

Root	Category	Sub Category	WQX Data Element XML Tag	Definition	Optionality	Data Field Type	Business Rule or Additional Description	Domain List?	Rule	Domain Values	Relationship	Requested By		
wqx	ORGANIZATION	ORG Description	OrganizationDescription	<b>Header</b> The particular word(s) regularly connected with a unique framework of authority within which a person or persons act, or are designated to act, towards some purpose.	Mandatory 1 instance of OrganizationDescription for Organization									
wqx			OrganizationIdentifier	A designator used to uniquely identify a unique business establishment within a context.	Mandatory	string max 30	Primary key for everything, unique on the planet, supplied by EPA upon application of trading partner.		Must be unique					
wqx			OrganizationFormalName	The legal designator (i.e. formal name) of an organization.	Mandatory	string max 60	Organization Name according to Trading Partner						WMCC BWQSA DWM	
wqde			DivisionName	The name of the reporting office's Division within an Organization.	Optional	string max 60	Domain List only applies where Organization = NJDEP	Yes (see business rule)					WMCC	
wqde			BureauName	The name of the reporting office's Bureau within an Organization.	Optional	string max 60	Domain List only applies where Organization = NJDEP	Yes (see business rule)					WMCC	
wqx			OrganizationDescriptionText	Information that further describes an organization.	Optional	string max 255								
wqde			OrganizationTypeText	The code that characterizes the Organization's type, business role, or sector.	Mandatory	From domain values string max 30		Yes						WMCC
wqde			OrganizationContactName	The name of the Organization's primary contact person.	Mandatory	string max 30								WMCC BWQSA DWM
wqx		ORG Electronic Address	ElectronicAddress	<b>Header</b> This section allows for the description of many electronic addresses per owning Organization.	Optional; 0 to many instances of ElectronicAddress allowed per Organization									
wqx			ElectronicAddressText	A resource address, usually consisting of the access protocol, the domain name, and optionally, the path to a file or location.	Conditional (see business rule)	string max 60	Required if electronic address type name is present						WMCC BWQSA DWM	
wqx			ElectronicAddressTypeName	The name that describes the electronic address type.	Conditional (see business rule)	From domain values string max 8	Required if electronic address text is present	Yes			Email Internet Intranet			
wqx		ORG Telephonic	Telephonic	<b>Header</b> This section allows for the description of many telephone numbers per owning Organization.	Optional; 0 to many instances of Telephonic allowed per Organization									
wqx			TelephoneNumberText	The number that identifies a particular telephone connection.	Conditional (see business rule)	String max 15	Required if telephone number type name is present						WMCC BWQSA DWM	
wqx			TelephoneNumberTypeName	The name that describes a telephone number type.	Conditional (see business rule)	From domain values string max 6	Required if telephone number text is present	Yes			Fax Home Mobile Office Pager			
wqx		ORG Organization Address	OrganizationAddress	<b>Header</b> This section allows for the description of up to three physical addresses for the owning Organization.	Optional; 0 to 3 instances of OrganizationAddress allowed per Organization Only one address of each type permitted									
wqx			AddressTypeName	Categorizes an address as either location, shipping, or mailing address.	Conditional (see business rule)	From domain values string max 8	Required if organization address is present.	Yes			Location Mailing Shipping			
wqx			AddressText	The address that describes the physical (geographic), shipping, or mailing location of an organization.	Conditional (see business rule)	string max 50	Required if Address Type Name is supplied.						WMCC BWQSA DWM	
wqx			SupplementalAddressText	The text that provides additional information about an address, including a building name with its secondary unit and number, an industrial park name, an installation name or descriptive text where no formal address is available.	Optional	string max 60								WMCC
wqx			LocalityName	The name of a city, town, village or other locality.	Optional	String max 30								WMCC BWQSA DWM

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wqx			StateCode	A code designator used to identify a principal administrative subdivision of the United States, Canada, or Mexico.	Conditional (see business rule)	From domain values string max 2	Required if Organization County Code is reported.			DE NJ NY PA		WMCC BWQSA DWM		
wqx			PostalCode	The combination of the 5-digit Zone Improvement Plan (ZIP) code and the four-digit extension code (if available) that represents the geographic segment that is a subunit of the ZIP Code, assigned by the U.S. Postal Service to a geographic location to facilitate mail delivery; or the postal zone specific to the country, other than the U.S., where the mail is delivered.	Optional	string max 10 XXXXX-XXXX						WMCC BWQSA DWM		
wqx		PROJ Description	Project	Header; This section allows for the description of Organization Projects.	Optional: 0 to many instances									
wqx			ProjectIdentifier	A designator used to uniquely identify a data collection project within a context of an organization.	Mandatory	string max 35	This short identifier supports the requirement to update or edit an existing project, subsequent to its initial entry, without repeating all of its component parts.						WMCC	
wqx			ProjectName	The name assigned by the Organization (project leader or principal investigator) to the project.	Mandatory	string max 60							WMCC BWQSA DWM	
wqx			ProjectDescriptionText	Project description, which may include a description of the project purpose, summary of the objectives, or brief summary of the results of the project.	Optional	string max 1999	Must provide either ProjectDescriptionText or supply a Project Attached Binary Object.						WMCC BWQSA DWM	
wqde			ProjectType	Defines the type or purpose of the monitoring project.	Mandatory	From domain values string max 30			Yes		Ambient-Routine Ambient-Targeted Spill-Response Stormwater-Study		WMCC	
wqde			ProjectDataFormat	Identifies the format and availability to the project's monitoring data.	Mandatory	From domain values string max 30			Yes		NJ Data Portal EPA WQX Web Services Electronic-online website Electronic-by request Hard Copy-by request Proprietary / Not Available			
wqde			ResultProvidedIndicator	Flag to indicate whether the Project has supplied data via the Water Quality Data Exchange.	Optional	string max 1				Auto-populated for internal tracking purposes.		Auto-populated for internal tracking purposes.		
wqde			ProjectContact	ContactType	Designator to identify the type of contact that is being supplied.	Mandatory	From Domain Values string max 20		Yes		Primary Contact Field Office Contact Organization Contact		BWQSA DWM	
wqde				ContactName	Identifies the name of a person who serves as a contact for the project.	Mandatory	string max 50							BWQSA DWM
wqde				TelephoneNumberText	Identifies the phone number of the person who is serving as the project contact.	Mandatory	string max 15							BWQSA DWM
				TelephoneNumberTypeName	The name that describes a telephone number type.	Mandatory	From domain values string max 6					Home Mobile Office Pager		
wqde				ElectronicAddressText	Identifies the email address of the person who is serving as the project contact.	Mandatory	string max 120							BWQSA DWM
				ElectronicAddressTypeName	The name that describes the electronic address type.	Mandatory	From domain values string max 8			Yes		Email Internet Intranet		
wqde				ProjectDataURLText	Identifies the URL where information about the project and/or data can be accessed.	Optional	string max 120						BWQSA DWM	
wqde			GeographicRegionName	Identifies the Geographic Region(s) where monitoring occurs under the project.	Mandatory	From Domain Values string max 50		Yes	Multi-select	Highlands Pinelands Coastal Statewide NY/NJ Harbor Estuary Delaware River Basin/Estuary Barnegat Bay Estuary				

