spreadsheets, Internet applications, presentations, and viewing PDF documents and graphic images. Additional functionality includes: business program development, project management, statistical analysis, desktop publishing, multi-media development, and database processing.

The following table contains the minimum hardware configuration requirements for the enhanced office workstation that is deployed to the user:

Processor:	3.4 GHz; 800 MHz FSB; dual processor
Memory:	2 GB DDR2 677 MHz upgradeable to 4 GB
Ports:	USB 2.0; 1 serial; 1 parallel; 1 external monitor; 2 PS/2; 10/100/1000 Ethernet
Keyboards:	USB Smartcard Keyboard or USB Keyboard if Smartcard Reader is an external device
Monitors:	17 inch Flat Panel
Hard Drives:	160 GB
Mouse:	USB 2-Button Mouse

Components external to the enhanced office workstation, such as monitors, keyboards, and speakers can be provisioned through reuse of existing inventory. Based on business need, additional internal and/or external devices, such as CD-ROM and DVD drives may be added to the configuration.

d. Specialized Office Workstation

The end-user computing platform for the specialized office workstation is a high-end desktop computer. A specialized office workstation may be deployed to the end-user only when standard office workstation or the enhanced office workstation will not support the business functions being performed.

The specialized office workstation is configured to support high-end applications and advanced graphics and modeling capabilities required by Geospatial Information System (GIS), software design and development, or engineering applications. This model is intended to be used by subject matter experts that demand the most processing power offered in a desktop computer.

The following table contains the minimum hardware configuration requirements for the specialized office workstation that is deployed to the user:

Processor:	4 GHz; 1333 MHz FSB; dual processor
Memory:	4 GB DDR2 667 MHz ECC upgradeable to 8 GB
Ports:	4 USB 2.0; 1 serial; 1 parallel; 1 external monitor; 2 PS/2; 10/100/1000 Ethernet
Keyboards:	USB Smartcard Keyboard or USB Keyboard if Smartcard Reader is an external device
Monitors:	20 inch Flat Panel
Hard Drives:	250 GB with capability to install multiple internal hard drives
Mouse:	USB 2-Button Mouse

Components external to the specialized office workstation, such as monitors, keyboards, and speakers can be provisioned through reuse of existing inventory. Based on business need, additional internal and/or external devices, such as CD-ROM and DVD drives may be added to the configuration.

e. Mobile Workstation

The end-user computing platform for the mobile workstation is a mid-level laptop computer. A mobile workstation may be deployed to the end-user only when the various office workstations will not support the business functions being performed due to regular work-related travel, field work, and/or continuity of operations.

The mobile workstation supports office productivity applications such as e-mail, word processing, spreadsheets, Internet applications, presentations, and viewing PDF documents and graphic images. Additional functionality may include: business program development, project management, statistical analysis, desktop publishing, multi-media development, and database processing.

The following table contains the minimum hardware configuration requirements for the mobile workstation that is deployed to the user:

Processor:	1.83 GHz; 667 MHz FSB
Memory:	2 GB DDR2 533 MHz upgradeable to 4 GB
Ports:	4 USB 2.0; 1 serial; 1 parallel; 2 PS/2; 10/100/1000 Ethernet
Keyboards:	Internal Keyboard
Monitors:	14.1 inch WXGA display
Hard Drives:	80 GB
Mouse:	USB 2-Button Optical Mouse
Other:	Smartcard Reader

Components external to the mobile workstation, such as monitors, keyboards, and speakers can be provisioned through reuse of existing inventory. Based on business need, additional internal and/or external devices, such as CD-ROM and DVD drives may be added to the configuration

f. Specialized Mobile Workstation

The end-user computing platform for the specialized mobile workstation is a high-end laptop computer. A specialized mobile workstation may be deployed to the end-user only when the various office workstations will not support the business functions being performed due to regular work-related travel, field work, and/or continuity of operations.

The specialized mobile workstation is configured to support high-end applications and advanced graphics and modeling capabilities required by Geospatial Information System (GIS), software design and development, or engineering applications. This model is intended to be used by subject matter experts that demand the most processing power offered in a laptop computer.

The following table contains the minimum hardware configuration requirements for the specialized mobile workstation that is deployed to the user:

Processor:	2.16 GHZ; 2MB L2 Cache;667 MHZ
Memory:	3 GB, DDR2 667 MHZ ; Upgradeable to 4 GB
Ports:	4 USB 2.0, DVI, Docking/port replicator, integrated gigabit Ethernet w/wireless
Keyboards:	Enhanced Performance USB Keyboard
Monitors:	15.0", Wide Screen UXGA 1600x1200
Hard Drives:	100 GB, 7200 RPM
Mouse:	USB 2 –button Optical Wheel Mouse
Other:	UXGA 256mb ATI Mobility FireGL v5200, smart card reader

Components external to the specialized mobile workstation, such as monitors, keyboards, and speakers can be provisioned through reuse of existing inventory.

