Metadata Record: New England Dams Database

Date: 08/10/18 lasted edited by Denise Blaha

Project Name: New England Dams Database

Project Description: Using dams in New England as a model system, collaborators across the Maine, New Hampshire, and Rhode Island research networks are examining the economic, ecological, social, and political trade-offs associated with different kinds of decisions about dams. Examples include increasing power production at existing hydropower dams, installing new power production technology at non-power dams, maintaining existing non-power dams for recreation, habitat or pollution abatement or removing dams to restore fisheries or address dam safety concerns.

Data Description: The New England Dams Database is a collaborative effort of the Maine, New Hampshire, and Rhode Island EPSCoR research networks and is compiled from various geospatial, land use, and hydrographic datasets identified in the attribute tables below. Attributes in this database include: dam Identification and location, feature characteristics, land use classification, dam status, dam hazard classification, ownership and management details, census data, and stream and watershed data. Some attributes are applicable to all six New England states, while other variables are specific to just certain states. See the tables below for details.

New in the 081018 Release of the New England Dams Database: This release removes 49 records that were duplicates of dams already in the database.

Known Data Issues

The Dam_Status attribute was reformatted in the 033018 release of the New England Dams Database as having a value of either "Existing" or "Removed" and this has created some inconsistencies with the Dam_Status_Details attribute for New Hampshire and Vermont. Only these 2 states were impacted by the change

The DDC is working with the Dams Data Team to resolve these data issues and make the revised data available as soon as possible.

Metadata for Removed Dams and Removed Dams Watersheds

Geospatial feature class files pertaining to removed dams and removed dams watersheds are now available. Attribute data include: Dam Name, Year of Removal,

City_County, River Basin, State, Dam_Height, Dam_Length, Latitude, and Longitude. The full metadata record for these data is here:

[Metadata_For_Removed_Dams_And_Removed_Dams_Watersheds_20171220](#)

Data Use: The use of these data are governed by the New England Dams Database Data Policy. Support for this project is provided by the National Science Foundation's Research Infrastructure Improvement program. NSF Award #IIA-1539071.

Data Type: Point and Polygon Data

Number of Stations/Sites:

Existing Dams: 7186 existing dams in New England (2091 in Connecticut; 1783 in Massachusetts; 645 in Maine; 1969 in New Hampshire; 433 in Rhode Island; 265 in Vermont)

Removed Dams: 258 removed dams in New England (35 in Connecticut; 45 in Massachusetts; 36 in Maine; 63 in New Hampshire; 6 in Rhode Island; 73 in Vermont)

Spatial Boundaries: South: 41.021988 North: 47.188888 East: -73.696037 West: -67.08976

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Regional Attributes in the New England Dams Database

New England-wide Attributes in the New England Dams Database (data sources appended to the bottom of the table)		
E = Data available for Existing Dams only		
R = Data available for Removed Dams only		
A = Data available for All Dams (Existing Dams and Removed Dams)		
Attribute	**Avail**	**Definition**
#ANAD_SPECIES	E	The number of anadromous species with documented habitat in the downstream functional network of each dam based on the data described for each species: alewife, blueback herring, American shad, hickory shad, striped bass, Atlantic salmon, Atlantic sturgeon. Only current habitat is considered for this metric. Source: NCAT (Anadromous Species (#)).
#DS_BARRIER	E	The number of barriers downstream of a given barrier. Does not include barriers excluded from network generation. Source: NCAT (Downstream barrier count).
#DS_HYDRO_DAM	E	Count of hydropower dams on downstream flowpath of a barrier. Source: NCAT.
#DS_IMPASS_BARRIER	E	The number of "impassable" barriers downstream of a given barrier. For the purpose of this metric, barriers are considered impassable if they are not crossed by anadromous fish habitat data. This metric attempts to compensate for the lack of comprehensive fish passage facility data. Thus, if mapped anadromous fish habitat crosses a dam, the assumption is made that some passage exists. Source: NCAT (Impassible Downstream Barrier Count).
#DS_WTRFLL	E	The number of natural waterfalls located downstream of the dam. Based on waterfall data compiled for the Northeast Aquatic Connectivity project. Source: NCAT (# DS Waterfalls).
ABS_GAIN_M	E	This metric, in meters, is the minimum of the two functional networks of a barrier. For example, if the upstream functional network was 10 kilometers and downstream functional network was 5 kilometers, then the Absolute Gain will be 5 kilometers. Source: NCAT (Absolute Gain).
ATL_CST_DRAIN	E	Indicates whether a dam is located in a basin which drains to the Atlantic Coast. 1 indicates drains to Atlantic. 0 indicates does not drain to the Atlantic. Used to identify dams in non-Atlantic coast drainages for data quality purposes, as described in Section 3.4 of the NE Aquatic Connectivity report. Source: NCAT (Atlantic Coast Drainage).