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wqde	PROJECT	ProjectGeographic	RiverBasinName	Identifies the River Basin(s) (Watershed Management Areas) in which monitoring occurs under the project.	Mandatory	From Domain Values string max 50		Yes	Multi-select	Upper Delaware Walkkill Pompton, Wanaque, Ramapo Lower Passaic and Saddle Upper Passaic, Whippany, and Rockaway Hackensack and Pascack North and South Branch Raritan Arthur Kill Lower Raritan, South River, and Lawrence Central Delaware Millstone Monmouth Assiscunk, Crosswicks, and Doctors Barnegat Bay Rancocas Lower Delaware Mullica Great Egg Harbor Maurice, Salem, and Cohansey Cape May			
wqde			HUCElevenDigitCode	Identifies the Hydrological Unit eleven digit Code(s) where monitoring occurs under the project.	Optional	string max 11		Yes	Multi-select	<a href="#">HUC11 reference list</a>			
wqde			CountyCodeName	Identifies the County(ies) where monitoring occurs under the project.	Mandatory	string max 20		Yes	Multi-select	Atlantic Berben Burlington Camden Cape May Cumberland Essex Gloucester Hudson Hunterdon Mercer Middlesex Monmouth Morris Ocean Passaic Somerset Sussex Union Warren			
wqde			LocalityName	Identifies the Municipality(ies) where monitoring occurs under the project.	Optional	string max 30				Multi-select	<a href="#">Municipality reference list</a>		
wqde			StationCount	Identifies the number of stations that exist for the project.	Mandatory	string max 4							
wqde		ProjectTemporal	ProjectStartDate	Identifies the start date of the monitoring project.	Mandatory	Date (YYYY-MM-DD)							
wqde			ProjectEndDate	Identifies the end date of the monitoring project.	Conditional	Date (YYYY-MM-DD)	Required if Project TemporalStatus is "Completed".						
wqde			TemporalStatus	Identifies the status of the monitoring project.	Mandatory	From Domain Values string max 50		Yes			Future/Planned In progress-discrete In progress-continual Completed		BWQSA DWM
wqde			SamplingSeason	Identifies the season(s) in which the project engages in monitoring activities.	Mandatory	From Domain Values string max 50		Yes	Multi-select		Year round Winter Spring Summer Fall	Multi-select	
wqde			MonitoringFrequency	Identifies the frequency with which monitoring activities occur.	Mandatory	From Domain Values string max 50		Yes	Multi-select		Annually Monthly Quarterly Weekly Daily Continuous		BWQSA DWM
wqde			TemporalComment	Allows for a free text description of temporal aspects of the project's monitoring.	Optional	string max 1999							

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wqde		ProjectMonitoringDescription	WaterbodyType	Describes the type(s) of waterbodies that are sampled within the given project.	Mandatory	string max 50		Yes	Multi-select	River/Streams Lakes Estuaries Oceans Wetlands Reservoirs		AMNET WMCC		
wqde			SalinityCategoryText	Describes the salinity category of waterbodies monitored in the project.	Mandatory	From domain values string max 50		Yes	Multi-select	Fresh Saline Brackish	Multi-select			
wqde			TidalInfluenceText	Describes the Tidal influence of waterbodies monitored in the project.	Mandatory	From domain values string max 50		Yes	Multi-select	Tidal NonTidal	Multi-select		BWQSA DWM	
wqde			AnalysisTypeCategory	Identifies the types of monitoring and analyses conducted under the project.	Mandatory	From domain values string max 50		Yes	Multi-select	Chemical/physical Microbiological/pathogenic Biological Habitat Radiological	Multi-select		BWQSA DWM	
wqde			AnalysisTypeSubCategory	Identifies the group types of chemical/physical characteristics and/or biological assemblages analyzed under the project.	Mandatory	From domain values string max 50		Yes	Only populated if selected chemical/physical or biological from above; Multi-select	if chemical/physical: Volatile organics Semi volatile organics Pesticides Metals Nutrients Conventionals  if Biological: Fish Benthic macroinvertebrates Algae Periphyton Aquatic plants Amphibians Other	Only populated if selected chemical/physical or biological from above; Multi-select		BWQSA DWM	
wqde			AnalysisMethodType	Identifies the types of analytical methods used in the project.	Mandatory	From domain values string max 50		Yes	Multi-select	Standard Experimental	Multi-select			
wqde			SampleBasisType	Identifies the sample basis used in the project.	Mandatory	From domain values string max 50		Yes	Multi-select	Wet Dry	Multi-select			BWQSA DWM
wqde			SampleMediaType	Identifies the types of media analyzed under the project.	Mandatory	From domain values string max 50		Yes	multi-select	Water Sediment Tissue Biological Habitat Air (weather)	multi-select			BWQSA DWM
wqde		ProjectDataQuality	QAPPIndicator	Indicator to identify whether the monitoring project was conducted according to a Quality Assurance Project Plan (QAPP).	Mandatory	string max 1		Yes		Y N			BWQSA DWM	
wqde			QAPPApprovedIndicator	Indicator to identify whether the project's QAPP has been approved by a designated Agency.	Conditional	string max 1	Required if QAPPIndicator = 'Y'	Yes	Only if above is positive.	Y N	Only if above is positive.			
wqde			QAPPApprovalAgency	Identifies the Agency that approved the project's QAPP.	Conditional	From domain values string max 50	Required if QAPPApprovedIndicator = 'Y'	Yes	Only if above is positive.	EPA USGS NJDEP-OQA	Only if above is positive.		BWQSA DWM	
wqde			TierDesignation	Identifies the Volunteer Monitoring Tier designation of the project.	Optional	string max 3				Only for Volunteer Monitoring projects	D C B A	Only for Volunteer Monitoring projects		BWQSA DWM
wqde			TierAssignedBy	Identifies the person or office who assigned the VM Tier Designation	Conditional	string max 30	Required if TierDesignation is reported							BWQSA DWM
wqx		PROJ Binary Object	ProjectAttachedBinaryObject	<b>Header;</b> This section allows for the association of References and electronic attachments to the project, including formal Project Plan and any other documents, images, maps, photos, laboratory materials, geospatial coverages, and other objects associated with the Project..	Optional		Multiple instances of ProjectAttachedBinaryObject per Organization instance.							
wqx			BinaryObjectFileName	The text describing the descriptive name used to represent the file, including file extension.	Conditional (see business rule)	string max 255	Required only when ProjectAttachedBinaryObject is reported. Must provide either ProjectDescriptionText or supply a Project Attached Binary Object.							BWQSA DWM

