FESTF Tools to Support Registration Review

Providing resources to support the Agency's Endangered Species Assessments under Registration Review

PPDC PRIA Process Improvement Workgroup Meeting
April 19, 2011

FESTF FIFRA Endangered Species Task Force

FESTF provides quality-checked locational data and a means to thoroughly document how it can be applied in a given situation.

Agenda

- FESTF's long history of research and application
- Aggregating reliable data sources
- FESTF MJD
- FESTF IMS
- Building for the future

Where we started

In 1997, FESTF began to address the data requirement to provide OPP with access to multi-jurisdictional and best-available information on the proximity of listed species to pesticide use sites.

For four years, FESTF – with OPP input – researched species data resources as well as how they could be accessed, collected, aggregated and efficiently distributed.

Over the next eight years, FESTF and OPP gave structure to the design concepts, developed a licensing agreement with NatureServe, and conducted 6 investigational pilot or case studies.

The result: Licensed access to NatureServe locational and biological data and an information management system (IMS) to document risk management decisions

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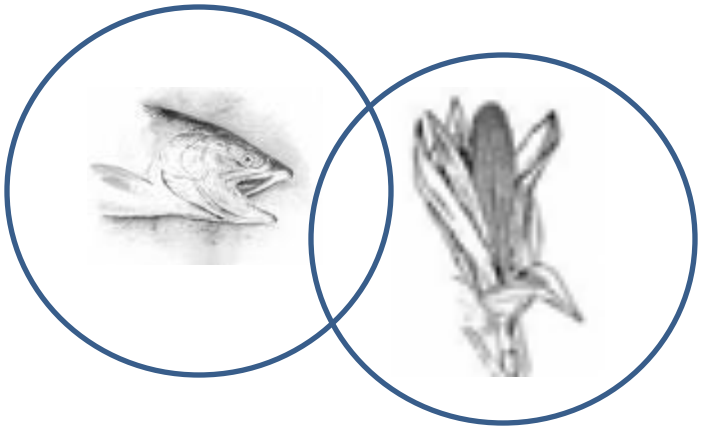
Where we are now



EPA has two pilot studies, addressing OPP's emerging process for endangered species assessments and exploring FESTF data's role.

Registrants and FESTF have submitted extensive species and proximity information that can be accessed to examine species and crop locations.

FESTF appreciates the opportunity to introduce the manner in which data are aggregated, used and documented so that we can best meet data requirements for OPP and support the Agency's endangered species assessment needs under Registration Review.

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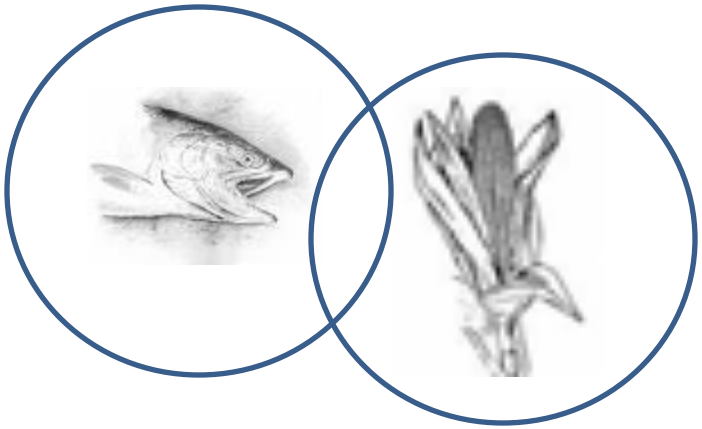