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BARREN_LAND_PERC	A	Percent barren land (calculated from NLCD Class 31) within the dam's watershed (watershed boundaries and area calculated with NHDPlusV2 Basin Delineator software).
CONNECTIV_IMPROV	E	Sequential rank based on connectivity improvement metrics assessed for each dam for the beneficial impact its removal would have on network connectivity. Each of the five metrics in this category deal with the length of the functional river network, either upstream, downstream, total, or measurements of network gain. In each case, the more network length gained by a dam's removal, the greater the dam's potential ecological benefit is considered to be. Source: NCAT (Connectivity Improvements).
CONNECTIV_STATUS	E	Connectivity status is a sequential rank of dams based on the current state of fragmentation in each dam's surrounding river network. Dams in the analysis are evaluated based on the premise that a dam in a less fragmented network would produce a greater ecological benefit if it were removed or remediated than a dam which is located in a more fragmented network. Connectivity status metrics include counts and densities of dams on the 1:100,000 scale NHDPlus hydrography. Additionally, the densities of dams on small streams (not in the NHDPlus) and road/stream & railroad/stream crossings within the upstream and downstream functional network local watersheds are included. Source: NCAT (Connectivity Status).
CULT_CROPS_PERC	A	Percent cultivated crop land (calculated from NLCD Class 82) within the dam's watershed (watershed boundaries and area calculated with NHDPlusV2 Basin Delineator software).
CURR&HIST_ANAD_FISH	E	Presence of habitat for 1 or more of the 7 anadromous species included in this analysis based on the data and methods described for each species: alewife, blueback herring, American shad, hickory shad, striped bass, Atlantic salmon, Atlantic sturgeon. Current habitat for any one or more species equates to a value of 1 for this metric. Historical habitat for any one or more species equates to a value of 2 for this metric If current and historical habitat are documented in the downstream functional network for different species, the current habitat trumps the historical habitat and the dam will have a value of 1 for this metric. Source: NCAT (Anadromous Species Present Curr and Hist).
DAM_AT_WTRFLL	E	Indicates if dam is located at a natural waterfall. 1 indicates waterfall present. 0 indicates no waterfall present. Can be used to identify dams whose mitigation may not improve passage due to natural barriers. Source: NCAT (Dam at Waterfall).
DAM_ID	A	Unique numerical identifier for this database.
DAM_HGT_FT	R	Dam height in feet. Source: American Rivers Note: There is dam height data for existing dams in Maine, New Hampshire, and Vermont. See tables below.
DAM_LENGTH_FT	R	Dam length in feet. Source: American Rivers. Rivers Note: There is dam length data for existing dams in New Hampshire and Vermont. See tables below.
DAM_NAME	A	Dam name identified in its state geodatabase for existing dams. For removed dams, data source is American Rivers.
DAM_STATUS	A	Flag for whether the dam is still active (coded as "Existing") or has been removed (coded as "Removed") Source: the Future of Dams project data team
DEG_BARRIER	E	The degree to which a dam is expected to be a barrier to fish passage: Complete barrier (>=12ft); Unknown, assumed complete barrier; Small Barrier (<12 ft); Partial Breach; Dam with Fish Passage facility. Source: NCAT (Degree of Barrier).

