

NOAA Field Sampling Workbooks — User Guide

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A. Introduction

Several tools have been developed for the collection and “capture” of field sampling information. These tools are used to capture data in a consistent format, and facilitate the assembly of field collection data from multiple days and/or multiple samplers. The tools include field forms (hard copy or PDF files), the equivalent forms in MS Excel, and a database management system in MS Access.

NRDA Sample Collection Form - SOIL/SEDIMENT							Questions about forms? Call (985) 746-1394			
Lead Sampler's Name/Phone							Sampler Team Code			
Lead Sampler's Affiliation							Resource Group			
NRDA Contact/Phone			Todd Goeks/ (206) 619-8031/todd.goeks@noaa.gov				Resource Group Leader			
Incident Name			Mississippi Canyon MC252 Deepwater Horizon				Habitat (e.g., sand beach)			
General Location Description							Sample date (mm/dd/yyyy)			
Location Code	Matrix	Sample Number (two digits)	Sample Time	Sampling Method	Depth (top - bottom)	Depth units	Sample QA/QC Type	Latitude	Longitude	Sample Notes
NRDA Sample Grid ID	(Sediment or Soil (s))	Sample # and A, B, or C for portion of composite	(24-hr clock, local time)	Method of sampling (i.e., core or grab)	Upper and lower depth	Units for depth values	Normal sample or Field QA/QC type	Latitude in DD.XX.XXXX	Longitude in DD.XX.XXXX	Description of sample, equipment used, including estimated volume, photo numbers, etc.

(Excel Field Sample Forms “FORM Sed Soil”)

The database allows team leaders to monitor progress of sample collection (what was collected and from where) and works in conjunction with management of laboratory data. These tools provide information management capabilities for remedial, NRDA, and restoration cases and response. They are useful for a single observation, short-term case sampling events, or prolonged response action. The incorporation of these tools into field efforts will improve NOAA’s capabilities in collecting and assembling the information in a timely manner and thus aid in potential on-going sampling efforts.

The field sampler can fill hard-copy forms by hand and then follow-up by using the electronic version; or the information can be captured on electronic versions during the sampling if field computers and sufficient personnel are available. The tools include field sample information forms (one for each matrix) and a Chain-of-Custody (COC) form. Following entry of data into the hard-copy blank forms, the information must be entered into one of the two available Excel files and then submitted for incorporation into the database. The two available field forms include the “**Field Sampling Workbook – Forms Version**” (used to create the blank hard-copy forms) **OR** the “**Field Sampling Workbook – Flat Version**”. For those who use only the electronic version of the forms (i.e., working with a computer during the field sampling event), all steps would be completed using “Field Sampling Workbook – Forms Version”. **Only one of the two formats must be completed, although the use of the Forms Version is strongly encouraged.** The Excel file names for these workbooks are shown in the table below. The file naming scheme is 2010_MMDD_LastName_FirstName with the date being the date the samples were taken. For additional information about which version would be appropriate for your needs, please refer to the Quick Comparison table in Section B.

Descriptive name in this document	Excel file name
Field SamplingWorkbook – Forms Version	NOAA Field Sample Information and COC Forms_07.02.2010_v16.2.1.xls
Field SamplingWorkbook – Flat Version	NRDA Sampling Form Flat Version 07.02.2010.xls

The following pages provide information on the use of these tools. In addition, smaller “cheat sheets” are available to get the basic information in a more visual way.

NOTE: The spreadsheets and associated programming code are developed for use in Excel 2007. Some of the macros and programming may not operate in Excel 2003 and lower versions.

B. Field Sampling Workbooks – Quick Comparison

As discussed above, there are two versions of the field sampling workbooks which can be used to electronically record the samples collected and which labs were shipped samples. The Forms Version is more versatile and has a number of programmed elements to assist with completing the forms efficiently. The Flat Version is based on an older “database” style spreadsheet. We recommend that the Forms Version be used for recording the samples collected. A comparison of the two workbooks is provided below.

Field SamplingWorkbook – Forms Version	Field SamplingWorkbook – Flat Version
Contains printable forms for field sampling information (3 different matrices) and COC form for use with handwritten content.	No printable forms in this version
Suitable tool for collecting information electronically while in the field when field computers are available.	Not designed for use in the field while collecting samples.
Creates necessary worksheets in a form design for places and matrices specified on the TOC tab.	Regardless of matrix and location, each sample is entered on a line of the table and user must differentiate the appropriate columns to be completed (some color coded shading provided)
Data entry proceeds by following layout as seen on handwritten forms.	Data entry is limited to a single row and user must scroll to the appropriate columns while completing with information from a handwritten form.