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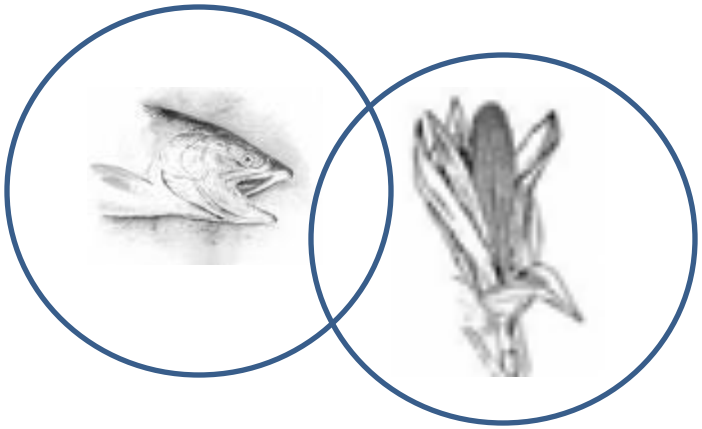

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Foundational data sources - species

	County-level species presence list sent to FESTF
	Licensed multi-jurisdictional database (FESTF MJD) provides spatial data on species locations
	•County-level species presence lists obtained from state offices and verified through Regional/Field offices •Critical Habitat locations downloaded from the USFWS Critical Habitat Portal and Federal Register documents

Foundational data sources – land use

Census of Agriculture 	County-level crop information downloaded from website
National Land Cover Data (NLCD) 	Spatial land use data downloaded from website
Cropland Data Layer (CDL) 	Crop-specific spatial land use data downloaded from website

Fundamental data sources are updated regularly

Data Source	Update Interval
	Last update received in June, 2003
	According to license; annual renewal is typical
 	County-level location data are collected annually; critical habitat designations are collected as they occur and will be updated regularly
Census of Agriculture Cropland Data Layer 	As new data are available (2007 is the most recent) 2009 CDL is most recent available
National Land Cover Data (NLCD)	2001 dataset is currently used; 2006 dataset under review

FESTF Tools

FESTF MJD

FESTF IMS

Licensed multi-jurisdictional database (**FESTF MJD**) provides sub-county locational data *but not all species or all occurrences have specific locational data* ***, therefore***

County-level presence and Critical Habitat locations are also important

FESTF's species location dataset, delivered through the FESTF MJD or the FESTF IMS

The **FESTF MJD** is a portal to locational and biological data provided through FESTF's NatureServe data license

Section: Biological Spatial

NatureServe Endangered Species Information

States

State	Rank	Rank Change Date	Protection Status	Protection Status Date	ESA Status	Element Occurrence Count
Alabama	S1	3/1/89	SP	*No data specified*	*No data specified*	2

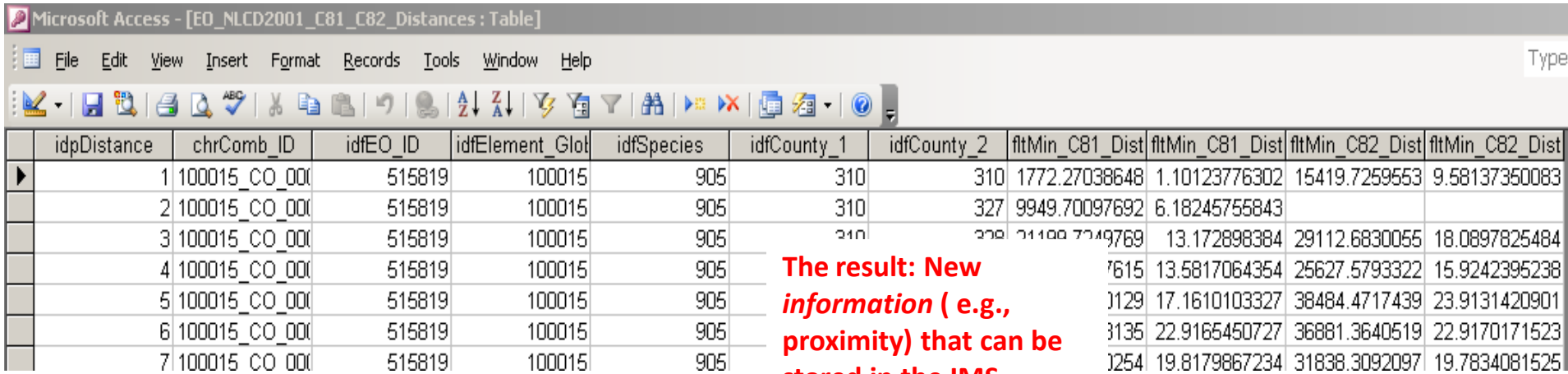
Row #	EO_ID <Sorting: Up, Order: 1>	Comb_ID <Sorting: Up, Order: 2>	Counties <Click to Sort>	Last Observation Date <Click to Sort>	Occurrence Data	General Description
1	968580	102208_AL_000001	Mobile	1920	Several specimens in the sandy palmetto covered hills at Grand Bay.	Sandy, palmetto-covered hills
2	970513	102208_AL_000003	Baldwin	10/2/79	Four seperate releases: on 23 Sept 1978, 5 hatchlings were released; 9 Oct 1978, 2 one-year old juveniles and 3 hatchlings released; 6 Sept 1979, 15 hatchlings released; 2 Oct 1979, 12 hatchlings released .	Deep sandy ridges and mounds comprised of coastal scrub community are interlaced by low depression and swabs that support deep sphagnum mats, titi, along with several additional wet affinities.