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wqde			BinaryObjectFileLocation	Identifies the URL / directory of the file attachment that is stored on the NJDEP image file management server.	Conditional (see business rule)	string max 100	Required only when AttachedBinaryObject is reported.						
wqx			BinaryObjectFileTypeCode	The text or acronym describing the binary content type of a file.	Conditional (see business rule)	string max 6	File text extension, free text not domain list validation.  Required only when ProjectAttachedBinaryObject is reported.	Yes	Limited to file type that WQX can accept	JPG BMP PDF TXT			
wqx		Monitoring Location Identity	MonitoringLocationIdentity	<b>Header</b> This section allows the owning Organization to describe monitoring locations.	Conditional: 0 to many instances		Monitoring Location Identity block is required for certain Activity Types.						
wqx			MonitoringLocationIdentifier	A designator used to describe the unique name, number, or code assigned to identify the monitoring location.	Mandatory	String max 35	This short identifier supports the requirement to update or edit an existing station, subsequent to its initial entry, without repeating all of its component parts.		Must be unique within the Organization			AMENT BWQSA DWM	
wqx			MonitoringLocationName	The designator specified by the sampling organization for the site at which sampling or other activities are conducted.	Mandatory	string max 60	Free text name assigned to the Monitoring Location by the Trading Partner.					AMNET BWQSA DWM	
wqx			MonitoringLocationTypeName	The descriptive name for a type of monitoring location.	Mandatory	From domain values string max 45		Yes				BWQSA DWM	
wqx			MonitoringLocationDescriptionText	Text description of the monitoring location.	Optional	string max 255						BWQSA DWM	
wqde			WaterBody Description	WaterBodyIdentifier		Optional	string max 12						BWQSA DWM
wqde				WaterBodyLocationText		Optional	string max 200						BWQSA DWM
wqde				SiteIdentifier		Optional	string max 12						
wqde				Waterbody Name		Optional	string max 50						
wqde				SiteAcresNumeric		Optional	string max 5						
wqde		HabitatName			Optional	string max 50							
wqde		BankName			Optional	string max 20							
wqde		StreamGradient			Optional	string max 20							
wqx		Monitoring Location Geospatial	MonitoringLocationGeospatial	<b>Header</b> This section allows for the geospatial description of a monitoring station. This section records the location in 3 dimensions.	Mandatory; one and only one allowed per instance of Monitoring Location.		Only 1 instance allowed per Monitoring Location instance						
wqx			LatitudeMeasure	The measure of the angular distance on a meridian north or south of the equator.	Mandatory	Decimal 6-8 digits	Signed Decimal Latitude with positive values north of the Equator					DWM/BWQSA	
wqx			LongitudeMeasure	The measure of the angular distance on a meridian east or west of the prime meridian.	Mandatory	Decimal 6-9 digits	Signed Decimal Longitude with neg values west of Greenwich					DWM/BWQSA	
wqde			LatitudeMeasureSegmentEndPoint		Conditional	Decimal 6-8 digits	Required when LongitudeMeasureSegmentEndPoint and/or StatePlaneLatitudeMeasureSegmentEndPoint are reported						
wqde			LongitudeMeasureSegmentEndPoint		Conditional	Decimal 6-9 digits	Required when LatitudeMeasureSegmentEndPoint and/or StatePlaneLongitudeMeasureSegmentEndPoint are reported						
wqde			StatePlaneNorthingYMeasure		Mandatory								
wqde			StatePlaneEastingXMeasure		Mandatory								
wqde			StatePlaneNorthingYMeasureSegmentEndPoint		Conditional		Required when LatitudeMeasureSegmentEndPoint and/or StatePlaneLongitudeMeasureSegmentEndPoint are reported						

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wqde	MONITORING LOCATION	Monitoring Location Geospatial	StatePlaneEastingXMeasureSegmentEndPoint		Conditional		Required when LongitudeMeasureSegmentEndPoint and/or StatePlaneLatitudeMeasureSegmentEndPoint are reported							
wqx			HorizontalAccuracyMeasure	<b>Header;</b> The horizontal measure of the relative accuracy of the latitude and longitude coordinates	Optional; Up to one allowed per instance of MonitoringLocationGeospatial									
wqx			MeasureValue	The recorded dimension, capacity, quality, or amount of something ascertained by measuring or observing.	Optional	Number 12	Required if HorizontalAccuracyMeasure block is reported						DWM/BWQSA	
wqx			MeasureUnitCode	The code that represents the unit for measuring the item.	Conditional (see business rule)	From domain values (MeasureUnitCode) string max 12	Required if HorizontalAccuracyMeasure block is reported	Yes		ft m				
wqde			LocationReferenceMap			Optional	string max 30							DWM/BWQSA
wqx			SourceMapScaleNumeric	The number that represents the proportional distance on the ground for one unit of measure on the map or photo.	Conditional (see business rule)	non Negative Integer	Mandatory only when HorizontalCollectionMethodCode is "INTERPOLATION MAP"							
wqx			HorizontalCollectionMethodName	The name that identifies the method used to determine the latitude and longitude coordinates for a point on the earth.	Mandatory	From domain values string max 60	Valid code values correspond to those enumerated for this data element in the FRS XML schema.	Yes						
wqx			HorizontalCoordinateReferenceSystemDatumName	The name that describes the reference datum used in determining latitude and longitude coordinates.	Mandatory	From domain values string max 6	Valid code values correspond to those enumerated for this data element in the FRS XML schema.	Yes				NAD83		
wqx			StateCode	A code designator used to identify a principal administrative subdivision of the United States, Canada, or Mexico.	Mandatory	From domain values string max 2	Required if Monitoring Location CountyCode is reported.	Yes		DE NJ NY PA				
wqx			CountyName	A county name used to identify a U.S. county or county equivalent.	Mandatory	From domain values string max 20		Yes		Atlantic Berben Burlington Camden Cape May Cumberland Essex Gloucester Hudson Hunterdon Mercer Middlesex Monmouth Morris Ocean Passaic Somerset Sussex Union Warren			DWM/BWQSA	
wqx			LocalityName	The name of a city, town, village or other locality.	Optional	string max 30								DWM/BWQSA
wqx			Monitoring Location Binary Object	AttachedBinaryObject	<b>Header;</b> This section allows for the association of References and electronic attachments to the Monitoring Location description including any other documents, images, maps, photos, laboratory materials, geospatial coverages, and other objects associated with the Project.	Optional; may have 0 to many for each instance of Monitoring Location		Multiple instances of StationAttachedBinaryObject per Monitoring Location instance						
wqx				BinaryObjectFileName	The text describing the descriptive name used to represent the file, including file extension.	Conditional (see business rule)	string max 255	Required if Monitoring Location AttachedBinaryObject present						
wqde				BinaryObjectFileLocation	Identifies the URL / directory of the file attachment that is stored on the NJDEP image file management server.	Conditional (see business rule)	string max 100	Required only when AttachedBinaryObject is reported.						

