
File Backup and Archiving Protocol

Alaska Region Inventory and Monitoring

Purpose

Describe the procedures used by the Alaska Region Inventory and Monitoring Branch to backup and archive the Biotic Inventory 2013 project data.

Authoritative (Primary) Data Archive

The primary data archive for the Biotic Inventory project will reside on a shared file system hosted by the Fairbanks office. The data stored in the archive shall be considered the primary (authoritative) data for the project. Project personnel should generally have read only access to the archive, except for the designated data upload area, which will require write permissions.

Primary Archive Parameters

Host name: ifw7fair-file01.fws.doi.net
Share name: Teams
Path: \\ifw7fair-file01.fws.doi.net\Teams\offices\IM\biotic_inventory
Data Custodian: Hilmar Maier <Hilmar_Maier@fws.gov>
Permissions: RW: Data Custodian
Data Steward (see project Data Management Plan)
RO: ifw7gf-im

Mirrored Data Archive

The primary data archive will occasionally be mirrored to a file server hosted by the Regional Office. The mirrored data archive serves as a remote, off-site storage facility for digital project data. In addition to providing an additional level of security, the mirrored archive allows Regional Office staff to access data without having to rely on the slow and unreliable network link between the Fairbanks and Anchorage offices. The mirrored data shall be considered a secondary copy.

Should any discrepancies be noted between the Primary Archive and the Regional Office Mirror, the data stored on the primary archive shall be considered as being correct. The mirror may be updated manually or through an automated task. In either case, information from the primary archive will overwrite any corresponding data on the secondary archive.

Secondary Archive Parameters

Host Name: ifw7rofs1.fws.doi.net
Share Name: Data 2
Path: \\ifw7rofs1\Data 2\users\common\natural_resources\im_archive\biotic_inventory
(CAUTION: Network path contains spaces or other invalid characters)
Data Custodian: Hilmar Maier <Hilmar_Maier@fws.gov>
Permissions: RW: Data Custodian
RO: ifw7gro-Natural_Resources

Adding Data to Archive

The project archive is intended to store data sets that meet specific requirements or have progressed to a specific point in the data workflow as defined by the project data management plan. The archive is not intended to store daily working copies of documents. Project personnel will generally be restricted from modifying data that resides in the archive but should have the ability to add data to a designated upload area.

Data that meets the requirements for archiving, as defined by the project Data Management plan, should be added to the archive upload area (“incoming” directory), along with the appropriate data documentation. The Data Steward will then review the incoming data and associated metadata and determine if the Data Custodian should move the data to an appropriate read-only location within the archive.

Project Upload Area

Path: \\ifw7fair-file01.fws.doi.net\Teams\offices\IM\biotic_inventory\incoming
Data Custodian: Hilmar Maier <Hilmar_Maier@fws.gov>
Permissions: RW: Data Custodian
RW: Data Steward (see project Data Management Plan)
RW: ifw7gf-im

Backup of Primary Archive

Data is anticipated to be added to the primary archive at an infrequent rate (new additions every 1-2 weeks?). Data in the primary archive should not generally be modified. Data backup will be performed on the following schedule

Daily: Mirror authoritative archive to secondary archive (“incoming” excluded)
Incremental backup (compressed) to external hard drive
Monthly: Full backup (compressed) to external hard drive (same volume as daily)
Quarterly: Even (April, October) and odd (Jan, Jul) quarter volumes (external hard drive)
Full backup (compressed) during first quarter of even/odd year
Incremental backup otherwise
Off-site rotation of media.
Annual: Full archive (uncompressed) to external hard drive (includes “incoming”)
As Required: Manual backup to daily volume or mirror to Regional Office secondary archive

Automated backup procedures will initially be performed using the open source “Acrea Backup” software. A backup script will be scheduled as a task on the Fairbanks Data Manager’s workstation and backups will be written to an external hard drive connected to the workstation. The above backup procedures are in addition to those that are performed on the network file system by the Fairbanks Office System Administrator.

Backup Schedule Summary

Volume	Jan	April	July	October	Comments
Quarterly Odd	Full/Incr		Incr		Full backup performed on odd years
Quarterly Even		Full/Incr		Incr	Full backup performed on even years

Annual Archive	Full				
Daily	Full monthly, daily incremental			Excludes “incoming” directory	

Backup of User Working Files

There is no systematic procedure in place that automates the backup of user files. User files stored on a network file system should be backed up according to the schedule defined by the local System Administrator. Data residing on a user workstation will be backed according to the schedule defined in the project data management plan.

References:

Acree Backup software. <http://www.areca-backup.org/>. (accessed: 20150511).

Biotic Inventory Project Data Management Plan. (this still needs to be written!!).

Fairbanks file server backup procedures. (to be obtained from Regional IT Staff).

Revision History

Revision Date	Revised By	Source Version	Description
20130821	Hilmar A. Maier	20130821	Initial release.
20150511	Hilmar A. Maier	20150511	Updated file paths. Revised backup procedures to reflect current practices.