

DataHub 2011

REST API Documentation

What is DataHub?

This interface provides access to several types of data related to the Chesapeake Bay. Bay Program databases can be queried based upon user-defined inputs such as geographic region and date range. Each query results in a downloadable, tab- or comma-delimited text file that can be imported to any program (e.g., SAS, Excel, Access) for further analysis.

Databases

Database Name

Database Name	DB
CBP Water Quality Database(1984-present)	CBP_WQDB
CBP Water Quality Database(1949-1982)	CBI_WQDB
CBP Toxics	CBP_TOXDB
Baywide Benthic	CBP_BENDB
Non-Tidal Benthic Data	CBP_NTBENDB
Baywide CBP Plankton Data	CBP_PLANKDB
Baywide CBP Fluorescence Data	CBP_FLUORDB
Bay Program Nutrient Point Source	CBP_PSDB

Table 1: Database Name

Data source: CBP Water Quality Database (1984-present)

Water Quality Data Type:

Water Quality Data Type	DTYPE
STATION INFORMATION	Station_Information
MONITORING EVENT DATA	Monitoring_Event_Data
WATER QUALITY DATA	Water_Quality_Data
LIGHT ATTENUATION DATA	Light_Attenuation_Data
OPTICAL DENSITY DATA	Optical_Density_Data

Table 2: Water quality Data Type

Attribute information

Attribute	EXTENT
HYDROLOGICAL UNIT (HUCS8)	HUCS8
SMALL WATERSHED (HUC11)	HUCS11
COUNTY/CITY(FIPS)	FIPS
MONITORING STATION	STATIONS
MONITORING SEGMENT	SEGS_2003
WATER BODY	WATER_BODIES

Table 3: Attribute information

URL to access attribute information

URL Information

<http://servername/filename/getExtentData/EXTENT/DType/DB>

Description	Value
Server name	E.g. http://api.chesapeakebay.net
Filename	dhHelper.svc
GetExtentData	getExtentData (default value on url)
EXTENT	Attribute information value(see EXTENT section table 3)
DTYPE	Water quality Data type (see DTYPE section table 2)
DB	Name of database (see DB section table1)= CBP_WQDB
Full url	Server name/filename/ GetExtentData /EXTENT/ DTYPE/DB

Complete URL LINK by HELPERS

Example: Get ALL Station information by following resources

RESOURCE	URL
HUC8	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/HUCS8/Station_Information/CBP_WQDB
HUS11	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/HUCS11/Station_Information/CBP_WQDB
FIPS	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/FIPS/Station_Information/CBP_WQDB
Monitoring Station	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/STATIONS/Station_Information/CBP_WQDB
Monitoring Segment	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/SEGS_2003/Station_Information/CBP_WQDB
Water Body	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/WATER_BODIES/Station_Information/CBP_WQDB
Selected Measured and Calculated Parameters	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getMCParameters

Data Service Retrieval Method:

Replace DTYPE (by your selected attributes) listed below are the examples of different DTYPES for HUC8 in Water quality database. if you have more than one DTYPE please separate it by comma (,)

List of DTYPE by HUC8

Description	DTYPE (HUC8)
APPOMATTOX	02080207
BALD EAGLE	02050204
BLACKWATER-WICOMICO	02060007

Description	Value
Server name	E.g. http://api.chesapeakebay.net
Filename	filename.svc
EXTENT	Attribute information value(see EXTENT section table 3)
DTYPE	Water quality Data type (see DTYPE section table 2)
ALL	All selected attributes
ALL	All selected measured and calculated parameters
True/False	When Measured parameter values only
From Date	E.g. Date format (01012010)
To Date	E.g. Date format (12312010)
Possible Full url	Server name/filename/ GetExtentData /EXTENT/ DTYPE Server name/filename/ GetExtentData /EXTENT/ ALL Server name/filename/ GetExtentData /EXTENT/ DTYPE/From date/To date Server name/filename/ GetExtentData /EXTENT/ ALL/From date/To date Server name/filename/ GetExtentData /EXTENT/ ALL/ALL/true/From date/To date Server name/filename/ GetExtentData /EXTENT/ ALL/ALL/False/From date/To date