Based on business need, additional internal and/or external devices, such as CD-ROM and DVD drives may be added to the configuration.

g. Ruggedized and Semi-Ruggedized Mobile Workstation

The ruggedized mobile workstation is a computer laptop that is constructed for travel, field use, and/or continuity of operations and can withstand extreme environmental conditions that most electronics could not tolerate. The semi-ruggedized mobile workstation is a computer laptop that is built for field use and costs less than a ruggedized laptop, but is not designed to withstand the same extreme conditions as a ruggedized laptop. Both models provide office automation and mobile productivity. Applications include: e-mail, word processing, spreadsheets, viewing PDF documents and graphic images, and specific field applications.

The following table contains the minimum hardware configuration requirements for the ruggedized mobile workstation that is deployed to the user:

Processor:	1.83 GHz; 667 MHz FSB
Memory:	2 GB DDR2 533 MHz upgradeable to 4 GB
Ports:	4 USB 2.0; 1 serial; 1 parallel; 2 PS/2; 10/100/1000 Ethernet
Keyboards:	Internal Keyboard
Monitors:	12.1 XGA WVA Outdoor Viewable Display
Hard Drives:	80 GB
Mouse:	USB 2-Button Optical Mouse
Other:	Smartcard Reader

Components external to the specialized mobile workstation, such as monitors, keyboards, and speakers can be provisioned through reuse of existing inventory. Based on business need, additional internal and/or external devices, such as CD-ROM and DVD drives may be added to the configuration.

2. Workstation Refreshment Standards

The configuration requirements for each workstation will be updated on an annual basis so that it represents commercial available technology offerings available in the marketplace. Deployed workstations based on prior year configurations will remain in service until the minimum refreshment period is met or the hardware fails to operate.

The following table identifies the refreshment standard and maximum life for each workstation type:

Workstation Type	Refreshment Period	Average Annual Refreshment Rate Per Agency	Maximum Life
Standard Office Workstation	4 Years	20%	5 Years
Standard Office Workstation By 2010 (Thin Client Workstation)	5 Years	20%	5 Years
Enhanced Office Workstation	4 Years	25%	5 Years
Specialized Office Workstation	4 Years	25%	5 Years
Mobile Workstation	3 Years	33.33%	5 Years
Specialized Mobile Workstation	3 Years	33.33%	5 Years
Ruggedized/Semi-Ruggedized Mobile Workstation	3 Years	33.33%	5 Years

3. Workstation Sources of Supply

The OCIO will establish enterprise wide contracts for purchasing of workstations and associated internal and external devices. Until such time that the contracts are established and designated as the mandatory sources of supply, all workstation purchases must be addressed through the Acquisition Approval Request (AAR) process. In the event that the request is for other than the standard or target office workstation, the AAR must provide sufficient justification for the number of each non-standard workstation type requested (enhanced, specialized, mobile, and ruggedized/semi-ruggedized mobile).

4. Workstation Management and Tracking

Each Agency and Staff Office will maintain basic itemized information on all workstations in order to track, manage and report on assets.

Appendix B End User Workstation Security Standards

1.0 End User Workstation Security Standards

The purpose of this appendix is to establish the requirements for implementing standards for the security of end-user workstations used throughout the United States Department of Agriculture (USDA). This access control policy guidance is designed to protect information systems and data within the USDA.

2.0 End User Account Management

Each agency, staff office, or shared service provider must establish and administer a user account management program for controlling access to USDA desktop computing assets. This program must include procedures to establish, activate, modify, review, disable, and remove user accounts. All user account administration for agency systems will be performed by appropriately trained and authorized system security personnel in accordance with technical direction provided by the agency Information Systems Security Program Manager (ISSPM), Department policy, and Federal regulations. All user accounts are required to be documented and made available for audit by the USDA Office of the Chief Information Officer or other authorized parties.

3.0 Access Authorization

Authorizations to access and use USDA information technology (IT) resources will be granted by business owners responsible for those resources. Access will be based on official business "Need to Know" and limited to the "Least Privilege" access required to perform job functions. Active accounts will be reviewed at least quarterly, and account permissions will be reviewed at least annually. Any discrepancies between system users and their access shall be reconciled by requesting and processing appropriate changes in user accounts and their associated access permissions.

4.0 Remote Access

All types of access to USDA information systems that are allowed via external connections, such as Virtual Private Networks (VPN) or CITRIX, must be fully documented and authorized by the individual's manager.

All methods of remote access to USDA information systems are subject to the following restrictions/controls:

- All remote accesses must be controlled and monitored through a limited number of managed access control points.
- Remote access must use a two-factor authentication mechanism where one of the factors is provided by a mechanism separate from the computer gaining access.
- All remote access sessions must be protected using Federal Information Processing Standards (FIPS) 140-2 compliant encryption.
- All remote access sessions must be protected by a "time-out" function requiring user re-authentication after 15 minutes or less of inactivity.
- Remote access activity must be recorded in logs and reviewed periodically.
- Remote access privileges must be authorized and restricted to users with an operational need for access.
- Remote access for privileged functions on an information system can be authorized only for compelling operational needs and the rationale for such access must be documented in the security plan for the information system.
- All methods of remote access must be fully documented in each agency's Overall Agency Security Plans.