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wqx			BinaryObjectFileTypeCode	The text or acronym describing the binary content type of a file.	Conditional (see business rule)	string max 6	Required if Monitoring Location AttachedBinaryObject present			JPG BMP PDF TXT		
wqx			<b>Activity</b>	<b>Header;</b> This section allows for the reporting of monitoring activities conducted at a Monitoring Location	Optional May have 0 to many for each instance of Organization							
wqx			ActivityIdentifier	Designator that uniquely identifies an activity within an organization.	Mandatory	string max 35	This short identifier supports the requirement to update or edit an existing activity, subsequent to its initial entry, without repeating all of its component parts.		Must be unique within the Organization. Only one Identifier per Activity			DWM/BWQSA
wqx			ActivityTypeCode	The text describing the type of activity.	Mandatory	From domain values string max 60		Yes	Only one Type per Activity/Identifier	Field Msr/Obs Field Msr/Obs-Portable Data Logger Field Msr/Obs-Habitat Assessment Sample-Routine Sample-Integrated Time Series Sample-Integrated Flow Proportioned Sample-Integrated Horizontal Profile Sample-Integrated Vertical Profile Sample-Integrated Cross-Sectional Profile Sample-Composite Without Parents Sample-Positive Control Sample-Negative Control Sample-Field Subsample Sample-Field Split Quality Control Field Replicate Habitat Assessment Quality Control Field Replicate Msr/Obs Quality Control Field Replicate Portable Data Logger Quality Control Field Sample Equipment Rinsate Blank Quality Control Field Calibration Check Quality Control Sample-Field Spike Quality Control Sample-Field Blank Quality Control Sample-Field Replicate Quality Control Sample-Field Ambient Conditions Blank Quality Control Sample-Lab Duplicate Quality Control Sample-Field Surrogate Spike Quality Control Sample-Trip Blank Quality Control Sample-Reagent Blank Quality Control Sample-Equipment Blank Quality Control Sample-Pre-preserved Blank		DWM/BWQSA
wqx			ActivityMediaName	Name or code indicating the environmental medium where the sample was taken.	Mandatory	From domain values string max 20		Yes	Only one Type per Activity/Identifier	Air Water Biological Soil Sediment Other		DWM/BWQSA

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wqx		ACTIVITY Description	ActivityMediaSubDivisionName	Name or code indicating the environmental matrix as a subdivision of the sample media.	Optional	From domain values string max 45		Yes	Only one SubDivision per ActivityMediaName	Groundwater Finished Water Municipal Waste Industrial Waste Leachate Stormwater Drinking Water Septic Effluent Industrial Effluent Const. Material Dry Fall Material Wet Fall Material Ambient Air Stack Gases Indoor Air Oil/Oily Sludge Filter Residue Wipe Subsurface Soil/Sediment Surface Soil/Sediment Soil Gas Sludge Surface Water			
wqde			SamplerName	Name of the person(s) that collected the sample or conducted the activity	Optional	string max 30							
wqde			ActivityArea		Optional	string max 15							
wqx			ActivityStartDate	The calendar date on which the field activity was started.	Mandatory	Date (YYYY-MM-DD)							DWM/BWQSA
wqx			ActivityStartTime	The measure of clock time when the field activity began.	Optional								
wqx			Time	The time of day that is reported.	Conditional (see business rules)	Time - (hh:mm:ss)	Required only when ActivityStartTime is reported						
wqx			TimeZoneCode	The time zone for which the time of day is reported. Any of the longitudinal divisions of the earth's surface in which a standard time is kept.	Conditional (see business rules)	string max 4	Required only when ActivityStartTime is reported	Yes			EDT EST		
wqx			ActivityEndDate	The calendar date when the field activity was completed.	Optional	Date (YYYY-MM-DD)							
wqx			ActivityEndTime	The measure of clock time when the field activity ended.	Optional								
wqx			Time	The time of day that is reported.	Conditional (see business rules)	Time - (hh:mm:ss)	Required only when ActivityEndTime is reported						
wqx			TimeZoneCode	The time zone for which the time of day is reported. Any of the longitudinal divisions of the earth's surface in which a standard time is kept.	Conditional (see business rules)	string max 4	Required only when ActivityEndTime is reported	Yes		EDT EST			
wqx			ActivityRelativeDepthName	The name that indicates the approximate location within the water column at which the activity occurred.	Optional	string max 15		Yes					
wqx			ActivityDepthHeightMeasure	<b>Header;</b> A measurement of the vertical location (measured from a reference point) at which an activity occurred.	Optional (see business rules); Up to one allowed per instance of ActivityDescription		Optional; May not exist with ActivityTopDepthHeightMeasureValue						
wqx			MeasureValue	The recorded dimension, capacity, quality, or amount of something ascertained by measuring or observing.	Optional	Number 12	Required if ActivityDepthHeightMeasure block is reported.						
wqx			MeasureUnitCode	The code that represents the unit for measuring the item.	Optional	string max 12	Required if ActivityDepthHeightMeasure block is reported.	Yes		ft m			
wqx		ProjectIdentifier	A designator used to uniquely identify a data collection project within a context of an organization.	Mandatory	string max 35	WQDE: only one instance possible for each Activity instance			Only one instance is allowed for each activity instance. Schema needs to be updated.				
wqx		ActivityConductingOrganizationText	A name of the Organization conducting an activity.	Optional	string max 60	Multiple instances possible for each Monitoring Activity instance							



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wqx	MONITORING ACTIVITY		MonitoringLocationIdentifier	A designator used to describe the unique name, number, or code assigned to identify the monitoring location.	Conditional (see business rules)	String max 35	Although the schema doesn't enforce this, some activity types will require that a monitoring location is present.  This MonitoringLocationIdentifier needs to correspond to either a MonitoringLocationIdentifier reported in the MonitoringLocationIdentity block of this submission or previously submitted to the system.							
wqde			ReportingRound		Optional	string max 10								
wqde			SamplePanel		Optional	string max 10								
wqde			DataIncludedinReport		Optional	string max 3								
wqde			FlowStatusIndicator		Optional	string max 10								
wqde			SampleChainOfCustody		Optional	string max 15								
wqde			ActivitySeason		Optional	string max 20								
wqde			RunoffImpact		Optional	string max 50								
wqx			ActivityCommentText		Optional	String max 255								
wqx			<b>BiologicalActivityDescription</b>	<b>Header:</b> <b>This section allows for the reporting of biological monitoring activities conducted at a Monitoring Location</b>	Optional May have 0 to 1 for each instance of Activity									
wqx			<b>BIOLOGICAL ACTIVITY Description</b>	AssemblageSampledName	An association of interacting populations of organisms in a given waterbody.	Optional	From domain values string max 50				Aquatic Vegetation Benthic Macroinvertebrates Reptiles Amphibians Fungi Bacteria/Virus Periphyton Phytoplankton/Zooplankton Ichthyoplankton Fish/Nekton			
wqx				ToxicityTestType	Identifies the type of toxicity as either Acute or Chronic.	Optional	From domain values string max 7				Acute Chronic			
wqx			<b>SAMPLE Description</b>	<b>SAMPLE Description</b>	<b>Header:</b> header in schema for Sample only	Optional May have 0 to 1 for each instance of Activity		Several elements are required when SampleDescription block is reported (see below)						
wqx				<b>SampleCollectionMethod</b>	<b>Header:</b> Identifies sample collection or measurement method procedures. Where a documented sample collection method has been employed, this enables the data provider to indicate the documented method that was employed during the field sample collection. Otherwise, the sample collection procedure will best be described in a freeform text.	Conditional (see business rule)		Conditional: Required if Sample Description block is reported. Required if Activity Type contains the term 'Sample'						
wqx				MethodIdentifier	The identification number or code assigned by the method publisher.	Conditional (see business rule)	String max 20	Required when SampleCollectionMethod is present.					DWM/BWQSA	
wqx				MethodIdentifierContext	Identifies the source or data system that created or defined the identifier.	Conditional (see business rule)	String max 120	Required when SampleCollectionMethod is present.					DWM/BWQSA	
wqx			<b>SAMPLE Description</b>	MethodName	The title that appears on the method from the method publisher.	Conditional (see business rule)	String max 60	Required when SampleCollectionMethod is present.					DWM/BWQSA	
wqx				MethodQualifierTypeName	Identifier of type of method that identifies it as reference, equivalent, or other.	Optional	string max 25							
wqx				MethodDescriptionText	A brief summary that provides general information about the method.	Optional	string max 500							

