

Appendix A: Access Database Field Descriptions

“Serial ID” – Serial Identification Number

This number is an internal identifier automatically generated by Microsoft Access and is not used outside of the database.

Data Type – Number (Incremented Long Integer)

“ONEID” – ONE ID or Office of Natural Environment Identification Number

This is the most important field as it is used as the identifier for each site and links the GIS attribute table to its attribute data stored in the main table, *Sites_tbl*. This is a unique number assigned to all mitigation sites and is used by other offices within NCDOT, such as Photogrammetry and Locations and Surveys. This number must be entered every time a new site is added to the *Sites_tbl* and no two numbers may be the same. The actual ONE ID for stream and wetland sites starts with the letters “WM” which are followed by two numbers separated by a hyphen. For example, the ONE ID for Benson Grove Mitigation Site in Johnston County is WM 051-003. WM stands for wetland mitigation (though this includes stream mitigation sites as well), the 051 is the county code for Johnston County (number 51 in an alphabetical list of counties from 1 to 100) and the 003 tags this site as the third site recorded in Johnston County. IT IS IMPORTANT TO NOTE, within the geodatabase itself the ONE ID will not appear this way. Instead, Benson Grove’s ID will be 051-003. The “WM” at the beginning is dropped. This is done to simplify the data entry in the database. Again, the importance of this ID must be stressed because it is a more distinguishing attribute

than the site's name as there may be several names for a site or several sites with closely related names. When this field is entered via the SiteEntry_frm form, a box will appear, suggesting the ONEID that should be used, based on the ONEID numbers that have already been used in that county. The programming code for this event procedure is stored in the form and was written by Rajpreet Butalia from Buck Engineering and is included in Appendix C.

Data Type – Text (10 characters)

“Name” – Mitigation Site Name

The name of the mitigation site given by ONE or the consultants of ONE should be placed in this field. If the site is a small onsite project it may be called by the TIP number or by the road number, such as B-2059 or NC 23. If there are multiple streams or wetlands on these sites, then add an identifier as well. For example, if there are two sites on NC 16, one may be called NC 16 Site 1 and the other NC 16 Site 2.

Data Type – Text (30 characters)

“Alias1” and “Alias2” – Mitigation Site Alternate Names

These fields should be used if more than one name is used to identify the site. For example, an onsite stream restoration site in Haywood County is called US 23 Onsite, Waynesville Site 1 or Racoon Branch, depending on who is referring to it.

Data Type – Text (30 characters)

“TIP” – Transportation Improvement Program Number

A TIP number is assigned to all transportation projects which is used throughout NCDOT. Consequently, all mitigation sites will have a TIP number associated with them as well, and will be the same number as the road project or one of the road projects for which it is providing mitigation. The number actually starts with a letter prefix and is usually followed by 4 numbers (ex. R-2510 is US 17 Washington Bypass). Furthermore, the four numbers may have a suffix of one or two letters to signify certain sections of the project (ex. R-2000A is Raleigh Outer Loop section A). Most mitigation sites will have a TIP, as stated above, and have a “WM” suffix to signify a “wetland mitigation” project, even though it may wetland, stream or T & E mitigation. The following describes each TIP letter:

- B – Bridge project (ex. B-3045)
 - R, A, X – Rural road project
 - U – Urban road project
 - I – Interstate project
- } Six most common

E – Enhancement

K, L – Landscape, Rest Stops

P – Passenger Rail

Y, Z – Railroad, Highway Crossing

W – Highway Hazard (Safety)

F – Ferry Improvements

FS – Feasibility Studies

T – Public Transportation

Data Type – Text (10 characters)

“Size” – Size of Mitigation Site

The total acquisition for the mitigation site, in acres, is placed in this field, including any portions of the property that will be used for preservation, upland or otherwise. If the entire mitigation site is within the road project’s right-of-way, then use only what is GPS’ed or digitized from the plans or aerial photographs.

Data Type – Number (Single)

“Onsite” – Onsite vs. Offsite Indicator

This field should be checked if the project is considered onsite mitigation. Onsite means that the mitigation is taking place directly adjacent to the roadway project and should be indicated as such in the mitigation plans. If the box is not checked, the mitigation is offsite.

Data Type – Yes/No (Checkbox)

“County” – NC County (Location of Mitigation Site)

This field is to indicate in which county the mitigation project is located. It should be noted that roadway projects may cross multiple counties, however, the mitigation site will usually be located within one county. There are a few instances where a site is located within two counties. If this occurs, use the county that comes first in the alphabet, or if a large majority of the site is inside one of the counties, use it instead.

