Office of Pesticide Programs
Registration Division

February 4, 2009

NOTE TO READER:

The attached is a protocol submitted by the Generic Endangered Species Task Force for the development of data sets to meet certain threatened and endangered species data requirements. EPA's concurrence on the protocol signifies that if carried out, the resulting product could fulfill data requirements related to the proximity of federally listed threatened and endangered species to areas of pesticide use.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

10 - 31 - 2007

Mr. Ephi Guri
MANA, Inc
4515 Falls of Neuse
Suite 300
Raleigh, NC 27609

Dear Mr. Guri:

Enclosed please find a copy of the Environmental Fate and Effects Division's (EFED) review of the "Revised Protocol for the Development of Datasets to Meet the Threatened and Endangered Species Data Requirement" submitted by the Generic Endangered Species Task Force (GESTF), Geoff Pigot, Chairman."

You will note that EFED has reviewed the revised protocol and has determined that it adequately addresses issues and concerns raised about the original protocol submission.

Please feel free to call me at (703) 305-5447 if you have any questions.

Sincerely,

Lois A. Rossi

Lois A. Rossi, Director
Registration Division
Office of Pesticide Programs

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D C , 20460

OCT 25 2007

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Review of "Revised Protocol for the Development of Datasets to Meet the Threatened and Endangered Species Data Requirement" submitted by the Generic Endangered Species Task Force (GESTF), Geoff Pigott, Chairman

FROM: Arthur-Jean B. Williams, Associate Director
Environmental Fate and Effects Division

TO: Lois Rossi, Director
Registration Division

I am writing to inform you of the Environmental Fate and Effects Division's (EFED's) review of the subject document. The Generic Endangered Species Task Force (GESTF) submitted to EFED a previous draft of their proposed protocol on which we provided technical input and suggestions. That input was articulated in a March 9, 2007 letter to the task force chairman and re-emphasized in a meeting held with members of the task force and EFED staff and management on April 23, 2007. At that time, EFED noted several areas of deficiency in the proposed protocol that would have prevented us from agreeing it could be used, when completed, to fulfill species/use site proximity data requirements. Since that time, GESTF has revised the protocol (the subject document).

We have reviewed the revised protocol and have determined that it addresses the issues noted on March 9, 2007 and April 23, 2007. The protocol and products resulting from application of the protocol represent a body of information and data that could fulfill current and future data requirements related to relative location of federally listed threatened or endangered species and use sites (or species/use site proximity data). EFED would recommend that this protocol and its resulting product be considered adequate for such data purposes. The protocol and resulting products are not adequate to fulfill other types of data requirements relative to federally listed threatened or endangered species.

Please let me know if you have any questions regarding this protocol or EFED's review. I can be reached on 305-7695.

cc: Anne Lindsay
Debra Edwards
Steven Bradbury
Donald Brady

PROTOCOL FOR THE DEVELOPMENT OF DATASETS TO MEET THE THREATENED AND ENDANGERED SPECIES DATA REQUIREMENT

Submitted by

Generic Endangered Species Task Force (GESTF)
4110 136th Street NW
Gig Harbor, WA 98332
253-853-7369

Submitted to

USEPA OPP-EFED
Arty Williams, Associate Director

Submission date

May 23, 2007

CONTENTS

1 TITLE OF STUDY 3
2 PURPOSE 3
3 GENERAL STUDY OVERVIEW 3
3.1 Source Dataset Justification 4
4 EXPERIMENTAL DESIGN 4
4.1 Endangered Species Location Dataset 4
4.1.1 Source Data 4
4.1.2 Dataset Development Methodology 6
4.2 Crop Use Sites Dataset 6
4.2.1 Source Data 6
4.2.2 Dataset Development Methodology 6
4.2.3 Crop Use-Site Dataset Synchronization with Watershed Boundaries 8
4.2.4 Additional Crop Use-Site Dataset Metadata 8
4.3 Turf Use Sites Dataset 8
4.3.1 Source Data 8
4.3.2 Dataset Development Methodology 8
4.4 Forestry Use Sites Dataset 9
4.4.1 Source Data 9
4.4.2 Dataset Development Methodology 9
4.5 Aquatic Use Sites Dataset 9
4.5.1 Source Data 9
4.5.2 Dataset Development Methodology 9
5 DOCUMENTATION / METADATA 10
6 DATASET / FINAL REPORT 10
6.1 Deliverables 10
6.2 Timing 10
7 PROTOCOL AMENDMENTS AND DEVIATIONS 10
8 PROTOCOL APPROVAL 11

1 TITLE OF STUDY

Development of Datasets to Meet the Endangered Species Data Requirement

2 PURPOSE

To generate spatial datasets that will meet USEPA Threatened and Endangered Species (T&ES) data requirements by providing information enabling the determination of proximity of T&ES to potential pesticide use sites.