Field Sampling Workbook – Forms Version	Field Sampling Workbook – Flat Version
Can generate COC forms partially completed based on information entered into the TOC tab and field forms (e.g. Sample ID, sample date, matrix, etc.)	No capability to autofill any COC information, although information from the COC forms must be incorporated.
One sample record on the field sampling form can be marked as submitted to multiple labs.	Samples submitted to multiple labs must be entered on multiple lines of the table.
SampleIDs are generated “on-the-fly” using content from the completed data on the form and shown at the far right.	SampleIDs in the spreadsheet should be completed as listed on the COC forms.
A crosstab layout on the COC worksheet makes selecting requested analysis a simple process of entering an “x” in the appropriate analysis columns.	Tabular layout requires that each analysis requested is selected using a pull-down list.
The COC worksheet groups multiple samples on a single form per receiving lab (with multi-pages possible where needed), with an appropriate form header specifying batch comments (e.g. receiving lab name, waybill number, lab instructions, turnaround time).	For each sample on the table shipped with the same waybill number, the general information associated with the batch of samples needs to be repeated on every row of the table.
COC forms and import into database allow for multiple relinquished by/received by records.	Only one relinquished by/received by field for each sample.

C. Guidance on SampleID Assignments

The SampleID is a critical field that is used to link the field and laboratory data. In addition, consistency will assist NOAA with understanding where, when, and who collected the sample. This section provides details on how the SampleID is created. The SampleID will begin with the Location Code, whether from the NRDA Sample Grid or Open Water Code (see Field Sample Data Management Protocol for instructions). The middle of the SampleID will be made up of a 5 character date code, including a letter to represent the year (2010 = A, 2011 = B, etc.) and 4 digits for the month and year (including zeros to keep it consistently 4 digits), e.g. A0502 represents 5/2/2010.

The final component of the SampleID Consists of three parts:

- one character abbreviation for the matrix (the letter of the matrix shown on the forms and form back in parenthesis);
- two digit number assigned to the sampling team;
- two digit sequence number (which will be listed on the forms under sample number). This sequence will restart each day with 01, and continue until all of the days samples have been collected.

The SampleID used for submission to the laboratory will be built from these three pieces, with dashes inbetween: LocationCode-DateCode-Matrix SamplerTeam Sample Number.

Sample ID Examples

SampleID	Location ID	Date	Matrix	Sample Team #	Sample #
LAAM24-A0502-T0102	LAAM24	05/02/2010	Tissue	01	02
GU3089-A1130-L0812	GU3089	11/30/2010	Soil	08	12
EC2779-B0130-R0457	EC2779	01/30/2011	Wrack	04	57

Composites:

When tracking composite samples, both the composite sample as well as the samples that make up the composite should be included in the field sampling form. This is so the actual locations of all of the samples making up the composite sample can be stored, as well as the actual SampleID of the sample sent to the lab.

If the compositing scheme is known at the time of sample collection, a sequence number suffix should be used for each portion of the composite and no suffix is used for the composited sample. If the compositing scheme is determined after the fact, a different nomenclature will be required.

CompositeID Examples

This is an example where the compositing scheme is known in advance. In this example, the fourth sample of the day will be a composite soil sample from three locations. In this case, there will be three rows in the spreadsheet with sample numbers of 04A, 04B, 04C respectively (each with latitude and longitudes), that will *not* be listed on the chain of custody (no x's in the chain of custody prep area to the right side of the samples on the field sampling forms). Then, there will be one row with sample number 04 that does not have a latitude or longitude (this is calculated by taking the centroid of the composite locations). This sample will be the one that will be listed on the chain of custody.

Another example is when the compositing scheme is determined after the fact. In this case, the sample numbers for the portions in the composite will remain as originally assigned. The composite sample number will begin with a C, and start a new sequence (e.g. the first after-the-fact composite is C01). The Sample notes field MUST indicate which sample numbers were included in the composite (such as "comp of 08, 10, 11 & 12"). If this composite includes samples from different days or different sampling teams, the entire sample ID for each portion in composite must be included in the sample notes field.