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DENS_DAM_100K_STR	E	Density of dams on 1:100,000 scale mapped streams, USGS NHDPlus. (US Density of Dams on non-100k streams).
DENS_ROAD_CROSS	E	Number of Road/Railroad and hydrography intersections within upstream functional network local watershed divided by watershed area. Source: NCAT (US Density of Road/Small Stream Crossings).
DEV_HIGH_INTEN_PERC	A	Percent high intensity developed land (calculated from NLCD Class 24) within the dam's watershed (watershed boundaries and area calculated with NHDPlusV2 Basin Delineator software).
DEV_LOW_INTEN_PERC	A	Percent low intensity developed land (calculated from NLCD Class 22) within the dam's watershed (watershed boundaries and area calculated with NHDPlusV2 Basin Delineator software).
DEV_MED_INTEN_PERC	A	Percent medium intensity developed land (calculated from NLCD Class 23) within the dam's watershed (watershed boundaries and area calculated with NHDPlusV2 Basin Delineator software).
DEV_OPEN_SPACE_PERC	A	Percent developed open space land (calculated from NLCD Class 21) within the dam's watershed (watershed boundaries and area calculated with NHDPlusV2 Basin Delineator software).
DIST_STR_MOUTH	E	Distance from each barrier to the network mouth in meters. Source: NCAT (Distance to River Mouth).
ECOL	E	Sequential rank of the dam based on ecological metrics representing both anadromous and resident fish assessed within each dam's functional networks or watersheds. Categorical ranks can be used to assess what metrics are driving a dam's position in the overall rank. Source: NCAT (Ecological).
FEATURE_CODE	A	Code associated with the relevant FEATURE_TYPE from NHDPlusV2.
FEATURE_TYPE	A	Identifier name per pond from NHDPlusV2.
FOREST_DECID_PERC	A	Percent deciduous forest land (calculated from NLCD Class 41) within the dam's watershed (watershed boundaries and area calculated with NHDPlusV2 Basin Delineator software).
FOREST_EVERG_PERC	A	Percent evergreen forest land (calculated from NLCD Class 42) within the dam's watershed (watershed boundaries and area calculated with NHDPlusV2 Basin Delineator software).
FOREST_MIXED_PERC	A	Percent mixed forest land (calculated from NLCD Class 43) within the dam's watershed (watershed boundaries and area calculated with NHDPlusV2 Basin Delineator software).
GNIS_ID_POND	A	Federally recognized ID of pond from USGS NHDPlusV2.
GNIS_ID_STREAM	A	Federally recognized ID of the stream associated with the dam from USGS NHDPlusV2.
GNIS_NAME_POND	A	Federally recognized name of pond from USGS NHDPlusV2.
GNIS_NAME_STREAM	A	Federally recognized name of the stream associated with the dam from USGS NHDPlusV2.
GRASS_HERB_PERC	A	Percent grassland/herbaceous land (calculated from NLCD Class 71) within the dam's watershed (watershed boundaries and area calculated with NHDPlusV2 Basin Delineator software).
HIST_ANDR_FISH	E	Indicates whether anadromous fish were historically present in the 8-digit Hydrological Unit Code (HUC) watershed in which the dam is located. Can be used to exclude dams from the results that are in watersheds which didn't have anadromous fish historically. Based on data from NatureServe that was reviewed by Workgroup participants from each of the states. Source: NCAT (Anadromous Fish in HUC8 Historically).
HUC12_NAME	A	Name of HUC12 watershed by USGS as identified in NHDPlusV2.
HUC8	E	Eight unit hydrologic code that describes the watershed's location to the region, subregion, basin and subbasin by USGS as identified in NHDPlusV2.
HUC8_NAME	E	Subbasin name that corresponds to the HUC8 code that described the watershed's location to the region, subregion, basin and subbasin by USGS as identified in