3 GENERAL STUDY OVERVIEW

The figure below graphically lays out the source datasets, intermediate datasets and deliverables detailed in this protocol that were previously verbally agreed upon by USEPA OPP-EFED and GESTF on October 28, 2005. The source datasets listed below and will be processed into standardized databases and provided to the USEPA OPP-EFED to meet the T&ES Data Requirement.

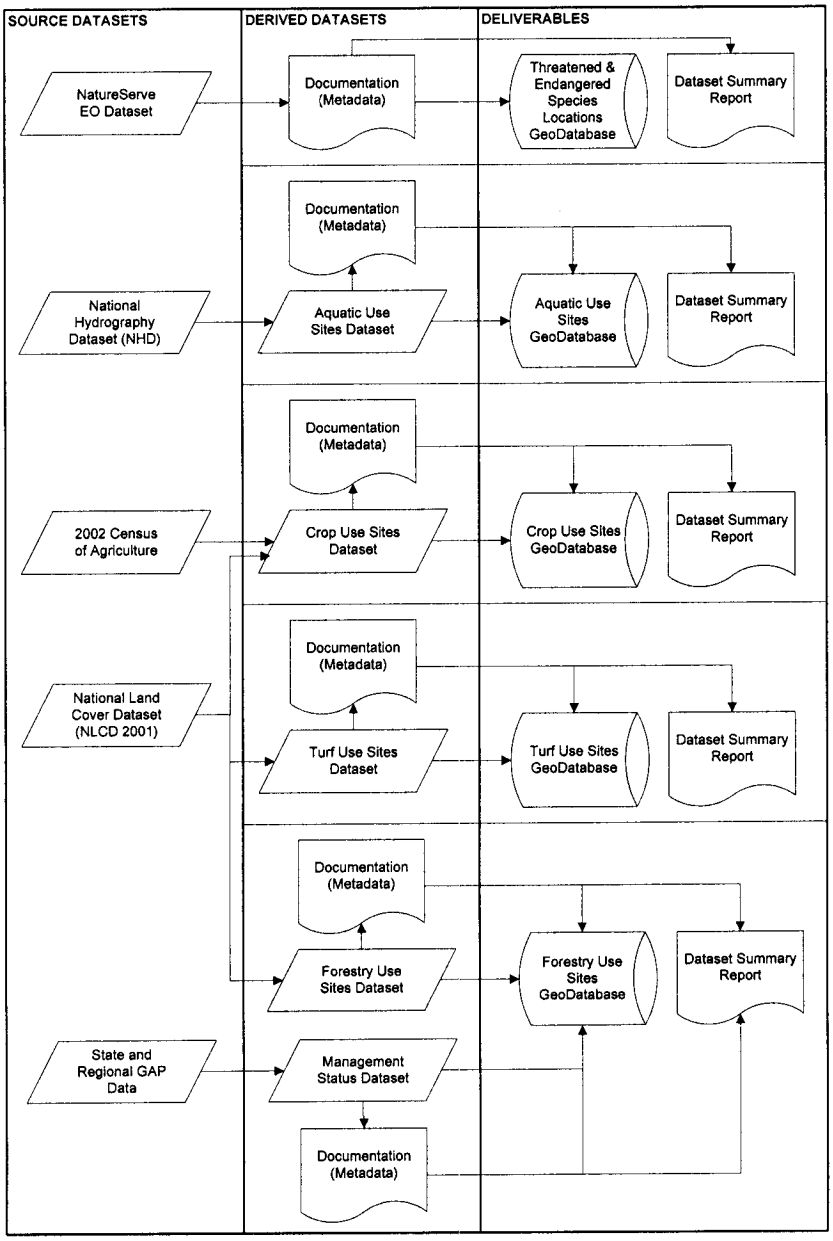

Figure 1: Conceptual flowchart for the development of datasets to meet the ES Data Requirement

3.1 Source Dataset Justification

The source datasets listed in the above figure are considered to be the most recent and nationally consistent spatial datasets available. As such, they have been selected for use by the GESTF and agreed upon by USEPA OPP-EFED to meet the T&ES Data Requirement.