5.0 End User Background Checks

Individuals who are to be granted access to USDA information systems must first undergo the Personal Identity Verification (PIV) process mandated by USDA policy and Homeland Security Presidential Directive 12 (HSPD-12). In addition, applications for appropriate background investigations for all individuals must be submitted and processed to a degree that meets the requirements for access.

6.0 Security Awareness

Individuals must complete the paper-based or CD based (on a stand-alone system) Computer Security Awareness and Privacy Basics training prior to being granted access to any USDA information systems. All employees must meet the annual training requirements for computer security awareness and the protection of personally identifiable information (PII) to retain access.

7.0 User Access Requests

Before a user account can be created or access permissions modified, a hardcopy or electronic user access request form must be completed. A hardcopy or electronic copy of each completed and processed form must be retained by the authorizing agency representative for each active user account. Each form should include at least the following:

- User first, middle, and last name.

- User ID(s).
- Description of the action requested.
- Description of the access(es) requested.
- List of information systems the individual is authorized to access and what role is authorized for each system.
- User's signature verifying that the user has read, and will abide by, the system's security rules and has completed all required security and privacy training.
- Verification of background investigation status (initiated, under adjudication, or completed).
- Authorizing manager's signature.
- Authorizing application security administrator's signature (if applicable).
- Processing agent's signature (e.g. ISSPM or Information System Security Officer).
- Certification that Computer Security Awareness and Privacy Basics training has been completed.

8.0 Need-to-Know

USDA information systems shall be configured to ensure that users have only that access necessary to perform their job responsibilities.

9.0 Password Standards

Pending implementation of USDA's LincPass environment, all USDA information systems must be configured to automatically ensure that all user accounts and their associated passwords adhere to the following USDA standards:

- Maximum lifetime for a password shall be 60 days for general users and privileged users (e.g. Security Administrators, programmers, auditors, engineers).
- Access by inactive users shall be suspended by the system within 30 days.
- User accounts shall be automatically locked out by the system after five consecutive unsuccessful logon attempts.
- Passwords must have a minimum of 12 alphanumeric and special characters (with complexity turned on), including at least one of each of the following: a number, an uppercase letter, and a lowercase letter; except for agency-documented and ACIO-CS approved exceptions where systems do not allow for compliance.
- Dictionary words cannot be used for passwords.
- System security software must enforce a password history for each user, disallowing reuse of the same password for at least 24 iterations.
- A minimum password age of one day must be enforced.
- Systems must obscure feedback of authentication information (e.g., display asterisks when a user enters a password).

- Passwords in storage and in transmission must be protected using FIPS 140-2 Security Requirements for Cryptographic Modules validated encryption.

10.0 Duty Assignment/Employment Status

Upon a change in assignment, job responsibilities, title, or location, an employee's or contractor's information system accesses must be reviewed and reconciled by immediately requesting and processing appropriate changes in their user accounts and their associated access permissions

When an employee or contractor is terminated, the employee's manager must immediately notify the appropriate agency personnel of the user's departure. All IDs and passwords or other means of accessing files or using computer resources by the individual must be disabled or removed within 24 hours of departure.

11.0 Access Logging

All USDA information systems must log access control related events. Reviews of these logs for identification of potentially suspicious activities should be conducted every 30 days or more frequently depending on the sensitivity of the system and its data. High impact systems should be configured to automatically notify responsible individuals when selected suspicious actions are logged.

12.0 Residual Data Removal

Each agency must establish and implement procedures to ensure that a user's sensitive residual data cannot be accessed by unauthorized users (see National Institute of Standards and Technology (NIST) Special Publication (SP) 800-88, Guide for Media Sanitization).

13.0 Access Warning Banner

All USDA information systems must display an approved, system use notification message before granting system access informing potential users of the following:

- The user is accessing a U.S. Government information system;
- The system usage may be monitored, recorded, and subject to audit;
- Unauthorized use of the system is prohibited and subject to criminal and civil penalties; and
- The use of the system indicates consent to monitoring and recording.

This notification must remain on the screen until the user takes explicit actions to log onto the information system.

14.0 Concurrent Sessions

High impact USDA networks must restrict the number of concurrent sessions for any user to three or a lower value as determined by the system owner and agency ISSPM.

15.0 Session Lock

All USDA workstations must be configured to initiate a session lock after 15 minutes of inactivity. The session lock shall remain in effect until the user reestablishes access using appropriate identification and authentication procedures.

16.0 Portable and Mobile Devices

Portable and mobile devices used to access the USDA network must be authorized, documented, and monitored. All data on such devices must be encrypted using FIPS 140-2 validated encryption unless the data has been determined to be non-sensitive, in writing, by the system owner and validated by USDA's Office of the Chief Information Officer (OCIO).

17.0 Personally Owned Systems

The USDA prohibits the use of personally owned information systems to directly access government systems for official U.S. Government business involving the processing, storage, or transmission of federal information. Personally owned information systems can be used to interface with government web interfaces designed to accommodate communication of specific information (e.g., Employee Personal Page and Outlook Web Access).

