



Quality Plan for the Division of State Lands July 2016

Table of Contents

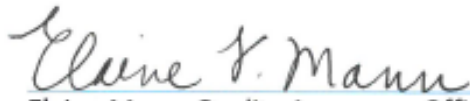
Table of Contents.....	1
Signature Page.....	2
Introduction	3
Basic Elements of the DSL Quality Plan.....	3
Policy Statement	4
Ethics	4
Organization and Responsibilities	5
Director’s Office	6
Office of Environmental Services	6
Bureau of Public Land Administration.....	8
Bureau of Real Estate Services.....	10
Bureau of Appraisal.....	13
Bureau of Surveying and Mapping.....	13
Training	18
Recommendations	19
Appendix A: <i>Glossary of Acronyms</i>	20
Appendix B: <i>FNAI Procedures</i>	22

Signature Page

The undersigned have read and understood this Quality Plan, are charged with managing and improving the quality system and are responsible for ensuring that all staff properly executes the procedures discussed in the plan.



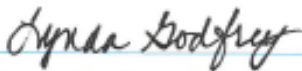
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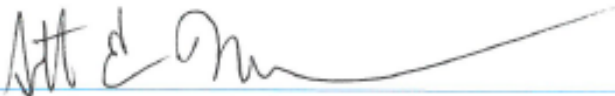
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Introduction

The Florida Department of Environmental Protection's (DEP) Quality Assurance (QA) program involves the implementation of a management system (planning, review, training, and assessment) to ensure that data collection, generation, interpretation, reporting, evaluation and archiving is of sufficient quality to support Department decisions. A component of the DEP QA program, the Division of State Lands' (DSL) QA program's effectiveness is dependent upon the actions of all DEP staff, from "front line" employees to management, meaning QA is a function distributed throughout the organization. One aspect of the program is to ensure that Department QA activities are carried out according to commitments made to the Environmental Protection Agency as enumerated in the DEP Quality Management Plan (QMP), 2-10-2014 (Rev.7).

The DEP Secretary is committed to implementation of the quality assurance requirements in the QMP and as authorized by program area 403.0623, F.S. and Chapter 62-160 Florida Administrative Code (FAC). It is the Secretary's intent to carry out these obligations and requirements as detailed in the Department's QA Directive (September 18, 2009).

In order to execute the components of the DEP QA Directive, the Division of State Lands has developed a quality system, which is executed through this Quality Plan document. The document describes the steps DSL takes to ensure the scientific and legal defensibility of environmental data it uses and that the necessary checks and balances throughout the division are intact. It details the process of planning, training, execution, assessment and corrective action DSL undertakes to ensure that the environmental data it uses and the checks and balances exercised meet the established quality criteria.

Basic Elements of the DSL Quality Plan

DSL's Quality Plan explains both the process and criteria by which the quality system is managed. The plan is utilized as an instrument of internal communication to inform staff of current and future quality assurance activities. DSL will revise the Quality Plan as needed, and pledges to ensure the consistent application of procedures and criteria for the use of the QA checks and balances and environmental data. The Quality Plan will also be used as a training document for new staff and as a reference for experienced personnel. The plan and its revisions also serve as an archival record of our formal quality system.

Existing internal and external documents, including rules, training manuals, guidance documents, SOPs, tables, etc. are cited throughout the plan.

The division expects all staff to understand and follow the procedures and criteria as discussed in this plan, and to carry out their assigned responsibilities for effective utilization of our quality system.

Policy Statement

DEP's Division of State Lands is Florida's lead agency for environmental land management and stewardship, serving as staff to the Board of Trustees (BOT) of the Internal Improvement Trust Fund (Governor and Cabinet). As such, the Division's role goes far beyond just acquiring lands for protection. It provides oversight for the management of activities on more than 12 million acres of public lands including lakes, rivers and islands. DSL administers the Florida Forever Program, Florida's blueprint for conserving our natural resources and renewing our commitment to conserve our natural and cultural heritage. The Division of State Lands also assists landowners who want to sell land to the state, buy land from the state or gain access to public lands. As such, The Division of State Lands believes in sound and useful Quality Assurance/Quality Control management practices to effectively complete the various tasks and goals associated with carrying out its mission.

It is the Division of State Land's policy to:

- Use scientifically valid and legally defensible data for decision making that affects the protection of the environment.
- Have and implement the quality system described in this document.
- Adaptively manage the quality system to be consistent with provisions of the DEP Quality Assurance Management Plan.
- Ensure that each individual is properly trained to execute their assigned functions.
- Implement procedures to evaluate the quality of the data DSL uses and to implement corrective actions when data does not meet our data quality objectives.
- Periodically audit the performance and record-keeping practices of data generators for which DSL has responsibility.
- Implement quality assurance procedures for the management of the data repositories.
- To provide the Secretary with information regarding DEP's ongoing QA efforts, DSL describes and compiles the results of all appropriate QA activities and relays it to the Standards and Assessment Program area for an annual report.

Ethics

All employees of the DEP Division of State Lands are held to high professional ethical standards in the performance of their duties. All employees are required to read, understand and sign an 'Ethics Statement' attesting to their commitment to honesty and integrity in performance of their duties. In addition, all employees are required to receive ethics training annually. Improper, unethical or illegal actions are dealt with according to the published Administrative Directives of the Florida Department of Environmental Protection.

Organization and Responsibilities

The Division of State Lands is organized into six separate program areas: the Director's Office (DO), the Office of Environmental Services (OES), the Bureau of Public Land Administration (BPLA), the Bureau of Real Estate Services (BRES), the Bureau of Appraisal (BA) and the Bureau of Surveying and Mapping (BSM). All six program areas within DSL provide different functions for the Division.

In the Division of State Lands, quality assurance and quality control are monitored by those individuals involved in each in-house process, as well as supervisors and bureau chiefs, and at times, hired contractors along with DSL's associated contract managers. The quality assurance officer (QAO) for the division is not involved in the many processes that are executed throughout the division on a daily basis, but rather, acts as a policy leader for the division as a whole.

DSL program staff performs necessary tasks in every instance to ensure that all work performed and all products generated are completed with full adherence to the applicable DEP rules and policies.

DSL's senior management, listed on the signature page of this document, ensures that this quality system is fully operational within the program, designates the Quality Assurance Officer and provides general oversight. These managers also evaluate the numerous processes in the program to ensure they meet the program's needs, and periodically evaluate the effectiveness of staff's data quality activities, including review of audit results. They also evaluate corrective action policies and procedures to be implemented when data does not meet program objectives. In the future, DSL's managers will discuss audit results with the QA Officer, review the annual Quality Assurance Report to the Secretary, and discuss findings with the QA Officer, as needed.