Field Duplicates:

Field duplicates are separate samples, so should be assigned a new sample number distinct from the original duplicated sample. On the sample form, use the Sample QA/QC Type column to indicate that the sample is a duplicate. The associated parent sample number can be identified in the Sample Notes column (the entire Sample ID should not be required in most situations since the location ID, matrix, and data should be the same).

D. Overview of Field Information Collection/Assembly

Initial Manual Approach:

At the beginning of a sampling event, blank field sample forms and Chain-of-Custody forms can be printed from the Field Sampling Workbook – Forms Version and used as forms which can be filled in by hand (PDF versions of the forms are also provided). At the end of each day of a sampling event, the data should be entered into one of the two Excel file formats (Forms or Flat version, Forms version is preferred) either by the field sampler or a data management team member. Once the file is completed, it should be submitted to the data management team for incorporation into the database.

The field sample information forms are matrix-specific with three different forms available:

- Sediment/Soil
- Tissue/Wrack
- Oil/Water/Tarball

There is also a “form back” which can be printed or copied to the back of these forms as a quick reference sheet for codes that can be used to abbreviate commonly used items such as matrix, sample collection method. The form back also provides guidance for the SampleID coding. The same form back is used for all three matrices. The COC form is also provided in the Excel workbook and has a “form back” as well.

NOTE: Water for field blank, trip blank and equipment blank samples can be entered onto any of the forms so that a water form does not need to be used to report only this type of sample.

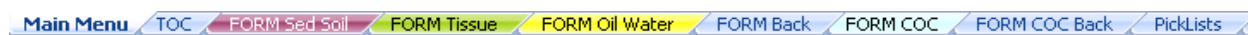
Electronic Data Entry:

If field sampling forms and COC forms are completed by hand, the information can be entered into **either** the Field Sampling Workbook – Forms or – Flat version. The Field Sample Forms Flat is relatively simple in design and appearance, but has the following limitations:

- Does not match the layout of the handwritten forms and thus may take somewhat longer to complete while scrolling left/right to find the appropriate column to enter the data;
- Does not provide a simple means for reporting samples that may have been submitted to multiple labs for analysis (e.g., one lab for chemistry and one lab for grain size);
- Requires more effort to record the lab name and analyses requested and other COC information that applies to a batch of samples because this information has to be entered into each row of the file for each sample reported (although some of this data entry can be simplified with Excel copy/paste methods).
-

If computers are available for the field effort, data can be completed electronically while samples are collected. For in-field electronic data entry, the Field Sampling Workbook – Forms version should be used, since this tool will assist with automating some of the steps to complete the COC forms. If a printer is available at a base station, command post, or on-location, the electronic COC forms can be printed rather than handwritten.

Field Sampling Workbook – Forms Version:



(Excel Field Sampling Workbook – Forms Version spreadsheet tabs)

The Field Sampling Workbook – Forms Version splits information into worksheets by general sampling location and matrix. Information entered on the field sample form is used to populate the COC forms. The COC forms within this workbook provide information about the labs where samples are shipped and

analyses requested. Even if handwritten COC forms are used for shipping the samples to the lab, the COC form should to be completed to supply information from the COC.

The field sample forms in Excel are identical to the paper forms, but are enhanced with QA/QC features (pick-lists, etc.) that aid in collecting consistent data and reducing data entry tasks. The workbook is comprised of several worksheets (tabs). When initially opened, the tabs named “Main Menu”, “TOC”, and “Guide” should be the only visible tabs. Other worksheets within the file are hidden and can be displayed by using a button labeled “Show/Hide Administrative Forms” on the worksheet labeled “Main Menu”. The complete list of the worksheets and short descriptions are provided below. The field sample collection forms within the file are available as three matrix-specific forms that are color coded and share a “look and feel” that is common across all the forms.

The worksheets in the Field Sampling Workbook – Forms Version include:

- Main Menu – Buttons to help generate forms as needed
- TOC (Table of contents) – Tables to summarize locations visited, sample matrix types collected, as well as information about which labs were shipped samples and what analyses were requested. This information will generate the field sample forms and COC forms that need to be completed.
- **FORM Oil Water** – Oil or Water sample form (template)
- **FORM Tissue** – Tissue or Wrack sample form (template)
- **FORM Sed Soil** – Sediment or Soil sample form (template)
- FORM Back – Back page for all sample forms
- **FORM COC** – Chain-of-Custody form (template)
- FORM COC Back – Back page for Chain-of-Custody form
- PickLists – Pick lists used for completing Excel forms
- Guide – A reference guide with instructions for the use of the file

