

APPENDIX A
DATA SOURCES

Development of Nutrient Criteria - Review of Electronic Data Sources

State (if applicable): Connecticut
Agency: Department of Environmental Protection
Primary Contact: Michael Beauchene
Phone or e-mail: mike.beauchene@po.state.ct.us

Quality Assurance Checklist: Each data notation should include the following metadata information

I. Location and Description of Waterbody

Waterbody Name:	<input checked="" type="checkbox"/>	Comment:	_____
Ecoregion:	_____		_____
State:	<input checked="" type="checkbox"/>		_____
County:	_____		_____
City/Town:	<input checked="" type="checkbox"/>		_____
Locale Type:	_____		_____
Watershed or USGS HUC:	_____		_____
Latitude:	<input checked="" type="checkbox"/>		_____
Longitude:	<input checked="" type="checkbox"/>		_____
River Reach/Mile or Stream Reach:	_____		_____
Size of Waterbody:	_____		_____
Salinity Condition (e.g. freshwater):	_____		_____
Type of Waterbody (e.g. lake or reservoir):	<input checked="" type="checkbox"/>		_____
(Rivers) Waterbody Subtype:	_____		_____
Average Depth of water:	_____		_____
Maximum Depth of Water:	_____		_____
Average width or diameter:	_____		_____
Area in acres:	_____		_____
Hydraulic Residence (or Flushing Rate)	_____		_____
Stream Flow	_____		_____
Velocity	_____		_____
Human Impact to Shore:	_____		_____
Human Impact on Watershed:	_____		_____
Point Source:	_____		_____
Non-Point Source:	_____		_____
Description of Riparian Zone:	_____		_____

II. Sampling Site Description

Water Depth:	_____	_____
Sample Depth (location in Water Column):	_____	_____
Depth Units:	_____	_____
Station:	<input checked="" type="checkbox"/>	_____
Distance from Shore Sampling Code (A-F):	_____	_____
Sampling Date & Time:	<input checked="" type="checkbox"/>	_____
Qualifiers:	_____	_____

III. Source of data

Name of Contact:	_____	_____
Agency Conducting the Study :	_____	_____
Phone Number/ E-mail for Contact:	_____	_____
Laboratory:	_____	_____
Analysis Method :	_____	_____
Sampling Method (Composite/Grab):	_____	_____
Detection Limits:	<input checked="" type="checkbox"/>	Minimum detection limit

IV. Water quality data

Parameters: N, Organic; NH3-N; NO2-N; NO3-N; TKN; TP

Development of Nutrient Criteria - Review of Electronic Data Sources

State (if applicable): NA - National
Agency: EPA-EMAP
Primary Contact: Stephen Hale
Phone or e-mail: Hale.Stephen@epamail.epa.gov

Quality Assurance Checklist: Each data notation should include the following metadata information

I. Location and Description of Waterbody

Waterbody Name:	X	Comment:	
Ecoregion:			
State:	X		
County:			
City/Town:			
Locale Type:			
Watershed or USGS HUC:	X		
Latitude:	X		
Longitude:	X		
River Reach/Mile or Stream Reach:			
Size of Waterbody:			
Salinity Condition (e.g. freshwater):			
Type of Waterbody (e.g. lake or reservoir):			
(Rivers) Waterbody Subtype:			
<i>Average Depth of water:</i>			
<i>Maximum Depth of Water:</i>			
<i>Average width or diameter:</i>			
<i>Area in acres:</i>			
Hydraulic Residence (or Flushing Rate)			
Stream Flow			
Velocity			
Human Impact to Shore:			
Human Impact on Watershed:			
Point Source:			
Non-Point Source:			
Description of Riparian Zone:			

II. Sampling Site Description

Water Depth:			
Sample Depth (location in Water Column):			
Depth Units:			
Station:	X		
Distance from Shore Sampling Code (A-F):			
Sampling Date & Time:	X		
Qualifiers:			

III. Source of data

Name of Contact:			
Agency Conducting the Study :			
Phone Number/ E-mail for Contact:			
Laboratory:			
Analysis Method :			
Sampling Method (Composite/Grab):			
Detection Limits:			

IV. Water quality data

Parameters: Alkalinity, acid neutralizing capacity, chla, color, conductivity, NH4, NO3, secchi disk transparency, SO4, TN, TP, TSS, turbidity.