The following is a breakdown of the division by bureau; included in each bureau's explanation of their QA function are the various documentation, data review, contract management, and corrective action practices that are normally adhered to. DSL understands the need to evaluate the quality and usefulness of environmental data prior to making decisions. DSL conducts data review on a regular basis within each applicable working group to determine the usability of data for determination of compliance with rules, etc. Additionally, DSL carries out numerous record-keeping procedures such as calculation checks, data archiving, checks of database entries, document control and maintenance, and record generation, retention and storage procedures to ensure appropriate documentation. This ensures that the DEP contracts that are administered through the division are properly managed to assure appropriate data quality as well. Corrective actions, when necessary, are practiced routinely at DSL in an effort to improve both working areas effectiveness and the public's ability to utilize DEP resources. Such actions can come about via user commentary, complaints, or other reports received from data users and the public requesting revisions, etc.

Director's Office

Among many of its roles, the Director's Office (DO) manages DSL's budget. All data regarding the budget (appropriation by the Legislature, encumbrances, expenditures, release of funds, revenue received, etc.) are used to support the functions and operations of the Division. These data are evaluated by staff and used to assist with numerous budget decisions and many reports for management, the Legislature, other divisions within DEP, other agencies and to support DSL's Legislative Budget Request. They also provide information used to project anticipated revenue expected to be deposited into the Internal Improvement Trust Fund, which partially funds and therefore supports the Division of State Lands.

QA/QC Function:

The Division's financial data is tracked primarily in Excel spreadsheets and reconciled with Florida's Accounting Information Resource (FLAIR) to ensure proper accounting of state funds. DSL expenditures regarding land acquisition are currently tracked via Excel spreadsheet. Historical data was migrated into APIS in 2012 and there was a QA/QC check after the data was migrated. Since that time, land acquisition data has been entered into APIS at the time of closing. Staff is currently being trained and refining procedures for adding data into APIS throughout the entire acquisition process from beginning to end and ensuring there is an ongoing QA/QC process in place.

The billing and collection of fees and payments for the use of state-owned land is posted daily in the Submerged and Upland Public Revenue System (SUPRS). The payments are reconciled with the Cash Receiving Application within the Bureau of Financial Management Revenue Section on a monthly basis. SUPRS allows only certain employees to perform certain tasks to avoid any conflicts (the staff member who creates the invoice cannot accept or post payments). Administrative Services Bureau of Finance and Accounting reconciles FLAIR with the Cash Receiving Application monthly on all revenue received into the Internal Improvement Trust Fund.

Office of Environmental Services

The Office of Environmental Services (OES) provides land management oversight for both conservation and non-conservation lands, monitors conservation easements, and acts as staff to the Acquisition and Restoration Council (ARC) and the records repository of the Land Management Uniform Accounting Council (LMUAC)

The OES uses scientific and technical data which is generated, maintained and interpreted by the Florida Natural Areas Inventory (FNAI). The FNAI-acquired data is used as an evaluation tool for the land management strategies and management plan reviews of state-owned land. The data is also used as a ranking tool for the priority list of land ownerships the division utilizes when developing DSL's land acquisition work plan. The data allows the Division of State Lands (DSL) to meet the goals and objectives of DSL, the Acquisition and Restoration Council (ARC), the BOT and the legislature by allowing selection and acquisition of the most important lands under the

Florida Forever Program and of oversight management of the state's 3.8 million acres of conservation lands.

The OES is also the repository of land management data used to ensure compliance with statute by all agencies/entities that manage conservation or non-conservation lands on behalf of the BOT. Additionally, OES staff provide the Environmental Site Assessments (ESAs) and Baseline Documentation Reports (BDRs) for the Bureau of Land Acquisition, as well as monitoring and developing the annual report for conservation easement monitoring.

QA/QC Function:

Land management data is received by the OES in the form of Land Use Plans and Land Management Plans, and are reviewed for compliance with statute.

The OES contract with FNAI gives the office access to a wide range of scientists with expertise in botany, zoology, ecology, conservation planning, GIS and database management. While there are no specific FNAI contractual provisions for QA/QC measures, FNAI, as a member of the international network of Natural Heritage Programs, participates in a unique conservation database (Biotics) development system implemented throughout the world requiring rigorous, consistent data standards and methodologies. More information can be seen at:

[Hyperlink to the NatureServe website standards and methods](#)

In addition, FNAI establishes technical advisory groups when developing and updating new data sets to ensure that the best possible, most accurate and uniform sources of data and applications are utilized properly. Most of the FNAI data and the reports generated from them are available for public review on the web and at public hearings where many scientists and other experts provide comments on their accuracy for assistance in the dataset development. FNAI's element occurrence data is validated on an ad hoc basis when staff conducts onsite reviews of managed areas with experts.

The FNAI procedures are presented in Appendix B of this document.

From within, the FNAI data, including mapping data is reviewed by staff from OES and BSM to ensure accuracy. Land management data is reviewed by staff from OES and the managing agencies and culminates in reports to the ARC and an annual report to the Governor and Cabinet. Acquisition planning data is reviewed by staff from OES and the Bureau of Land Acquisition to develop a division work plan which is submitted to the ARC and the Governor and Cabinet. Data submitted for land acquisition proposals are reviewed by OES staff, the ARC, and are then reported once a year to the Governor and Cabinet in a report covering more than 100 ARC-recommended projects.

OES staff generates Land Management Plan data (due dates, notification dates, etc.) and enters data into the management plan tracking system which will eventually migrate to the Integrated Land Management System (ILMS) database. The entries into the management plan tracking system are validated by distribution to cooperating agencies and by OES staff, with the cooperation of BPLA staff. As cooperators reveal errors, a lead staff person corrects the data.

The land management data from the management plan tracking system are used to ensure compliance with statute by all agencies/entities that manage conservation or non-conservation lands on behalf of the BOT.

Data generated in the process of performing Land Management Reviews are entered into spreadsheets for compilation by staff. Data entry is reviewed by another staff member, who also compiles the annual Land Management Review Report to the Governor and Cabinet.

QA/QC is also conducted for boundaries of managed areas and Florida Forever projects. Individual project maps are updated for inclusion in reports during project development and re-evaluation.

QA/QC for other data, such as the Florida Forever measures, is performed at a gross level by comparing statistics from previous reports to identify gross disparities. When disparities occur, FNAI staff is consulted to determine if data errors or other factors are the cause.

The ESAs that are utilized as due diligence products for real estate closings sometimes involve the use of scientific data. The scientific data is generated from the sampling and analyses performed under the Environmental Site Assessment Reports Contract by the Environmental Contractor when completing the work needed for an Environmental Site Assessment Phase II Report. The Environmental Contractor must conform to the requirements set forth in Chapter 62-160, F.A.C. and the Quality Assurance Requirements for Department Contracts. The Contractor follows QA/QC measures during the collection of samples (ex: duplicate, split and equipment blank samples). The laboratory (subcontractor) used by the Contractor also follows its own QA/QC measures. The lab used is listed in the Contractor's contract, audited by the DEP QA program area and certified annually by the Florida Department of Health. Each report is reviewed for evaluation of information and data regarding the property in question, and how they may affect the general public usage of the property. The report states the laboratory scientific data, which are generated from sampling work that occurred during a Phase II (or beyond) ESA performed under a task assignment description detailing the tests needed due to Recognized Environmental Conditions found during the initial ESA Phase I report. The findings are compared to the residential, recreational, commercial and industrial cleanup target level tables and criteria set forth by the regulatory side of DEP.