		NHDPlusV2.
ID_STATE	E	Unique identification number of feature by state; ID number prefaced with its state abbreviation. CT, RI and ME generally use whole numbers; NH and VT generally uses numbers with decimals; MA has no ID numbers.
LATITUDE	A	Latitude of the dam location per its state geodatabase for existing dams. For removed dams, data source is American Rivers.
LONGITUDE	A	Longitude of the dam location per its state geodatabase for existing dams. For removed dams, data source is American Rivers.
NAT_ID	E	Unique ID for the dam in the Office of Dam Safety database. No entry indicates that the state database did not include the NatID.
NCAT_5%_TIER	E	Analysis results grouped into 20 bins where each bin has 5% of the dams in the analysis area. For example, 2 indicates the dam is ranked within 6-10%). These are the results that should be used for dam assessments. Source: NCAT (NCAT Tiered_Results (5% Bins)).
OPEN_WATER_PERC	A	Percent open water (calculated from NLCD Class 11) within the dam's watershed (watershed boundaries and area calculated with NHDPlusV2 Basin Delineator software). Note NLCD Class 12 (perennial Ice/Snow) was 0 % for all the watersheds assessed.
PASTURE_HAY_PERC	A	Percent pasture/hay land (calculated from NLCD Class 81) within the dam's watershed (watershed boundaries and area calculated with NHDPlusV2 Basin Delineator software).
POND_AREA_SQKM	A	Area of the pond in square kilometers, rounded to 3 decimal places per NHDPlusV2.
POND_PRES	A	Presence (Y) or Absence (N) of a pond within 30 m of the dam; determined by a "near" analysis using NHDPlusV2 data.
PRIM_PURP	E	The primary purpose of the dam as listed in the dam database. Source: NCAT (Primary Purpose).
REACHCODE_POND	A	Federally recognized code of the flowlines from USGS NHDPlusV2, associated with the pond location.
REACHCODE_STR	A	Unique code for stream from USGS NHDPlusV2.
RESULTS_RANK	E	The sequential list of dams produced by the NCATanalysis. This list should be used with extreme caution: the precision with which GIS can calculate metrics and rank dams is not necessarily indicative of ecological differences. The Tiered Results (5% bins) should be used to assess dams for their potential ecological benefit. Source: NCAT (Overall Results Rank).
SHRUB_SCRUB_PERC	A	Percent shrub/scrub land (calculated from NLCD Class 52) within the dam's watershed (watershed boundaries and area calculated with NHDPlusV2 Basin Delineator software).
SIZE_CLASS	E	River size class based on NE Aquatic Habitat Classification. 1a: Headwaters (<3.861 sq.mi.); 1b: Creeks (>= 3.861<38.61 sq.mi.); 2: Small River (>=38.61<200 sq. mi.); 3a: Medium Tributary Rivers (>=200<1000 sq.mi.); 3b: Medium Mainstem Rivers (>=1000<3861sq.; 4: Large Rivers (>=3861 < 9653 sq.mi.); 5: Great Rivers (>=9653 sq.mi.). Source: NCAT.
SIZE_CLASS_GAIN	E	With dam removal, number of river size classes gained. Source: NCAT (# US Size Classes gained).
SIZE_SYST_TYPE	E	Sequential rank of the dam based only on those weighted metrics from the Size & System Type category. Categorical ranks can be used to assess what metrics are driving a dam's position in the overall rank. Source: NCAT (Size and System Type).
STATE	A	State within which the dam resides per its state geodatabase for existing dams. For removed dams, data source is American Rivers.
STR_COMID	A	Code for stream reach from USGS NHDPlusV2.
STR_LENGTH_KM	A	Length of stream reach per USGS NHDPlusV2.

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STR_ORDER	A	Classification code for stream order by USGS NHDPlusV2.
TOT_UPSTR_RIV_LENGTH_M	E	Total length of river network upstream of a given barrier, regardless of any upstream barriers in meters. Source: NCAT (Total Upstream River Length).
TOWN	A	Town within which the dam resides per its state geodatabase for existing dams. For removed dams, data source is American Rivers.
UPSTR_BARRIER_DENS_#/M	E	Upstream Barrier Count divided by the total length of river upstream in meters. Does not include barriers excluded from network generation. Source: NCAT (Upstream Barrier Density (#/m)).
UPSTR_FUNCT_NTWK_LENGTH_M	E	Length of the functional network upstream of a barrier in meters. The functional network is defined by those sections of river that a fish could theoretically access from any other point within that functional network. Its terminal ends are barriers, headwaters, and/or the river mouth. Source: NCAT (Upstream Functional Network Length).
WB_AREA_COMI	A	Identifier in USGS NHDPlusV2.
WET_EMERG_PERC	A	Percent emergent herbaceous wetland (calculated from NLCD Class 90) within the dam's watershed (watershed boundaries and area calculated with NHDPlusV2 Basin Delineator software).
WET_WOOD_PERC	A	Percent woody wetland (calculated from NLCD Class 95) within the dam's watershed (watershed boundaries and area calculated with NHDPlusV2 Basin Delineator software).
WTSHD_AREA_SQKM	E	Watershed area in square kilometers. Watershed boundaries and area calculated with NHDPlusV2 Basin Delineator software.
WTSHD_LOCAL_COND	E	Sequential rank of the dam based on watershed and local condition metrics evaluating the ecological condition of a given dam's contributing watershed, within its upstream and downstream functional river network local watersheds, within the Active River Area of its upstream and downstream functional river networks and within a 100m buffer of its upstream and downstream functional river networks. Dams whose watershed and local conditions are in better condition (i.e. less impervious surface, more natural land cover) are considered to have a greater potential ecological benefit if removed. Source: NCAT (Watershed and Local Condition).
YEAR_REMOVED	R	Year dam was removed, as provided by stakeholder. This field may contain dam removal start date and/or end date if removal occurs throughout several years. Source: American Rivers
B06011e1	A	MEDIAN INCOME IN THE PAST 12 MONTHS (IN 2014 INFLATION-ADJUSTED DOLLARS) BY PLACE OF BIRTH IN THE UNITED STATES: Total: Population 15 years and over in the United States with income -- (Estimate) Source: US Census Bureau
C02003e1	A	DETAILED RACE: Total: Total population -- (Estimate) Source: US Census Bureau
C02003e3	A	DETAILED RACE: Population of one race: White: Total population -- (Estimate) Source: US Census Bureau
C02003e4	A	DETAILED RACE: Population of one race: Black or African American: Total population -- (Estimate) Source: US Census Bureau
C02003e6	A	DETAILED RACE: Population of one race: Asian alone: Total population -- (Estimate) Source: US Census Bureau
B03001e3	A	HISPANIC OR LATINO ORIGIN BY SPECIFIC ORIGIN: Hispanic or Latino: Total population -- (Estimate) Source: US Census Bureau
C24050e2	A	INDUSTRY BY OCCUPATION FOR THE CIVILIAN EMPLOYED POPULATION 16 YEARS AND OVER: Production, transportation, and material moving occupations: Agriculture, forestry, fishing and hunting, and mining: Civilian employed population 16 years and over -- (Estimate) Source: US Census Bureau
B15002e11	A	SEX BY EDUCATIONAL ATTAINMENT FOR THE POPULATION 25 YEARS AND OVER: Male: High school graduate (includes equivalency): Population 25 years and over -- (Estimate) Source: US Census Bureau
B15002e28	A	SEX BY EDUCATIONAL ATTAINMENT FOR THE POPULATION 25 YEARS AND OVER: Female: High school graduate (includes equivalency): Population 25 years