Development of Nutrient Criteria - Review of Electronic Data Sources

State (if applicable): Maine
Agency: Department of Environmental Protection
Primary Contact: Paul Mitnik
Phone or e-mail: Paul.Mitnik@maine.gov

Quality Assurance Checklist: Each data notation should include the following metadata information

I. Location and Description of Waterbody

Waterbody Name: X
Ecoregion:
State:
County: X
City/Town: X
Locale Type: X
Watershed or USGS HUC:
Latitude: X
Longitude: X
River Reach/Mile or Stream Reach:
Size of Waterbody:
Salinity Condition (e.g. freshwater):
Type of Waterbody (e.g. lake or reservoir):
(Rivers) Waterbody Subtype:
Average Depth of water:
Maximum Depth of Water:
Average width or diameter:
Area in acres:
Hydraulic Residence (or Flushing Rate)
Stream Flow
Velocity
Human Impact to Shore:
Human Impact on Watershed:
Point Source:
Non-Point Source:
Description of Riparian Zone:

II. Sampling Site Description

Water Depth:
Sample Depth (location in Water Column):
Depth Units:
Station: X
Distance from Shore Sampling Code (A-F):
Sampling Date & Time: X
Qualifiers:

III. Source of data

Name of Contact:
Agency Conducting the Study :
Phone Number/ E-mail for Contact:
Laboratory:
Analysis Method :
Sampling Method (Composite/Grab):
Detection Limits:

IV. Water quality data

Parameters: Alkalinity, bacteria, BOD5, BOD60, CBOD, CCHLA, CHLA, CHLB, CHLC, color, conductivity, DO, NBOD, NH3, NO2+NO3, NOX, pH, phaeophyton, PO4-P, Q, secchi disk transparency, TBOD, temperature, TKN, TP.

Development of Nutrient Criteria - Review of Electronic Data Sources

State (if applicable): New Hampshire
Agency: EPA, MODERNIZED STORET
Primary Contact: Anonymous for EPA; Gregg Comstock for NHDES
Phone or e-mail: STORET@epa.gov; gcomstock@des.state.nh.us

Quality Assurance Checklist: Each data notation should include the following metadata information

I. Location and Description of Waterbody

Waterbody Name:	X	Comment:
Ecoregion:		
State:	X	
County:		
City/Town:	X	
Locale Type:	X	
Watershed or USGS HUC:		
Latitude:	X	
Longitude:	X	
River Reach/Mile or Stream Reach:		
Size of Waterbody:		
Salinity Condition (e.g. freshwater):		
Type of Waterbody (e.g. lake or reservoir):		
(Rivers) Waterbody Subtype:		
<i>Average Depth of water:</i>		
<i>Maximum Depth of Water:</i>		
<i>Average width or diameter:</i>		
<i>Area in acres:</i>		
Hydraulic Residence (or Flushing Rate)		
Stream Flow		
Velocity		
Human Impact to Shore:		
Human Impact on Watershed:		
Point Source:		
Non-Point Source:		
Description of Riparian Zone:		

II. Sampling Site Description

Water Depth:		
Sample Depth (location in Water Column):		
Depth Units:		
Station:	X	
Distance from Shore Sampling Code (A-F):		
Sampling Date & Time:	X	Both date and time
Qualifiers:	X	

III. Source of data

Name of Contact:		
Agency Conducting the Study :		
Phone Number/ E-mail for Contact:		
Laboratory:		
Analysis Method :		
Sampling Method (Composite/Grab):	X	
Detection Limits:	X	

IV. Water quality data

Parameters: Alkalinity, aluminum, arsenic, BOD, BOD-UC, cadmium, calcium, chl-a, chloride, shromium, COD, copper, DO, DOS, Enterococcus, Eschericia coli, flow, gen_obs, hardness, iron, lead, manganese, nickel, Kjeldahl-N, NH3-N, NO3-N, pH, secchi disc transparency, selenium, specific conductance, fecal Streptococcus, sulfate, air temperature, water temperature, total coliform, total fecal coliform, TP, TS, TSS, turbidity, water appearance, weather comments, zinc.