Field Sampling Workbook – Flat Version:



(Excel Field Sampling Workbook – Flat Version spreadsheet tabs)

The Field Sampling Workbook – Flat version was generated from a file formerly known as “SimpleSheet.” The design is a straightforward tabular layout with each column having a header to define the contents. The latest version has some additional pull-downs that work from defined picklists to help to more quickly and consistently complete some of the columns (e.g., matrix, oil/tarball position, etc.). This layout can be helpful for someone assembling a lot of data from multiple field sampling forms. However, it may take longer to complete than if one uses the Field Sampling Workbook – Forms version, since the forms version has a “crosstab” table for providing information about the receiving lab and the analyses requested. Also, the forms version accommodates samples that are shipped to multiple labs. In the flat version, to record multiple lab names (and the associated analyses requested) for a sample, the data for the sample must be entered onto the table twice. Also, the forms version completes the full SampleID from the information completed in the Location field, matrix, sample date, sample team code, etc. In the flat version this must be completed manually.

In addition to providing a tabular layout for the data, the flat version includes worksheets with pick lists (to assist with populating the table using pull-down lists) and a worksheet describing the expected field content and format.

E. Field Sampling Workbook: Quick Steps

Field Sampling Workbook – Forms Version:

1. If you need forms for all three matrix types (oil/water, tissue, sediment/soil) and a COC form, go to the “Main Menu” worksheet and “Print Blank Forms” button to print these forms and the associated form backs. The macro associated with the button will open the print dialog box to allow you to select the printer. If you press the cancel button during the operation, it will only cancel the print of one of the 8 pages, so you will need to press cancel multiple times to cancel all the pages that would be printed using this button. No duplexing is available with this technique. However, if a PDF is created with the printing step, you can print duplex versions from your software that opens /views PDF files. Once printing is complete, skip to step 3. If you wish to prefill some of the forms prior to printing, see the next numbered section below on “basic information pre-printed on form”.

2. If you only need one or two matrix types and/or the COC form, use the “**Show/Hide Administrative Forms**” to see all the available form templates. Select the appropriate tab for the form(s) to suit the sampling needs (i.e., “FORM Sed Soil”, “FORM Oil Water”, “FORM Tissue” and/or “FORM COC”) and use the Print button on that form to facilitate printing of the form and the back in one step. The macro associated with the button will open the print dialog box to allow you to select the printer. No duplexing is available with this technique. However, if a PDF is created with the printing step, you can print duplex versions from your software that opens /views PDF files. Skip to step 3.

3. Take forms into the field, record notes, observations, and samples as necessary.

4. Return to command post or office and complete data entry starting with the “TOC” (table of contents) tab which will complete the header information on each worksheet that you will require. In the table provided in section B, complete “Location Description”, “Habitat”, and select yes/no with the pull-down arrows for the appropriate matrices for each location. The “Location Abbreviation”, should be automatically completed for you based on the first 8 characters of the general location description. The abbreviation will appear on the tab names that are generated in step 5. In the table provided in section C, complete information on the lab analyses required, lab name and lab abbreviation if you are submitting samples to a lab. All analyses for a specified lab must be grouped on consecutive rows.

5. Use the “**Generate Sample Collection Forms**” button to create the required worksheets for each location and matrix.

6. Newly generated forms with pre-loaded data appear as new tabs at right end of the workbook. Edit the field sample collection forms with data from the handwritten forms. To the right side of the main sample collection information table, there is a smaller table where you select which samples are submitted to each lab specified on your “TOC” worksheet.

7. When you have completed the field sampling information for all locations and matrices, go to the “Main Menu” worksheet and click on the “**Generate Lab Specific COCs**” button. This will create one worksheet for each lab at the right end of the workbook. Data from multiple location/matrix worksheets will be compiled together to minimize the number of worksheets created. For those labs receiving many samples, multiple forms will be shown, one below the other on the worksheet.

8. Review the COC forms generated and select the specific analyses requested and any special instructions for the sample handling (e.g. archive sample; jar for VOC analyses and bag for grain size).

(Excel Field Sampling Workbook – Forms Version, spreadsheet tabs)

9. If you submitted hand written COC forms with the samples to the lab, complete Date/Time and Printed Name/Org. sections under the Relinquished by heading, but in the section for the signature, enter “see handwritten form”.