Data Service Retrieval URL

Description	URL
Server name/filename/ GetExtentData /EXTENT/ DTYPE	http://api.chesapeakebay.net/rest/DataHubRESTSrv/getWQStationInformation.svc/HUCS8/02080207,02050204,02060007/
Server name/filename/ GetExtentData /EXTENT/ ALL	http://api.chesapeakebay.net/rest/DataHubRESTSrv/getWQStationInformation.svc/HUCS8/ALL
Server name/filename/ GetExtentData /EXTENT/ DTYPE/From date/To date	http://api.chesapeakebay.net/rest/DataHubRESTSrv/getWQLightAttenuation.svc/HUCS8/02080207,02060007,02060002/04262000/08232004
Server name/filename/ GetExtentData /EXTENT/ ALL/From date/To date	http://api.chesapeakebay.net/rest/DataHubRESTSrv/getWQLightAttenuation.svc/HUCS8/ALL/01012000/12312000
Server name/filename/ GetExtentData /EXTENT/ ALL/ALL/true/From date/To date	http://api.chesapeakebay.net/rest/DataHubRESTSrv/getWQWaterQuality.svc/WATER_BODIES/ALL/ALL/true/03082004/12012005
Server name/filename/ GetExtentData /EXTENT/ ALL/ALL/False/From date/To date	http://api.chesapeakebay.net/rest/DataHubRESTSrv/getWQWaterQuality.svc/WATER_BODIES/ALL/ALL/false/03082004/12012005

Data source: Historical Water Quality Database (1949-1982)

Water Quality Data Type:

Water Quality Data Type	DTYPE
STATION INFORMATION	Station_Information
MONITORING EVENT DATA	Monitoring_Event_Data
WATER QUALITY DATA	Water_Quality_Data
CURRENT SPEED AND DIRECTION	Current_Speed_and_Direction_Data

Table 2: Historical Water quality Data Type

Attribute information

Attribute	EXTENT
HYDROLOGICAL UNIT (HUCS8)	HUCS8
SMALL WATERSHED (HUC11)	HUCS11
COUNTY/CITY(FIPS)	FIPS
MONITORING SEGMENT	SEGS_1998

Table 3: Attribute information

URL to access attribute information

URL Information

http://servername/filename/getExtentData/EXTENT/DType/DB

Description	Value
Server name	E.g. http://api.chesapeakebay.net
Filename	dhHelper.svc
GetExtentData	getExtentData (default value on url)
EXTENT	Attribute information value(see EXTENT section table 3)
DTYPE	Water quality Data type (see DTYPE section table 2)
DB	Name of database (see DB section table1) CBI_WQDB
Full url	Server name/filename/ GetExtentData /EXTENT/ DTYPE/DB

Complete URL LINK by HELPERS

Example: Get ALL Station information by following resources

RESOURCE	URL
HUC8	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/HUCS8/HUCS8/CBI_WQDB
HUS11	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/HUCS11/HUCS11/CBI_WQDB
FIPS	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/FIPS/FIPS/CBI_WQDB
Monitoring Segment	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/SEGS_1998/SEGS_1998/CBI_WQDB

Data Service Retrieval Method:

Replace DTYPE (by your selected attributes) listed below are the examples of different DYPES for HUC8 in old water quality database. If you have more than one DTYPE please separate it by comma (,)

List of DTYPE by HUC8

Description	DTYPE (HUC8)
CHOPTANK	02060005
UPPER CHESAPEAKE BAY	02080208
BLACKWATER-WICOMICO	02060007

Data Service URL possible combination

Description	Value
Server name	E.g. http://api.chesapeakebay.net
Filename	filename.svc
EXTENT	Attribute information value(see EXTENT section table 3)
DTYPE	Water quality Data type (see DTYPE section table 2)
ALL	All selected attributes
ALL	All selected measured and calculated parameters
True/False	When Measured parameter values only
From Date	E.g. Date format (01012010)
To Date	E.g. Date format (12312010)

Possible Full url	Server name/filename/ GetExtentData /EXTENT/ DTYPE Server name/filename/ GetExtentData /EXTENT/ ALL Server name/filename/ GetExtentData /EXTENT/ DTYPE/From date/To date Server name/filename/ GetExtentData /EXTENT/ ALL/From date/To date Server name/filename/ GetExtentData /EXTENT/ ALL/ALL/true/From date/To date Server name/filename/ GetExtentData /EXTENT/ ALL/ALL/False/From date/To date
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Data Service Retrieval URL

Description	URL
Server name/filename/ GetExtentData /EXTENT/ DTYPE	http://api.chesapeakebay.net/rest/DataHubRESTSrv/getWQStationInformationOld.svc/HUCS8/02060007.02060002
Server name/filename/ GetExtentData /EXTENT/ ALL	http://api.chesapeakebay.net/rest/DataHubRESTSrv/getWQStationInformationOld.svc/HUCS8/ALL
Server name/filename/ GetExtentData /EXTENT/ DTYPE/From date/To date	http://api.chesapeakebay.net/rest/DataHubRESTSrv/getWQStationInformationOld.svc/HUCS8/ALL/
Server name/filename/ GetExtentData /EXTENT/ ALL/From date/To date	http://api.chesapeakebay.net/rest/DataHubRESTSrv/getWQMonitoringEventOld.svc/HUCS8/ALL/01011949/12311949
Server name/filename/ GetExtentData /EXTENT/ ALL/ALL /From date/To date	http://api.chesapeakebay.net/rest/DataHubRESTSrv/getWQWaterQualityOld.svc/SEGS_1998/ALL/ALL/01011949/12311949