		and over -- (Estimate) Source: US Census Bureau
B15012e1	A	TOTAL FIELDS OF BACHELOR'S DEGREES REPORTED: Total: TOTAL BACHELOR'S DEGREE MAJORS TALLIED FOR PEOPLE 25 YEARS AND OVER WITH A BACHELOR'S DEGREE OR HIGHER ATTAINMENT -- (Estimate) Source: US Census Bureau
B05009e1	A	AGE AND NATIVITY OF OWN CHILDREN UNDER 18 YEARS IN FAMILIES AND SUBFAMILIES BY NUMBER AND NATIVITY OF PARENTS: Total: Own children under 18 years living in families or subfamilies -- (Estimate) Source: US Census Bureau
B16001e1	A	LANGUAGE SPOKEN AT HOME BY ABILITY TO SPEAK ENGLISH FOR THE POPULATION 5 YEARS AND OVER: Total: Population 5 years and over -- (Estimate) Source: US Census Bureau
B16001e3	A	LANGUAGE SPOKEN AT HOME BY ABILITY TO SPEAK ENGLISH FOR THE POPULATION 5 YEARS AND OVER: Spanish or Spanish Creole: Population 5 years and over -- (Estimate) Source: US Census Bureau
B16001e63	A	LANGUAGE SPOKEN AT HOME BY ABILITY TO SPEAK ENGLISH FOR THE POPULATION 5 YEARS AND OVER: Other Indo-European languages: Population 5 years and over -- (Estimate) Source: US Census Bureau
B05001e1	A	NATIVITY AND CITIZENSHIP STATUS IN THE UNITED STATES: Total: Total population in the United States -- (Estimate) Source: US Census Bureau
B05001e6	A	NATIVITY AND CITIZENSHIP STATUS IN THE UNITED STATES: Not a U.S. citizen: Total population in the United States -- (Estimate) Source: US Census Bureau
Data Sources:		
NHDPlusV2		USGS. Available online: http://waterdata.usgs.gov/nwis/ (accessed on 20 December 2015).
HUC-8 WBD		USGS and USDA-NRCS. Geospatial Data Gateway. Available online: https://gdg.sc.egov.usda.gov/GDGOrder.aspx (accessed on 10 May 2016).
NLCD		National Land Cover Database, 2011. Available online: http://www.mrlc.gov/nlcd2011.php (accessed on 18 March 2016).
NCAT		Northeast Aquatic Connectivity. Available online: http://rcngrants.org/content/northeast-aquatic-connectivity (accessed on 24 May 2016). Further information on data attributes can be found in Martin, E.H. and C.D. Apse. 2011. Northeast Aquatic Connectivity: An Assessment of Dams on Northeastern Rivers. The Nature Conservancy, Eastern Freshwater Program.
NPDES		EPA Geospatial Data Access Project. Available online: https://www.epa.gov/enviro/geospatial-data-download-service (accessed on 21 August 2016).
American Rivers		American Rivers Dam Removal Database. Available online: https://figshare.com/articles/_/5234068
US Census Bureau		2014 TIGER/Line Shapefiles and the 2010-2014 American Community Survey (ACS) 5-year estimates

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State Specific Attributes in the New England Dams Database (data sources appended to the bottom of each table):