State	Rank	Rank Change Date	Protection Status	Protection Status Date	ESA Status	Element Occurrence Count
Florida	S3	12/6/84	LT	*No data specified*	*No data specified*	506

Species locations with spatial components

Information about species location

FESTF MJD species locations can be post-processed and used to calculate distances from species locations to land use categories (from NLCD, 2001)



idpDistance	chrComb_ID	idfEO_ID	idfElement_Glot	idfSpecies	idfCounty_1	idfCounty_2	fltMin_C81_Dist	fltMin_C81_Dist	fltMin_C82_Dist	fltMin_C82_Dist
1	100015_CO_00(	515819	100015	905	310	310	1772.27038648	1.10123776302	15419.7259553	9.58137350083
2	100015_CO_00(	515819	100015	905	310	327	9949.70097692	6.18245755843		
3	100015_CO_00(	515819	100015	905	310	328	21199.7249769	13.172898384	29112.6830055	18.0897825484
4	100015_CO_00(	515819	100015	905			7615	13.5817064354	25627.5793322	15.9242395238
5	100015_CO_00(	515819	100015	905			0129	17.1610103327	38484.4717439	23.9131420901
6	100015_CO_00(	515819	100015	905			3135	22.9165450727	36881.3640519	22.9170171523
7	100015_CO_00(	515819	100015	905			0254	19.8179867234	31838.3092097	19.7834081525

The result: New *information* (e.g., proximity) that can be stored in the IMS

FESTF Information Management System 2.7

The **FESTF IMS** is a warehouse for accumulation and storage of data

- County-level locational data
- Sub-county details collected through assessment process

Sub-county locational data are not available for all species locations

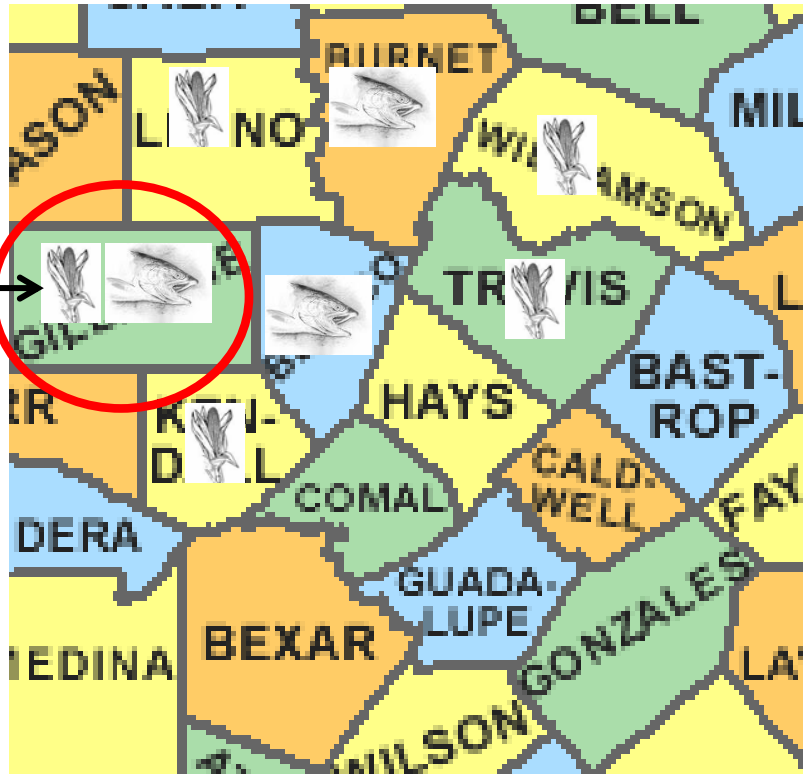
To deal with these circumstances, the IMS operates on county-level location data, identifying its source and serving as a platform for further data collection.