Data source: Toxic Data

Toxic Data Type:

Water Quality Data Type	DATA TYPE
CHEMICAL CONTAMINANT DATA	Chemical_Contaminant
THRESHOLD DATA	Threshold
REFERENCE INFORMATION	Reference

Table 2: Toxic Data Type

Attribute information

Attribute	EXTENT /DTYPE
HYDROLOGICAL UNIT (HUCS8)	HUCS8
COUNTY/CITY(FIPS)	FIPS
MONITORING SEGMENT	CBSEG_1985
CBP BASIN	CBP_BASIN

Table 3: Attribute information

URL to access attribute information

URL Information

<http://servername/filename/getExtentData/EXTENT/DType/DB>

Description	Value
Server name	E.g. http://api.chesapeakebay.net
Filename	dhHelper.svc
GetExtentData	getExtentData (default value on url)
EXTENT	Attribute information value(see EXTENT section table 3)
DTYPE	Water quality Data type (see DTYPE section table 3)
DB	Name of database (see DB section table1) CBP_TOXDB
Full url	Server name/filename/ GetExtentData /EXTENT/ DTYPE/DB
From Date	E.g. Date format (2010-01-01)
To Date	E.g. Date format (2010-12-31)

Complete URL LINK by HELPERS

Example: Get Toxic information by following resources

RESOURCE	URL
HUC8	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/HUCS8/1973-01-01_1979-12-31/CBP_TOXDB
FIPS	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/FIPS/1973-01-01_1979-12-31/CBP_TOXDB
Monitoring Segment	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/CBSEG_1985/1973-01-01_1979-12-31/CBP_TOXDB
CBP BASIN	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/CBP_BASIN/1973-01-01_1979-12-31/CBP_TOXDB
Select Media Type(s)	http://api.chesapeakebay.net/rest/DataHubRESTSrv/getToxicMediaType.svc/Media
Chemical Name	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getToxicsChemicals/HUCS8/ALL/SED,BIL,FIL,FS,F,FSO,TIS,EDI,TNE,TWH,WAT,WTD,WTP,WTT/ALL/chemical_name/02271973/01011975
Chemical Class	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getToxicsChemicals/HUCS8/ALL/SED,BIL,FIL,FS,F,FSO,TIS,EDI,TNE,TWH,WAT,WTD,WTP,WTT/ALL/chemical_class/02271973/01011975

Data Service Retrieval Method:

Replace DTYPE (by your selected attributes) listed below are the examples of different DTYPES for HUC8 in Toxic database. If you have more than one DTYPE please separate it by comma (,)

List of DTYPE by HUC8

Description	DTYPE (HUC8)
CACAPON-TOWN	02070003
CHOPTANK	02060005
BLACKWATER-WICOMICO	02060007

Description	Value
Server name	E.g. http://api.chesapeakebay.net
Filename	filename.svc
EXTENT	Attribute information value(see EXTENT section table 3)
DTYPE	Water quality Data type (see DTYPE section table 3)
Media Types	Select Media Type
Chemical_name	All Chemical Name
Chemica_class	All Chemical Class
Select Chemical	Chemical Name or Chemical class
From Date	E.g. Date format (01012010)
To Date	E.g. Date format (12312010)
Possible Full url	<p>Server name/filename/ EXTENT/DType/Media Type/ chemical_class/selected chemical/from date/to date</p> <p>Server name/filename/ EXTENT/DType/Media Type/ chemical_name/selected chemical/from date/to date</p>

Data Service Retrieval URL

Description	URL
Server name/filename/ EXTENT/DType/Media Type/ chemical_class/select e chemical/from date/to date	http://api.chesapeakebay.net/rest/DataHubRETSrv/getWQChemicalContaminantData.svc/HUCS8/02080207,02060007,02070003/SED,BIL,FIL/chemical_class/AVS,INO/02271973/09181993
Server name/filename/ /EXTENT/ DType/Media Type/Chemical_name. /select chemical/from date/ to date	http://api.chesapeakebay.net/rest/DataHubRETSrv/getWQChemicalContaminantData.svc/HUC8/02080207,02060007,02070003/SED,BIL,FIL/chemical_name/000120821,000095501/02271973/09181993

Data source: Baywide CBP Benthic Data

Benthic Data Type:

Benthic Data Type	Values
MONITORING EVENT DATA	Monitoring_Event_Data
BIOLOGICAL EVENT DATA	Biological_Event_Data
SEDIMENT DATA	Sediment_Data
BIOMASS DATA	Biomass_Data
TAXONOMIC DATA	Taxonomic_Data
WATER QUALITY DATA	Water_Quality_Data
INDICATOR OF BENTHIC INTEGRITY (IBI) DATA	IBI_Data