Bureau of Public Land Administration

The Bureau of Public Land Administration (BPLA) is the Board of Trustees (BOT) real estate administration program within the Division of State Lands and generates revenue from a variety of instruments benefiting the Board of Trustees and other state agencies, for the management, administration, protection and conservation of state-owned lands. BPLA staff works on behalf of the BOT and coordinates with state agencies, state universities, governmental stakeholders and the general public to meet their real estate needs through the administration of state land inventories. These activities involve over 3.3 million acres of upland property, as well as, the 9 million acres of sovereignty submerged land held in trust by the BOT. The Upland Section administers the necessary land approvals for all state parks, forests, wildlife management areas, historic sites, correctional facilities, educational facilities, private uses and municipal public uses

of BOT-owned lands. In administering the following instruments, the section coordinates with DEP-Title and Land Records, DEP-Office of General Counsel, DEP- Office of Cabinet Affairs, Acquisition and Restoration Council, outside counsel, environmental consultants, surveyors, appraisers, conservation organizations, municipalities and members of the public. There are currently approximately 2500 upland land instruments (public and private leases, commercial leases, easements, use agreements, Release of Reservation, etc....). The Submerged Lands Section administers the necessary land approvals for all marinas, docks and other structures located on BOT-owned submerged land. The submerged land staff works closely with DEP-Regulatory District Offices, DEP-Title and Land Records, Water Management Districts (WMD), DEP-Office of General Counsel, outside legal counsel, environmental consultants, and members of the public. There are currently approximately 3100 submerged land instruments (lease, easements, conservation easements, dedications, etc....). BPLA also plays a key role in: locating Federal Emergency Management Agency (FEMA) sites during emergencies such as hurricanes; and recommending surplus lands to the Bureau of Real Estate Service (BRES) for disposition.

QA/QC Functions

BPLA staff produces the documents necessary for the management of the BOT land portfolio. Additionally, BPLA staff provides to BRES the lands available for surplus after a release of lease is requested, a site inspection is conducted, if applicable and noticing has been completed. BPLA tracks instrument data through the Integrated Land Management System (ILMS). The processing of new upland leases or lease amendments begins by a receipt of an acquisition package from BRES. BPLA enters all land management data into ILMS and provides electronically the instrument information to Title and Land Records. The upland data is fed into SOLARIS by the Land Inventory System (LITS) and a match is made through the Facilities Inventory Tracking (FITS) system for those leases that include facilities (state buildings, warehouses, maintenance yards, etc....). All instrument legal descriptions are verified through these processes against ownership records. In addition, the submerged land instrument information is entered into ILMS and subsequently entered into the Board of Trustees Land Document System (BTLDS). The submerged land data is not currently tracked in SOLARIS. Both the upland and submerged land revenue data is housed in the Submerged and Upland Revenue System (SUPRS). All disposed lands deeded with restrictions and/or reversion deed language are being brought into SOLARIS for tracking and review as necessary.

Staff has the ability to compare information from ILMS against the other databases (ILMS, SUPR, LITS, FITS, and BTLDS) to provide quality control of the data. After a lease is prepared by staff, the file is given to the Division of Operations, Recurring Revenue staff to prepare the invoice, at which time, SUPRS and ILMS are compared to ensure each data system lists the correct name, address, etc. Leases are billed on the 1st and 15th of each month and SUPRS provides a link to the last invoice to confirm the billing is correct.

BSM's GIS (Geographic Information System) and Title and Land Records, BTLDS are utilized as tools to ensure accuracy. BPLA staff works directly with lessees on data review (ex. management plan tracking system), including state agencies, to ensure matching data with outside records so

that any errors may be pinpointed and corrections may be made to the databases. This data is compared in LITS and FITS.

Data is used for renewing instruments, creating agenda items for the BOT's approval, preparing reports for management activities, measuring productivity, track consistency of authorizations, answering questions for Florida's Legislators, etc....

Bureau of Real Estate Services

The Bureau of Real Estate Services is responsible for activities related to the negotiation, acquisition, disposition, exchange, donation and closing of real property as agents to the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida (BOT). In addition, the Bureau is responsible for the management of statewide contracts for title and closing services.

The acquisition group is responsible for negotiating the land transactions necessary for full fee acquisitions, conservation easements and other less-than-fee acquisitions. DEP's Florida Coastal Office, Division of Recreation and Parks and the Office of Greenways and Trails within the Division of Recreation and Parks, utilize the assistance of BRES' acquisition program area. BRES also assists the Florida Fish and Wildlife Conservation Commission, the Florida Forest Service and other non-conservation entities such as state universities and the Florida Department of Corrections in the same capacity. Each negotiation involves organizing the acquisition with an appraisal map, appraisal report, a negotiation strategy and offer and drafting up contract terms and obtaining the BOT's approval via a pre-planned approval process.

The Disposition team is responsible for marketing lands owned by the Board of Trustees (BOT) that have been identified as not needed for public purposes via sale or land exchanges. The disposition process consists of review and coordination with the managing agency and ARC review when applicable, evaluation, assessments (appraisals, title, surveys), marketing, sale by competitive bid when required, negotiated direct sale, contract preparation, coordinating legal and management reviews and approvals, agenda process for Board of Trustees' approval, deed preparation for Governor & Cabinet execution and closing. The team is responsible for handling problem resolution, inquiries and questions from the public received on a daily basis regarding available lands, process, and general information. The Disposition of State Land and Facilities Report required each year (per F.S. 216.0153) is also maintained and prepared by the Disposition team in coordination with the Department of Management Services (DMS).

The closing program area is responsible for preparing land transactions for conveyance to state ownership. Contractors are utilized for due diligence products including title searches, title insurance, closing services, ESAs and BDRs. The closing program area manages the statewide contracts for title insurance and closing services for accuracy and compliance with Florida's statutes and DEP's policies and procedures. Any issues that might arise during the acquisition process must also be resolved before the land is conveyed to the BOT.

QA/QC Function:

The acquisition program area of BRES is responsible for negotiating, reviewing and preparing real estate contracts to purchase fee simple and less-than-fee acquisitions. Title commitments and appraisals are reviewed by staff to determine proper contractual particulars. Agents maintain required Communication Logs and Offer Chronologies for each acquisition, as well as preparing Negotiation Strategy forms for management approval of the negotiations. This program area also prepares BOT agenda items and enters data into the BRES acquisition plan. Real estate contracts, as well as title commitments and other pertinent documents, are reviewed and approved by DEP attorneys.