18.0 Policy Exceptions

Exceptions to this policy will be considered only in terms of implementation time. Exceptions, that are approved, will be interim in nature and expire at the end of one year. Agencies shall submit all policy exception requests directly to the Office of the Chief Information Officer.

19.0 Responsibilities

19.1 The USDA CIO will:

- Publish and disseminate policy and procedures for Access Control for end-user computing;
- Review all requests for exceptions to this policy appendix in a timely manner and coordinate the response to the agency; and
- Conduct periodic evaluations to ensure agency compliance with this policy.

19.2 The Agency Chief Information Officer (CIO) will:

- Oversee all aspects of access control within the agency;
- Ensure that separation of duties among IT staff is maintained to avoid conflicts of interest;
- Ensure that audit trails are appropriately configured and reviewed, and that irregularities are addressed; and
- Annually certify that access profiles for each employee have been reviewed and are appropriate.

19.3 The Agency ISSPM will:

- Administer all aspects of an effective access control system within the agency; and
- Verify access control is properly documented and followed within the agency.

19.4 Business and System Owners will:

- Ensure that authorizations to access the IT resources under their administration are based on 'Need-to-Know,' Least Privilege, and separation of duties; and
- Participate in periodic reviews of access authorizations and submit requests for changes in user accounts to reconcile any discrepancies noted.

19.5 End Users will:

- Access or attempt to access only data or resources to which they are specifically authorized;
- Protect passwords and all other system access methods against unauthorized disclosure; and
- Protect input/output data from casual inspection or unauthorized retrieval.

20.0 Operating System Security Configuration

The Federal Desktop Core Configuration (FDCC) compliance deadline is July 31, 2008. This standard applies to all end user workstations operating under Windows XP and Windows Vista operating systems.

Microsoft no longer supports Windows 95, Windows 98 or Windows 2000 operating systems and therefore these are not allowed on USDA networks. Although Linux and Mac OS are not covered under FDCC, these operating systems must still meet minimum USDA security standards. The Red Hat Linux Enterprise 4 and Mac OS security configuration guides are available at:

http://www.ocionet.usda.gov/ocio/security/config_guides.html.

20.1 Microsoft Windows Operating Systems

Microsoft Windows XP Professional Service Packs 2 is currently the target Windows operating system in USDA. When Microsoft announces that it will no longer support a particular Service Pack or operating system version, it must be removed from the USDA network 60 days prior to the end of service date. Although there are some instances of Microsoft Windows Vista Enterprise implemented in the USDA, this operating system is not considered a standard USDA Windows operating system at this time, and is not authorized for general end-user workstation deployment.

USDA technical security configurations are available at:

http://www.ocionet.usda.gov/ocio/security/config_guides.html.

20.2 Microsoft Windows XP Professional

Windows XP Professional Service Packs 3 is the target standard. Service Pack 2 must be upgraded to Service Pack 3 as soon as possible. Service Pack 1 must be upgraded with the most current Service Pack or removed from the network.

All instances of Microsoft Windows XP Professional operating system software will conform to the configuration setting requirements set forth by the NIST Federal Desktop Core Configuration (FDCC). There will be no deviations from this core configuration.

Information about the FDCC is available at <http://nvd.nist.gov/fdcc/index.cfm>.

20.3 Microsoft Windows Vista Enterprise

If Microsoft Windows Vista is deployed, then Microsoft Windows Vista Enterprise is the only version permitted on the USDA network. Current patches must be applied in accordance with section 21.0 below.

All instances of Microsoft Windows Vista operating system software will conform to the configuration setting requirements set forth by the NIST FDCC. There will be no deviations from this core configuration.

Information about the FDCC is available at <http://nvd.nist.gov/fdcc/index.cfm>.

21.0 Scanning and Patching

Critical security patches are required to be applied immediately after testing but not more than seven days after release. Agencies and staff offices must scan operating system software monthly to ensure that software updates and non-critical patches are current and that all system vulnerabilities are remediated.

22.0 Security Software

At a minimum anti-virus/anti-malware and whole disk encryption software shall be applied to all end user workstations. The enterprise-wide software approved by USDA should be used when possible. Use of other software products must comply with NIST standards and be reported to OCIO.

23.0 Two-Factor Authentication

USDA, along with the rest of the Federal government, is beginning to implement Homeland Security Presidential Directive 12 (HSPD-12) to provide an interoperable identity card to employees and contractors who either access government computer systems or need to access government facilities that are protected with electronic access controls. USDA is going to leverage the HSPD-12 credential (also known as the USDA LincPass) to meet the two-factor authentication requirement.

The USDA LincPass environment will be implemented and deployed during FY 2008 and FY 2009. All employees and contractors who have been provisioned with a LincPass must use it to access USDA networks. By September 30, 2008, LincPass usage requirement will apply to all laptop access. By September 30, 2009, all workstations are required to use the USDA LincPass for access to USDA networks.

APPENDIX C**End-User Workstation Software Standards**

The following sections identify the software standards for USDA Desktops, Laptops, and Thin Clients.