Table 2: Benthic Data Type

Attribute information

Attribute	EXTENT /DTYPE
HYDROLOGICAL UNIT (HUCS8)	HUCS8
COUNTY/CITY(FIPS)	FIPS
MONITORING SEGMENT	SEGS_2003
WATER BODY	WATER_BODIES

Table 3: Attribute information

URL to access attribute information

URL Information

http://servername/filename/getExtentData/EXTENT/DType/DB

Description	Value
Server name	E.g. http://api.chesapeakebay.net
Filename	dhHelper.svc
GetExtentData	getExtentData (default value on url)
EXTENT	Attribute information value(see EXTENT section table 3)
DTYPE	Water quality Data type (see DTYPE section table 3)
DB	Name of database (see DB section table1)
Full url	Server name/filename/ GetExtentData /EXTENT/ DTYPE/DB

Complete URL LINK by HELPERS

Example: Get ALL Monitoring Event Data by following resources

RESOURCE	URL
HUC8	http://api.chesapeakebay.net/rest/DataHubRETSrv/dhHelper.svc/getExtentData/HUCS8/HUCS8/CBP_BENDB
FIPS	http://api.chesapeakebay.net/rest/DataHubRETSrv/dhHelper.svc/getExtentData/FIPS/FIPS/CBP_BENDB
Monitoring Segment	http://api.chesapeakebay.net/rest/DataHubRETSrv/dhHelper.svc/getExtentData/SEGS_2003/SEGS_2003/CBP_BENDB
WATER BODY	http://api.chesapeakebay.net/rest/DataHubRETSrv/dhHelper.svc/getExtentData/WATER_BODIES/WATER_BODIES/CBP_BENDB

Data Service Retrieval Method:

Replace DTYPE (by your selected attributes) listed below are the examples of different DTYPES for HUC8 in Benthic database. If you have more than one DTYPE please separate it by comma (,)

List of DTYPE by HUC8

Description	DTYPE (HUC)
APPOMATTOX	02080207
CHINCOTEAGUE	02040303
CHOPTANK	02060005

List of File Names

Description	Filename
Monitoring Event Data	getBenthicMonitoringEvent.svc
Biological Event Data	getBenthicBiologicalEventData.svc
Sediment Data	getBenthicSedimentData.svc
Biomass Data	getBenthicBiomassData.svc
Taxomoica Data	getBenthicTaxonomicData.svc
Water Quality Data	getBenthicWQData.svc
Indicator of Benthic Integrity (IBI) Data	getBenthicIBIData.svc

Data Service URL possible combination

Description	Value
Server name	E.g. http://api.chesapeakebay.net
Filename	filename.svc
EXTENT	Attribute information value(see EXTENT section table 3)
DTYPE	Water quality Data type (see DTYPE section table 3)
ALL	All selected attributes
ALL	All selected measured and calculated parameters
True/False	When Measured parameter values only
From Date	E.g. Date format (01012010)
To Date	E.g. Date format (12312010)
Possible Full url	Server name/filename/ GetExtentData /EXTENT/ DTYPE/From date/To date Server name/filename/ GetExtentData /EXTENT/ ALL/From date/To date

Data Service Retrieval URL

Description	URL
Server name/filename/ GetExtentData /EXTENT/ DTYPE/From date/To date	http://api.chesapeakebay.net/rest/DataHubRESTSrv/getBenthicMonitoringEvent.svc/HUCS8/ALL/02111975/01011976
Server name/filename/ GetExtentData /EXTENT/ From date/To date	http://api.chesapeakebay.net/rest/DataHubRESTSrv/getBenthicMonitoringEvent.svc/HUCS8/03010205,02080207,02060007,02060002,02040303,02060010,02060005,02040304,02080110/02111975/09242010

Data source: Non- Tidal Benthic Data

Attribute	EXTENT	Filename
EVENT	EVENT	getNonTidalBenthicEventData.svc
HABITAT ASSESSMENT	Habitat_Assessment	getNonTidalBenthicHabitatAssessmentData.svc
TAXONOMIC COUNTS	Taxonomic_Counts	getNonTidalBenthicTaxonomicCountsData.svc
WATER QUALITY	Water_Quality	getNonTidalBenthicWaterQualityData.svc
INDICATORS AND CALCULATED METRICS	Indicator_Calculated_Metrics	getNonTidalBenthicIndicatorCaculatedData.svc
WAREHOUSE	Warehouse	getNonTidalBenthicWarehouseData.svc

Table 2: Non-Tidal Benthic Data Type

Attribute information

Water Quality Data Type	DTYPE
AGENCY	AGENCY
STATE	STATE
HYDROLOGIC UNITS, (HUC)	HUCS8
COUNTIES/CITIES	FIPS
ECO REGION	ECO_REGION