Lands owned by the State and titled to the BOT may be disposed of as surplus lands. The Disposition team within BRES manages the process for disposing of surplus land. Generally, land that is not considered useful for conservation or some other governmental use will be considered surplus. (The disposition process may be initiated by DEP or a request may be made to dispose of surplus land from other State agencies, local governments, and other parties from outside DEP.)

Surplus land is disposed of through sale or exchange. Parcels of land may be sold by negotiated direct sales, auction, competitive sealed bid, proactive marketing and by any reasonable means. Disposition staff is responsible for facilitating the surplus sale from start to finish including preparation of all documents and coordination with the Office of General Counsel and Management for all reviews and approvals. Real estate services may be obtained through real estate companies contracting with the State to facilitate the sale of surplus property. BRES is currently utilizing the expertise of brokers under contract with DMS to maximize marketing potential and monetary return on the lands. The team is responsible for managing each project that is marketed through a real estate broker.

The Disposition team acquires an appraisal from the Bureau of Appraisal on parcels of land being disposed of as surplus when the estimated value is \$500,000 or more. However, the BRES does have the authority to use a comparable sales analysis (CSA) or a broker's opinion of value when the estimated value of the land is under \$500,000. Either the buyer or the buyer's closing agent may obtain a settlement statement (BRES is not required and does not always obtain a settlement statement for surplus sales but does for all exchanges.). The settlement statement is a form furnished to the parties of a real estate transaction summarizing the actual settlement costs. It includes costs paid to and by the settlement agent and those costs paid outside the closing.

Surplus records for lands being proposed for disposition which have not already been created in FL-SOLARIS Land Inventory Tracking System (LITS) by the Uplands Operations Management Consultant Manager are created by the assigned GOC II or III. Each parcel will be assigned a unique LITS surplus number which is connected to the originating LITS Acquisition Number. In addition, all surplus dispositions are recorded and tracked in the Disposition Tracking database (a Microsoft FoxPro database maintained by the BRES. Surplus land data is entered into the database for each surplus land file. An Administrative Assistant in the Division of State Lands compares the data entered into the database with the supporting documentation for the surplus land file to confirm if the data was entered into the database correctly. The information is also

reviewed by a Government Operations Consultant II or the Program Consultant. The Administrative staff uses the data in the Disposition Tracking database to prepare quarterly reports of sales, which are reviewed by the Program Consultant. BRES keeps track of sales until closing. The funds received for surplus land and exchange transactions are forwarded to the Bureau of Financial Management (FM) within the Office of Operations with a copy of the Money Deposit Information Sheet. The deposit form is also sent to the Finance and Accounting Revenue Section (F&A). FM deposits the funds and notifies F&A. Disposition staff notifies F&A in the case of an expected wire transfer which is deposited directly into the Treasury and Finance and Accounting notifies the Disposition staff when it is received.

After closing, the documentation for surplus lands is entered into the FL-SOLARIS Land Inventory Tracking System (LITS) and is assigned a unique Disposition number which is linked to the LITS Acquisition and Surplus numbers. The file is then forwarded to the Title and Land Records Section where the LITS disposition record is completed

The closing program area of BRES is responsible for procurement contracting in which task assignments are prepared for DSL and other division offices that need assistance. Task assignments are created for title/closing services using department object and financial codes required for tracking and processing payments. The various products obtained under the procurement contracts are then reviewed by staff and approved by DEP attorneys for closing and post-closing documentation.

Warrant requests are prepared by the closing program area for DEP's Finance and Accounting. The warrants are for compensation for closings and eminent domain court-ordered payments. A checklist is reviewed against the warrant request for accuracy.

The closing program area not only closes the real estate contracts that are negotiated for purchase by the acquisition program area, but also oversees all QA/QC for each individual file that is closed, including the use of checklists to identify the necessary steps to bring the file to closure and problem resolution of issues that may need to be addressed prior to closing. The closing program area also works closely with the Office of General Counsel (OGC) staff to ensure all legal requirements are met. After closing, staff verifies that the documentation for acquisition/donation lands has been entered into the Acquisition Process Information System (APIS) Tracking System. Title contractors may be tasked to close acquisition files as well. Several BRES staff members monitor the many various processes for compliance. ESAs in particular, as discussed under the QA/QC heading for OES on previous pages, utilize even further quality control/quality assurance checks.

The same closing program area reviews and coordinates receipt of any corrections necessary to finalize the Title Policy, corrective instruments, FLAIR, BTLDS, and other reconciliation in cooperation with BSM's Title and Land Records group. Closed deeds and title policies are processed to the Title and Land Records group for entry into the records system and file storage recordkeeping.

Eminent domain case reconciliation is performed in the closing program areas. Court documents that require warrant requests for court-ordered payments are processed also. Court deposits and

additional payments are reconciled with the Office of General Counsel who reconciles with the Attorney General's Office (AG) and the Collier County Clerk of Court to assure proper payments.

The closing program area of BRES is also responsible for overseeing post-closing escrow agreements and funds. When a closing occurs and money is held in escrow, the Closing Team Lead is notified when the escrow agreement has been complied with, and at that time, the Closing Team Lead confirms compliance with the appropriate party before the release of escrow funds is authorized. If the issue is environmental in nature, the request for release of escrow monies goes to the OES. An OES staff member then checks to make sure that all areas affiliated with the request for release of escrow monies have been complied with, calculates then reviews the monies to be released and finally submits the approval for the escrow money release prior to authorization of the release of funds. The Closing Team Lead communicates with escrow agent for final release of funds.

Bureau of Appraisal

The Bureau of Appraisal supports the land acquisition, disposition and management activities of the Division by contracting with independent appraisers throughout the state for appraisal services. The purpose of these appraisals is to obtain an unbiased opinion of value of a property to be purchased or sold, or the values of easements, leases, conservation easements, or special purpose properties, such as boat slips. The same appraisal services are offered to other agencies outside the Division of State Lands. The bureau maintains a list of state-certified appraisers who meet the requirements to perform appraisals for the Division and the Board of Trustees. This list is made available to counties, municipalities, water management districts and other governmental agencies for their use in selecting appraisers.

QA/QC Function:

The Bureau of Appraisal ensures that appraisal products received from contractors meet the requirements of the Supplemental Appraisal Standards for the Board of Trustees (Supplemental Standards), the Uniform Standards for Professional Appraisal Practice (USPAP), and when federal funding is involved, the Uniform Appraisal Standards for Federal Land Acquisitions (UASFLA) also known as the "Yellow Book". Each contract for appraisal services specifies the appropriate standards to be followed, and the contract appraiser provides a certification within each report that the appraisal is both geographically and technically competent to have taken the assignment and has met the applicable standards. All staff appraisers are familiar with the requirements of the Supplemental Standards; each staff appraiser attends regular, biennial training on USPAP. Further, after a property has been appraised for acquisition purposes and the appraised value meets a specific value threshold, it is reviewed by a contract review appraiser for conformity with USPAP. All products require ultimate approval by the Bureau.