4 EXPERIMENTAL DESIGN

4.1 Endangered Species Location Dataset

Threatened and endangered species location data will be obtained from NatureServe[1] which acquires data from individual state heritage programs and compiles it into a single spatial dataset that has been standardized into a consistent format for all states.

4.1.1 Source Data

The Element Occurrence (EO) dataset from NatureServe will be used to meet the data requirement for representing federally listed endangered and threatened species locations. The following data fields will be included in the dataset:

County Code – A six-digit code indicating the county or other sub-state jurisdiction where the EO is located.

County Name – The official full name of the county or sub-state jurisdiction where the EO is located.

Data Sensitive EO Indicator – Indicates that location information on this EO is sensitive and should be restricted from unsecured use.

Latitude – The x-coordinate (latitude) of the EO centrum expressed in decimal degrees.

Longitude – The y-coordinate (longitude) of the EO centrum expressed in decimal degrees.

Element Code – Unique 10-character record identifier for the species assigned by NatureServe. Used to create relationships between the data provided.

Element Global ID – Unique identifier for the species in the Biotics database system.

Element Occurrence Code – Unique record identifier for each EO.

Element Occurrence Number – A number identifying the particular occurrence in a subnation.

EO Interpreted USESA Status – U.S. Federal Status as assigned under the Endangered Species Act interpreted at the EO level to accommodate species with varying status across their range.

FIPS Code – A numerical code assigned by the U.S. government as part of the U.S. Federal Information Processing Standard (FIPS) to uniquely identify each county and equivalent subdivisions in the United States.

First Observation Date – The date that the EO was first reported at the site. If the EO is known from only one field report, then the date entered in this field should be the same as in the Last Observation Date field.

Global Common Name – The global (i.e., range-wide) common name of the element adopted for use in the NatureServe Central Databases.

Global Conservation Status Rank – The conservation status of a species from a global (i.e., range-wide) perspective characterizing the relative rarity or imperilment of the species.

Global Habitat Comments – A text summary of the habitats and microhabitats commonly used range-wide describing any daily, seasonal and geographic variation in habitat use.

Global Rank Date – The date on which the Global Conservation Status Rank (GRANK) of an element was last reviewed and updated by NatureServe scientists.

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[1] Additional information on the NatureServe dataset can be obtained at http://www.natureserve.org/prodServices/heritagemethodology.jsp

Global Scientific Name – The standard global (i.e., range-wide) scientific name (genus and species) adopted for use in the Natural Heritage Central Databases based on standard taxonomic references.

Habitat Type (Animals) – For animal records only, a text field that combines the values from several fields that characterize habitat at a global or range-wide level.

Last Observation Date – The date that the EO was last observed to be extant at the site.

Mapping Precision – A code for the precision used to map the EO on a USGS topographic quadrangle map.

Meridian – Where rectangular land surveys apply, the U.S. rectangular land survey (Public Land Survey System) meridian used to reference the rectangular survey location of the EO.

Quad Code – The code for each USGS 7.5' (or 15') topographic quadrangle map(s) on which the EO is located.

Quad Name – The name of the USGS 7.5' (or 15') topographic quadrangle map(s) on which the EO is located.

Rounded Global Rank – The Global Conservation Status Rank (GRANK) rounded to a single character.

Rounded Subnational Rank – The Subnational Conservation Status Rank (SRANK) rounded to a single character.

Section – Where rectangular land surveys apply, the U.S. rectangular land survey (Public Land Survey System) legal section division(s) that best describe the location of the EO in each township listed in the TownRange field.

Subnation – Abbreviation for the subnational jurisdiction (e.g., state) where the EO is located.

Subnational Common Name – The standard subnational common name of the species adopted for use by the program based on selected standard taxonomic reference(s) for the jurisdiction.

Subnational Conservation Rank – The conservation status of a species characterizing the relative rarity or imperilment of the species from the subnational jurisdiction perspective.

Subnational Exotic Status – Value indicating the origin of the species element in the nation or subnation.