Root	Category	Sub Category	WQX Data Element XML Tag	Definition	Optionality	Data Field Type	Business Rule or Additional Description	Domain List?	Rule	Domain Values	Relationship	Requested By
wqx			SampleCollectionEquipmentName	The name that represents equipment used in collecting the sample.	Conditional (see business rule)	From domain values string max 40	Required when SampleCollectionMethod is present.	Yes		Benthic Corer Benthic Dredge Benthic Grab Diatometer Electroshock Miscellaneous/Other Net/Horizontal Tow Net/Non-Tow Net/Vertical Tow Trap/Substrate Water Sampler		DWM/BWQSA
wqx			SampleCollectionEquipmentCommentText	Free text with general comments further describing the sample collection equipment.	Optional	String max 255						
wqx		SAMPLE Prep	SamplePreparation	<b>Header</b> This section describes a sample preparation procedure which may be conducted on an initial Sample or on subsequent subsamples.	Optional May have 0 to 1 for each instance of Activity							
wqx			SamplePreparationMethod	<b>Header</b> Identifying information about the method(s) followed to prepare a sample for analysis.	Conditional (see business rules)		Required if Sample Preparation block is reported					
wqx			MethodIdentifier	The identification number or code assigned by the method publisher.	Conditional (see business rule)	string max 20	Required if Sample Preparation Method block is reported.					
wqx			MethodIdentifierContext	Identifies the source or data system that created or defined the identifier.	Conditional (see business rule)	string max 120	Required if Sample Preparation Method block is reported.					
wqx			MethodName	The title that appears on the method from the method publisher.	Conditional (see business rule)	string max 120	Required if Sample Preparation Method block is reported.					
wqx			MethodQualifierTypeName	Identifier of type of method that identifies it as reference, equivalent, or other.	Optional	string max 25						
wqx			MethodDescriptionText	A brief summary that provides general information about the method.	Optional	string max 500						
wqx				SampleContainerTypeName	The text describing the sample container type.	Conditional (see business rule)	From domain values string max 35	Required if Sample Preparation block is reported	Yes		Aluminum Foil Wrap BOD Bottle Carboy Container Cubitainer Galvanized Steel Container Glass Bottle Glass Media Bottle Glass Petri Dish Glass Tube Glass Vial Glass Vial w/ Septa HDPE Bottle HDPE Vial Nalgene Bottle Nalgene Vial Plastic Bottle Plastic Bag Plastic Dilution Bottle Plastic Syringe Polycarbonate Media Bottle Polyethylene Bottle Polyethylene Container Polyethylene Vial Polypropylene Bottle Polypropylene Container Polypropylene Vial Polystyrene Container Polystyrene Petri Dish Stainless Steel Container Teflon Bottle Teflon Vial Unspecified	
wqx			SampleContainerColorName	The text describing the sample container color.	Conditional (see business rule)	From domain values string max 15	Required if Sample Preparation block is reported	Yes		Amber Clear Green Black Translucent Opaque Unspecified		

Root	Category	Sub Category	WQX Data Element XML Tag	Definition	Optionality	Data Field Type	Business Rule or Additional Description	Domain List?	Rule	Domain Values	Relationship	Requested By	
wqx			ChemicalPreservativeUsedName	Information describing the chemical means to preserve the sample.	Conditional (see business rule)	string max 80	Either ChemicalPreservativeUsedName or ThermalPreservativeUsedName are required if Sample Preparation block is reported						
wqx			ThermalPreservativeUsedName	Information describing the temperature means used to preserve the sample.	Conditional (see business rule)	From domain values string max 25	Either ChemicalPreservativeUsedName or ThermalPreservativeUsedName are required if Sample Preparation block is reported	Yes		None Wet Ice (4 deg C) Dry Ice (-78.5 deg C) Refrigerated (4 deg C) Cold Packs (4 deg C) Frozen (0 deg C) Frozen (-20 deg C) Frozen (-50 deg C) Freeze Dried Unspecified			
wqx			SampleTransportStorageDescription	The text describing sample handling and transport procedures used.	Conditional (see business rule)	string max 250	Required if Sample Preparation block is reported						
wqx		ACTIVITY Metric	ActivityMetricType	<b>Header;</b> This section allows for the reporting of metrics to support habitat or biotic integrity indices.	Optional May have 0 to many for each instance of Activity								
wqx			MetricTypeIdentifier	A designator used to describe the unique name, number, or code assigned to identify the metric (Organization specific).	Conditional (see business rule)	string max 35	Required if ActivityMetricType is reported.						
wqx			MetricTypeIdentifierContext	Identifies the source or data system that created or defined the metric.	Conditional (see business rule)	string max 50	Required if ActivityMetricType is reported.						
wqx			MetricTypeName	Name of the activity metric.	Conditional (see business rule)	string max 50	Required if ActivityMetricType is reported.						
wqx			MetricTypeCitation	<b>Header;</b> Identifies the source that created or defined the metric name.	Optional May have 0 to 1 for each instance ActivityMetric								
wqx			ResourceTitleName	A name given to the resource	Conditional (see business rule)	string max 120	Required if MetricCitation is reported.						
wqx			ResourceCreatorName	An entity primarily responsible for making the content of the resource.	Optional	string max 120							
wqx			ResourceSubjectText	A topic of the content of the resource.	Optional	string max 120							
wqx			ResourcePublisherName	An entity responsible for making the resource available.	Optional	string max 60							
wqx			ResourceDate	A date of an event in the lifecycle of the resource.	Conditional (see business rule)	date (YYYY-MM-DD)	Required if MetricCitation is reported.						
wqx			ResourceIdentifier	An unambiguous reference to the resource within a given context.	Conditional (see business rule)	string max 255	Required if MetricCitation is reported.						
wqx			MetricTypeScaleText	Provides a description of the scale used for the activity metric.	Optional	string max 50							
wqx			FormulaDescriptionText	Provides a description of the formula used to calculate the activity metric score.	Optional	string max 50							
wqx			MetricValueMeasure	<b>Header;</b> A measurement of the metric.	Optional; Up to one allowed per instance of ActivityMetric								
wqx			MeasureValue	The recorded dimension, capacity, quality, or amount of something ascertained by measuring or observing.	Optional	Number 12	Required if MetricValueMeasure block is reported.						
wqx		MeasureUnitCode	The code that represents the unit for measuring the item.	Optional	string max 12	Required if MetricValueMeasure block is reported.	Yes						
wqx		MetricScoreNumeric	Provides the score for the activity metric.	Conditional (see business rule)	string max 10	Required if ActivityIndex is reported.							
wqx		MetricCommentText	Free text with general comments concerning the metric.	Optional	string max 255								