1. Workstation Operating System**a. Windows Operating Systems**

The following table contains the current Windows operating system software standard:

Category	Manufacturer	Title	Version
Windows-Based Workstations	Microsoft	Windows XP Professional SP2	2002

Although there are some instances of Microsoft Windows Vista Enterprise implemented in USDA, this Windows operating system is not considered a current USDA standard Windows operating system at this time, and is not authorized for general end-user workstation deployment.

b. Desktop and Laptop Application Software

The following table contains the base commercial-off-the-shelf (COTS) applications and government-off-the-shelf (GOTS) utility software standards:

Category	Manufacturer	Product	Oldest Version Permissible
Application Programming Interface	Microsoft	DirectX	9.0c
Application Programming Interface	Microsoft	Dot Net Framework	2.0
Browser	Microsoft	Internet Explorer	6.0.x SP2
Configuration Management	Microsoft	MS SMS Client	2.50.4160.2000
Database Connectivity	Microsoft	Microsoft Data Access Components (MDAC)	2.8
File Compression	Corel	WinZip	11.0
Graphics Display	Adobe	Adobe Flash Player	9.0.28
Graphics Display	Adobe	Adobe Shockwave	10.1.4.20
Media Player	Microsoft	Media Player	10
Media Player	Apple	QuickTime	7.1.6
Media Player	Real	RealOne Enterprise	Enterprise (V6.0.11.2160)
Office Productivity Suite	Microsoft	Office Professional	2003* SP2
Email and Content Management	Microsoft	Outlook /CRM	2003* SP3

(i.e., Email, Calendar, etc.)			
PDF Viewer/Writer	Adobe	Acrobat Standard	6.06
PDF Viewer/Writer	Adobe	Adobe Reader	8.0
Security	Various	See Appendix B	n/a

* FY2009 The Department allow the purchase and will begin the migration of MS Office Professional 2007.

Each Agency and Staff Office may add additional software, such as Microsoft Project, to the base standards when configuring their desktop and laptop software image to support their mission. Only those products that are needed by an agency to support the categorical function must be loaded. For example, not all workstations must have a copy of Adobe Acrobat Standard.

When implementing the (thin-client workstation, the application software for the most part would be installed on the server infrastructure.

2. Software Sources of Supply

The OCIO will establish enterprise wide contracts for purchasing of workstation software associated with this appendix. In the event that the request is for software with the same functionality as software identified in this appendix, the agency is to request a deviation through the AAR process.

3. Workstation Software Management and Tracking

Each Agency and Staff Office will maintain basic information, to include manufacturer name, software category, software title, software version, number of licenses, procurement source of software, and contract number, associated with all COTS workstation software, in order to track, manage and report on software licensing.

4. Approval of Workstation Software Images

On an annual basis, each Agency and Staff Office will provide to the OCIO a listing of workstation software information for each software image in use within the organization for review and approval by the CIO. The date of the annual review along instructions on what information to provide and how to provide it will be announced through a CIO memorandum.

Appendix D
End User Workstation Peripheral and Miscellaneous Standards

1.0 End-User Workstation Peripheral Standards

The following sections identify the Peripheral standards for USDA Desktops, Laptops, and Thin Clients. Use cases are defined for each printer type to guide users to the most appropriate peripheral choice, and guidance on recommended minimum technical specifications are defined for each printer type to ensure the sound value of all acquisitions and to set baselines useful in later enterprise-wide purchase contracts.

1.1 Printer Types and Deployment Guidance

USDA has identified nine workstation printer types:

Printer Type	Platform
Standard Network Printer	Laser Printer
Enhanced Network Printer	Laser Printer
Multi-purpose Network Printer	Multi-function Laser Printer
Standard Desk-side Printer	Inkjet Printer
Standard Portable Printer	Inkjet Printer
Enhanced Desk-side Printer	Laser Printer
Multi-purpose Desk-side Printer	Multi-function Inkjet Printer
Small Format Plotter	Inkjet Plotter
Large Format Plotter	Inkjet Plotter

The standard network printer shall be deployed to USDA employees whenever feasible. Standard desk-side printers shall be deployed in those offices where employees do not have ready access to a central network printer or that are staffed by only a few employees with simple print requirements. The use of enhanced or multi-purpose printers should meet the use cases described for each printer type below. Generally, the ratio of total printers, to include both desk-side and network printers, to total employees and in-house contractor staff should be less than one to one.

1.1.1 Standard Network Printer

The printer platform for the standard network printer is a mid-level laser printer. It provides high quality printer functionality to standard office workgroups in lieu of multiple desk-side printers. The standard network printer can support basic printing and publishing needs for quality, medium-volume black and white documents.

The following table contains guidance on minimum hardware specifications for a standard network printer:

Technology:	Laser
Function:	B&W printer
Memory:	80 MB
Print Quality:	B&W 1200x1200 dpi
Print Speed:	Normal Quality: B&W 45 ppm
Media Sizes:	Letter, legal, statement, executive, envelopes (No commercial sizes)
Media Types:	Paper (brochure, inkjet, photo, plain, bond), envelopes, labels, cards (greeting, index), transparencies
Duplex Printing:	Standard
Paper Input Capacity:	500 sheets or more
Monthly Duty Cycle	Up to 100,000 pages
Network Interface:	10/100 Mbps

1.1.2 Enhanced Network Printer

The printer platform for the enhanced network printer is a mid-level or better laser printer that supports both black and white and color printing. Justifications for the purchase of the enhanced network printer are:

- Color printing is needed for business report generation or effective customer communications.