10. Save the file using the file naming convention assigned to the project. Provide the file(s) electronically via thumb drive or email to the Information Management Team.

11. The Information Management Team will import data from the field sampling information and COC forms into an MS Access database and run appropriate QA/QC checks of the data.

To create and print sample sheets with BASIC information pre-printed on form:

1. Start with TOC (table of contents) form.
2. Complete general information section of TOC (Name, Initials, NRDA Contact, Incident, Date)
3. Complete ALL of the sample location information possible, including “Location Description”, “Habitat”, “Location Abbreviation”, and select yes/no with the pull-down arrows for the appropriate matrices for each location to be visited (for day or length of response).
4. Press “Generate Sample Collection Forms” button on the “TOC” worksheet to generate new matrix specific sample forms for each location.
5. Newly generated forms with pre-loaded data appear as new tabs at right end of the workbook and can be printed out to take into the field.
6. Save the file using the file naming convention assigned to the project.
7. When you return from the field start with step 4 in the section above or use the Field Sampling Workbook –flat version instructions provided below.

Field Sampling Workbook – Flat Version:

1. If you need blank forms for use in the field, see the initial steps described in the section above labeled “Field Sampling Workbook – forms version: Quick Steps”. When you are ready to enter the data from the field sampling forms and COCs electronically, continue with step 2 below.
2. Return to command post or office and complete data entry on the “Samples” worksheet. Begin entering data on row 5. Columns with light blue shading provide convenient pull-down list to select appropriate choices for the column. Information specific to only one or two matrix types (e.g. sediment/soil) have column headers with shaded backgrounds. For these matrix specific items, only complete the columns appropriate to the type of sample collected.
3. Save the file using the file naming convention 2010_MMDD_LastName_FirstName with the date the samplers were taken. Provide the file(s) electronically by uploading along with the rest of the field data in a zip file to the RPI FTP site. See Data Management Protocol for more information.

F. Field Sampling Workbook – Forms Version: Worksheet Descriptions

When initially opened, the tabs named “Main Menu”, “TOC”, and “Guide” should be visible. Other worksheets within the file are hidden and can be displayed by using a button labeled “Show/Hide Administrative Forms” on the worksheet labeled “Main Menu”. The complete list of the worksheets and short descriptions are provided below.

- Main Menu – buttons to help generate forms as needed
- TOC – (Table of contents) small tables to summarize locations visited and sample matrix types collected as well as information about which labs where shipped samples and what analyses were

requested. This information will generate the field sample forms and COC forms which will need to be completed.

- **FORM Oil Water** – Oil or Water sample form (template)
- **FORM Tissue** – Tissue or Wrack sample form (template)
- **FORM Sed Soil** – Sediment or Soil sample form (template)
- FORM Back – Back page for all sample forms
- **FORM COC** – Chain-of-custody form (template)
- FORM COC Back – Back page for Chain-of-custody form
- PickLists – pick lists used for completing Excel forms
- Guide – A reference guide with instructions for the use of the file

Main Menu:

(use- frequent)

This worksheet provides a set of buttons that facilitate printing blank forms, generating forms for specific matrices and sampling locations (this also on the TOC worksheet), and generating the necessary COC forms.

TOC (Table of contents):

(use- frequent, required)

This worksheet contains basic information on what was sampled, where it was sampled and what lab and analyses will be needed to process the samples. The Table of contents can be used during pre-sample planning or when returning to the command center or office to complete the data entry after sampling. If you know where you are going and what matrices will be sampled, field sheets can be generated for all sites and matrices with common information completed in advance. Any information entered will be copied to “new” location/matrix specific forms when matrix selections are set to “Yes” in the location information table (using the “**Generate Sample Collection Forms**” button). These “new” forms will then become the data input screens for entering data that will be imported into the database at the end of the day.

If you go into the field without completing the TOC page and use blank forms, then you will start on this worksheet when you return to the command post/office. Begin by entering the location information and the matrices sampled at each location.

Whether you use blank forms or forms with pre-printed information, when you are ready to start entering information about the samples, we suggest to first complete the lab name and analyses requested section before continuing to the matrix and location specific forms.