Root	Category	Sub Category	WQX Data Element XML Tag	Definition	Optionality	Data Field Type	Business Rule or Additional Description	Domain List?	Rule	Domain Values	Relationship	Requested By
wqx		Activity Binary Object	IndexIdentifier	A designator used to describe the unique name, number, or code assigned to identify the index record.	Optional	string max 35	May have 0 to many occurrences for each Activity Metric block.		Multi-entry			
wqx			ActivityAttachedBinaryObject	<b>Header;</b> This section allows for the association of References and electronic attachments to the Activity description including any other documents, images, maps, photos, laboratory materials, geospatial coverages, and other objects associated with the Project..	Optional; may have 0 can have many per instance of Activity.		Multiple instances of SampleAttachedBinaryObject per Sample instance					
wqx			BinaryObjectFileName	The text describing the descriptive name used to represent the file, including file extension.	Conditional (see business rule)	string max 255	Required if ActivityAttachedBinaryObject present					
wqde			BinaryObjectFileLocation	Identifies the URL / directory of the file attachment that is stored on the NJDEP image file management server.	Conditional (see business rule)	string max 100	Required only when AttachedBinaryObject is reported.					
wqx			BinaryObjectFileTypeCode	The text or acronym describing the binary content type of a file.	Conditional (see business rule)	string max 6	Required if ActivityAttachedBinaryObject present			JPG BMP PDF TXT		
wqx					<b>Result</b>	<b>Header;</b> This section describes the results of a field measurement, observation, or laboratory analysis.	Optional; Each instance of Activity may have 0 to many results allowed					
wqx	DataLoggerLineName	The unique line identifier from a data logger result text file, normally a date/time format but could be any user defined name, e.g. "surface", "midwinter", and or "bottom".)			Conditional (see business rule)	string max 15	Required when Activity Type contains phrase "Data Logger". Must be unique within Activity.					
wqx	ResultDetectionConditionText	The textual descriptor of a result.			Conditional: (see business rule)	From domain values string max 35	Required if "ResultValue/ValueMeasure" is blank. Detection condition explains why there is no result measure value.	Yes		Detected Not Quantified Not Reported Present Above Quantification Limit Not Detected Present Below Quantification Limit		
wqx	CharacteristicName	The object, property, or substance which is evaluated or enumerated by either a direct field measurement, a direct field observation, or by laboratory analysis of material collected in the field.			Conditional (see business rule)	From domain values string max 120	Required if ResultValue/ValueMeasure is reported	Yes				
wqx	MethodSpeciationName	Identifies the molecular form of the Characteristic			Optional							
wqx	ResultSampleFractionText	The text name of the portion of the sample associated with results obtained from a physically-partitioned sample.			Conditional (see business rule)	From domain values string max 25	Required for certain characteristics.	Yes		Total Dissolved Suspended Settleable Non-settleable Filterable Non-filterable Volatile Non-volatile Acid Soluble Vapor Supernate Fixed Total Recoverable Comb Available Total Residual Free Available Pot. Dissolved		
wqx		<b>ResultMeasure</b>			<b>Header;</b> The reportable measure of the result for chemical, microbiological, or other characteristics being analyzed.	Conditional (see business rules); Up to one allowed per instance of ResultDescription			Required if Detection Condition is blank. No entry is allowed here if there is an entry in the ResultDectonConditionText			

Root	Category	Sub Category	WQX Data Element XML Tag	Definition	Optionality	Data Field Type	Business Rule or Additional Description	Domain List?	Rule	Domain Values	Relationship	Requested By
wqx		Result Description	ResultMeasureValue	The reportable measure of the result for the chemical, microbiological or other characteristic being analyzed.	Conditional (see business rule)	String max 60	Required if Detection Condition is blank. No entry is allowed here if there is an entry in the ResultDectionConditionText.  ResultValueMeasure must match a domain list value if the CharacteristicName ends with the phrase 'Choice List'	Conditional (see note)				DWM/BWQSA
wqx			MeasureUnitCode	The code that represents the unit for measuring the chemical substance, microbiological substance or other characteristic.	Conditional (see business rule)	From domain values string max 12 (Measure Unit Code)	Required if a non text result is reported; can also be reported for non-numeric results.	Yes				DWM/BWQSA
wqx			MeasureQualifierCode	A code used to identify any qualifying issues that affect the results.	Optional	From domain values string max 5		Yes		J R U UJ		DWM/BWQSA
wqx			ResultStatusIdentifier	Indicates acceptability of the result with respect to QA/QC criteria.	Conditional (see business rule)	From domain values string max 12	Required if result is reported.	Yes		Preliminary Final		DWM/BWQSA
wqx			StatisticalBaseCode	The code for the method used to calculate derived results.	Optional	From domain values string max 25		Yes		Maximum Mean Median Minimum Mode MPN Standard Deviation 5 Pctl 10 Pctl 15 Pctl 20 Pctl 25 Pctl 75 Pctl 80 Pctl 85 Pctl 90 Pctl 95 Pctl		
wqx			ResultValueTypeName	A name that qualifies the process which was used in the determination of the result value (e.g., actual, estimated, calculated).	Conditional (see business rule)	From domain values string max 12	Required if result is non text, Default is actual.	Yes		Actual Estimated Calculated		DWM/BWQSA
wqde			ResultValueTypeReason	An explanation as to why the value type is Estimated or Calculated	Optional	string max 100						DWM/BWQSA
wqx			ResultWeightBasisText	The name that represents the form of the sample or portion of the sample which is associated with the result value (e.g., wet weight, dry weight, ash-free dry weight).	Optional	From domain values string max 15		Yes		Wet Dry Ash-Free Dry		

Root	Category	Sub Category	WQX Data Element XML Tag	Definition	Optionality	Data Field Type	Business Rule or Additional Description	Domain List?	Rule	Domain Values	Relationship	Requested By	
wqx			ResultTimeBasisText	The period of time (in days) over which a measurement was made. For example, BOD can be measured as 5 day or 20 day BOD.	Optional	From domain values string max 12		Yes		96 Hours 1 Day 2 Day 3 Day 4 Day 5 Day 6 Day 7 Day 8 Day 9 Day 10 Day 11 Day 12 Day 13 Day 14 Day 15 Day 16 Day 17 Day 18 Day 19 Day 20 Day 21 Day 22 Day 23 Day 24 Day 25 Day 26 Day 27 Day 28 Day 29 Day 30 Day 60 Day			
wqx			ResultTemperatureBasisText	The name that represents the controlled temperature at which the sample was maintained during analysis, e.g. 25 deg BOD analysis.	Optional	From domain values string max 12		Yes		05 Deg C 10 Deg C 15 Deg C 20 Deg C 25 Deg C 30 Deg C 35 Deg C 40 Deg C 45 Deg C 50 Deg C 55 Deg C 60 Deg C 65 Deg C 70 Deg C 75 Deg C 80 Deg C 85 Deg C 90 Deg C 95 Deg C			
wqx			ResultExceedanceIndicator		Optional	string max 1							
wqde			ResultIdentifier	Uniquely identifies a Result under an Activity.	Mandatory	string max 35	Should be a system generated value and will mean absolutely nothing to the end user. Used for resubmissions						
wqx			ResultCommentText	Free text with general comments concerning the result.	Optional	string max 255							
wqx			BiologicalResultDescription	<b>Header;</b> This section allows for the reporting of biological result information.	Optional May have 0 to 1 for each instance of Result								
wqx			BiologicalIntentName	The primary reason the biological monitoring has occurred.	Conditional	From domain values string max 35	Required if Biological Result Description block is reported.	Yes			Individual Tissue Population Census Group Summary Frequency Class		