Table 3: Attribute information

URL to access attribute information

URL Information

http://servername/filename/getExtentData/EXTENT/DType/DB

Description	Value
Server name	E.g. http://api.chesapeakebay.net
Filename	dhHelper.svc
GetExtentData	getExtentData (default value on url)
EXTENT	Attribute information value(see EXTENT section table 3)
DTYPE	Water quality Data type (see DTYPE section table 3)
DB	Name of database (see DB section table1)
Full url	Server name/filename/ GetExtentData /EXTENT/ DTYPE/DB

Complete URL LINK by HELPERS

Example: Get ALL Event information by following resources

RESOURCE	URL
AGENCY	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/AGENCY/EVENT/CBP_NTBENDB
STATE	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/STATE/EVENT/CBP_NTBENDB
HUC	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/HUCS8/EVENT/CBP_NTBENDB
COUNTIES /CITIES	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/FIPS/EVENT/CBP_NTBENDB
ECO REGION	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/ECO_REGION/EVENT/CBP_NTBENDB

Data Service Retrieval Method:

Replace DTYPE (by your selected attributes) listed below are the examples of different DTYPES for HUC8 in database. If you have more than one DTYPE please separate it by comma (,)

List of DTYPE by STATE

Description	DTYPE (STATE)
DELAWARE	DE
MARYLAND	MD
NEW YORK	NY

Data Service URL possible combination

Description	Value
Server name	E.g. http://api.chesapeakebay.net
Filename	filename.svc
EXTENT	Attribute information value(see EXTENT section table 3)
DTYPE	Water quality Data type (see DTYPE section table 2)
ALL	All selected attributes
ALL	All selected measured and calculated parameters
True/False	When Measured parameter values only
From Date	E.g. Date format (01012010)
To Date	E.g. Date format (12312010)
Possible Full url	Server name/filename/ GetExtentData /EXTENT/ DTYPE/From date/To date Server name/filename/ GetExtentData /EXTENT/ ALL/From date/To date

Data Service Retrieval URL:

Description	URL
Server name/filename/ GetExtentData /EXTENT/ DTYPE/ALL/From date/To date	http://api.chesapeakebay.net/rest/DataHubRETSrv/getNonTidalBenthicIndicatorCaculatedData.svc/STATE/ALL/04012003/04292008
Server name/filename/ GetExtentData /EXTENT/ From date/To date	http://api.chesapeakebay.net/rest/DataHubRETSrv/getNonTidalBenthicIndicatorCaculatedData.svc/STATE/MD,NY,PA/04012003/04292008

Data source: Baywide CBP Plankton Data

Benthic Plankton Data Type:

Attribute	EXTENT	Filename
STATION INFORMATION	Station_Information	getPlanktonStation.svc
MONITORING EVENT DATA	Monitoring_Event_Data	getPlanktonMonitoring.svc
PHYTOPLANKTON DATA	Phytoplankton_Data	getPlanktonPicoplanktonPhytoplankton.svc
MESOOZOPLANKTON DATA	Mesozooplankton_Data	getPlanktonMesozooMicrozooJellyfish.svc
PICOPLANKTON DATA	Picoplankton_Data	getPlanktonPicoplanktonPhytoplankton.svc
PRIMARY PRODUCTIVITY DATA	Picoplankton_Data	getPlanktonPrimary.svc

JELLYFISH DATA	Jellyfish_Data	getPlanktonMesozooMicrozooJellyfish.svc
COMPOSITE METRIC DATA	Composite_Metric_Data	getPlanktonCompositeMetric.svc
PIBI DATA	PIBI_Data	getPlanktonPIBI.svc

Table 2: Plankton Data Type

Attribute information

Water Quality Data Type	EXTENT /DTYPE
HYDROLOGIC UNITS, (HUC)	HUCS8
COUNTIES/CITIES (FIPS)	FIPS
MONITORING STATION	STATIONS
MONITORING SEGMENT	SEGS_1998
WATER BODY	WATER_BODIES

Table 3: Attribute information

URL to access attribute information

URL Information

http://servername/filename/getExtentData/EXTENT/DType/DB

Description	Value
Server name	E.g. http://api.chesapeakebay.net
Filename	dhHelper.svc
GetExtentData	getExtentData (default value on url)
EXTENT	Attribute information value(see EXTENT section table 3)
DTYPE	Water quality Data type (see DTYPE section table 2)
DB	Name of database (see DB section table1)
Full url	Server name/filename/ GetExtentData /EXTENT/ DTYPE/DB

Complete URL LINK by HELPERS

Example: Get ALL Event information by following resources

RESOURCE	URL
HYDROLOGIC UNITS, (HUC)	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/HUCS8/HUCS8/CBP_PLANKDB
COUNTIES/CITIES (FIPS)	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/FIPS/FIPS/CBP_PLANKDB
MONITORING STATION	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/STATIONS/STATIONS/CBP_PLANKDB
MONITORING SEGMENT	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/SEGS_1998/SEGS_1998/CBP_PLANKDB
WATER BODY	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/WATER_BODIES/WATER_BODIES/CBP_PLANKDB