Bureau of Surveying and Mapping

The Bureau of Surveying and Mapping is responsible for maintaining a repository of land records, determining the location of land and water boundaries, protecting the State's interest in land by

clearly delineating and defending the boundaries of state-owned lands, issuing opinions of title and defending the State's title and ownership interests in property vested in the BOT

BSM is arranged into three work groups (program areas): Land Acquisition & Management, Title and Land Records, and Public Land & Geodetic Survey.

- The Land Acquisition program area of BSM performs survey and mapping services for Preservation 2000/Florida Forever and other agency programs. This program area also performs reviews for the acquisition and sale of state lands.

QA/QC Function:

The Land Acquisition portion of BSM oversees the review of land surveys, appraisal maps and legal descriptions for land acquisition purposes. Though generation of these products is at times completed in-house, they are usually provided to the Division of State Lands by private sector consultants under contract. Reviews of products for accuracy, correctness and completeness, against contractual (task assignment) scope provisions and applicable statutes and rules most commonly found in Chapter 177, F.S., and Chapter 5J-17, F.A.C., are performed in-house or by private contractor under contract with the State for this review service. Contracts contain verbiage which holds the consultant responsible for the products and services:

“The CONTRACTOR shall perform the services in a proper and satisfactory manner as determined by the DEPARTMENT. Any and all equipment, products or materials necessary to perform this Contract shall be supplied by the CONTRACTOR, unless otherwise specified herein.”

BSM staff checks and verifies surveys and related products. Designated staff acts as contract managers and assign tasks to contractors for services. All tasks are reviewed and approved via separation of duties and involve another staff member, in addition to a separate funding authority. Products and services are reviewed for accuracy and completeness by internal staff and in some cases by separate contract consultant review staff.

Surveys are used for the acquisition and management of land. Acquisition surveys and products are matters of due diligence for land acquisition. Management surveys are typically prepared for land managers which police/enforce boundaries.

- BSM's land management program area provides surveys and maps of state owned lands that have not been surveyed or mapped in the past in order to resolve boundary issues. This program area also uses land surveys and legal descriptions, most of which are provided by private sector consultants under contract for land management purposes. This program area also contracts out for review of surveys and legal descriptions. Surveys are used for the management of land and are typically prepared for land managers which police/enforce boundaries.
- The land management branch of BSM is also involved with providing water level and Ordinary High Water information for lakes, streams and rivers. The water level data is used to calculate stage duration curves for percentages relating to the height or elevation of the surface of the water body. Water level data is then used in conjunction with data observed in the field from naturally occurring indicators of water levels to establish

boundaries of the limits of state ownership. The data is used for permitting purposes and in cases involving litigation. Information is collected from gages that are maintained by the state's water management districts and the U.S. Geological Survey.

QA/QC Function:

All surveys, maps and legal descriptions are reviewed by staff, or by separate contract consultant review staff, for accuracy, correctness and completeness against contractual scope provisions and applicable statutes and rules most commonly found in Chapter 177, F.S., and Chapter 5J-17, F.A.C. All tasks are reviewed and approved via separation of duties and involve another staff member, in addition to a separate funding authority. Further, contracts contain verbiage which holds the contract consultant responsible for the products and services:

"The CONTRACTOR shall perform the services in a proper and satisfactory manner as determined by the DEPARTMENT. Any and all equipment, products or materials necessary to perform this Contract shall be supplied by the CONTRACTOR, unless otherwise specified herein."

The water management districts routinely inspect the gauges and new levels are run to them about every three years. There are base gauges and reference gauges at the sites so that independent readings can be made.

- The Title and Land Records program area of BSM provides presentation, reproduction, research and general administration of the land records of the BOT. It also provides maintenance of existing records; the processing of new incoming records, which includes preparation for scanning into BTLDS; Data processing and integration with FL-SOLARIS; title research for management, acquisition, disposition, permitting and general state land ownership requests; and filling of orders relating to reproduction of the various records, including public records requests.

QA/QC Function:

This program area of BSM utilizes internet accessed data and services, such as historic aerial photographs, government surveys and official records, from many county property appraiser offices, county clerk's offices, and aerial photograph sites (ex. from UF and DOT), as well as documents that are maintained in the Title and Land Records program area files to assess current issues and contextualize new information into the basis for real property ownership of the Board of Trustees. Staff member meetings and in-house mapping utilize bureau talent and expertise when regarding any new data submitted. The program area assigns tasks to title companies for basic title related services. Contractors are required to prepare products in accordance with statute, specifically Section 253.03(8)(a), (b) and (c) F.S., which corresponds to BSM's contract with FSU's FREAC (Florida Resources and Environmental Analysis Center) to compile and distribute the Public Land Inventory to Public Agencies and for integration in FL-SOLARIS with payment subject to Department review and approval. Contracts specify responsibilities and services required of the contractor such as the minimum detail requirements for reports, data and/or instruments provided by the contractor, identity of the program manager or other contract

supervisor, and description of the duration and conditions under which the contract shall be fulfilled.

Records staff review and compile historic and current documents and mapping data for integration into the BTLDS, FL-SOLARIS and land records vault. For the mass upload of records in BTLDS that were migrated to FL-SOLARIS staff performs ongoing review and verification of documents and data for QA/QC. For new documents, after review for accuracy, records staff prepares the documents for scanning into the BTLDS database. After scanning, staff performs QA/QC of BTLDS land inventory property management data for BOT owned lands as well as linking newly scanned acquisition, management and conveyance documents to the land inventory in BTLDS and LITS component of FL-SOLARIS. Scanned documents are used as the basis for creation and updating of the BTLDS property management inventory component. Records staff also reconciles BTLDS data with the Public Lands Inventory (PLI) tax parcels, FL-SOLARIS and with FLAIR for land acquisitions.

The Title Research staff provides accurate and timely title determinations of the BOT's ownership interest in environmental resource applications for projects within the State for the district permitting offices and water management districts. Research staff completes determinations as well as conducting state land ownership research at the request of the Cabinet and Legislative offices, tax assessors and property appraisers, law enforcement agencies, private and state attorneys, other offices within DEP, other agencies, governmental entities, corporations, surveyors and the general public.

Research staff is assigned specific counties so that new ownership queries are continually evaluated by review with previous determinations and valid new information is incorporated into the program area files. Determinations are reviewed by supervisors to verify accuracy and consistency and have additional work completed when necessary. Completed determination reports are scanned into Oculus for creation of an automated storage database for future retrieval of reports and images.

BTLDS is undergoing a significant upgrade due to the outdated technology of the current system. BTLDS will be modernized with updated technologies meeting the standards and requirements of DEP's Office of Technology and Information Services (OTIS). Business processes between mission critical applications, BTLDS and Florida State Owned Lands and Records System (FL-SOLARIS), will be enhanced to include seamless integration and web-enabled access for greater user efficiency. The "Refreshed" BTLDS will provide enhanced functionality in the following areas: Document Management, GIS, Land Use Summary, Worksheet, Mapping, Administrator, DEP Data Search, BTLDS Public Data Search, and Reports. The core modules are scheduled to go live in July, 2016, with the completion of all applications scheduled for completion in January, 2017. Title and Land Records staff have been active participants in the analysis, design, development and implementation of the project.