Connecticut (Existing Dams Only)	
Attribute	**Definition**
DAM_HAZ	CT uses a 5 category system to indicate dam hazard potential: AA: Negligible hazard potential, A: Low hazard potential, BB: Moderate hazard potential, B: Significant hazard potential, C: High hazard potential.
MBAS_NO _CT	Major Drainage Basin Number - Identifies the major drainage basin the dam is located in. There are 8 major basins in Connecticut.
OWNER_T YPE_CT	Type of Ownership of Dam Codes: D: Owned by CT DEP, F: Federal government owned, L: local(municipal) government owned, P: Privately owned, S: State government other than CT DEP owned, U: Utility owned, Blank: meaning of blank field value is unknown.
QUAD_NO _CT	Quadrangle Number - An ID number designated by the State of Connecticut, Department of Environmental Protection, Natural Resources Center in the 1980's to uniquely identify individual quadrangle maps. This value indicates the USGS topographic quadrangle the dam is located on. Numeric value. Quadrangle maps published by the USGS that cover the Connecticut mainland and coastal area are assigned numeric values ranging from 1-116. Other quadrangle areas that encompass the waters of Connecticut in Long Island Sound are assigned numeric values range from 1213 to 1218, 1310 to 1313, and 1407 to 1408. (0 indicates no data).
RBAS_NO _CT	Regional Drainage Basin Number - Identifies the regional drainage basin the dam is located in. The first digit corresponds to the Major basin number (MBAS_NO). All Regional basins in the same Major basin have the same first digit. A Regional drainage basin number ending in "0" defines the greater main-stem basin for the corresponding Major drainage basin. For example, Regional basin 40 is the main-stem basin for Major basin 4. These main-stem Regional basins are usually named after the corresponding Major basin.
SBAS_NO_ CT	Subregional Drainage Basin Number - Identifies the Subregional drainage basin the dam is located in. The first digit corresponds to the Major basin number (MBAS_NO) and the first 2 digits represent the Regional basin number (RBAS_NO). All Subregional basins in the same Major and Regional basin have the same first and first 2 digits, respectively. A Subregional drainage basin number ending in "00" defines the main-stem basin for the corresponding Regional drainage basin. For example, Subregional basin 4300 is the main-stem basin for Regional basin 43. These main-stem Subregional basins are usually named after the corresponding Regional basin.
Data Source:	Connecticut Department of Energy & Environmental Protection. Available online: http://www.ct.gov/deep/cwp/view.asp?a=2698&q=322898&deepNav_GID=1707 (accessed on15 December 2015).

Maine (Existing Dams Only)	
Attribute	**Definition**
ALT_NAME	Alternative name the dam may be referenced by.
AMUPDDAT_ME	Date of attribute update.
AMUPDORG_ME	Organization responsible for attribute update.
DAM_HAZ	Maine uses a 3 category system for dam hazard potential: L: low S: significant H: high.
DAM_HGT_FT	Dam height in feet.

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DEP_ID_ME	ME DEP BL&WQ ID.
DIST_CITY_MI_M E	Distance from the dam to the nearest affected City/Town/Village, to the nearest mile (and tenth if appropriate).
FMPROCSS_ME	12 character field defined 12 12 C; this FM item refers to a PROCESS OR ACTION which is explanatory of quality or accuracy of a feature; can be used for cross reference in the Process Description or Source Produced Citation Abbreviation elements, part of the Data Quality/Process Step and Source Information sections of FGDC metadata.
FMUPDDAT_ME	Default Arc/Info date field defined 8, 10, D; the FM item FMUPDAT refers to the date of update on the location of a feature; can be used as cross reference to Process Date, part of the Data Quality/Process Step sections of FGDC metadata.
HOTLINK_ME	URL address for Statewide Incident Management System (SWIMS) representation of this dam.
HYDRAUL_HGT_ FT_ME	Hydraulic height of the dam, in feet to the nearest foot, which is defined as the vertical difference between the maximum design water level and the lowest point in the original streambed.
INSP_INIT_ME	Date of most recent inspection.
LAST_UPD_ME	Date of last update.
MAJ_PURPOS_M E	Major purpose of the dam/impoundment: I: Irrigation; H: Hydroelectric; C: Flood control & storm water management; N: Navigation, S: Water Supply; R: Recreation; P: Fire protection, stock, or small farm pond; F: Fish and wildlife pond; D: Debris control; T: Tailings; O: Other.
MAJ_TYPE_ME	Major type of construction: RE: earth ER: rockfill PG: gravity CB: buttress VA: arch MV: multi-arch CN: concrete MS: masonry ST: stone TC: timber crib OT: other.
MAX_CAP_ACFT	Maximum storage, in acre-feet, which is defined as the total storage space in a reservoir below the maximum attainable water surface elevation, including any surcharge storage.
MAX_DISC_CFS	Number of cubic feet per second (cu ft/sec) which the spillway is capable of discharging when the reservoir is at its maximum designed water surface elevation.
MEMA_ID_ME	Maine Emergency Management (MEMA) identifier.
NORM_CAP_ACF T_ME	Normal storage, in acre-feet, which is defined as the total storage space in a reservoir below the normal retention level, including dead and inactive storage and excluding any flood control or surcharge storage.
OWNER	Primary dam owner.
P1_INSP_ME	Term indicating whether this dam was inspected in the Phase I Inspection Program;Y: yes; N: no; Blank: unknown.
PVT_FED_ME	Private dam on federal property code indicating whether the dam is a private dam located on federal property – Y or N.
SOURCE_ME	Project identifier for data source used in update.
STATE_REG_ME	Name of the primary state agency with regulatory or approval authority over the dam.
YEAR_BUILT	Year original dam was built.
Data Source:	Maine Office of Geographic Information Systems (MEGIS). Maine Office of GIS Data Catalog. Maine Impoundments and dams. Available online: http://www.maine.gov/megis/catalog/ (accessed on 15 December 2015).