Data Service Retrieval Method:

Replace DTYPE (by your selected attributes) listed below are the examples of different DTYPES for HUC8 in Water quality database. If you have more than one DTYPE please separate it by comma (,)

List of DTYPE by STATE

Description	DTYPE (HUC)
BLACKWATER-WICOMICO	02060007
CHESTER-SASSAFRAS	02060002
CHOPTANK	02060005

Data Service URL possible combination

Description	Value
Server name	E.g. http://api.chesapeakebay.net
Filename	filename.svc
EXTENT	Attribute information value(see EXTENT section table 3)
DTYPE	Water quality Data type (see DTYPE section table 3)
ALL	All selected attributes
ALL	All selected measured and calculated parameters
MI	Microzooplankton
MZ	Mesozooplankton
PH	Phytoplankton
PP	Picoplankton
MZ2	Jellyfish
PD	Primary Productivity
From Date	E.g. Date format (01012010)
To Date	E.g. Date format (12312010)
Possible Full url	Server name/filename/ GetExtentData /EXTENT/ DTYPE Server name/filename/ GetExtentData /EXTENT/ DTYPE/ALL Server name/filename/ GetExtentData /EXTENT/ DTYPE/From date/To date Server name/filename/ GetExtentData /EXTENT/DTYPE/ ALL/From date/To date Server name/filename/ GetExtentData /EXTENT/ DTYPE/ALL/MZ/Fromdate/Todate

Description	URL
Server name/filename/ GetExtentData /EXTENT/ DTYPE/ALL	http://api.chesapeakebay.net/rest/DataHubRETSrv/getPlanktonStation.svc/HUCS8/ALL
Server name/filename/ GetExtentData /EXTENT/ DTYPE	http://api.chesapeakebay.net/rest/DataHubRETSrv/getPlanktonStation.svc/HUCS8/02060007,02060002,02060005
Server name/filename/ GetExtentData /EXTENT/ DTYPE/ALL/MZ/Fromd ate/Todate	http://api.chesapeakebay.net/rest/DataHubRETSrv/getPlanktonMonitoring.svc/HUCS8/ALL/MZ/08021984/09191985

Data source: Baywide CBP Fluorescence Data

Water Quality Data Type:

Attribute	EXTENT	Filename
HORIZONTAL FLUORESCENCE	Horizontal_Fluorescence_Data	getHorizontalFluorescenceData.svc
VERTICAL FLUORESCENCE DATA	Vertical_Fluorescence_Data	getVerticalFluorescenceData.svc

Table 2: Fluorescence Data Type

Attribute information

Water Quality Data Type	EXTENT /DTYPE
HYDROLOGIC UNITS, (HUC)	HUCS8
COUNTIES/CITIES (FIPS)	FIPS
MONITORING SEGMENT	SEGS_2003
WATER BODY	WATER_BODIES

Table 3: Attribute information

URL to access attribute information

URL Information

<http://servername/filename/getExtentData/EXTENT/DType/DB>

Description	Value
Server name	E.g. http://api.chesapeakebay.net
Filename	dhHelper.svc
GetExtentData	getExtentData (default value on url)
EXTENT	Attribute information value(see EXTENT section table 3)
DTYPE	Water quality Data type (see DTYPE section table 3)
DB	Name of database (see DB section table1)
Full url	Server name/filename/ GetExtentData /EXTENT/ DTYPE/DB

Complete URL LINK by HELPERS

Example: Get ALL Event information by following resources

RESOURCE	URL
HYDROLOGIC UNITS, (HUC)	http://api.chesapeakebay.net/rest/DataHubRESTDsrv/dhHelper.svc/getExtentData/HUCS8/HUCS8/CBP_FLUORDB
COUNTIES/CITIES (FIPS)	http://api.chesapeakebay.net/rest/DataHubRESTDsrv/dhHelper.svc/getExtentData/FIPS/FIPS/CBP_FLUORDB
MONITORING SEGMENT	http://api.chesapeakebay.net/rest/DataHubRESTDsrv/dhHelper.svc/getExtentData/SEGS_2003/SEGS_2003/CBP_FLUORDB
WATER BODY	http://api.chesapeakebay.net/rest/DataHubRESTDsrv/dhHelper.svc/getExtentData/WATER_BODIES/WATER_BODIES/CBP_FLUORDB

Data Service Retrieval Method:

Replace DTYPE (by your selected attributes) listed below are the examples of different DTYPES for HUC8 in database. If you have more than one DTYPE please separate it by comma (,)