FORM “Oil Water,” “Tissue,” “Sed Soil”:

(use- frequent, required)

These forms are the key components of the Field Sample Forms sampling tools. When first opening the file, these may not be visible. The forms can be displayed by using a button labeled “Show/Hide Administrative Forms” on the worksheet labeled “Main Menu.” There are 3 color coded, matrix specific field sampling forms (“**FORM Sed Soil**”, “**FORM Tissue**”, “**FORM OilWater**”). These forms can be printed directly from Excel as blank forms or the location/matrix-specific forms may be generated and pre-populated with information entered from the TOC. All information for these forms is required to be entered either **before going** into the field, or by hand on hard-copy **while in** the field. All hand-entered data will be entered on the digital forms once a day for sampling that has been completed. **SampleIDs** are created “on-the-fly” on the digital forms from the combination of several fields including **Location Code plus Matrix plus Sample Number**. The headings of these elements are color coded (blue) for easy identification on the forms. If

necessary, any form can be used for any matrix collection as required; simply use the appropriate pick-list value for the media actually being sampled. Pick-list values for all matrices are provided on the back page of each sample field sheet. Item by item description included below.

FORM Back:

(use- common, not required)

Standard back page for all sampling forms. The back page includes matrix-specific pick-list values, general sample identifier creation information and examples, plus an area for a sketch of the sampling area.

FORM COC (Chain-of-Custody):

(use- frequent, required)

As described for the blank field sampling forms, the COC form can be printed with no data, and can be completed in the field by hand. After returning from the field and completing information on the location and matrix specific sampling forms, the appropriate COC forms with some information partially completed are generated by using a button on the Main Menu worksheet. All data added by hand on COC forms will be entered on the digital forms since the COC information will be required for the database.

COC FORM Back:

(use- common, not required)

Standard back page for COC forms. The back page includes a list of commonly required lab analyses.

PickLists (Pick lists used for Excel forms):

(use- infrequent)

Lists used for options available on the pull-down boxes associated with the field sampling and COC forms. Information regarding the format for most columns on the field sample forms is also provided on this tab (e.g., format for latitude/longitude coordinates).

Guide (Instructions):

(use- infrequent, general reference)

The guide tab provides more detailed descriptions use of the forms for both pre-sample and post-sampling activities. The Design concepts and Caveats/Known bugs sections describe the project goals and current status of the tools.

G. Field Sampling Workbook – Forms Version: Field Form Description

NRDA Sample Collection Form - SOIL/SEDIMENT								Questions about forms? Call (985) 746-1394			
Lead Sampler's Name/Phone								Sampler Team Code			
Lead Sampler's Affiliation								Resource Group			
NRDA Contact/Phone				Todd Goeks/ (206) 619-8031/todd.goeks@noaa.gov				Resource Group Leader			
Incident Name				Mississippi Canyon MC252 Deepwater Horizon				Habitat (e.g., sand beach)			
General Location Description								Sample date (mm/dd/yyyy)			
Location Code	Matrix	Sample Number (two digits)	Sample Time	Sampling Method	Depth (top - bottom)	Depth units	Sample QA/QC Type	Latitude	Longitude	Sample Notes	
NRDA Sample Grid ID	(S)ediment or Soil (L)	Sample # and A, B, or C for portion of composite	(24-hr clock, local time)	Method of sampling (ie., core or grab)	Upper and lower depth	Units for depth values	Normal sample or Field QA/QC type	Latitude in DD XX.XXXX	Longitude in DD -YYY.YYYY	Description of sample, equipment used, including estimated volume, photo numbers, etc.	

(Excel Field Sample Forms "FORM Sed Soil")

The following section provides a description of the data elements on the Field Sample Forms. There are three forms available that differ based on the matrix sampled (i.e., **FORM Sed Soil**, **FORM Tissue**, **FORM Oil Water**). Most data elements are the same on each form. However, there are three columns on the body of the form that are color coded specific to the matrix identified in the form title bar. The information below will provide guidance on the content to be entered. In addition, the back of the field form provides information by matrix for sampling methods, oil/tarball position, tissue types, etc.

The first 10 elements listed below appear on the header portion of the forms. If desired, this header information may be entered in Excel prior to printing the forms, so that the headers are completed before sampling begins. Otherwise, if blank forms are used in the field and data entered into Excel after the sampling is completed, most of these fields should be completed on the TOC tab with information on the locations where sampling occurred (see section B on TOC tab). Then, the "Generate Sample Collection Forms" button will populate all the field sample forms with the same data in the header portion.

For some form elements, short form codes have been provided to make data entry by hand in the field more efficient (e.g., "S" for (S)ediment). Refer to the back of the field form for suitable codes.