Allows it to interface with the county-based risk management strategy OPP uses in its Endangered Species Protection Program.

FESTF Information Management System 2.7

The **FESTF IMS** utilizes aggregated county-level data sources to determine potential species/crop co-occurrence

County with potential co-occurrence of species and crop



FESTF Information Management System 2.7

Expert Contact Association References	
First Name:	Phil
Middle Initial:	
Last Name:	Delphey
Title:	Biologist
Affiliation	USFWS
Address 1:	Twin Cities Ecological Services Office, 4101 East 80th Street
Address 2:	
City:	Bloomington
State:	MN
Zip Code:	55425
Phone Number:	(612) 725-3548 X206
Fax Number:	
Email Address:	phil_delphey@fws.gov
Date Contacted:	4/28/2008
Reference Comments:	According to conversations with Phil Delphey, USFWS biologist (pers. comm., 4/28/2008), there are currently no known populations of Minnesota dwarf trout lily in Dodge County, Minnessotta.

Records **experts contacted and documents consulted to verify species location data and other information**

Stores collected opinions

General Association References	
Reference Citation	USFWS. 2003. Final Recovery Plan for the Karner Blue Butterfly (*Lycaeides melissa samuelis*). U.S. Fish and Wildlife Service, Fort Snelling, Minnesota. 273 pp. Karner Blue Butterfly Recovery Plan.pdf
Reference Comments	See distribution starting on page 6, life history/ecology on page 11, and habitat on page 28.

Links the user to the original reference

FESTF Information Management System 2.7

Spatial and Temporal Details

Spatial Details: Pogonia, small whorled (*Isotria medeoloides*) in Madison, VA

EO Identifier (Comb_ID)	Shortest distance from EO to cultivated land in each county					
	Madison, VA[1] (County of Interest)	Culpeper, VA[2] (Neighboring)	Greene, VA[3] (Neighboring)	Orange, VA[4] (Neighboring)	Page, VA[5] (Neighboring)	Rappahannock, VA[6] (Neighboring)
137976_VA_000043	3.19 mi.	10.3 mi.	10.34 mi.	19.85 mi.	3.13 mi.	8.04 mi.

The following clomazone use sites occur in this county (USDA Agricultural Census, 2002):

[1] Beans - snap; Cantaloups; Cucumbers and pickles; Peppers, bell; Peppers, chile (all peppers - excluding bell); Pumpkins; Soybeans for beans; Watermelons

[2] Beans - snap; Cucumbers and pickles; Pumpkins; Soybeans for beans; Sweet potatoes; Vegetables, other; Watermelons

[3] Beans - snap; Cantaloups; Cucumbers and pickles; Peppers, bell; Peppers, chile (all peppers - excluding bell); Pumpkins; Soybeans for beans; Squash; Vegetables, other; Watermelons

[4] Beans - snap; Cantaloups; Cucumbers and pickles; Pumpkins; Soybeans for beans; Squash; Watermelons

[5] Beans - snap; Cantaloups; Cucumbers and pickles; Peppers, bell; Pumpkins; Soybeans for beans; Vegetables, other; Watermelons

[6] Beans - snap; Cantaloups; Cucumbers and pickles; Peppers, bell; Peppers, chile (all peppers - excluding bell); Pumpkins; Soybeans for beans; Squash; Vegetables, other; Watermelons