- The Public Land and Geodetic Survey program area of BSM is responsible for providing survey and geographic data for LABINS. This group also provides for the collection of water level and meteorological collection and geodetic control data for the state. The same program area of the bureau performs identification, restoration and preservation of

the controlling corner monuments established during the original cadastral surveys related to the Restoration of Corners Act (F.S. 177 Part III). Responsibilities also include locating the mean high water line as recognized in the State Constitution as the boundary between state sovereignty land and uplands subject to private ownership for the Coastal Mapping Act (F.S. 177 Part II) and providing liaison and technical assistance with the National Ocean Service/National Geodetic Survey and the public.

QA/QC Function:

All horizontal and vertical control surveys performed by BSM require QA/QC on observed measurements which must also meet the National Geodetic Survey (NGS) specifications and be checked by federally developed software. Level lines are processed using Translev. Mark descriptions are prepared, checked and entered into WinDesc. WinDesc is the NGS approved software program for Windows-based computers for the purpose of creating, editing, and submitting recovery information for a bench mark(s) and is incorporated into Translev. The vertical control surveys are performed using compensating levels and the data that is collected and processed for closure checks to multiple benchmarks. Field measurements for vertical control are automatically accepted or denied by internal instrumentation software provided by NGS for the automatic electronic leveling units. Staff ensures that NGS specifications are followed in field collections of data and office computations. When surveying horizontal control for latitude and longitude locations, measurements are collected and evaluated by calculating mathematical closures to known existing horizontal control points. Horizontal control data is obtained utilizing the manufacturer's post processing GPS/GNSS software. (Currently the bureau uses GNSS Solutions 3.00.07 by Magellan Navigation, Inc. to process the measurements.) and calculations are performed until required accuracies are attained. The horizontal and vertical control survey data is published through the NGS and state agencies for surveyors and mappers, engineers and the public.

The Public Land and Geodetic branch of BSM is responsible for the construction and maintenance of tide and meteorological stations throughout the state. These stations contain sensors that capture the following data: water level, wind speed, wind direction, air temperature, humidity, air pressure, rainfall, conductivity, water temperature, dissolved oxygen and pH. The sensors are calibrated by the manufacturers at the time of purchase. QA/QC is performed on the sensors in the field bi-monthly or monthly, depending on the type of sensor. During monitoring, when measurements are found to be an "out of range" reading and the sensor is deemed out of range, it is re-calibrated by BSM or replaced by sending it back to the manufacturer for re-calibration or replacement. BSM is currently providing the data digitally and are sharing the data via website: [Florida DEP tide and meteorological stations](#).

BSM is providing digital water level data used to model the flow of water and pollutants, determine tidal datums, determine mean high water line boundary determinations, and navigation by the boating community.

All Mean High Water surveys are filed pursuant to Chapter 177, Part II, F.S. and are checked by staff for compliance with that applicable statute and National Ocean Service (NOS) specifications. Mean High Water Elevations displayed on the LABINS website ([Florida DEP Land Boundary](#)

[Information System](#)) are checked based on the scientific information that is supplied by the National Oceanic and Atmospheric Administration, National Ocean Service. Corner records that are filed are reviewed for compliance pursuant to Chapter 177, Part III, F.S. The Mean High Water elevations and surveys, Erosion Control Line surveys and Certified Corner records are published for private and public distribution. BSM acts as the public repository for Mean High Water surveys and Certified Corner records, pursuant to Chapter 177, Parts II & III, F.S. After Erosion Control surveys are approved by BSM, they are recorded in the official records of the applicable county or counties.

Training

All DSL personnel are properly trained to perform their duties. Supervisors periodically assess staff performance to ensure conformance with the policies and procedures of the unit. Though many of DSL's members hold varied types of degrees and education, as well as various certifications and licenses, only certain types of training are actually required for employment within DSL. DSL's training requirements include:

DO

- DEP provides employees with an entire suite of online courses that provide a one-stop reference for online training needs. This is the source for employee compliance training along with supervisory, professional development, safety, and workers' compensation courses. Link: [Online | Training | Administrative Services | Florida DEP](#)

OES

- The ESA reviewer is trained in the applicable ASTM E 1527-13 standard which corresponds with Phase I ESAs.

BPLA

- The Uplands and Submerged Lands training manuals and Standard Operating Procedures are available to staff members as training and refresher tools.

BRES

- BRES Staff must have knowledge of real estate principles. BRES procedures manuals are available as training and refresher tools.

BA

- The Bureau of Appraisal (BA) **requires** that its appraisers have and maintain state appraisal certifications or appraiser trainee status. There is one exception due to a recent job re-classification from Senior Appraiser to Program Manager. Regardless, this position continues work as a staff appraiser and keeping current remains mission critical for this employee. To maintain the state appraisal certification or trainee status, 30 hours of

appraisal continuing education **must** be taken biennially. The Bureau Chief ensures and oversees that completion of the continued education is accomplished by the appropriate individuals within the BA. Educational course material options are approved by the Florida Real Estate Appraisal Board, Department of Business and Professional Regulation. Included in the 30 hours of required continuation education are courses regarding current training in appraisal theory and technical appraisal methodology, as well as the Uniform Standards of Professional Appraisal Practice. These appraisal standards must be met by contract appraisers and reviewers for all BA appraisal assignments. Failure to obtain the required continuing training education will result in loss of professional certification or license.

BSM

- Professional Surveyors and Mappers are required to have a license which must be renewed every two years. In addition, the Surveyor must take 24 hours of Continuing Education Credits (CEC) every two years before the license can be renewed, with at least six of those hours being an approved provider's course or seminar on Florida's laws affecting the practice of surveying and mapping. Training manuals are provided by the educational provider. A BSM supervisor oversees and ensures that each Division surveyor completes the CEC in a timely manner, and the documentation to support the CEC completion is maintained by the supervisor for five years, as well as the Board of Professional Surveyors and Mappers within the Department of Agriculture.
- All Professional Surveyors and Mappers are required to be licensed pursuant to Chapter 472 FS and Rule 5J17 FAC.
- Land management surveyors in BSM must also be certified to operate watercraft and trailers per DEP Directive 620, which is renewed every five years. This certification involves the corresponding training manuals. This group must also be versed and trained in the newest releases of Autodesk and ESRI mapping software which comes with corresponding manuals that are used to train surveyor staff. A supervisor both ensures that the surveyors receive the training, and maintains all certificates of completion.
- The Title and Land Records group have procedure manuals for BTLDS and individual procedures for Records Management.