Root	Category	Sub Category	WQX Data Element XML Tag	Definition	Optionality	Data Field Type	Business Rule or Additional Description	Domain List?	Rule	Domain Values	Relationship	Requested By	
wqx	RESULT	BIOLOGICAL Result Description	BiologicalIndividualIdentifier	A number uniquely identifying the individual in accordance with the total number of individuals reported by the user.	Optional	string max 4 (non-negative integer)							
wqx			SubjectTaxonomicName	The name of the organism sampled as part of a biological sample.	Conditional	From domain values string max 120	Required if Biological Result Description block is reported.						
wqde			SpeciesCommonName	The non-scientific name or common name for the organism.	Optional	string max 35							
			UnidentifiedSpeciesIdentifier	A number assigned as a part of a taxonomic identification. Used with a valid genus name to indicate a unique species has been observed but not taxonomically identified.	Optional	string max 8							
wqx			SampleTissueAnatomyName	The name of the anatomy from which a tissue sample was taken.	Optional	From domain values string max 30		Yes					
wqx		Result Frequency Class Information	FrequencyClassInformation	<b>Header;</b> This section allows for the definition of a subgroup of biological communities by life stage, physical attribute, or abnormality to support frequency class studies.	Optional; may have 0 can have many per instance of Result Description								
wqx			FrequencyClassDescriptorCode	A code that describes the frequency class, either as a life stage, abnormality, gender, or measurable characteristic (i.e. length, weight) used to categorize a biological population count.	Conditional (see business rule)	domain list string max 50	Required if FrequencyClassInformation is reported	Yes			Biological Abnormality Measured Characteristic Lifestage Sex		
wqx			FrequencyClassDescriptorUnitCode	The code that represents the unit for measuring the item.	Conditional (see business rule)	string max 12	Required if FrequencyClassDescriptorCode type = 'Measured Characteristic'	Yes					
wqx			LowerClassBoundValue	This described the lower bound for a frequency class descriptor.	Conditional (see business rule)	string max 8	Required if FrequencyClassDescriptorCode type = 'Measured Characteristic'						
wqx			UpperClassBoundValue	This described the upper bound for a frequency class descriptor.	Conditional (see business rule)	string max 8	Required if FrequencyClassDescriptorCode type = 'Measured Characteristic'						
wqx		Result Binary Object	ResultAttachedBinaryObject	<b>Header;</b> This section allows for the association of References and electronic attachments to a Result description including any other documents, images, maps, photos, laboratory materials, geospatial coverages, and other objects associated with the Project..	Optional; may have 0 can have many per instance of Result			Multiple instances of AnalysisAttachedBinaryObject per Analysis instance					
wqx			BinaryObjectFileName	The text describing the descriptive name used to represent the file, including file extension.	Conditional (see business rule)	string max 255	Required if ResultAttachedBinaryObject present						
wqde			BinaryObjectFileLocation	Identifies the URL / directory of the file attachment that is stored on the NJDEP image file management server.	Conditional (see business rule)	string max 100	Required only when AttachedBinaryObject is reported.						
wqx			BinaryObjectFileTypeCode	The text or acronym describing the binary content type of a file.	Conditional (see business rule)	string max 6	Required if ResultAttachedBinaryObject present				JPG BMP PDF TXT		
wqx		Result Analytical Method	Result Analytical Method	<b>Header;</b> Allows for the optional association of an analytical method employed either in the Lab or in the Field with any result.	Conditional (see business rule); may have 0 can have 1 per Result			Required for certain ActivityTypeCodes. (Refer to Activity Type domain list for identification of Activity Types that require reporting of Analytical Method.)					
wqx			MethodIdentifier	The identification number or code assigned by the method publisher.	Conditional (see business rule)	string max 20	Required if Result Analytical Method block is reported.  Domain Values: <b>This field will be validated against a domain value list only if the MethodIdentifierContext element (05.02.02) is set to one of a predefined list of contexts (e.g. USEPA, ASTM, USDO/USGS, etc.).</b>	Yes, but see note in business rules.			<a href="#">See Analytical Method</a>		DWM/BWQSA

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wqx		Result Analytical Method	MethodIdentifierContext	Identifies the source or data system that created or defined the identifier.	Conditional (see business rule)	string max 120	Required if Result Analytical Method block is reported.			AOAC APHA ASTM ENV/CANADA FISON HACH IL/SWSD ISO NCASI NIOSH USDOC/NOAA USDOE/ASD USDOE/EML USDOI/USGS USEPA USFDA		DWM/BWQSA		
wqx			MethodName	The title that appears on the method from the method publisher.	Conditional (see business rule)	string max 60	Required only if Method Identifier and Method Identifier Context are not from WQX Domain Value list (i.e. user-defined method)						DWM/BWQSA	
wqx			MethodQualifierTypeName	Identifier of type of method that identifies it as reference, equivalent, or other.	Optional	string max 25								
wqx			MethodDescriptionText	A brief summary that provides general information about the method.	Optional	string max 255								
wqx		Result LAB Info	<b>ResultLabInformation</b>	<b>Header;</b> Information that describes information obtained by a laboratory related to a specific laboratory analysis.	Optional; may have 0 can have 1 per Result									
wqx			LaboratoryName	The name of the Lab responsible for the result	Optional	string max 60								
wqx			LabReceiveDate	Date the sample was received at the laboratory.	Optional	date (YYYY-MM-DD)	Most regulatory method include the maximum time between when a sample is collected and when it is extracted. Sometime called the "holding time".							
wqde			LabExtractionDate	Date the analyte(s) were extracted from the sample. Not all samples require extraction.	Optional	date (YYYY-MM-DD)	With some methods that require a chemical or physical extraction							
wqde			AnalysisStartDate	The calendar date on which the analysis began.	Optional	date (YYYY-MM-DD)								
wqx			AnalysisStartTime	The local time and relative time zone when the analysis began.	Optional									
wqx			Time	The time of day that is reported.	Conditional (see business rules)	Time - (hh:mm:ss)	Required only when AnalysisStartTime is reported							
wqx			TimeZoneCode	The time zone for which the time of day is reported. Any of the longitudinal divisions of the earth's surface in which a standard time is kept.	Conditional (see business rules)	string max 4	Required only when AnalysisStartTime is reported	Yes			EDT EST			
			AnalysisEndDate	The calendar date on which the analysis was finished.	Optional	date (YYYY-MM-DD)								
			AnalysisEndTime	The local time and relative time zone when the analysis was finished.	Optional									
			Time	The time of day that is reported.	Conditional (see business rules)	Time - (hh:mm:ss)	Required only when AnalysisEndTime is reported							
			TimeZoneCode	The time zone for which the time of day is reported. Any of the longitudinal divisions of the earth's surface in which a standard time is kept.	Conditional (see business rules)	string max 4	Required only when AnalysisEndTime is reported	Yes			EDT EST			
			ResultLaboratoryCommentCode	Remarks which further describe the laboratory procedures which produced the result.	Optional	From domain values string max 3		Yes			<a href="#">See Lab Comment Code</a>			
wqx				<b>ResultQuantitationLimit</b>	<b>Header;</b> Information that describes one of a variety of detection or quantitation limits determined in a laboratory.	Optional; may have 0 can have many per Result Lab Information			Multiple instances of ResultQuantitationLimits per ResultLabInformation					



