

A photograph of a river scene. In the foreground, a large, weathered, light-colored log lies horizontally across the river, partially submerged. The water is dark and rippled. In the background, there is a dense forest of bare, brown trees and shrubs. The sky is a pale blue. The overall scene is in a natural, somewhat desolate setting.

SRST Database Update

South River Science Team

October 2016

AECOM

Agenda

- EIM Database Overview
- Database (EIM) Customization
- Data Migration
- Database Demo

EIM Database

Locus EIM (Environmental Information Management) is a cloud based data management solution that allows users to plan samples, manage sampling, lab and subsurface data, visualize results and generate regulatory reports.

- ◆ Plan water, soil, air, waste, and other sample types
- ◆ Generate COCs and other lab forms
- ◆ Receive data from labs (via EDDs)
- ◆ Wastewater management
- ◆ Nuclear waste management
- ◆ Drinking water quality management
- ◆ Validate lab data to verify data quality
- ◆ Analyze data using queries and visualization tools
- ◆ Produce reports for regulatory compliance or internal use
- ◆ Laboratory data management
- ◆ Groundwater management
- ◆ Discharge monitoring report (DMR)
- ◆ Track and monitor remediation or other long-term projects

Database (EIM) Customization

Field Name	Status
BAND_OR_TAG_NO	Existing Biological Sample Table
BIOLOGICAL_SAMPLE_COMMENTS	Existing Biological Sample Table
BIOLOGICAL_SAMPLE_DETAIL	Existing Biological Sample Table
COLLECTION_LOCATION_DESC	Existing Biological Sample Table
FIELD_SAMPLE_ID	Existing Biological Sample Table
FUNCTIONAL_FEEDING_GROUP	Existing Biological Sample Table
LAST_MODIFIED_BY	Existing Biological Sample Table
LAST_MODIFIED_DATE	Existing Biological Sample Table
NEST_BOX_NO	Existing Biological Sample Table
SITE_ID	Existing Biological Sample Table
SPECIMEN_CATEGORY	Existing Biological Sample Table
SPECIMEN_SAMPLE_TYPE	Existing Biological Sample Table
TAXONOMIC_ID	Existing Biological Sample Table
TROPHIC_POSITION	Existing Biological Sample Table
STUDY_GROUP	New Field - Field Sample Table
POINT_OF_CONTACT	New Field - Field Sample Table
BIOLOGICAL_SAMPLE_DETAIL	New Field - Biological Sample Table
NEST_BOX_NO	New Field - Biological Sample Table
BAND_OR_TAG_NO	New Field - Biological Sample Table
COLLECTION_LOCATION_DESC	New Field - Biological Sample Table
FUNCTIONAL_FEEDING_GROUP	New Field - Biological Sample Table
TROPHIC_POSITION	New Field - Biological Sample Table
SPECIMEN_CATEGORY	New Field - Biological Sample Table
TAXONOMIC_ID	New TAXON Table
COMMON_NAME	New TAXON Table
SCIENTIFIC_NAME	New TAXON Table
TAXONOMIC_CLASS	New TAXON Table
TAXONOMIC_ORDER	New TAXON Table
TAXONOMIC_FAMILY	New TAXON Table
TAXONOMIC_GENUS	New TAXON Table
FIELD_SAMPLE_ID	New BIOLOGICAL_SAMPLE_ATTRIBUTE Table
BIOLOGICAL_ATTRIBUTE	New BIOLOGICAL_SAMPLE_ATTRIBUTE Table
BIOLOGICAL_ATTRIBUTE_VALUE	New BIOLOGICAL_SAMPLE_ATTRIBUTE Table
BIOLOGICAL_ATTRIBUTE_UNITS	New BIOLOGICAL_SAMPLE_ATTRIBUTE Table
BIOLOGICAL_ATTRIBUTE_COMMENTS	New BIOLOGICAL_SAMPLE_ATTRIBUTE Table

- AECOM has maintained biological data in Excel
- Customization request was based on fields in Excel files not included in EIM
- Locus created new fields and tables for storing data efficiently
- Data is being migrated in manageable batches

Database Migration

- Valid Value Lists (VVLs) were established in EIM (7 lists for taxon information, 6 for other biological attributes)
- VVL's enforce data integrity and limit data entry options

Setup Field Taxonomies

Taxonomies ?

— All sites Add new

Taxonomic ID ↑	Common Name	Scientific Name	Class	Family	Order	Genus
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
AGPHO	RED-WINGED BLACKBIRD	Agelaius phoeniceus	Aves	Icteridae	Passeriformes	Agelaius
AISPO	WOOD DUCK	Aix sponsa	Aves	anatidae	Passeriformes	Aix
ALCEP	ONION	Allium cepa	Liliopsida	Liliaceae	Liliales	Allium
ALGAE	PERIPHYTON		Algae			
AMNAT	YELLOW BULLHEAD	Ameiurus natalis	Actinopterygii	Ictaluridae	Siluriformes	Ameiurus
AMRUP	ROCK BASS	Ambloplites rupestris	Actinopterygii	Centrarchidae	Perciformes	Ambloplites
AMSAV	GRASSHOPPER SPARROW	Ammodramus savannarum	Aves	Emberizidae	Passeriformes	Ammodramus
ANPLA	MALLARD	Anas platyrhynchos	Aves	Anatidae	Anseriformes	Anas
BABIC	TUFTED TITMOUSE	Baeolophus bicolor	Aves	Paridae	Passeriformes	Baeolophus
BAETI	MAYFLY	Baetidae	Insecta	Baetidae	Ephemeroptera	
BEVUL	BEET	Beta vulgaris	Magnoliopsida	Chenopodiaceae	Caryophalles	Beta