Subnational Population Status – Value indicating the type of residency that characterizes populations of the animal element to which distribution information pertains.

Subnational Presence / Absence – Value indicating the current presence of the element in the nation or subnation.

Subnational Protection Status – Code used by the individual subnational jurisdictions for the level of legal protection afforded to the element by that jurisdiction.

Subnational Rank Date – The date when the Subnational Conservation Status Rank (SRANK) of an element was last reviewed and updated by natural heritage program scientists.

Subnational Regularity Status – Value indicating the regularity of occurrence for the species element in the nation or subnation.

Subnational Scientific Name – The standard subnational scientific name (genus and species) adopted for use by the program based on selected standard taxonomic reference(s) for the jurisdiction.

Survey Date – The date of the last (i.e., most recent) field survey for the EO, regardless of whether it was found during the visit.

Taxonomic Non-Standards (Plants) – For plant records only, identifies the taxa that are not based on the standard taxonomic references.

TownRange – For those EO that lie within the U.S. rectangular land survey, the legal township and range descriptions that best define the location of the EO.

U.S. Endangered Species Act Status – Official federal status assigned under the U.S. Endangered Species Act of 1973.

U.S. Endangered Species Act Status Date – The date of publication in the Federal Register of notification of an official status for a taxon or population.

Watershed – The 8-digit code (HUC-8) from the USGS hydrologic unit map for each watershed where the EO is located.

Element Occurrence Data – Data collected on the biology of the EO.

Element Occurrence Rank – A comparative evaluation summarizing the representative quality, condition, viability and defensibility of the EO.

Element Occurrence Type – A descriptive term used to categorize the specific type of EO.

General Description – A description or "word picture" of the general area where the EO is located.

Managed Area Code – Unique code for a managed area where the EO is located.

Managed Area Name – Name of a managed area where the EO is located.

Reference Code – A unique identifier for a reference that contains information on the EO.

References – A formal citation for a reference with information on the EO.

4.1.2 Dataset Development Methodology

The data will be provided by NatureServe in ESRI GeoDatabase format and subsequently processed to conform to GESTF T&ES Dataset format and documentation standards described in Section 5.

4.2 Crop Use Sites Dataset

4.2.1 Source Data

The NLCD 2001[2] dataset will be used to provide the spatial information representing crop use sites. In order to provide the level of crop-type detail required by USEPA OPP-EFED, additional survey information will be collected and used to enhance the NLCD crop-type classification.

4.2.2 Dataset Development Methodology

The following NLCD land cover types will be extracted to represent crop classes:

Cultivated Crops – Areas used for the production of annual crops, such as corn, soybeans, vegetables, tobacco, and cotton as well as perennial woody crops such as orchards and vineyards. This class also includes all land being actively tilled.

Grassland / Herbaceous – Areas dominated by grammanoid or herbaceous vegetation. These areas are not subject to intensive management such as tilling, but may be utilized for grazing.

Pasture / Hay – Areas of grasses, legumes, or grass-legume mixtures planted for livestock grazing or the production of seed or hay crops, typically on a perennial cycle.

Because the USEPA OPP-EFED stated that the above level of detail is inadequate to meet ES Data Requirements for crop use sites, the NLCD 2001 dataset will be enhanced to provide a more detailed cropping classification. The following crop classification schema for enhancing the NLCD 2001 data (derived from the general classification used in the US Census of Agriculture for consistency) will be used to update the crop-type classification:

Grains – Corn, Sorghum, Wheat and Other Field Crops
Row Crops – Cotton, Tobacco, Soybeans, Dry Beans, Peas, Potatoes, Sugar Crops and Peanuts
Berries
Fruits and Nuts
Vegetables
Hay, Forage and Silage
Mixed (identifying the specific types from the above list as well as relative percentage of composition for each crop)

[2] Additional information on the NLCD 2001 dataset may be found at http://www.mrlc.gov/mrlc2k_nlcd.asp

The methodology to acquire the information necessary to enhance the base NLCD data and then enhance the NLCD classification is as follows:

1) Maps displaying the general crop areas derived from the NLCD 2001 will be sent to local experts (Extension Agents, Field Managers, etc.) in each county. The maps will include information on production for the primary crop classifications (listed above) from the most recent Census of Agriculture. To help the experts locate themselves within the maps, county boundaries, major urban areas, major roads and primary hydrology will be included to provide a spatial context.
2) The local experts will be asked to indicate on the maps where within the NLCD identified crop area(s) the different AgCensus crops are grown, and if mixed, in what proportions. Additionally, the maps can be used to provide information on crop rotation.
3) If maps are not returned in a timely manner, the expert will be contacted by phone up to three times and if still not returned, an in-person visit will be scheduled.
4) Returned maps will be used to update the base NCLD crop classification by using the information from the maps to spatially subset the general crop classification into the more detailed AgCensus classifications. These areas will then be attributed with the crop percentage / rotation information provided by the expert. This new dataset will present the NLCD 2001 data using the same spatial delineations provided by the source data but with the enhanced crop classification. The data will be processed to conform to GESTF ES Dataset format and documentation standards.
5) The returned maps will be scanned and linked to the enhanced NLCD data via the metadata generated for the enhanced NCLD Crop Use Site dataset, thus providing a history of the changes made to the source NLCD data. For example, a user will not only know that the NLCD 2001 originally classified an area as Cultivated Crops, but will also see that it has been updated to Vegetables as well as the ID Number of the specific update map document used to enhance the data. By using the document ID Number, the user can link to a scanned version of the document received from the county in order to verify the raw data used for the update.

The following is a conceptual flowchart for the NLCD enhancement process:

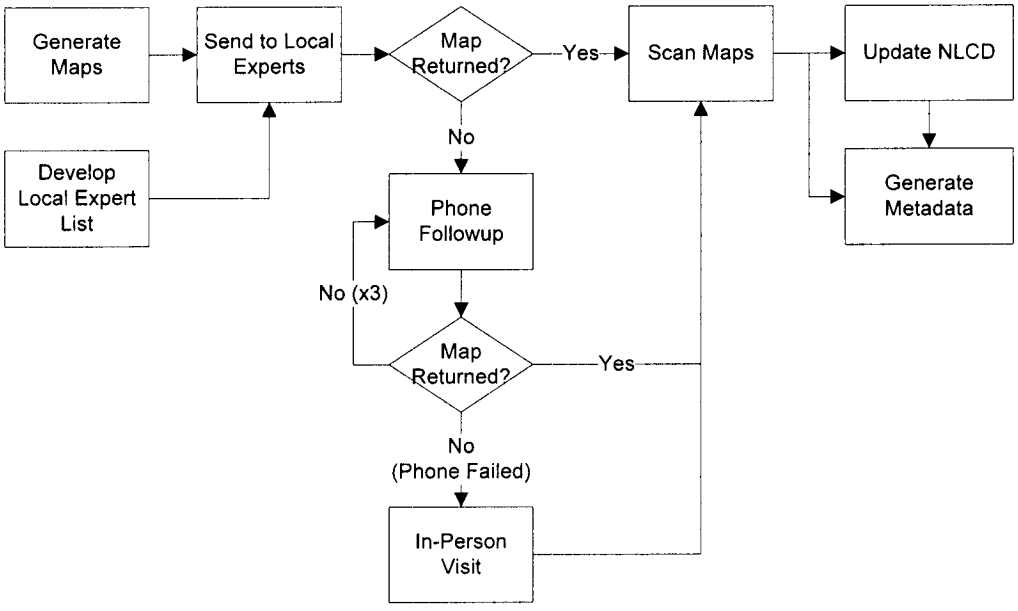

Figure 2: Conceptual Workflow for Enhancement of NLCD Crop Use Site Data

4.2.3 Crop Use-Site Dataset Synchronization with Watershed Boundaries

In order to facilitate the use of the Crop Use-Site Dataset in risk assessments based on watershed units of analysis, additional quality checking will be performed to verify that the enhanced crop-type boundary delineations generated by local experts are synchronized with watershed boundaries *when appropriate and correct*.

To assist in collecting the most accurate information possible, detailed hydrologic unit boundaries from the NHDPlus data used to generate the Aquatic Use-Site Dataset (detailed in Section 4.5.1) will be drawn on the maps sent to local experts. The instructions provided with the maps will ask that the experts pay particular attention to the watershed boundaries when making their delineations and to not cross from one into another unless it is truly the case.