The following table contains guidance on minimum hardware specifications for an enhanced network printer:

Technology:	Laser
Function:	B&W and Color printer
Memory:	160 MB
Print Quality:	B&W 600x600 dpi; Color 600x600 dpi
Print Speed:	Normal Quality: B&W 31 ppm; Color 31 ppm
Media Sizes:	Letter, legal, statement, executive, envelopes (No. 10, Monarch, DL), 3 x 5 to 8.5 x 14 in.
Media Types:	Paper (brochure, photo, plain, bond), envelopes, labels, cards (greeting, index), transparencies
Duplex Printing:	Standard
Paper Input Capacity:	500 sheets or more
Monthly Duty Cycle	Up to 100,000 pages
Network Interface:	10/100 Mbps

1.1.3 Multi-purpose Network Printer

The printer platform for the multi-purpose network printer is a mid-level, multi-function laser printer that multiple functions including printing, copying, color scanning, and faxing. The justification for the purchase of the multi-purpose network printer is:

- The printing, copying, scanning, and faxing functions are needed by the office and the multi-purpose network printer can meet these needs in a more cost-effective manner than the purchase of a separate printer, fax machine, and photocopier.

The following table contains guidance on minimum hardware specifications for a multi-purpose network printer:

Technology:	Laser
Function:	B&W printing, copying, color scanning, and faxing
Memory:	256 MB
Print Quality:	B&W 1200x1200 dpi
Print Speed:	Normal Quality: B&W 45 ppm
Media Sizes:	Letter, legal, statement, executive, envelopes (No commercial sizes)
Media Types:	Paper (plain, bond), envelopes, labels, cards (greeting, index), transparencies
Duplex Printing:	Standard
Paper Input Capacity:	150 sheets or more
Monthly Duty Cycle	Up to 30,000 pages
Network Interface:	10/100 Mbps

1.1.4 Standard Desk-side Printer

The printer platform for the standard desk-side printer is a mid-level ink jet printer. This printer can support basic printing needs for both black and white and color documents. The standard desk-side printer will be deployed to USDA employees when the use of a network printer is not feasible. Justifications for using a standard desk-side printer are:

- A network printer is not readily available and its use would negatively impact end user productivity;
- The end user must print sensitive or confidential documents that may be compromised if printed on a network printer; and/or
- The end-user is in a small office where the use of the standard desk-side printer meets their printing needs more economically than the standard network printer.

The following table contains guidance on minimum hardware specifications for a standard desk-side printer:

Technology:	Inkjet
Function:	B&W and Color printer
Memory:	32 MB
Print Quality:	B&W 1200x1200 dpi; Color 4800x1200 dpi
Print Speed:	Normal Quality: B&W 16 ppm; Color 16 ppm
Media Sizes:	Letter, legal, statement, executive, envelopes (No. 10, Monarch, DL), cards (3 x 5 in, 4 x 6 in, 5 x 7 in, 5 x 8 in, 4 x 10 in, 4 x 11 in, 4 x 12 in, 8 x 10 in)
Media Types:	Paper (brochure, inkjet, photo, plain, bond), envelopes, labels, cards (greeting, index), transparencies
Duplex Printing:	Standard
Paper Input Capacity:	80 sheets or more
Monthly Duty Cycle	Up to 1,000 pages

1.1.5 Standard Portable Printer

The printer platform for the standard portable is a mid-level inkjet printer. This printer can support basic printing needs for both black and white and color documents. This printer is distinguished from the standard desk-side printer primarily by unit size and weight. The portable printer will be deployed to USDA employees who work primarily in the field, being mobile and/or working in non-office environments where larger printers are not practical, and the use of a network printer is not feasible. Justifications for using a standard desk-side printer are:

- Neither a standard desk-side printer nor a network printer is readily available, and the use of either would negatively impact end user productivity;
- The end user must print sensitive or confidential documents in an urgent timeframe, and cannot defer printing until they return to a USDA site with pre-installed printers;
- The end-user is in a small office or temporary office space where the permanent deployment of the standard desk-side printer is impractical; and/or
- The end user travels regularly as part of their assigned duties.

The following table contains guidance on minimum hardware specifications for a standard portable printer:

Technology:	Inkjet
Function:	B&W and Color printer
Memory:	32 MB
Print Quality:	B&W 1200x1200 dpi; Color 4800x1200 dpi
Print Speed:	Normal Quality: B&W 16 ppm; Color 16 ppm
Media Sizes:	Letter, legal, statement, executive, envelopes (No. 10, Monarch, DL), cards (3 x 5 in, 4 x 6 in, 5 x 7 in, 5 x 8 in, 4 x 10 in, 4 x 11 in, 4 x 12 in, 8 x 10 in)
Media Types:	Paper (brochure, inkjet, photo, plain, bond), envelopes, labels, cards (greeting, index), transparencies
Duplex Printing:	Optional
Paper Input Capacity:	30 sheets or more
Monthly Duty Cycle	Up to 500 pages
Weight:	Less than 12 pounds
Power Supply:	AC, DC Optional (battery and/or auto adapter)

1.1.6 Enhanced Desk-side Printer

The printer platform for the enhanced desk-side printer is a mid-level black and white laser printer. Justifications for using an enhanced desk-side printer are:

- The end user(s) meets the justifications for the use of the standard desk-side printer, but needs to print laser-quality documents, large documents, and/or high volumes of documents.