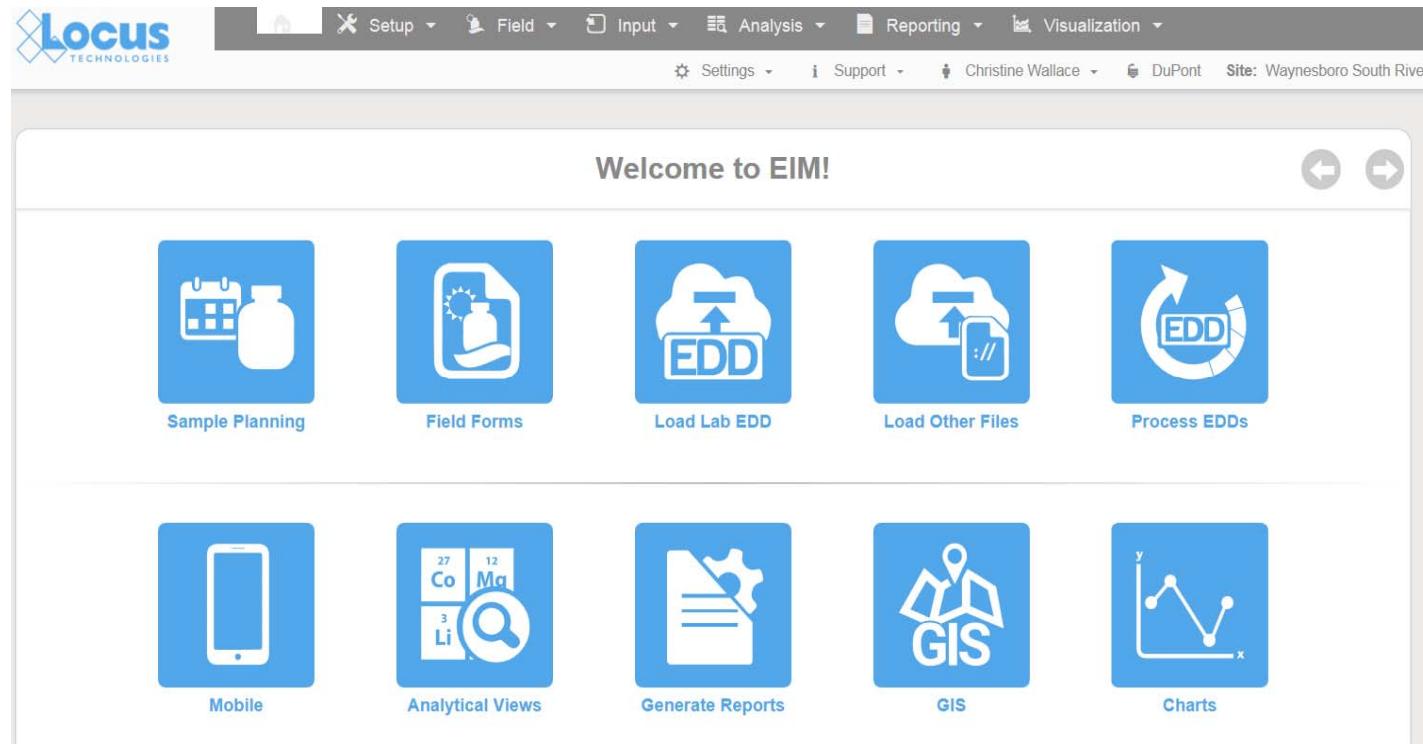
Data Migration (continued)

- Excel data was moved into upload templates and loaded into the newly customized biota tables
- Column headers were color coded to help determine which new tables would be populated with which columns of information
- Biota data is now in EIM and can be pulled for evaluation