List of DTYPE by HUC

Description	DTYPE (HUC)
BAY/OCEAN BOUNDARY	00000000
BLACKWATER-WICOMICO	02060007
CHESTER-SASSAFRAS	02060002

Data Service URL possible combination

Description	Value
Server name	E.g. http://api.chesapeakebay.net
Filename	filename.svc
EXTENT	Attribute information value(see EXTENT section table 3)
DTYPE	Water quality Data type (see DTYPE section table 3)

ALL	All selected attributes
ALL	All selected measured and calculated parameters
From Date	E.g. Date format (01012010)
To Date	E.g. Date format (12312010)
Possible Full url	Server name/filename/ GetExtentData /EXTENT/ DTYPE/From date/To date Server name/filename/ GetExtentData /EXTENT/DTYPE/ ALL/From date/To date

Description	URL
Server name/filename/ GetExtentData /EXTENT/ DTYPE/ALL/From Date /To Date	http://api.chesapeakebay.net/rest/DataHubRESTSrv/getVerticalFluorescenceData.svc/HUCS8/ALL/08021984/12182008
Server name/filename/ GetExtentData /EXTENT/ DTYPE/ From Date /To Date	http://api.chesapeakebay.net/rest/DataHubRESTSrv/getVerticalFluorescenceData.svc/HUCS8/00000000,0,02060007,02060002/08021984/12182008

Data source: Baywide Nutrient Point Source Data

Point Source Data Type:

Attribute	EXTENT	Filename
FACILITY INFORMATION	Facility_Information	getPointsourceData.svc
AVERAGE FLOW DATA	Average_Flow_Data	getPsAvgFlowDataMonth.svc/getPsAvgFlowDataAnnual.svc
AVERAGE CONCENTRATION DATA	Average_Concentration_Data	getPsAvgConData.svc/getPsAvgConDataAnnual.svc
AVERAGE LOAD DATA	Average_Load_Data	getPsAvgLoadDataMonth.svc/getPsAvgLoadDataAnnual.svc

Table 2: Point Source Data Type

Attribute information

Water Quality Data Type	EXTENT /DTYPE
HYDROLOGIC UNITS, (HUC)	HUCS8
SMALL WATERSHED (HUC11)	HUCS11
COUNTIES/CITIES (FIPS)	FIPS
STATE	STATE
FACILITY	FACILITY
WATERSHED MODEL SEGMENT	WATERMODEL
RECEIVING WATER	RECEIVING
NPDES NUMBER	NPDES
CHESAPEAKE BAY PROGRAM BASIN	CBPB
TRIBUTARY STRATEGY BASIN	TSB

Table 3: Attribute information

URL to access attribute information

URL Information

http://servername/filename/getExtentData/EXTENT/DType/DB

Description	Value
Server name	E.g. http://api.chesapeakebay.net
Filename	dhHelper.svc
GetExtentData	getExtentData (default value on url)
EXTENT	Attribute information value(see EXTENT section table 3)
DTYPE	Water quality Data type (see DTYPE section table 3)
DB	Name of database (see DB section table1)
Full url	Server name/filename/ GetExtentData /EXTENT/ DTYPE/DB

[Complete URL LINK by HELPERS](#)

Example: Get ALL Event information by following resources

RESOURCE	URL
HYDROLOGIC UNITS, (HUC)	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/HUCS8/HUCS8/CBP_PSDB
SMALL WATERSHED (HUC11)	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/HUCS11/HUCS11/CBP_PSDB
COUNTIES/CITIES (FIPS)	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/FIPS/FIPS/CBP_PSDB
STATE	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/STATE/STATE/CBP_PSDB
FACILITY	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/FACILITY/FACILITY/CBP_PSDB
WATERSHED MODEL SEGMENT	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/WATERMODEL/WATERMODEL/CBP_PSDB
RECEIVING WATER	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/RECEIVING/RECEIVING/CBP_PSDB
NPDES NUMBER	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/NPDES/NPDES/CBP_PSDB

CHESAPEAKE BAY PROGRAM BASIN	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/CBPB/CBPB/CBP_PSDB
TRIBUTARY STRATEGY BASIN	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getExtentData/TSB/TSB/CBP_PSDB
Select Parameters (Average Concentration Data)	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getPSParameters/Average_Concentration_Data
Select Parameters (Average Load Data)	http://api.chesapeakebay.net/rest/DataHubRESTSrv/dhHelper.svc/getPSParameters/Average_Load_Data

Data Service Retrieval Method:

Replace DTYPE (by your selected attributes) listed below are the examples of different DTYPES for HUC8 in database. If you have more than one DTYPE please separate it by comma (,)

List of DTYPE by HUC

Description	DTYPE (HUC)
APPOMATTOX	02080207
BLACKWATER-WICOMICO	02060007
CHEMUNG	02050105

Data Service URL possible combination

Description	Value
Server name	E.g. http://api.chesapeakebay.net
Filename	filename.svc
EXTENT	Attribute information value(see EXTENT section table 3)
DTYPE	Water quality Data type (see DTYPE section table 2)
Active	Active and Significant Only
ALL	Select Facility Type All
Monthly	Select Average Type
Annual	Select Average Type
Allparam	Select Parameters
From Date	E.g. Date format (01012010)