Recommendations

To further improve the division's quality of production and achievement, the following are general recommendations DSL may want to employ for the future viability and success of its missions:

- Establish a written protocol for each database to be used by data entry personnel throughout the division's bureaus, so that inaccuracies and mistakes are discovered and resolved prior to user operation of the database systems.
 - KYRA Solutions is currently developing protocols for the APIS database
- After the completion of the database integration that has been undertaken by the Division, establish a uniform QA/QC protocol for all data entry personnel.

Appendix A: Glossary of Acronyms

AG	Attorney General's Office
APIS	Acquisition Process Information System
ARC	Acquisition and Restoration Council
BA	Bureau of Appraisal
BLA	Bureau of Land Acquisition
BOT	Board of Trustees (of the Internal Improvement Trust Fund)
BPLA	Bureau of Public Land Administration
BSM	Bureau of Surveying and Mapping
BTLDS	Board of Trustees Land Document System
CAD	Computer Aided Drafting
DEP	Department of Environmental Protection
DO	Director's Office
DOR	Department of Revenue
DSL	Division of State Lands
ESA	Environmental Site Assessment
FAC	Florida Administrative Code
FCT	Florida Communities Trust
FCO	Fixed Capital Outlay
FDEP	Florida Department of Environmental Protection
FEMA	Federal Emergency Management Agency
FLAIR	Florida's Accounting Information Resource
FNAI	Florida Natural Areas Inventory
FS	Florida Statutes
GIS	Geographic Information Systems

ILMS	Integrated Land Management System
LABINS	Land Boundary Information System
NGS	National Geodetic Survey
NOS	National Ocean Service
OES	Office of Environmental Services
OGC	Office of General Council
OGT	Office of Greenways and Trails
PLI	Public Lands Inventory
PMDC	Performance Measures Data Collection
QA	Quality Assurance
QAO	Quality Assurance Officer
QA/QC	Quality Assurance/ Quality Control
SQL	Structured Query Language
SUPRS	Submerged and Upland Public Revenue System
TIITF	Board of Trustees Internal Improvement Fund
QMP	Quality Management Plan
UASFLA	Uniform Appraisal Standards for Federal Land Acquisitions
USGS	United States Geologic Survey
USPAP	Uniform Standards for Professional Appraisal Practices
WMD	Water Management District

Appendix B: FNAI Procedures

FNAI PROCEDURES FOR PROCESSING OF ELEMENT OCCURRENCE RECORDS (EORS) (An In-house Guide)

Produced by the Biotics Data Committee composed of Glenn Woodsum, Sally Jue, Linda Chafin, Katy NeSmith, and Carolyn Kindell

RESPONSIBILITY FOR EOR PROCESSING

Data Management Staff is responsible for monitoring the flow of the process. They will notify Senior Scientists of any procedural problems or systematic errors, and update all pertinent staff with any changes in the procedure. After staff is notified via e-mail or a memo, the changes will be recorded in the FNAI Operations Manual (in revision).

Project Managers are responsible for the processing of all EORs associated with Special Projects. Special Projects will require a prior commitment of staff time for EOR processing, which must be coordinated with the staff member and his/her supervisor.

Senior Scientists and/or Program Area Leaders from each program area are responsible for all EORs of their program area type (plant, animal, or natural community) that are not part of a Special Project. Senior Scientists and Program Area Leaders can, of course, delegate tasks to staff members within their program area (or outside their program area if agreed upon by the appropriate supervisor) but they are ultimately responsible for ensuring that the work required to complete all the steps in the processing of an EOR is done in a timely manner. This will involve reviewing finished EOR data packets and communicating with Data Management Staff to assure that there are no backlogs, bottle-necks, or other problems causing delays. This will also involve correcting any problems, and assigning the necessary tasks to staff members to make sure that the EORs are progressing in accordance with office and/or program area schedules (as per office-wide calendar).

All Scientists and Scientific-support staff are responsible for working on every step of the process described below, as directed by their supervisors or as per their job objectives (particular staff members will not be assigned specific tasks as part of this procedure; supervisors will be responsible for coordinating and assigning tasks to appropriate staff).

THE EOR PROCESSING STEPS

EOR Entry for new EORs

1. Assemble the EO source materials

Gather all the source documents (hard-copy and/or digital) you will need for mapping of the EO and (later) entry of the associated text fields. These materials could include a field form, published or unpublished report, printed program areas of spreadsheets or attribute tables, digital shapefile, field notes, copy of a quad map, etc. Attach a copy of the EOR cover sheet form as the first page in each EO source packet. Fill in the element name on the EOR cover sheet. Check the box for New EOR on the cover sheet and indicate whether or not this is to be a sub-EO and, if so, give the EO_ID and EO_number of the parent EOR (if not known at the time you create the EO then you will have to come back to fill in this field).

2. Map the EO source(s)

- Enter Biotics Mapper and proceed to Input/Edit mode for creation and placement of source features for the EOR. Details of feature making are not presented here. For each EOR, add the element code (from the “create source feature” window) to the cover sheet.
- If you define multiple source features that will comprise a single EO representation, enter the total number of features on the cover sheet. For multiple source features it is a good idea while mapping to enter a descriptive source feature label to assist in later checking of the data.
- If a copy theme is used for the source feature shapes, enter the path to the file on the cover sheet.
- Check the box for “Defer calculation of spatial attributes” if you plan to map several EOs during your current session. Enter data as appropriate in the Identifiers and Mapping tabs for each of your source features.
- If your EO will be made from a single source feature, you may check the box for “Create EO Representation from Source Feature” in the create source feature window. For a compound EO (multiple source features) leave this box unchecked for each source feature.

3. Generate the EO representation

- If your EO will be made from a single source feature and you checked the box for “Create EO Representation from Source Feature” in the create source feature window, Mapper will automatically proceed to generate the EO rep when you finish the source feature.
- For a compound EO (multiple source features) you must use the “chain tool” followed by a selection of all of the related source features for the EO. This will initiate the generation of the EO rep.
- Record on the EOR cover sheet the EO number and EO_ID assigned by Biotics.

- Record your initials and the date of mapping on the EOR cover sheet.
- Exit the Input/Edit mode when you have finished all of the source feature and EO creation activities for your session. At this time, you should specify that deferred spatial attributes should be calculated.

4. Enter the EO tabular data

Tabular data for the EO are now entered directly into the computer as opposed to being transcribed to a hard-copy form. We will also refer to this direct entry process as transcription.

- Launch the Tracker application and enter the view mode for “Element occurrences”.
- Use the find button or menu item to select an EOR for which you want to add tabular data. The simplest method is probably to enter the EO_ID on the Code/ID tab (find element occurrence window) as recorded on the EOR cover sheet when the EO representation was created.
- When the record is found, click on the “Details” button, then proceed through the various tabs in the EO window to enter the data fields appropriate to the EOR. For help with filling out EOR fields in Biotics Tracker, please refer to the FNAI data content and standards document (in preparation) or use Biotics’ on-line help system (click on the “?” button when your cursor is in the desired EOR field to bring up the help screen).
- When you have completed tabular data entry, set the Data QC status field on the Version /QC tab to “Incomplete”. Then on the EOR cover sheet check the corresponding box for setting QC status, enter your initials as the data transcriber, and add the date of entry.