Header Section:

- 1. Lead Sampler's Name/Phone (required)** – First and Last Names for sampler or lead sampler name if a sample team is working together. Also, provide contact phone number that can be used to clarify any content on the form(s). Names of additional samplers on the team should be entered in the Survey Notes box.
- 2. Lead Sampler's Affiliation (required)** – The company or organization for whom the lead sampler works or is affiliated with.
- 3. NRDA Contact/Phone (required)** – Incident NRDA Lead/contact phone
- 4. Incident Name (required)** – Current Incident Name (or Case name, future use).
- 5. General Location Description (required)** – General text location description (common place names) where samples that are reported on the form were collected.
- 6. Sampler Team Code (required)** – Each sample team will be assigned a 2 digit team code. Enter this identifier in this box. The Sampler Team Code is used for the SampleID, email dwhnrda@gmail.com for a Team Code if you are on a new team
- 7. Resource Group (required)** – If the sampler is assigned to a resource group, such as Eelgrass or Fish/Invertebrate, this should be identified.

8. **Resource Group Leader (if available)** – If the sampler is assigned to a resource group, the resource group leader's name should be provided.
9. **Habitat (required)** – General habitat description, described as Rocky intertidal, Rip-rap, Cobble field, sandy beach, marsh, etc. In the Excel version of the forms, pull-down lists of options are provided. Additional choices may be added to the list if necessary, by editing the choices under the Habitat heading on the PickLists tab. Instructions for properly editing the pick lists are also provided on the lower portion of the PickLists tab.
10. **Sample date (required)** – Enter date in the format MM/DD/YYYY, for a single day. Zeros must be included for months earlier than October and for days less than 10 (e.g. 09/07/2010). Create new Excel files for each day of sampling. Note: For the SampleID (which is generated on-the-fly in the Excel file), the year is abbreviated as a letter (2010="A"; 2011="B"), and the date is formatted as letter+MMDD.

Table Body:

11. **Location Code (required)** – Incident assigned Division or Zone or Grid (only one is required) and Segment (if applicable). Separate these components with a "/" character.
12. **Matrix (required)** – Sampled matrix type from one of the following (short form for handwritten forms in parentheses): (S)ediment, soi(L); (O)il or Tarball (B) or (W)ater; (T)issue or Wrack (R); Blan(K) water. The latter matrix can be used on any of the matrix forms so that a water sample for a blank does not need to go on a separate water form if the majority of samples are from other matrix types.
13. **Sample Number (required)** – A two digit number (01). If collecting material from several different coordinates for a composite sample the main sample will be numbered and the component samples used for the composite will have the same number followed by a letter (e.g., A, B, etc.). Thus the sample to be submitted to a lab, may be numbered "01" and the components of the sample may be "01A", "01B" etc. The complete Sample ID for the COC/jar label will include the Location code, Sample date (in the format described in the Sample date section above), Sample Team code, Matrix code (a single letter) and Sample Number (e.g., BN/02-A0502-T0102). The Excel tools will automatically generate the complete Sample ID and will populate the Excel generated COC forms with this Sample ID if these tools are employed.
14. **Sample Time (required)** – Time when sample was collected using 24 hour clock.
15. **Sed/Soil or Oil/Tarball/Water forms, Sampling Method (required)** – Method of sample collection, including (GR)ab, (CO)re [sediment only], (SC)rape [oil/tarball only], or (OT)her.
16. **Sed/Soil Depth values (required)** – actual upper and lower depth values for the units as defined in the adjacent column (e.g., 0 – 5).
17. **Sed/Soil Depth units (required)** – sample depth units in (i)nches or (c)entimeters, (f)eet, or (m)eters.
18. **Oil/Tarball Position (required)** – location of "oil", described as (FLOAT)ing, (SUB)merged, (STRAND)ed, or (COV)ering.
19. **Oil/Water Sample Size and Units (if available)** – Volume or weight of sample with the units applicable to the size value.
20. **Species (NA for Wrack) (required)** – Species collected or NA if sample is Wrack.
21. **Tissue Type (NA for Wrack) (required)** – described as (WH)ole body, Whole body without shell (WNS), Fillet with skin (FS), Fillet without skin (FWOS), (MU)scl, (LI)ver, (EGG), Leaves (LEV), Leaves and stems (LVS). Typical choices are provided on Form back. Enter NA if sample is Wrack.
22. **Number in Sample (NA for Wrack) (required)** – count of organisms in a sample. Enter 1 if only one organism is in the sample. If the sample is a composite, it should be the sum of all organisms in the

subsamples. If the sample is a component (subset) of the composite, the number should be the count collected from the identified coordinates.