Once the maps are returned and digitized into the Crop Use-Site data, a quality check will be performed by overlaying the generated Crop Use-Site data with the detailed NHDPlus hydrologic unit boundaries and contiguous areas of crop within a watershed smaller than five hectares will be reexamined and verified with the expert that generated the source information.

Any modifications made to the Crop Use-Site dataset through this QA process will be documented in the same manner as the other expert data as detailed in Section 4.2.4.

4.2.4 Additional Crop Use-Site Dataset Metadata

Because of the significant amount of data generation and processing involved in the creation of the Crop Use-Site Dataset, in addition to the standard metadata that will be generated for all datasets as detailed in Section 5, the following information regarding the expert sources will be acquired and documented:

- Name
- Title / Position
- Contact Information (address, phone, email, etc.)

Additionally, information regarding the processing for the enhancement of the base NLCD data will be documented in the metadata as follows:

- Map ID of the source map (from local experts) used to enhance the NLCD dataset
- Staff ID of the individual that updated the data
- Date of the update

4.3 Turf Use Sites Dataset

4.3.1 Source Data

The NLCD 2001 dataset described in Section 4.2.1 will be used to create the Turf Use Sites dataset.

4.3.2 Dataset Development Methodology

The following two classes listed below are considered the best available data to represent potential turf use sites and will be extracted from the NLCD 2001 data:

Developed, Open Space - Includes areas with a mixture of some constructed materials, but mostly vegetation in the form of lawn grasses. Impervious surfaces account for less than 20 percent of total cover. These areas most commonly include large-lot single-family housing units, parks, golf courses, and vegetation planted in developed settings for recreation, erosion control, or aesthetic purposes

Developed, Low Intensity - Includes areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 20-49 percent of total cover. These areas most commonly include single-family housing units.

The data will be processed to conform to GESTF ES Dataset format and documentation standards described in Section 5.

4.4 Forestry Use Sites Dataset

4.4.1 Source Data

The NLCD 2001 dataset described in Section 4.2.1 above will be used to create the Forestry Use Sites dataset. Additionally, management status information from regional GAP Analysis Program data available at the time the dataset is generated will be used to provide additional information on the likelihood that an area may be a potential use site. Because the GAP data is not expected to be available for all areas covered by the NCLD 2001 dataset when the forestry use site dataset is generated, management status information in not expected to completely cover all of the forestry use site data. The GAP management status data will not be incorporated into the forestry use site dataset but provided as an additional data layer in order to provide maximum flexibility to researchers when conducting risk assessments as well as to not integrate information that may rapidly become dated into the forestry use site dataset.

4.4.2 Dataset Development Methodology

The three classes listed below will be extracted from the NLCD 2001 data to represent potential forestry use sites:

Deciduous Forest – Includes areas dominated by trees generally greater than 5 meters tall and greater than 20 percent of total vegetation cover. More than 75 percent of the tree species shed foliage simultaneously in response to seasonal change.

Evergreen Forest – Includes areas dominated by trees generally greater than 5 meters tall and greater than 20 percent of total vegetation cover. More than 75 percent of the tree species maintain their leaves all year and canopy is never without green foliage.

Mixed Forest - Includes areas dominated by trees generally greater than 5 meters tall and greater than 20 percent of total vegetation cover. Neither deciduous nor evergreen species are greater than 75% of the total tree cover.

The data will be processed to conform to GESTF ES Dataset format and documentation standards described in Section 5.

In addition to the spatial NLCD derived forestry classification described above, all GAP management status data available at the time the Forestry dataset is generated will be acquired from state and regional projects. The data will be standardized to conform to GESTF ES Dataset format and compiled into a single spatial dataset and metadata generated to document data lineage and processing methodology.

4.5 Aquatic Use Sites Dataset

4.5.1 Source Data

NHDPlus[3] data will be used to represent potential aquatic use sites.

4.5.2 Dataset Development Methodology

The spatial component of the NHDPlus data will be acquired and compiled into a single spatial dataset. Water bodies stored in the dataset as linear features will be expanded (buffered) to widths determined to be appropriate for the different water body feature types. Guidance on the widths to be used will be provided by USEPA-EFED at a later date. The data will be processed to conform to GESTF ES Dataset format and documentation standards described in Section 5.

Note that because the data requirement is for spatial location information, the GESTF will provide only the spatial (NHD) component of the NHDPlus data. However, because no changes to the attribute information in the source data will be made, other NHDPlus data / components (flow direction, velocity and volume information, etc.) will still work as intended with the GESTF provided data.