Temporal Details: N/A

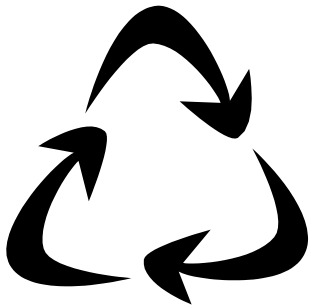
General Exclusion Comments: The nearest cultivated land (NLCD, 2001, Class 82) to any occurrence of Pogonia, small whorled (*Isotria medeoloides*) in Madison County, VA is at least 2 miles.

Organizes calculated distances

Displays AgCensus data

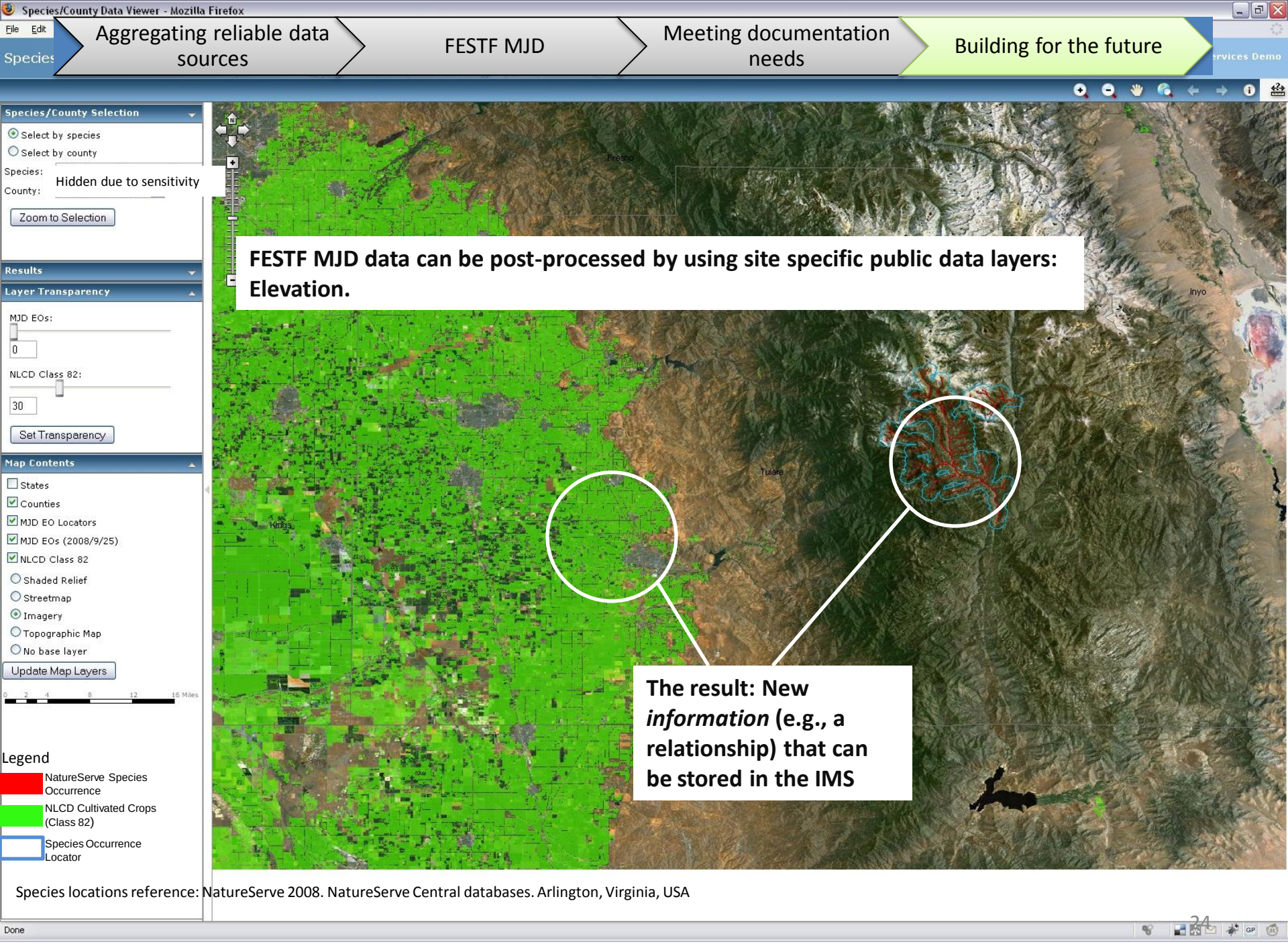
FESTF Information Management System 2.7

Allows for ***retrieval*** and, if appropriate, ***reuse*** of information in subsequent evaluations.



FESTF Information Management System 2.7

FESTF data and tools are designed to be fluid systems to evolve and change as needed.