A	B	C	D	E	F	G	H	I	J	K	L
PROJECT	Location ID	SAMPLE_NAME	SAMPLE_M	DATE_SAMPLE	YR	MON	SMP	FIELD_SAMPLE	TISSUE_CAT	SAMPLE_TY	SAMPLE_DESCRIPTOR
AMENDMENT PILOT BASELINE 6/11	BASE-C1-CHIRON	WSR-N-BASE-C1-CHIRON-06292011	Animal Tissue	6/29/2011	2011	6	FS	25890492	AQUATIC INVERTEBRATE	COMPOSITE	WHOLE BODY
AMENDMENT PILOT BASELINE 6/11	BASE-C1-CHIRON	WSR-N-BASE-C1-CHIRON-06292011	Animal Tissue	6/29/2011	2011	6	FS	25890492	AQUATIC INVERTEBRATE	COMPOSITE	WHOLE BODY
AMENDMENT PILOT BASELINE 6/11	BASE-C1-CHIRON	WSR-N-BASE-C1-CHIRON-06292011	Animal Tissue	6/29/2011	2011	6	FS	25890492	AQUATIC INVERTEBRATE	COMPOSITE	WHOLE BODY
AMENDMENT PILOT BASELINE 6/11	BASE-C1-CAENIS	WSR-N-BASE-C1-CAENIS-06292011	Animal Tissue	6/29/2011	2011	6	FS	25890494	AQUATIC INVERTEBRATE	COMPOSITE	WHOLE BODY
AMENDMENT PILOT BASELINE 6/11	BASE-C1-CAENIS	WSR-N-BASE-C1-CAENIS-06292011	Animal Tissue	6/29/2011	2011	6	FS	25890494	AQUATIC INVERTEBRATE	COMPOSITE	WHOLE BODY
AMENDMENT PILOT BASELINE 6/11	BASE-C1-CAENIS	WSR-N-BASE-C1-CAENIS-06292011	Animal Tissue	6/29/2011	2011	6	FS	25890494	AQUATIC INVERTEBRATE	COMPOSITE	WHOLE BODY
AMENDMENT PILOT BASELINE 6/11	BASE-C1-CAENIS	WSR-N-BASE-C1-CAENIS-06292011	Animal Tissue	6/29/2011	2011	6	FS	25890494	AQUATIC INVERTEBRATE	COMPOSITE	WHOLE BODY
AMENDMENT PILOT BASELINE 6/11	BASE-C1-SNAIL	WSR-N-BASE-C1-SNAIL-06292011	Animal Tissue	6/29/2011	2011	6	FS	25890496	AQUATIC INVERTEBRATE	COMPOSITE	WHOLE BODY
AMENDMENT PILOT BASELINE 6/11	BASE-C1-SNAIL	WSR-N-BASE-C1-SNAIL-06292011	Animal Tissue	6/29/2011	2011	6	FS	25890496	AQUATIC INVERTEBRATE	COMPOSITE	WHOLE BODY
AMENDMENT PILOT BASELINE 6/11	BASE-C2-CHIRON	WSR-N-BASE-C2-CHIRON-06292011	Animal Tissue	6/29/2011	2011	6	FS	25890498	AQUATIC INVERTEBRATE	COMPOSITE	WHOLE BODY
AMENDMENT PILOT BASELINE 6/11	BASE-C2-CHIRON	WSR-N-BASE-C2-CHIRON-06292011	Animal Tissue	6/29/2011	2011	6	FS	25890498	AQUATIC INVERTEBRATE	COMPOSITE	WHOLE BODY
AMENDMENT PILOT BASELINE 6/11	BASE-C2-CHIRON	WSR-N-BASE-C2-CHIRON-06292011	Animal Tissue	6/29/2011	2011	6	FS	25890498	AQUATIC INVERTEBRATE	COMPOSITE	WHOLE BODY
AMENDMENT PILOT BASELINE 6/11	BASE-C2-CAENIS	WSR-N-BASE-C2-CAENIS-06292011	Animal Tissue	6/29/2011	2011	6	FS	25890500	AQUATIC INVERTEBRATE	COMPOSITE	WHOLE BODY
AMENDMENT PILOT BASELINE 6/11	BASE-C2-CAENIS	WSR-N-BASE-C2-CAENIS-06292011	Animal Tissue	6/29/2011	2011	6	FS	25890500	AQUATIC INVERTEBRATE	COMPOSITE	WHOLE BODY
AMENDMENT PILOT BASELINE 6/11	BASE-C2-CAENIS	WSR-N-BASE-C2-CAENIS-06292011	Animal Tissue	6/29/2011	2011	6	FS	25890500	AQUATIC INVERTEBRATE	COMPOSITE	WHOLE BODY
AMENDMENT PILOT BASELINE 6/11	BASE-C2-SNAIL	WSR-N-BASE-C2-SNAIL-06292011	Animal Tissue	6/29/2011	2011	6	FS	25890502	AQUATIC INVERTEBRATE	COMPOSITE	WHOLE BODY
AMENDMENT PILOT BASELINE 6/11	BASE-C2-SNAIL	WSR-N-BASE-C2-SNAIL-06292011	Animal Tissue	6/29/2011	2011	6	FS	25890502	AQUATIC INVERTEBRATE	COMPOSITE	WHOLE BODY
AMENDMENT PILOT BASELINE 6/11	BASE-C3-CHIRON	WSR-N-BASE-C3-CHIRON-06292011	Animal Tissue	6/29/2011	2011	6	FS	25890504	AQUATIC INVERTEBRATE	COMPOSITE	WHOLE BODY

Field Sample Table
Location Table
DuPont Biological Sample Table
Taxonomic Table
Analytical Table
Biological Sample Attribute Table

Demo





Thank You

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South River Science Team

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AECOM