[3] Additional information on the NHDPlus Dataset can be found at http://www.horizon-systems.com/nhdplus/

5 DOCUMENTATION / METADATA

The source data, processing methodology and final dataset structure and data field descriptions will be documented and provided with the datasets in metadata files conforming to the ESRI interpretation of FGDC-STD-001-1998[4] standards as detailed in the document *Content Standard for Digital Geospatial Metadata Workbook (Version 2.0)*[5].

In addition to the metadata provided with the data, a final written report documenting the source data, processing methodology, and the dataset deliverables will be provided with the generated datasets.

6 DATASET / FINAL REPORT

6.1 Deliverables

All of the above datasets will be compiled into ESRI GeoDatabases representing each major use site category (crop, turf, forestry, aquatic) as indicated in Figure 1 above and submitted to the USEPA on DVD. In addition, a final report as described in Section 5 above will be submitted in both hardcopy and electronic format.

6.2 Timing

The datasets and final reports will be submitted to the USEPA within five (5) years of the project start date, defined as one month after EPA's formal acceptance of this protocol.

7 PROTOCOL AMENDMENTS AND DEVIATIONS

All amendments to and / or deviations from this protocol and the reasons therefore will be documented, approved by the Sponsor, and signed by the Study Monitor, dated and maintained with the protocol. Any amendments to and / or deviations from this protocol will be recorded in the raw data and documented in the final report described in Section 6.1 above.

[4] Additional information on the Federal Geographic Data Committee Content Standard for Digital Geographic Data can be found at http://www.fgdc.gov/metadata/metadata.html

[5] The current version of the Content Standard for Digital Geospatial Metadata Workbook document can be found at http://www.fgdc.gov/metadata/documents/workbook_0501_bmk.pdf

8 PROTOCOL APPROVAL

Sponsor:

Geoff Pigott Chairman, GESTF	Date

Study Coordinator:

Stephen Kay Pyxis Regulatory Consulting, Inc.	Date

List of Chemicals Supported by the GESTF Sept. 28, 2007 Submissin

PC Code	Product
31402	(R)-2-(2,4-Dichlorophenoxy)propanoic acid (2,4-DP-p)
31465	(R)-2-(2,4-Dichlorophenoxy)propanoic acid, 2-ethylhexyl ester
31403	(R)-2-(2,4-Dichlorophenoxy)propanoic acid, dimethylamine salt
79038	1-Decanol
30001	2,4-Dichlorophenoxyacetic acid (2,4-D)
30053	2,4-Dichlorophenoxyacetic acid, 2-butoxyethyl ester
30063	2,4-Dichlorophenoxyacetic acid, 2-ethylhexyl ester
30019	2,4-Dichlorophenoxyacetic acid, dimethylamine salt
30004	2,4-Dichlorophenoxyacetic acid, sodium salt
55803	2,6-diisopropylnaphthalene (2,6-DIPN)
30801	4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)
30819	4-(2,4-Dichlorophenoxy)butyric acid, dimethylamine salt
122804	Abamectin
103301	Acephate
101201	Acephate Methamindophos
121601	Acetochlor
114401	Acifluorfen
66501	Aluminum phosphide
106901	Asulam
106902	Asulam, sodium salt
80803	Atrazine
58001	Azinphos Methyl
11101	Barium metaborate
8101	Basic cupric sulfate
128820	Bensulfuron methyl
128825	Bifenthrin
11001	Boric acid
11002	Boric oxide
11103	Boron sodium oxide tetrahydrate
12301	Bromacil
123202	Bromacil, lithium salt
128920	Bromoxynil Heptanoate
35301	Bromoxynil
35303	Bromoxynil Butyrate
35302	Bromoxynil Octanoate
6321	Calcium oxytetracycline
81301	Captan
41401	Carbamothioic acid, dipropyl-, S-ethyl ester (EPTC)
56801	Carbaryl
128872	Carbendazim
81901	Chlorothalonil
59101	Chlorpyrifos
121011	Clethodim
125203	Clodinafop-p
125501	Clofentezine
117403	Clopyralid
117401	Clopyralid, monoethanolamine salt
117423	Clopyralid, potassium salt
117404	Clopyralid, triethanolamine
22901	Copper carbonate
23401	Copper hydroxide