23. **Sample QA/QC Type (required)** – sample type described as (N)ormal (i.e., standard field sample), or other special QA/QC sample type such as (R)eference, (B)ackground, (D)uplicate, (S)plit, (T)rip blank, (R)inse blank, (E)quipment blank.

24. **Latitude (required)** – sample location latitude (Y) in decimal degrees (YY.yyyyyy)

25. **Longitude (required)** – sample location longitude (X) in decimal degrees (-XXX.xxxxxx)

26. **Sample Notes (optional)** – additional description of sample such as equipment used for collection, photo numbers, etc., information on composite samples, or identification of the Parent Sample number if the sample is a duplicate.

Lower Section:

27. **Survey Notes (optional)** – Weather, wildlife, sample design modifications, general station photos, general notes on sample location and condition, other members of sampling team.

28. **Field Chain of Custody (optional)** – Short-term chain of custody when sample runners or others are taking custody of field samples to deliver to command posts prior to lab shipping.

H. Field Sampling Workbook – Forms Version: COC Form Description

The following section provides a description of the data elements on the COC form. The information below will provide guidance on the content to be entered. In addition, the back of the field form provides a list of chemical analyses typically requested.

The first 10 elements listed below appear on the header portion of the forms. If desired, this header information may be entered in Excel prior to printing the forms, so that the headers are completed before sampling begins. If blank forms are used in the field and the data entered into Excel after the sampling is completed for the day, most of these fields should be completed automatically by using the button labeled “Generate Lab Specific COCs” on the Menu tab based on information provided in section C on TOC tab about the labs and analyses required. In addition, the button to generate the COCs will complete the sample ID, sample date, sample time, and matrix for the Table body. The remaining portion of the form is primarily used to specify the analyses requested.

Header Section:

1. **Sampler’s Contact/Phone (required)** – First and Last Names for Sampler or Lead sampler name if a sample team is working together. Also, provide contact phone number that can be used to clarify any content on the form(s).

2. **Sampler’s Affiliation (required)** – The company or organization for whom the Sampler works or is affiliated with.

3. **Incident Name (required)** – Current Incident Name (or Case name, future use).

4. **Special Instructions (optional)** – Instructions for lab such as “call on receipt of samples” or “provided lab report and EDD”. There are two blocks available for completing this information and there a pull-down lists in the Excel file with typical selections.

5. **Turn Around Time (required)** – Time expected for return of analytical results, typically previously discussed with the laboratory.

6. **NOAA Contact/Phone (required)** – NOAA contact person and his/her phone number.

7. **NOAA Mailing Address (optional)** – NOAA contact person’s mailing address

8. **NOAA Email Address** – NOAA contact person’s email address

9. **Lab Name (required)** – Lab name where samples are shipped (e.g. TDI Brooks)
10. **Waybill Number (required)** – Waybill number used for shipping the samples.

Table Body:

11. **Sample ID (required)** – The complete sample identification.
12. **Sample Date (required)** – Date when sample was collected in the format MM/DD/YYYY. Zeros must be included for months earlier than October and for days less than 10 (e.g. 09/07/2010).
13. **Sample Time (optional)** – Time when sample was collected using 24 hour clock.
14. **Matrix (required)** – Sampled matrix type from one of the following (short form for handwritten forms in parentheses): (S)ediment, (L)and; (O)il or Tarball (B) or (W)ater; (T)issue or (R)ack; (K) water.
15. **Analysis columns; 6 provided (required)** – Heading for the analyses requested are entered as column headers in the blue area. Then the table body should be completed with “X” below the analyses for each sample on the form.
16. **# of containers (required)** – Number of containers (of any type or mixture of type) shipped to the lab
17. **Comments** – If the sample is to be archived or a specific container should be used for a requested analysis, this can be noted in the Comments column

Lower Section:

The lower section is the chain-of-custody tracking section with relinquished by and received by boxes. If a hand written version of the COC was sent with the samples to the lab, complete the Date/Time, and Printed name sections and put “see handwritten form” in the signature block to indicate that a hand written version of the form is the “official” version.