Development of Nutrient Criteria - Metadata Review for Data Completeness

State (if applicable): Maine
Agency: Penobscot Indian Nation
Primary Contact: Dan Kusnierz
Phone or e-mail: pinwater@penobscotnation.org

Quality Assurance Checklist: Each data notation should include the following metadata information

I. Location and Description of Waterbody

Waterbody Name:	<u>X</u>	Comment:	<u></u>
Ecoregion:	<u></u>		<u></u>
State:	<u>X</u>		<u></u>
County:	<u></u>		<u></u>
City/Town:	<u></u>		<u></u>
Locale Type:	<u>X</u>		<u></u>
Watershed or USGS HUC:	<u></u>		<u></u>
Latitude:	<u></u>		<u></u>
Longitude:	<u></u>		<u></u>
River Reach/Mile or Stream Reach:	<u></u>		<u></u>
Size of Waterbody:	<u></u>		<u></u>
Salinity Condition (e.g. freshwater):	<u></u>		<u></u>
Type of Waterbody (e.g. lake or reservoir):	<u></u>		<u></u>
(Rivers) Waterbody Subtype:	<u></u>		<u></u>
<i>Average Depth of water:</i>	<u></u>		<u></u>
<i>Maximum Depth of Water:</i>	<u></u>		<u></u>
<i>Average width or diameter:</i>	<u></u>		<u></u>
<i>Area in acres:</i>	<u></u>		<u></u>
Hydraulic Residence (or Flushing Rate)	<u></u>		<u></u>
Stream Flow	<u></u>		<u></u>
Velocity	<u></u>		<u></u>
Human Impact to Shore:	<u></u>		<u></u>
Human Impact on Watershed:	<u></u>		<u></u>
Point Source:	<u></u>		<u></u>
Non-Point Source:	<u></u>		<u></u>
Description of Riparian Zone:	<u></u>		<u></u>

II. Sampling Site Description

Water Depth:	<u></u>	<u></u>
Sample Depth (location in Water Column):	<u></u>	<u></u>
Depth Units:	<u></u>	<u></u>
Station:	<u>X</u>	<u></u>
Distance from Shore Sampling Code (A-F):	<u></u>	<u></u>
Sampling Date & Time:	<u>X</u>	<u>Date only</u>
Analysis Date:	<u></u>	<u></u>

III. Source of data

Name of Contact:	<u></u>	<u></u>
Agency Conducting the Study :	<u></u>	<u></u>
Phone Number/ E-mail for Contact:	<u></u>	<u></u>
Laboratory:	<u></u>	<u></u>
Analysis Method :	<u></u>	<u></u>
Sampling Method (Composite/Grab):	<u></u>	<u></u>
Detection Limits:	<u></u>	<u></u>

IV. Water quality data

Parameters: Chl-a, conductivity, DOC, NH3, NO2, NO3, secchi disk transparency, temperature, TN, TP, TSS, turbidity.