List of Chemicals Supported by the GESTF Sept. 28, 2007 Submissin

PC Code	Product
23501	Copper oxychloride
23503	Copper oxychloride sulfate
24402	Copper sulfate monohydrate
75101	Cryolite
109702	Cypermethrin
104801	Desmedipham
57801	Diazinon
84001	Dichlorvos (DDVP)
110902	Diclofop
10501	Dicofol
35001	Dimethoate
13802	Disodium methanearsonate (DSMA)
128994	Dithiopyr
35505	Diuron
79401	Endosulfan
38901	Endothall
38904	Endothall, dipotassium salt
38903	Endothall, disodium salt
38905	Endothall, mono(N,N-dimethylcocoamine) salt
99801	Ethephon
110601	Ethofumesate
128701	Fenoxaprop
129092	Fenoxaprop-p ethyl
83601	Fentin hydroxide
123001	Flumetralin
35503	Fluometuron
81601	Folpet
46923	Glycine Tetraglycine hydroperiodide
103607	Glycine, N-(phosphonomethyl)-, diammonium salt
103613	Glycine, N-(phosphonomethyl)-, potassium salt
417300	Glyphosate
103604	Glyphosate, ammonium salt
13608	Glyphosate, dimethylammonium salt
103601	Glyphosate, isopropylamine salt
111902	Imazalil Sulphate
111901	Imazalil
128943	Imazapic, ammonium salt
129041	Imazapic
128829	Imazapyr, isopropylamine salt
128821	Imazapyr
128922	Imazethapyr
128923	Imazethapyr, ammonium salt
129099	Imidacloprid
109801	Iprodione
128897	Lambda-Cyhalothrin
1509	Lauryl alcohol
35506	Linuron
66504	Magnesium phosphide
57701	Malathion
51501	Maleic hydrazide
51503	Maleic hydrazide, potassium salt

List of Chemicals Supported by the GESTF Sept. 28, 2007 Submissin

PC Code	Product
14504	Mancozeb
14505	Maneb
30501	MCPA
30564	MCPA, 2-ethylhexyl ester
30516	MCPA, dimethylamine salt
30563	MCPA, isooctyl ester
30502	MCPA, sodium salt
19201	MCPB
19202	MCPB, sodium salt
129046	Mecoprop-p
31519	Mecoprop, dimethylamine salt
31503	Mecoprop, potassium salt
119046	Mecoprop-p-potassium
109101	Mepiquat chloride
109105	Mepiquat pentaborate
113501	Metalaxyl
113502	Metalaxyl-M
53501	Methyl parathion
108801	Metolachlor
101101	Metribuzin
122010	Metsulfuron Methyl
13803	Monosodium acid methanearsonate (MSMA)
13806	MSMA, calcium salt
103001	Napropamide
124002	Novaluron
63502	Oil (mineral)
31605	Oil (soybean)
104201	Oryzalin
109001	Oxadiazon
111601	Oxyfluorfen
6304	Oxytetracycline
6308	Oxytetracycline hydrochloride
61601	Paraquat
108501	Pendimethalin
109701	Permethrin
98701	Phenmedipham
5101	Picloram
5104	Picloram, potassium salt
5102	Picloram, triispropanolamine salt
108102	Pirimiphos-methyl
110201	Prodiamine
80804	Prometon
80805	Prometryn
101701	Pronamide
19101	Propachlor
28201	Propanil
97601	Propargite
80808	Propazine
122101	Propiconazole
80807	Simazine
114402	Sodium acifluorfen

List of Chemicals Supported by the GESTF Sept. 28, 2007 Submissin

PC Code	Product
73301	Sodium chlorate
6310	Streptomycin sulfate
6306	Streptomycin
122001	Sulfometuron Methyl
77501	Sulfur
78003	Sulfuryl fluoride
128997	Tebuconazole
120603	Tetraconazole
120301	Thidiazuron
102001	Thiophanate-Methyl
83601	Triphenyltin hydroxide (TPTH)
83602	Triphenyltin fluoride
116001	Triclopyr
116004	Triclopyr, butoxyethyl ester
116002	Triclopyr, triethylamine salt
36101	Trifluralin
112602	Trinexapac-Ethyl
83602	Triphenyltin hydroxide
34805	Ziram