The following table contains guidance on minimum hardware specifications for an enhanced desk-side printer:

Technology:	Laser
Function:	B&W printer
Memory:	80 MB
Print Quality:	B&W 1200x1200 dpi
Print Speed:	Normal Quality: B&W 35 ppm
Media Sizes:	Letter, legal, statement, executive, envelopes (No. 10, Monarch, DL), cards (3 x 5 in, 4 x 6 in, 5 x 7 in, 5 x 8 in, 4 x 10 in, 4 x 11 in, 4 x 12 in, 8 x 10 in)
Media Types:	Paper (brochure, inkjet, photo, plain, bond), envelopes, labels, cards (greeting, index), transparencies
Duplex Printing:	Standard
Paper Input Capacity:	500 sheets or more
Monthly Duty Cycle	Up to 100,000 pages

1.1.7 Multi-purpose Desk-side Printer

The printer platform for the multi-purpose desk-side printer is a mid-level multi-function inkjet printer. Justifications for using an enhanced desk-side printer are:

- The end user(s) meets the justifications for the use of the standard desk-side printer, but is located in a small field office and needs the multi-purpose desk-side printer to support multiple functions including black and white or color printing, copying, scanning, and faxing.

The following table contains guidance on minimum hardware specifications for a multi-purpose desk-side printer:

Technology:	Inkjet
Function:	B&W or Color printing, copying, scanning, and faxing,
Memory:	64 MB
Print Quality:	B&W 1200x1200 dpi; Color 4800x1200 dpi
Print Speed:	Normal Quality: B&W 8.5 ppm; Color 5.3 ppm
Media Sizes:	Letter, legal, statement, executive, envelopes (No. 10, Monarch, DL), cards (3 x 5 in, 4 x 6 in, 5 x 7 in, 5 x 8 in, 4 x 10 in, 4 x 11 in, 4 x 12 in, 8 x 10 in)
Media Types:	Paper (brochure, inkjet, photo, plain, bond), envelopes, labels, cards (greeting, index), transparencies
Duplex Printing:	Standard
Paper Input Capacity:	100 sheets or more
Monthly Duty Cycle	Up to 50,000 pages

1.1.8 Small Format Plotter

The small format plotter is usually connected to the office network in order to facilitate workgroup resource sharing. It provides high quality plotter functionality to standard office workgroups for small to medium size plotter output. This plotter uses either roll feed paper or individual sheets.

The following table contains guidance on minimum hardware specifications for a small format plotter:

Technology:	Inkjet
Function:	Color plotter
Memory:	64 MB
Plotter Quality:	Color 2400 x 2400 dpi
Media Sizes:	Letter, legal, statement, executive, envelopes, 3 x 5 to 18 x 14 in. or Roll feed paper up to 24 in. with automatic paper cutter
Paper Input Capacity:	Up to 70 sheets (tray)

1.1.9 Large Format Plotter

The large format plotter is usually connected to the office network in order to facilitate workgroup resource sharing. It provides high quality plotter functionality to standard office workgroups for medium to large size plotter output. This plotter uses either roll feed paper or individual sheets.

The following table contains guidance on minimum hardware specifications for a large format plotter:

Technology:	Inkjet
Function:	Color plotter
Memory:	256 MB
Plotter Quality:	Color 2400 x 21200 dpi
Media Sizes:	Letter, legal, statement, executive single sheets or Maximum roll feed paper 44 in. x 300 ft. with automatic paper cutter

1.2 Printer Sources of Supply

The OCIO will establish enterprise wide contracts for purchasing of desk-side and network printers. Until such time that the contracts are established and designated as the mandatory sources of supply, agencies should use existing acquisition approval procedures when purchasing printers.

1.3 Printer Refreshment Standards

The minimum hardware specifications for each workstation printer will be updated on an annual basis to represent available commercial technology in the marketplace. Deployed workstation printers based on prior year configurations will remain in service until the minimum refreshment period is met or the hardware fails to operate.