Development of Nutrient Criteria - Review of Electronic Data Sources

State (if applicable): Rhode Island
 Agency: Department of Environmental Management
 Primary Contact: Connie Carey
 Phone or e-mail: ccarey@doa.state.ri.us

Quality Assurance Checklist: Each data notation should include the following metadata information

I. Location and Description of Waterbody

Waterbody Name:	<u>X</u>	Comment:	<u>River name and ID</u>
Ecoregion:			
State:	<u>X</u>		<u>Inferred from source</u>
County:			
City/Town:			
Locale Type:			
Watershed or USGS HUC:	<u>X</u>		<u>Basin name</u>
Latitude:	<u>X</u>		
Longitude:	<u>X</u>		
River Reach/Mile or Stream Reach:			
Size of Waterbody:			
Salinity Condition (e.g. freshwater):			
Type of Waterbody (e.g. lake or reservoir):			
(Rivers) Waterbody Subtype:			
Average Depth of water:			
Maximum Depth of Water:			
Average width or diameter:			
Area in acres:			
Hydraulic Residence (or Flushing Rate)			
Stream Flow			
Velocity			
Human Impact to Shore:			
Human Impact on Watershed:			
Point Source:			
Non-Point Source:			
Description of Riparian Zone:			

II. Sampling Site Description

Water Depth:			
Sample Depth (location in Water Column):			
Depth Units:			
Station:	<u>X</u>		<u>Station name and location</u>
Distance from Shore Sampling Code (A-F):			
Sampling Date & Time:	<u>X</u>		<u>Date only</u>
Qualifiers:			

III. Source of data

Name of Contact:		
Agency Conducting the Study :		
Phone Number/ E-mail for Contact:		
Laboratory:		
Analysis Method :		
Sampling Method (Composite/Grab):		
Detection Limits:	<u>X</u>	

IV. Water quality data

Parameters: Conductivity, DO, NH3, NO2+NO3-D, NO3, NO3-D, pH, temperature, TP, TSS

Development of Nutrient Criteria - Metadata Review for Data Completeness

State (if applicable): RI
 Agency: USGS
 Primary Contact:
 Phone or e-mail:

Quality Assurance Checklist: Each data notation should include the following metadata information

I. Location and Description of Waterbody

Waterbody Name:	X	Comment:
Ecoregion:		
State:	X	
County:		
City/Town:		
Locale Type:		
Watershed or USGS HUC:		
Latitude:	X	
Longitude:	X	
River Reach/Mile or Stream Reach:		
Size of Waterbody:		
Salinity Condition (e.g. freshwater):		
Type of Waterbody (e.g. lake or reservoir):		
(Rivers) Waterbody Subtype:		
<i>Average Depth of water:</i>		
<i>Maximum Depth of Water:</i>		
<i>Average width or diameter:</i>		
<i>Area in acres:</i>		
Hydraulic Residence (or Flushing Rate)		
Stream Flow		
Velocity		
Human Impact to Shore:		
Human Impact on Watershed:		
Point Source:		
Non-Point Source:		
Description of Riparian Zone:		

II. Sampling Site Description

Water Depth:		
Sample Depth (location in Water Column):		
Depth Units:		
Station:	X	
Distance from Shore Sampling Code (A-F):		
Sampling Date & Time:	x	Date only
Analysis Date:		

III. Source of data

Name of Contact:	
Agency Conducting the Study :	
Phone Number/ E-mail for Contact:	
Laboratory:	
Analysis Method :	
Sampling Method (Composite/Grab):	
Detection Limits:	

IV. Water quality data

Parameters: DO, NH3, NO2+NO3-D, NO3, NO3-D, pH, temperature, TP.

Development of Nutrient Criteria - Review of Electronic Data Sources

State (if applicable): NA - National
 Agency: EPA, STORET
 Primary Contact: Dan Parker
 Phone or e-mail: PARKER.DAN@epamail.epa.gov

Quality Assurance Checklist: Each data notation should include the following metadata information

I. Location and Description of Waterbody

Waterbody Name:	X	Comment:	
Ecoregion:			
State:	X		
County:	X		
City/Town:	X		
Locale Type:	X		
Watershed or USGS HUC:	X		
Latitude:	X		
Longitude:	X		
River Reach/Mile or Stream Reach:			
Size of Waterbody:			
Salinity Condition (e.g. freshwater):			
Type of Waterbody (e.g. lake or reservoir):			
(Rivers) Waterbody Subtype:			
Average Depth of water:			
Maximum Depth of Water:			
Average width or diameter:			
Area in acres:			
Hydraulic Residence (or Flushing Rate)			
Stream Flow	X		
Velocity			
Human Impact to Shore:			
Human Impact on Watershed:			
Point Source:			
Non-Point Source:			
Description of Riparian Zone:			