5. Print the EOR data and assemble QC package

- Using one of the Crystal Reports programs for EO proofing (EO_Proof_ID, EO_Proof_WL_id, EO_Proof_WL_name), obtain a printed copy of the EOR.
- Assemble the final EOR QC package by inserting the proof report after the EOR cover sheet and before any of the supporting source materials (field forms or notes, hand-drawn maps, copies of quads, etc.).
- Deliver the finished QC package to an FNAI scientist different from the one who originally processed the data, or place it in the QC1 staging area for the appropriate type of EOR (Plant, Animal, Natural Community, or Special Project) and the Data Manager will assign QC responsibility. Until the GMF is reorganized, the QC staging area is in Data Manager’s office.

6. QC1 – mapping QC (must be performed by someone other than the original mapper)

- With Biotics Mapper running, the EO.Reps (Polygons) theme active, and an EOR QC package (headed by an EOR cover sheet) in hand, use the “Zoom by” tool or the Query (“hammer”) button to go to the vicinity of the EOR you want to QC. Select the Query Active Theme(s) button and draw a rectangle around a portion of the view that includes the EOR to check. If multiple EO reps are presented in a “Query Element Occurrences” window, select the appropriate one and click on “Details”.
- Verify that the EO rep is for the correct element and that the Shape_ID (EO rep feature ID) matches the one recorded on the EOR cover sheet. This will seem circular if these were used to select the EO rep in the first place, but other methods can be used to query the EO rep and in those instances these checks will be necessary.
- Make sure that the number of source features in the EO rep matches the data on the EOR cover sheet.
- Click on a source feature in the Query Element Occurrence window, then the “Details” button, and verify that the conceptual feature type, locational uncertainty type and distance class, and mapping attributes agree with what you would expect based on the source data included in the EOR data packet.
 - Use the “View shape” button to check the digitizing of the source features and verify that each source feature is consistent with the source data.
 - If there is a problem with any of the source features set the QC status on the General tab to “FAILED” and note the reason(s) for failure in the Remarks field
- Repeat the above step for all of the source features
- After all of the source features have been checked, move to the “Spatial Attr” Tab in the query element occurrence window and verify that the spatial attributes have been calculated. If you see that spatial attributes have not been calculated for this EOR, notify Data Management staff who will make sure that these attributes are calculated. Note also whether or not any attributes for site or MA are consistent with source data.
- Examine the shape of the EO representation and verify that it makes logical sense given the nature of the source feature(s) and supporting data.

If at any point in this process the data do not match your expectations based on the information on the EOR cover sheet or the data in the EOR source materials, confer with the person responsible for mapping and attempt to resolve any differences of opinion or interpretation before completing the QC process.

- When all of the above checks have been performed, proceed to the QC/General tab of the Query Element Occurrence window. If all checks were successful set the Quality Control Status to “PASSED”. If any checks were unsuccessful and were not able to be resolved after consultation with the original mapper, set the QC status to “FAILED” and note the reason(s) for failure in the quality control Remarks field. In both cases enter your name (using the form “last name, FI. MI.”) and date on which you performed the mapping QC.

At this point you may 1) continue on with QC2 (Tracker data QC), or 2) return the EOR packet to the EOR staging area in the “Ready for QC2” file (for EORs with QC=PASSED) or the “QC failed” folder.

NOTE – if you intend to proceed directly to Tracker QC you may want to save one or more of the EORs you have been working on to a working list (BIOTICS menu “Save Working List...” item). This will facilitate finding the EORs quickly (with the List menu “Open List...” item) after you open Tracker.

7. QC2 – Tracker QC

QC of the text fields associated with an EOR has necessarily changed considerably since the days when data were rewritten (transcribed) to a hard copy form prior to computer entry. Now EO information is typed directly into the computer based on the contents of various source materials, typically field report forms, field notes, published reports, or other scientific literature. The job of the QC2 checker is thus primarily to ensure that the data as entered conform to FNAI and/or NatureServe data entry standards, are free of typographical or grammatical errors, and are logically consistent within the set of fields comprising the EOR and with the source material. In the absence of transcription forms, there may not be any hard copy text against which the reviewer can perform a word-for-word type of comparison.

The ‘QC2’ part of the EOR procedure really consists of three steps: proofing, updating Tracker with the corrected data, and setting the ‘Data QCStatus’ field to a value of “Passed”. It is very important that the ‘QC’ field be updated on the paper copy and in Tracker, as this field will be used to determine if an EOR is complete and ready for dissemination to the public.

First check the EO_proof_report printout to verify that all of the required fields have been entered. These fields are highlighted with white text on a black background on the proof report. If all fields are present, check the box on the EOR cover sheet. If not, return the data package to the transcriber for completion.

Check contents in EO data program areas for logical consistency, consistency with data from the source materials, spelling, punctuation, grammar, and data content and format standards. This is not necessary for the Locators, Sources, and Spatial data program areas, which are either entered automatically by Biotics or have been previously QCed in Mapper.

- o For all EORs, data program areas include Identifiers, Site/Directions, Rep. Detail, Rep. Extent, Survey Information, EO Rank, Description, Protection, MA/Ownership, Additional Topics, Documentation, Version/QC, and Extensible Data. Natural community EORs also include program areas for Rel. to Std, EO Rank Factors, Environment, Composition, Structure, and Inventory.
- Mark changes directly on the EO_proof printout, using red pencil.
- To make corrections arising from your proofreading of the EO record, first open Biotics Tracker, select the Element Occurrence View mode, then find the EOR(s) you want to revise. The best methods are probably to use the Find menu or Find button, along with

the EO_ID as recorded on the EOR cover sheet for the EO, or to open a previously saved working list containing a set of EORs to QC.

- Locate the tab(s) containing the data to revise and make the corrections. As you make a correction make a small red check mark next to the revision notes on the proof report.
- When all corrections are complete, proceed to the “Version/QC” tab and set the “Data QC Status” field to “Passed”. Enter your name (using the form “last name, FI. MI.”) into the “Data QC By” field.

8. Final QC and disposition of the EOR

- When the mapping and data QC processes are complete, deliver the finished EOR data packet to the senior scientist or program area leader responsible for your project or type of data.
- Senior scientist or program area leader only – review the finished EOR data packet as you want, then place the packet in the “completed EORs” file (currently in Glenn’s office). This review is simply to enable you to keep in touch with the data being generated within your discipline and can be as detailed as you wish.
- Data management staff – perform a final QC on the data packet, initial and date the EOR cover sheet, then place the EOR packet in the “to-be-filed” file. This is a process-oriented QC, not another content QC. It will allow data management staff to monitor overall data flow and to ensure that standard procedures are being followed.