The following table identifies the refreshment standard for each printer type:

Printer Type	Minimum Refreshment Period	Average Annual Refreshment Rate Per Agency
Standard Network Printer	5 Years	20%
Enhanced Network Printer	5 Years	20%
Multi-purpose Network Printer	3-5 Years	33%
Standard Desk-side Printer	At hardware failure outside of warranty period	Not applicable
Standard Portable Printer	At hardware failure outside of warranty period	Not applicable
Enhanced Desk-side Printer	At hardware failure outside of warranty period	Not applicable
Multi-purpose Desk-side Printer	At hardware failure outside of warranty period	Not applicable
Small Format Plotter	5 Years	20%
Large Format Plotter	5 Years	20%

Appendix E End User Workstation Conservation and Green Standards

1.0 End User Workstation Conservation and Green Standards

1.1 USDA Electronics Stewardship Plan (ESP)

The USDA Electronics Stewardship Plan (ESP) implements sound environmental practices for acquisition, operations and maintenance, and end-of-life disposal of electronic products. Executive Order 13423, "Strengthening Federal Environmental, Energy, and Transportation Management," requires that all Executive Agencies accomplish the following: acquire Electronic Product Environmental Assessment Tool (EPEAT)-registered electronics for 95% of purchases where the EPEAT standard is available; enable the Energy Star features on 100% of computers and monitors; establish and implement policies to extend the useful life of electronics; and use environmentally sound procedures for the disposition of electronics that have reached the end of their useful lives. This appendix will highlight the minimum compliance requirements.

The complete USDA Electronics Stewardship Plan (ESP) is available at:
http://greening.usda.gov/elect_steward.htm.

1.1.1 Acquisition

USDA's goal is to purchase 95 percent of its electronic products as Electronic Product Environmental Assessment Tool (EPEAT) -registered, for products that have EPEAT standards. EPEAT is an application that helps purchasers identify electronic products based on their environmental attributes. The EPEAT Product Registry lists electronic products according to three tiers of environmental performance: Bronze, Silver and Gold. USDA requires the purchase of Bronze-level products as a baseline, but encourages agencies and staff offices to procure EPEAT Silver-rated electronic products or higher if available. USDA will factor and consider EPEAT recommendations when making workstation acquisitions. All considerations being equal, the EPEAT-rated product will be purchased.

Information on EPEAT can be found at <http://www.epeat.net/>. Currently, EPEAT has registered only desktop computers, monitors, and laptops, under Standard IEEE 1680-2006 (Institute of Electrical and Electronics Engineers).

1.1.2 Operations and Maintenance

USDA's goal will be to reduce its energy usage by enabling the Energy Star~ feature on 100% of computers and monitors, or to the maximum degree based on agency mission needs.

1.1.2.1 Windows XP and Vista Power Management Settings

To improve workstation energy consumption, USDA required the following minimum energy saving settings for workstations, both desktops and laptops, except for those systems and computers that are exempt for mission-critical or security reasons:

- "Turn off monitor" set to 15 minutes or less (Monitor Power Management)
- "System Standby" ("Sleep") set to 30 minutes or less (Computer Power Management)

Automatic 'push' of operating system and application software updates and patches will be affected when system goes into "system standby" or "sleep mode." The software updates and patches will be deferred until the next time the workstation is operational or "awake." If the deferred update or patch is implemented during working hours, then depending on the size and nature of the deferred update or patch, the workstation may not be as responsive as normal. Once the deferred updates are installed, the workstation may need to be restarted, after which system responsiveness should resume to normal. Each support operation must validate that required updates and patches were successfully implemented.

Power management settings for Windows Vista are default settings, and do not require a special configuration. For Windows XP these settings must be adjusted if not already set.

Agencies and Staff Offices will take the appropriate steps to ensure these setting are preserved. Preferably the user should not be granted administration rights to the Power Management settings. In the event that users have administration rights to these settings, the IT support organization must have the capability to remotely: (1) detect when Power Management settings do not comply with the standard and (2) change the Power Management settings to comply with the standard.

1.1.3 End-of-Life Management

USDA will continue to follow the Federal Management Regulation (FMR) and the Agriculture Property Management Regulation (AGPMR) for the donation, sale, and recycling of electronic equipment no longer needed by the Federal Government.

- Follow the FMR and AGPMR for the donation, transfer, sale, and recycling of surplus electronics;
- Donate computers directly to schools through the "Computers for Learning" program;
- Use the services of the U. S. General Services Administration to sell computers that could not be donated or transferred; and
- Sell used electronics at its Beltsville Service Center through Federal Asset Sales authority.

To manage electronics which have reached their useful end of life in an environmentally sound manner USDA will:

- Recycle scrap electronics through GSA, which utilizes contractors for recycling; and
- Recycle scrap electronics (after obtaining approval from GSA) through UNICOR, ensuring that environmentally sound end-of-life practices are followed. For additional information, see http://www.unicor.gov/recycling/iso_institutions.cfm.

The FMR and AGPMR can be found at <http://www.usda.gov/da/property/part10236.pdf>.

2.0 Print Conservation and Green Standards

Because paper production consumes 10 times the energy of the printing process, actions that decrease the volume of paper printed will significantly reduce environmental impact. To reduce energy and paper consumption, users are encouraged to:

1. Use duplex printing when available for those print jobs that can be printed on the front and back on the same page;
2. Whenever practical, eliminate the printing of banner pages that separate print jobs on networked printers;
3. Replace printers at the end of their service life with new energy efficient printers that have better power management features and low-power idle modes;
4. Share printers to reduce the number of printers in an office; and
5. Print only when necessary.