II. Sampling Site Description

Water Depth:		
Sample Depth (location in Water Column):	X	
Depth Units:		Not in electronic file
Station:	X	Station ID and location description
Distance from Shore Sampling Code (A-F):		
Sampling Date & Time:	X	Both date and time
Qualifiers:		

III. Source of data

Name of Contact:	
Agency Conducting the Study :	
Phone Number/ E-mail for Contact:	
Laboratory:	
Analysis Method :	
Sampling Method (Composite/Grab):	
Detection Limits:	

IV. Water quality data

Parameters: DO, NH3+NH4, NO2, NO2+NO3, secchi disk transparency, temperature, TKN, TP, turbidity.

Development of Nutrient Criteria - Review of Electronic Data Sources

State (if applicable): Rhode Island
Agency: University of Rhode Island Watershed Watch
Primary Contact: Linda Green
Phone or e-mail: lgreen@uri.edu

Quality Assurance Checklist: Each data notation should include the following metadata information

I. Location and Description of Waterbody

Waterbody Name:	X	Comment:	
Ecoregion:			
State:	X		
County:			
City/Town:			
Locale Type:			
Watershed or USGS HUC:			
Latitude:			
Longitude:			
River Reach/Mile or Stream Reach:			
Size of Waterbody:			
Salinity Condition (e.g. freshwater):			
Type of Waterbody (e.g. lake or reservoir):			
(Rivers) Waterbody Subtype:			
Average Depth of water:			
Maximum Depth of Water:			
Average width or diameter:			
Area in acres:			
Hydraulic Residence (or Flushing Rate)			
Stream Flow			
Velocity			
Human Impact to Shore:			
Human Impact on Watershed:			
Point Source:			
Non-Point Source:			
Description of Riparian Zone:			

II. Sampling Site Description

Water Depth:		
Sample Depth (location in Water Column):	X	For selected samples (others deep/shallow)
Depth Units:	X	Meters when available
Station:	X	Station ID and description
Distance from Shore Sampling Code (A-F):		
Sampling Date & Time:	X	Date only
Qualifiers:		

III. Source of data

Name of Contact:	
Agency Conducting the Study :	
Phone Number/ E-mail for Contact:	
Laboratory:	
Analysis Method :	
Sampling Method (Composite/Grab):	
Detection Limits:	

IV. Water quality data

Parameters: Chlorophyl-a, secchi disk transparency, TN, TP.

Development of Nutrient Criteria - Review of Electronic Data Sources

State (if applicable): Vermont
 Agency: Department of Environmental Conservation
 Primary Contact: Eric Smeltzer
 Phone or e-mail: eric.Smeltzer@dec.anr.state.vt.us

Quality Assurance Checklist: Each data notation should include the following metadata information

I. Location and Description of Waterbody

Waterbody Name:	X	Comment:	
Ecoregion:			
State:	X		
County:			
City/Town:			
Locale Type:			
Watershed or USGS HUC:	X	Basin ID	
Latitude:	X	Coords in ddmms	
Longitude:	X	Coords in ddmms	
River Reach/Mile or Stream Reach:			
Size of Waterbody:			
Salinity Condition (e.g. freshwater):			
Type of Waterbody (e.g. lake or reservoir):		None. Inferred from name	
(Rivers) Waterbody Subtype:			
Average Depth of water:		in meters	
Maximum Depth of Water:		in meters	
Average width or diameter:			
Area in acres:		Lake area in acres. Also basin area.	
Hydraulic Residence (or Flushing Rate)			
Stream Flow	X		
Velocity			
Human Impact to Shore:			
Human Impact on Watershed:			
Point Source:			
Non-Point Source:		Landuse. Tributary data has nutrient loads	
Description of Riparian Zone:			