Data Type – Lookup Table, Combo Box (See “Counties_tbl” Table description in Appendix B)

“Division” – NCDOT Division

This field is to indicate the location of the mitigation site according to NCDOT Divisions. NCDOT has divided the 100 NC counties into 14 divisions and that division structure is used throughout the DOT as well as by other government agencies. The division number is automatically chosen for you when using the *SiteEntry_frm* Form in the database. This is an event procedure stored in the form. The programming code for this event procedure was written by Rajpreet Butalia from Buck Engineering and is included in Appendix C. It is solely based on which county is chosen for the above field, so if a site falls into two divisions, be sure to make sure the right county is chosen and the database will generate the division number.

Data Type – Lookup Table, Combo Box (See “Counties_tbl” Table description in Appendix B)

“River” – River Basin Code

Location of the mitigation site according to the NC DWQ system of 17 major river basins. Each mitigation site will likely always fall into only one river basin. This field utilizes a two letter code to identify the river basin, as shown in the table description.

Data Type – Lookup Table, Combo Box (See “River_tbl” Table description in Appendix B)

“CU” – 8-digit Cataloging Unit Code

Each river basin is divided into a sub-basin coded with an 8-digit identification number, developed by the USGS. These geographic areas are important to NCDOT

mitigation in that any mitigation must occur within the same cataloging unit the impact occurs. The cataloging unit is influenced by the preceding field in that, when using the form *SiteEntry_frm*, the combo box will only allow you to choose from a list of cataloging units located within the river basin chosen for the “River” field. This is an event procedure stored in the form. The programming code for this event procedure was written by Rajpreet Butalia from Buck Engineering and is included in Appendix C. A feature class named Hydro_CU is included in the geodatabase to help determine in which cataloging unit the site is located. It is important to note that the Hydro_CU feature class included in the geodatabase and the “nchu83mp.shp” from which it was derived, is the most recent spatial data file representing the drainage features of North Carolina.

Data Type – Lookup Table, Combo Box (See “CU_tbl” Table description in Appendix B)

“Corps” – US Army Corps of Engineers Field Office

The USACE has four regulatory field offices in the state of NC, which are responsible for regulatory obligations in their assigned area. This field is a combo box which gives a choice between the four USACE field offices, which are coded with a two letter abbreviation of the city in which the offices are located, as shown in the table description.

Data Type – Lookup Table, Combo Bo (See “Corps_tbl” Table description in Appendix B)

“Status” – Mitigation Project Status

The status of the mitigation site will be selected here and should be updated as needed.

Data Type – Lookup Table, Combo Box (See “Status_tbl” Table description in Section ?)

“Dispensed” – Site Dispensation Indicator

This attribute should be checked if the property has been dispensed or legally conveyed to another land management entity, usually a local government or nonprofit organization.

Data Type – Yes/No (Checkbox)

“Disponee” – Name of Disponee

If the preceding field was confirmed with a “yes”, or checked, this field should be filled out to indicate to whom the site was dispensed or legally conveyed.

Data Type – Text (30 characters)

“Aquis” – Property Acquisition Type Code

There are two methods NCDOT utilizes to acquire land for mitigation purposes; fee simple purchases and establishment of conservation easements. The former is an outright purchase of a property that is surveyed, recorded with a deed and the NCDOT shall possess the property until dispensation. The latter allows the land owner to continue to legally own the property, however, he/she signs a legal document, an easement, which prohibits certain activities within the easement boundaries. The conservation easement boundaries are surveyed as well and included in the easement document, which is then attached to the property deed and should be respected into perpetuity, regardless of the property owner. This field utilizes a two letter code to identify the land acquisition type, as shown in the table description.

Data Type – Lookup Table, Combo Box (See “Aquire_tbl” Table description in Appendix B)

“Stream” , “Wetland”, “T/E” – Stream Mitigation, Wetland Mitigation, Threatened & Endangered (T & E) Species Conservation Mitigation Type Indicators

ONE performs three types of mitigation; stream, wetland and/or threatened and endangered species conservation. A mitigation site may involve one, two or all three of these types and these three fields will be used to indicate as such by checking the box(es). If a box is not checked, the site does not provide that type of mitigation.

Data Type – Yes/No (Checkbox)

“Mon” – Monitoring Indicator

Most sites require some type of monitoring, and if it does, indicate so with this field. If the checkbox is not checked, it does not need monitoring.

Data Type – Yes/No (Checkbox)

“S_Mon_Req”, “H_Mon_Req”, “V_Mon_Req”, “T/E_Mon_Req” – Stream, Hydrology, Vegetation, T& E Monitoring Requirements

The regulatory agencies will decide if a mitigation site needs to be monitored, indicated as such in the preceding attribute, as well as the monitoring requirements, which are displayed with this field.