Massachusetts (Existing Dams Only)	
Attribute	**Definition**
DAM_HAZ	Massachusetts uses a 4 category system to classify potential dam hazard: High: Located where failure will likely cause loss of life and serious damage to home(s). industrial, commercial facilities, important public utilities, main highway(s) or railroad(s). Significant: Located where failure may cause loss of life and damage home(s), industrial or commercial facilities, secondary highway(s) or railroad(s) or cause interruption of use or service of relatively important facilities. Low: Located where failure may cause minimal property damage to others. Loss of life is not expected. N/A: No hazard code. Non-jurisdictional dams do not have hazard codes except when owned and regulated by the federal government.
LOCSTATUS_MA	Indicates whether geographic location of the dam has been verified. Verified: Dam locations have been checked against ODS records. NOT Verified: Dam location yet to be verified should not be considered checked.
MGMTUNIT_MA	Massachusetts department or other management unit responsible for dams. MWRA-Operated: Dam is operated by Mass. Water Resource Authority. PL-566/Flood Control: Dams in the Watershed Protection & Flood Prevention Program (PL-566). Other values: Unique names that are self-explanatory e.g. 'Conservation Commission', 'Board of Selectmen' etc. (in the case of Municipally owned dams).
OWNTYPE1_MA	Basic Information on owner type. See OwnType2 for further elaboration. Public: Owned by a public entity Private: Owned by a private entity.
OWNTYPE2_MA	Private: Owned by a private entity. Private Association or other non-profit: Owned by a private association or a non-profit. State: Owned by a state agency. More details in OwnType3 field. Municipality: Owned by a municipality. More details in OwnType3 field. Federal Agency: Owned by a federal agency. More details in OwnType3 field. Political Subdivision: Owned by a political subdivision that is neither state nor municipal such as a water district that might have jurisdiction within more than one municipality.

OWNTYPE3_MA	Department or other management unit responsible for dams.
	Private: Dams are privately owned so names, addresses, etc. are not publicly shared.
	Private Association or Other Non-profit: Dams are privately owned so names, addresses, etc. are not publicly shared.
	'City of…' or 'Town of...': For municipality owned dams, the specific municipal authority.
	'Water District' or 'Regional School': For dams owned by Political subdivisions, the authority name.
	ACOE or FWQ: for federal regulated dams, name of regulating agency.
	DCR, DFG, DHE, DOT, DCAM, DMH, or MBTA: For state owned dams, the authority name. More details in field 'MgmtUnit'.
REGAUTH_MA	Ferc Jurisdiction: FERC (Federal Energy Regulation Commission) Jurisdiction applies to facilities that generate hydro-electric power and are subject to FERC regulation. May be privately or publicly owned.
	Army Corps of Engineers Jurisdiction: Dams regulated by the Army Corps of Engineers (ACOE).
	Fish and Wildlife Jurisdiction: Dams regulated by the Fish & Wildlife Service (FWS).
	Office of Dam Safety: Dams which may be privately owned but are regulated by and under the jurisdiction of the Massachusetts Office of Dam Safety (ODS) in accordance with regulation CMR 302 10.00.
	Non-Jurisdictional-Other: Not regulated by the ODS or other jurisdiction. Typically under 6 ft in height and/or under 15 acre feet in storage and do not have an assigned 'Hazard Code'. Dams owned and regulated by the federal government are also typically Non-jurisdictional but DO have assigned Hazard Codes.
Data Source:	The Massachusetts Office of Dam Safety. MassGIS Data. Available online: http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-ofgeographic-information-massgis/datalayers/dams.html (accessed on 15 December 2015).