II. Sampling Site Description

Water Depth:		
Sample Depth (location in Water Column):		Sampling depth provided
Depth Units:		No units indicated
Station:	X	Storet number provided.
Distance from Shore Sampling Code (A-F):		
Sampling Date & Time:	X	Both date and time
Qualifiers:		

III. Source of data

Name of Contact:		
Agency Conducting the Study :		
Phone Number/ E-mail for Contact:		
Laboratory:		
Analysis Method :	X	
Sampling Method (Composite/Grab):		
Detection Limits:		

IV. Water quality data

Parameters: Alkalinity, chl-a, DP, TCL, TN, TNOX, TP, TSS.

APPENDIX B
MAIN DATA TABLES

WATERBODY Table Structure

Key	Field Name	Data Type	Description
	Unique_NO	Number (Long)	Database waterbody sequence number
**	Waterbody_ID	Text	Unique waterbody identifier
	Waterbody_Name	Text	Waterbody name
	Waterbody_Type	Text	Waterbody type (link to table)
	Waterbody_Number	Text	Waterbody number in original source for data
	Waterbody_Description	Text	General description of waterbody
	State	Text	State
	Town	Text	Town
	County	Text	County
	Map	Text	Name of USGS quad map
	Lake_Elev	Number (Single)	Elevation of the lake (m)
	Coords_Latitude	Number (Double)	Latitude of lake center (decimal degrees)
	Coords_Longitude	Number (Double)	Longitude of lake center (decimal degrees)
	Epa_Ecoregion	Text	EPA Nutrient Ecoregion name
	Lake_Area	Number (Single)	Lake area (ha)
	Lake_Volume	Number (Single)	Lake volume (cu-m)
	Basin_Area	Number (Single)	Area of basin contributing to lake (ha)
	Lake_Max_Depth	Number (Single)	Lake maximum depth (m)
	Lake_Mean_Depth	Number (Single)	Lake mean depth (m)
	Runoff_Avg	Number (Single)	Average runoff
	Retention_Time	Number (Single)	Lake retention time (yrs)
	Wq_Classification	Text	Classification based on water quality
	Acidification_Cat	Text	Lake acidification category
	Lake_Size_Cat	Text	Lake size category (small, medium, large – as per EMAP)
	Lake_Trophic_Cat	Text	Lake trophic category (low, medium, high – as per EMAP)
	Lake_Population_Cat	Text	Lake population category (low, medium, high – as per EMAP)
	Geologic_Zone	Text	Name of geologic zone
	Tributary_Code	Text	River/stream tributary code
	Used	Text	Selected for refined database (yes/no)
	Scoring_Results	Number (Integer)	Scoring results for nutrient parameters (0-4)
	Designated Water Use	Text	Designated water use
	IMPAIRED_303d	Text	Listed on the 303d list
	WQEvaluation	Text	Qualitative general evaluation of water quality by state contacts
	Reference_Stats75	Text	Assessment based on 75 th percentile from database (REF, TEST, IMP)
	Assessment	Text	Assessment by state contacts (REF, TEST, IMP)

Key	Field Name	Data Type	Description
	Assessment_Comments	Memo	Basis for the assessment
	Lu_Residential	Number (Double)	Residential land within 5 km buffer (%)
	Lu_Commercial	Number (Double)	Commercial land use within 5 km buffer (%)
	Lu_Barren	Number (Double)	Barren land fraction within 5 km buffer (%)
	Lu_Forested	Number (Double)	Forested land within 5 km buffer (%)
	Lu_Shrubland	Number (Double)	Shrubland land within 5 km buffer (%)
	Lu_Woody	Number (Double)	Woody land within 5 km buffer (%)
	Lu_Agricultural	Number (Double)	Agricultural land within 5 km buffer (%)
	Lu_Recreational	Number (Double)	Recreational land within 5 km buffer (%)
	Lu_Wetland	Number (Double)	Wetland land within 5 km buffer (%)
	Comments	Memo	General comments on waterbody