To Date	E.g. Date format (12312010)
From Date(Annual)	E.g. Date format (2010)
To Date(Annual)	E.g. Date format (2011)
Possible Full url	<p>Server name/filename/ GetExtentData /EXTENT/ DTYPE/Active</p> <p>Server name/filename/ GetExtentData /EXTENT/ DTYPE/ALL/ALL</p> <p>Server name/filename/ GetExtentData /EXTENT/ DTYPE/From date/To date Server name/filename/ GetExtentData /EXTENT/DTYPE/ ALL/From date/To date Server name/filename/ GetExtentData /EXTENT/DTYPE/ ALL/Annual/From date/To date</p> <p>Server name/filename/ GetExtentData /EXTENT/DTYPE/ ALL/Monthly/From date/To date</p> <p>Server name/filename/ GetExtentData /EXTENT/DTYPE/ Active/Monthly/From date/To date</p> <p>Server name/filename/ GetExtentData /EXTENT/ DTYPE/ ALL/Allparam/ALL/Monthly/From date/To date</p> <p>Server name/filename/ GetExtentData /EXTENT/ DTYPE/ ALL/parameter/ALL/Annual/From date/To date</p>

Description	URL
Server name/filename/ GetExtentData /EXTENT/ DTYPE/ALL/Active	http://api.chesapeakebay.net/rest/DataHubRETSrv/getPointsourceData.svc/HUCS8/ALL/Active
Server name/filename/ GetExtentData /EXTENT/ DTYPE/ ALL/ALL	http://api.chesapeakebay.net/rest/DataHubRETSrv/getPointsourceData.svc/HUCS8/ALL/ALL
Server name/filename/ GetExtentData /EXTENT/ DTYPE/ ALL/ALL/Monthly/From date/To date	http://api.chesapeakebay.net/rest/DataHubRETSrv/getPsAvgFlowDataMonth.svc/HUCS8/ALL/ALL/Monthly/01012000/06012000
Server name/filename/ GetExtentData /EXTENT/ DTYPE/ ALL/ALL/Annual/From date/To date	http://api.chesapeakebay.net/rest/DataHubRETSrv/getPsAvgFlowDataAnnual.svc/HUCS8/ALL/ALL/Annual/2000/2001
Server name/filename/ GetExtentData /EXTENT/ DTYPE/ ALL/Active/Monthly/From date/To date	http://api.chesapeakebay.net/rest/DataHubRETSrv/getPsAvgFlowDataMonth.svc/HUCS8/ALL/Active/Monthly/01012000/06012001
Server name/filename/ GetExtentData /EXTENT/ DTYPE/ ALL/Active/Annual/From date/To date	http://api.chesapeakebay.net/rest/DataHubRETSrv/getPsAvgFlowDataAnnual.svc/HUCS8/ALL/Active/Annual/2000/2001

Server name/filename/ GetExtentData /EXTENT/ DTYPE/ ALL/Allparam/ALL/M onthly/From date/To date	http://api.chesapeakebay.net/rest/DataHubRESTSrv/getPsAvgConData.svc/HUCS8/ALL/Allparam/ALL/Monthly/01012000/06012000
Server name/filename/ GetExtentData /EXTENT/ DTYPE/ /parameter/ALL/Ann ual/From date/To date	http://api.chesapeakebay.net/rest/DataHubRESTSrv/getPsAvgConDataAnnual.svc/HUCS8/02080207,02050204,02060007,02070003,02050105/ZN D,ECOCCI,FCOLI/ALL/Annual/2000/2000

Error Codes & Responses

HTTP Status Codes

The DataHub API attempts to return appropriate HTTP status codes for every request. Users may encounter following error messages depending on different circumstances.

200 OK: Success!

304 Not Modified: There was no new data to return.

400 Bad Request: The request was invalid. An accompanying error message will explain why.

This is the status code will be returned during rate limiting.

401 Unauthorized: Authentication credentials were missing or incorrect.

403 Forbidden: The request is understood, but it has been refused. An accompanying error message will explain why. This code is used when requests are being denied due to update limits.

404 Not Found: The URI requested is invalid or the resource requested, such as a user, does not exist.

406 Not Acceptable: Returned by the Search API when an invalid format is specified in the request.

420 Enhance Your Calm: Returned by the Search and Trends API when you are being rate limited.

500 Internal Server Error: Something is broken.

502 Bad Gateway: Server is down or being upgraded.

503 Service Unavailable: The DataHub servers are up, but overloaded with requests. Try again later.

Service Endpoint not found: Incomplete URL address or mistyped URL address .