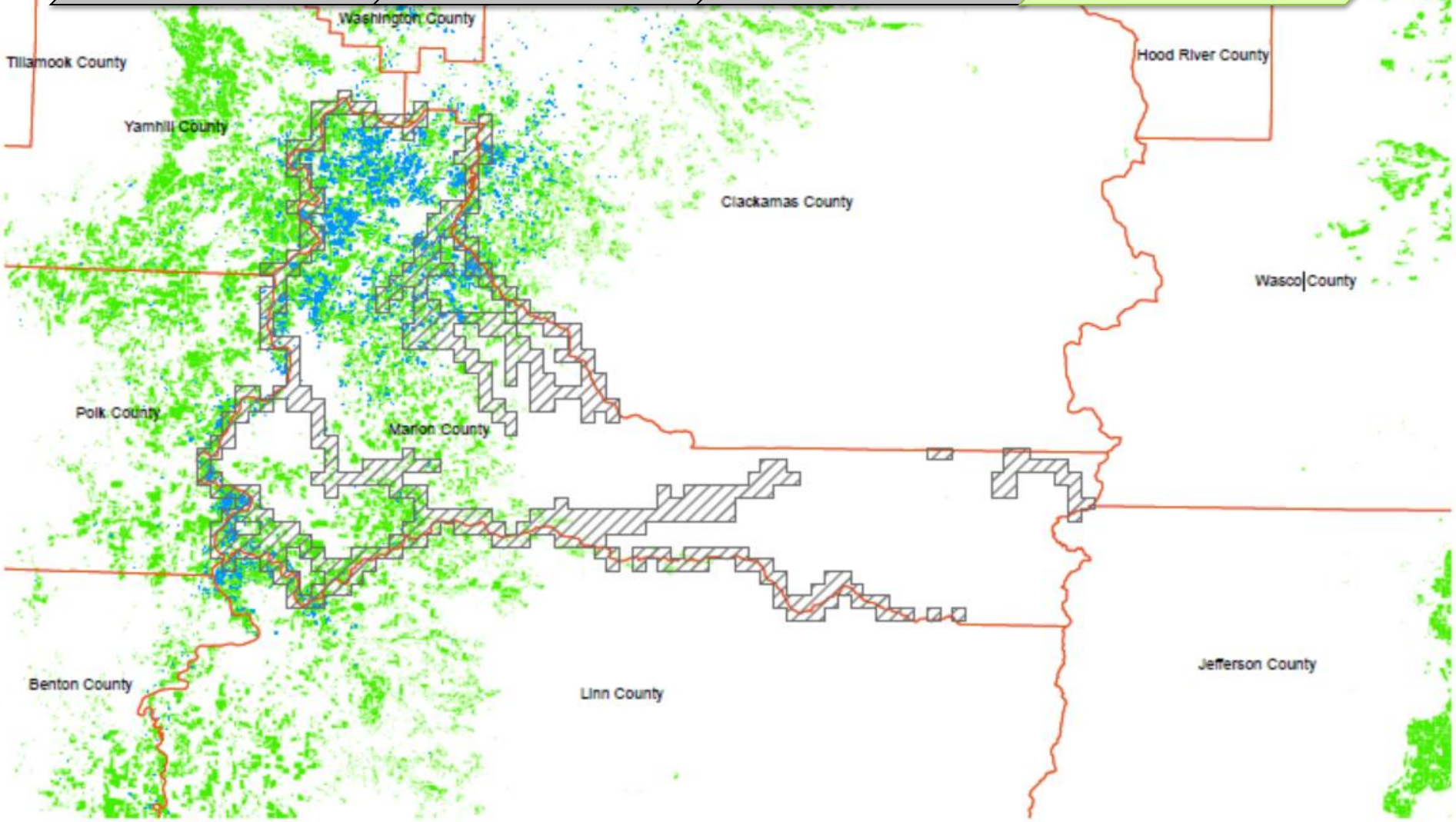


Species locations reference: NatureServe 2008. NatureServe Central databases. Arlington, Virginia, USA

FESTF MJD species locations can be post-processed and used to calculate distances from species locations to land use categories (from NLCD, 2001) and specific crops (from CDL, 2009)

	A	B	C	D	E	F	G	H
1	EO_ID (from FESTF MJD, 2011)	COMMON NAME (from FESTF MJD, 2011)	SCIENTIFIC NAME (from FESTF MJD, 2011)	TAXON	FROM COUNTY	TO COUNTY	NEAREST NLCD 2001 CROPLAND (Class 82) (M)	NEAREST CDL 2010 HOPS (M)
2	280130	Steelhead (Upper Willamette River ESU, winter run)	Oncorhynchus mykiss pop. 33	Fish	Marion	Clackamas	0	0
3	280130	Steelhead (Upper Willamette River ESU, winter run)	Oncorhynchus mykiss pop. 33	Fish	Marion	Jefferson	109,150	NA
4	280130	Steelhead (Upper Willamette River ESU, winter run)	Oncorhynchus mykiss pop. 33	Fish	Marion	Linn	23,435	25,460
5	280130	Steelhead (Upper Willamette River ESU, winter run)	Oncorhynchus mykiss pop. 33	Fish	Marion	Marion	0	0
6	280130	Steelhead (Upper Willamette River ESU, winter run)	Oncorhynchus mykiss pop. 33	Fish	Marion	Polk	12,954	13,058
7	280130	Steelhead (Upper Willamette River ESU, winter run)	Oncorhynchus mykiss pop. 33	Fish	Marion	Wasco	102,265	NA
8	280130	Steelhead (Upper Willamette River ESU, winter run)	Oncorhynchus mykiss pop. 33			nhill	7,784	9,894
9	284819	Chinook salmon (Upper Willamette River ESU, spring run)	Oncorhynchus tshawytscha pop.			ckamas	26,459	30,705

The result: proximity to specific crops that can be stored in the IMS