STATION Table Structure

Key	Field Name	Data Type	Description
**	Station_ID	Text	Database unique station identifier
	Waterbody_ID	Text	Waterbody (link to table)
	Location_Descrip	Memo	Brief description of location
	Latitude	Number (Double)	Latitude (decimal degrees)
	Longitude	Number (Double)	Longitude (decimal degrees)
	Elevation	Number (Double)	Elevation from MWL
	Locale_Type	Text	Type of locale (link to table)
	Locale_Name	Text	Town/city name
	County	Text	County name
	State	Text	State
	Agency_Station_ID	Text	Station ID used by monitoring agency
	Agency_Name	Text	Name of monitoring agency
	Station_Type	Text	Type of station
	Gis_Huc_Code	Text	Hydrologic Unit Code (8-digit) – from GIS
	Watershed_Name	Text	Name of watershed
	Waterbody_Subtype	Text	Waterbody subtype (link to table)
	Waterbody_Class	Text	Waterbody class
	Tributary_Code	Text	Tributary code
	Mileage	Number (Double)	River mile
	Rf3_Unit	Text	Reach File Unit
	Rf3_Code	Number (Integer)	Reach File Code
	Epa_Ecoregion	Text	EPA Nutrient Ecoregion name
	Riparian_Zone	Text	Riparian zone (link to table)
	Microecoregion	Text	50
	Human_Impact_Shoreline	Text	Human impact to shoreline (link to table)
	Point_Source_Impact	Text	Point source impact (link to table)
	Nonpoint_Source_Impact_ID	Text	Non-point source impact (link to table)
	Impact_Remarks	Text	Comments on impacts assessment
	Contact_Name	Text	Name of contact for station
	Contact_Phone	Text	Phone of contact for station
	Contact_Address	Text	Address of contact for station
	Flow_Mean	Number (Double)	Mean flow (7Q10)
	Data_Source	Text	Source of data for ancillary data on station
	Comments	Text	General comments on station

SAMPLE Table Structure

Key ¹	Field Name	Data Type	Description
	Sample_ID	Number (Long)	Sample ID database sequence number
**	Station_ID	Text	Station (link to Station table)
	Agency_SampleID	Text	Sample ID used by monitoring agency
	Agency_ID	Text	Monitoring agency
**	Sampling_Date	Date/Time	Sampling Date
**	Sampling_Time	Date/Time	Sampling Time (12:00 AM if missing)
**	Sampling_Method	Text	Sampling Method (link to table)
**	Sample_Type	Text	Sample type (link to table)
	Sampling_Conditions	Text	Sampling conditions (link to table)
**	Sample_Depth	Number (Double)	Depth of sample (-9999 if missing)
	WaterDepth	Number (Double)	Water depth at time of sampling
	DataSource	Text	Source the data was obtained from
	Comments	Text	Additional comments

¹ A combination of the StationID, Sampling Date, Sampling Time, Sampling Method, Sample Type, and Sample Depth fields is used to define a unique record.

WQDATA Table Structure

Key ¹	Field Name	Data Type	Description
	Wqdata_ID	Number (Long)	Database water quality data sequence number
**	SampleID	Number (Long)	Unique database sample ID
**	Parameter	Text	Parameter (link to table)
	Analysis_Date	Text	Date analyzed
	Analysis_Time	Text	Time analyzed
	Analysis_Method	Number (Long)	Analysis method (link to table)
	Analysis_Method_Remarks	Text	Remarks on analysis method
	Reported_Value	Number (Double)	Value reported
	Reported_Qualifier	Text	Qualifier (link to table)
	Unit_Of_Measure	Text	Unit
	Detection_Limit	Number (Double)	Reported detection limit
	Measurement_Uncertainty	Number (Double)	Uncertainty on measurement
	Data_Source	Text	Source the data was obtained from
	Comments	Text	General comment on the water quality data

¹ A combination of the SampleID and Parameter fields are used to define a unique record.