Data Type – Lookup Table, Combo Box (See “S_Mon_tbl”, “H_Mon_tbl”, “V_Mon_tbl or “T/E_Mon_tbl” description in Appendix B)

“Mon_Report” – Link to Monitoring Report (if available)

If a site requires monitoring, indicated with a “yes” or check in the “Mon” field, a report must be generated documenting the current status of the stream and/or wetland. This report can be linked to the database by typing the file path in the this field. It should be noted, if the database is moved, the path of the file will need to be changed. In addition, if the table is distributed for GIS purposes, the files linked to the database will not be automatically distributed with it.

Data Type – Hyperlink

“Asset” – Asset Indicator

A mitigation sight may have assets, meaning it provides more credits than needed, thus the credits are not presently being used to offset impacts to any project. If a site does posses assets, indicate with a “yes”, or check, the box. If the box is not checked, it does not possess assets.

Data Type – Yes/No (Checkbox)

“St_Rest”, “St_Enh”, “St_Pres” – Stream Restoration, Enhancement and

Preservation Credits

Respectively, the amount of stream restoration, enhancement and/or preservation, in linear footage, each site provides, as given by the site “as-builts”.

Data Type – Number (Single)

“Ref” – Reference Stream (if available)

Every stream restoration project requires a reference stream, which provides “target” data on what the restored stream should approximate. The reference stream data is stored in another Access database. The name of the reference stream should be placed here to link the two databases together.

Data Type - Hyperlink

“W_R_Rest”, “W_R_Cr”, “W_R_Enh”, “W_R_Pres”- Riverine Wetland Restoration, Creation Enhancement and Preservation Credits

Respectively, the amount of riverine wetland restoration, creation, enhancement and/or preservation, in acres, each site provides, as given by the site “as-builts”.

Data Type – Number (Single)

“W_N_Rest”, “W_N_Cr”, “W_N_Enh”, “W_N_Pres” – Nonriverine Wetland Restoration, Creation, Enhancement and Preservation Credits

Respectively, the amount of non-riverine wetland restoration, creation, enhancement and/or preservation, in acres, each site provides, as given by the site “as-builts”.

Data Type – Number (Single)

“M_Rest”, “M_Cr”, “M_Enh”, “M_Pres” – CAMA Marsh Restoration, Creation, Enhancement, and Preservation Credits

Respectively, the amount of CAMA marsh restoration, creation, enhancement and/or preservation, in acres each site provides, as given by the site “as-builts”.

Data Type – Number (Single)

“Buf_Enh”, “Buf_Pres” – Buffer Enhancement and Buffer Preservation Credits

Respectively, the amount of buffer enhancement and/or preservation credits, in acres, each site provides, as given by the site “as-builts”.

Data Type – Number (Single)

“T/E_sp”, “T/E_sp2”, “T/E_sp3” – Threatened & Endangered Species Being Conserved (Space for three separate species)

This field is designated for listing the scientific name of the species being conserved with T & E mitigation site. The names of mussels for buffer conservation projects should be included here as well.

Data Type – Text (30 characters)

“T/E_size”, “T/E_size2”, “T/E_size3” – T & E Species Population Sizes

The population size of any T & E species that is being conserved must sometimes be monitored and should be recorded in this field. These three fields should correlate to the three previous fields.

Data Type – Number (Integer)

“App_plan” – Approved Management Plan for T&E Species Indicator

T & E conservation sites sometimes must have a written management plan approved by the lead regulatory agency, which is typically the US Fish & Wildlife Agency. If a

management plan has been approved, indicate so with this field by checking the box. If the box is not checked, it does not have an approved management plan.

Data Type – Yes/No (Checkbox)

“Misc_Notes” – Miscellaneous Notes

Any special notes that need to be recorded about a mitigation site should be written here. This includes, but is not restricted to, recording any assets the site may possess, citing any outstanding DOT commitments, posting any problems or special conditions the site may present, etc.

Data Type – Text (100 characters)

“Files” – Link to Files (if available)

Any important files regarding the site, such as close out letters etc., can be linked to the database by typing the file path in this field. It should be noted, if the database is moved, the path of the file will need to be changed. In addition, if the table is distributed for GIS purposes, the files linked to the database will not be automatically distributed with it.

Data Type - Hyperlink

“D_Code” – Digitizing Code (Internal Code)

This field was created to record the source of the spatial data in the GIS portion of the geodatabase. The source of the spatial data refers to the form of data used to digitize or import the boundaries of the mitigation site into ESRI shapefile format.

Data Type – Lookup Table-Combo Box (See “Dig_tbl” Table description in Appendix B)