Species Location Data Source: NatureServe and its natural heritage member programs, under license to the FIFRA Endangered Species Task Force (FESTF, dataset received by FESTF on March 24, 2011). The absence of data in any particular geographic area does not necessarily mean that species or ecological communities of concern are not present. For display purposes, species locations have been generalized to an arbitrary section grid per agreement with NatureServe and its natural heritage member programs.
Land Cover Data Sources: NLCD (National Landcover Dataset) 2001, U.S. Geological Survey Land Cover Institute (LCI), retrieved from http://landcover.usgs.gov/. USDA National Agricultural Statistical Service (NASS) 2010 Cropland Data Layer (CDL), retrieved from

Locations of Federally Listed Fish, Cultivated Crops and Hops in Marion County, Oregon

- Marion County Fish Locations (EOs from FESTF MJD)
- NASS CDL 2010 Hops
- NLCD 2001 Cultivated Crops (Class 82)
- County Boundaries

0 50 100 200 300 Miles

Scale: 1:700,000

N W E S

COMPLIANCE SERVICES INTERNATIONAL

FESTF data not yet fully considered in the Registration Review process may bring efficiencies to the effects determination and consultation process.

How can these resources be utilized during the consultation process?

FESTF began its effort to meet OPP endangered species data requirements over a dozen years ago.

The first products in Registration Review are defining the species assessment and consultation process.

How can FESTF support and contribute to the resources needed?