Root	Category	Sub Category	WQX Data Element XML Tag	Definition	Optionality	Data Field Type	Business Rule or Additional Description	Domain List?	Rule	Domain Values	Relationship	Requested By	
wqx		Result Detection Quantitation Limit	DetectionQuantitationLimitTypeName	Text describing the type of detection or quantitation limit used in the analysis of a characteristic.	Conditional (see business rule)	From domain values string max 35	Required when ResultDetectioncondition is either "Not Detected" "Present Above Quantification Limit" or "Present and Below Quantification Limit"	Yes		Instrument Detection Level (IDL) Method Detection Level (MDL) Estimated Detection Level Upper Quantitation Limit Lower Quantitation Limit Long Term Method Detection Level Drinking Water Maximum Water Quality Standard or Criteria Upper Reporting Limit Lower Reporting Limit		DWM/BWQSA	
wqx			DetectionQuantitationLimitMeasure	Constituent concentration that, when processed through the complete method, produces a signal that is statistically different from a blank.	Conditional (see business rule)		Required when ResultDetectioncondition is either "Not Detected" "Present Above Quantification Limit" or "Present and Below Quantification Limit"						
wqx			MeasureValue	The reportable measure of the result for the chemical, microbiological or other characteristic being analyzed.	Conditional (see business rule)	Number 12	Required when ResultDetectioncondition is either "Not Detected" "Present Above Quantification Limit" or "Present and Below Quantification Limit"; Also required when DetectionQuantitationLimitMeasure block is reported.						DWM/BWQSA
wqx			MeasureUnitCode	The code that represents the unit for measuring the chemical substance, microbiological substance or other characteristic.	Conditional (see business rule)	From domain values string max 12 (MeasureUnitCode)	Required when ResultDetectioncondition is either "Not Detected" "Present Above Quantification Limit" or "Present and Below Quantification Limit"; Also required when DetectionQuantitationLimitMeasure block is reported.	Yes					
wqx			LabSamplePreparationMethod	The overall dilution of the substance (expressed as either volume or dilution factor) subjected to this analysis.	Optional								
		LAB Sample Prep	MethodIdentifier	The identification number or code assigned by the method publisher.	Conditional (see business rule)	string max 20							
			MethodIdentifierContext	Identifies the source or data system that created or defined the identifier.	Conditional (see business rule)	string max 120							
			MethodName	The title that appears on the method from the method publisher.	Conditional (see business rule)	string max 120							
			MethodQualifierTypeName	Identifier of type of method that identifies it as reference, equivalent, or other.	Optional	string max 25							
			MethodDescriptionText	A brief summary that provides general information about the method.	Optional	string max 500							
wqx			LabDilution	The overall dilution of the substance (expressed as either volume or dilution factor) subjected to this analysis.	Optional								
wqx			MeasureValue	The reportable measure of the result for the chemical, microbiological or other characteristic being analyzed.	Conditional (see business rule)	string max 12	Required if LabDilution block is reported.						
wqx			MeasureUnitCode	The code that represents the unit for measuring the chemical substance, microbiological substance or other characteristic.	Conditional (see business rule)	From domain values string max 12	Required if LabDilution block is reported.						
wqx		GROUP	ACTIVITY Group	Header;	Allows for the grouping of activities	Optional May have 0 to many for each instance of Activity							
wqx	ActivityGroupIdentifier			Designator that uniquely identifies a grouping of activities within an organization.	Mandatory	string max 35			Must be unique within the Organization.				
wqx	ActivityGroupName			A name of an activity group.	Optional	string max 50							DWM/BWQSA

Root	Category	Sub Category	WQX Data Element XML Tag	Definition	Optionality	Data Field Type	Business Rule or Additional Description	Domain List?	Rule	Domain Values	Relationship	Requested By
wqx	ACTIVITY GR	ACTIVITY Group	ActivityGroupTypeCode	Identifies the type of grouping of a set of activities	Mandatory	From domain values string max 50		Yes		Subsample QC Sample Field Set Replicate		
wqx			ActivityIdentifier	Designator that uniquely identifies an activity within an organization.	Mandatory	string max 35	May have 2 to many occurrences for each Activity Group block. This ActivityIdentifier needs to correspond to either an ActivityIdentifier reported in the Activity block of this submission or previously submitted to the system.					
wqx	INDEX	Biological Habitat Index	<b>BiologicalHabitatIndex</b>	<b>Header:</b> This section allows for the reporting of habitat and biotic integrity indices as a representation of water quality conditions.	Optional May have 0 to many for each instance of Organization							
wqx			IndexIdentifier	A designator used to describe the unique name, number, or code assigned to identify the index record.	Conditional (see business rule)	string max 35	Required if BiologicalHabitatIndex is reported.					
			<b>IndexType</b>	<b>Header:</b> This section identifies the index type reported as part of a biological or habitat index.	Conditional Required if BiologicalHabitatIndex is reported.							
			IndexTypeIdentifier	A designator used to describe the unique name, number, or code assigned to identify the index (Organization specific).	Conditional (see business rule)	string max 35	Required if IndexType is reported.					
wqx			IndexTypeIdentifierContext	Identifies the source or data system that created or defined the index.	Conditional (see business rule)	string max 50	Required if IndexType is reported.					
wqx			IndexTypeName	Name of the habitat or biotic integrity index.	Conditional (see business rule)	string max 50	Required if IndexType is reported.					
wqx			<b>IndexCitation</b>	<b>Header:</b> Identifies the source that created or defined the index name.	Optional May have 0 to 1 for each instance of BiologicalHabitatIndex							
wqx			ResourceTitleName	A name given to the resource	Conditional (see business rule)	string max 120	Required if IndexCitation is reported.					
wqx			ResourceCreatorName	An entity primarily responsible for making the content of the resource.	Optional	string max 120						
wqx			ResourceSubjectText	A topic of the content of the resource.	Optional	string max 120						
wqx			ResourcePublisherName	An entity responsible for making the resource available.	Optional	string max 60						
wqx			ResourceDate	A date of an event in the lifecycle of the resource.	Conditional (see business rule)	date (YYYY-MM-DD)	Required if IndexCitation is reported.					
wqx			ResourceIdentifier	An unambiguous reference to the resource within a given context.	Conditional (see business rule)	string max 255	Required if IndexCitation is reported.					
wqx			IndexTypeScaleText	Provides a description of the scale used for the index.	Optional	string max 50						
wqx			IndexScoreNumeric	Provides the score for the index.	Conditional (see business rule)	string max 10	Required if BiologicalHabitatIndex is reported.					
wqx			IndexQualifierCode	A code used to identify any qualifying issues that affect the index.	Optional	string max 5						
wqx			IndexCommentText	Free text with general comments concerning the index.	Optional	string max 4000						
wqx	IndexCalculatedDate	Date on which the index was calculated.	Optional	date (YYYY-MM-DD)								
wqx	MonitoringLocationIdentifier	A designator used to describe the unique name, number, or code assigned to identify the monitoring location.	Conditional (see business rule)	String max 35	Required if BiologicalHabitatIndex is reported.							