Metadata Record: New England Dams Database (version 08102018)

New Hampshire (Existing Dams Only)	
Attribute	**Definition**
DAM_HAZ	New Hampshire generally uses a 4 category system for potential dam hazard: L: Low Hazard NM: Non-menace S: Significant Hazard H: High Hazard. In some cases New Hampshire uses a 5 category system (like CT): AA: Negligible hazard potential, A: Low hazard potential, BB: Moderate hazard potential, B: Significant hazard potential, C: High hazard potential.
DAM_HGT_FT	Dam height in feet.
DAM_LENGTH_FT	Dam length in feet.
DAM_STATUS_DETAILS	Functional status of dam.
DRAIN_AREA_SQMI	Drainage area in square miles.
FERC_NO	Multi-digit Federal Energy Regulatory Commission identification number.
IMPND_AREA_AC_NH	Size of the impoundment in acres.
OWNER	Primary dam owner.
PURPOSES_NH	The main use of the dam. F: Flood control H: Hydro L: Lagoon R: Recreation W: Water Supply D: Detention M: Mill P: Protection C:Conservation/agriculture.
Data Source:	NH GRANIT: New Hampshire's Statewide GIS Clearinghouse. Available online: http://www.granit.unh.edu/data/search?dset=damsnh (accessed on 15 December 2015).

Rhode Island (Existing Dams Only)	
Attribute	**Definition**
ALT_NAME	Alternative name the dam may be referenced by.
DAM_HAZ	Rhode Island uses a 3 category system for dam hazard potential: Low: Low hazard High: High hazard Significant: Significant hazard.
DAM_TYPE	Type of dam, in order of relative importance.
Data Source:	Rhode Island Geographic Information System (RIGIS). Available online: http://www.rigis.org/data/dams (accessed on 15 December 2015).

Metadata Record: New England Dams Database (version 08102018)

Vermont (Existing Dams Only)	
Attribute	**Definition**
BASIN_NAME_VT	DEC Watershed Planning Basin.
DAM_HAZ	Vermont has a 3 category system for dam hazard potential: Low Hazard Potential: Dams assigned the low hazard potential classification are those where failure or mis-operation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the owner's property. Significant Hazard Potential: Dams assigned the significant hazard potential are those dams where failure or mis-operation results in no probable loss of human life but can cause economic loss, environmental damage, disruption of lifeline facilities, or impact other concerns. Significant hazard potential classification dams are often located in predominately rural or agricultural areas but could be located in areas with population and significant infrastructure. High Hazard Potential: Dams assigned high hazard potential classification are those where failure or mis-operation will probably cause loss of human life.
DAM_HGT_FT	Dam height in feet.
DAM_LENGTH_FT	Dam length in feet.
DAM_STATUS_DETAILS	Functional status of dam.
DAM_TYPE	Type of dam, in order of relative importance.
DRAIN_AREA_SQMI	Drainage area in square miles.
FED_REG_VT	Federal agency involved in regulation of the dam.
FERC_NO	Multi-digit Federal Energy Regulatory Commission identification number.
MAX_CAP_ACFT	Maximum dam storage in acre-feet.
MAX_DISC_CFS	Maximum discharge in cubic feet/second.
NORM_STOR_ACFT_VT	Normal dam storage in acre-feet.
ORIG_PURP_VT	Original purpose of dam.
OWNER	Primary dam owner.
OWNER_TYPE_VT	Type of ownership of dam.
PURPOSES_VT	Dam purposes, in order of relative importance: I: Irrigation H: Hydroelectric C: Flood control & storm water management N: Navigation S: Water Supply R: Recreation P: Fire protection, stock, or small farm pond F: Fish and wildlife pond D: Debris control T: Tailings O: Other.
RES_TYPE_VT	Reservoir type.
STATE_REG_VT	State agency with regulatory or approval authority over the dam.
SURF_AREA_AC_VT	Surface area in acres.
VDI_DATE_VT	Extract date from the Vermont Dam Inventory.
YEAR_BUILT	Year original dam was built.
Data Source:	Vermont Center for Geographic Information (VCGI), Department of Environmental Conservation. Available online: http://vcgi.vermont.gov/opendata (accessed on 15 December 2015).