

Lake Features

Part 1: Data Summary

Description

This coverage depicts lake features and includes all open water features mapped by the Municipality. Data for the MOALakes coverage are stored in a geodatabase format and are compiled for distribution in ArcInfo and ArcView formats.

Corporate Dataset Name:

MOALakes

Feature Class Name:

e04MLakes

Polygons:

- Lake



Data Creation Method

Municipal lakes mapping is performed through location of features with respect to select base digital imagery using mapping definitions, criteria and standards as developed by Watershed Management Services and as expressed in Anchorage Municipal Code and in federal wetlands regulations. Landscape elements identified as open water features either under the Anchorage Wetlands Management Plan or through WMS mapping are transferred to an initial digital format through heads-up screen digitization using ortho-imagery as a base. The initial arcs linework is then imported to the WMS Geodatabase where topology is built and new and related existing features are edited to conform to the logical structure of MOA hydrographic mapping.

Data Availability	Extent of Data
Available as 'MOALakes' in shape file and ArcGIS file format. Features stored in WMS Geodatabase.	Municipality of Anchorage corporate area Suggested viewing scale 1:6,000 or smaller
Publication Information	Contact Information
Revision: V4.0 Published: January 2005 Produced by: Municipality of Anchorage OPD & PW Watershed Management Services	Distribution: Charlie Barnwell (BarnwellCE@muni.org) Mike Kiker (KikerMR@muni.org) Phil Manke (MankePJ@muni.org) Content: Scott Wheaton (WheatonSR@muni.org)

Lake Features

Part 2: Definitions and Mapping Method

Lake Features

Lake features mapped by the Municipality of Anchorage include open bodies of water greater than 2500 ft² in area. Most of these features are classified as wetlands under the Anchorage Wetlands Management Plan. As a result lake features are also included in the Municipality's wetlands mapping dataset as a separate wetland 'type' and have the same attributes as other wetland features. Readers are referred to MOA wetlands features metadata for description and definitions of lake attribute data. In the Municipal GIS most Anchorage lake features are represented by simple polygons but complex polygon features can result for those lakes that include islands.

Lake Feature Definitions

Lakes are important surface water resources that support aquatic and terrestrial wildlife, provide flood detention for storm water runoff, and provide a wide range of recreational, aesthetic and economic benefits to the entire community. A lake's character is the cumulative result of the complex interactions of climate and terrain, surrounding land practices, and the nature of the ground and surface waters entering it. Thus the quality of lake waters and their immediate shorelines are also important indicators of the nature of contributing watersheds and the extent to which whole watershed systems are being successfully managed.

Lake

Generally, lake features are those inland areas that are covered by relatively large pools of water for some period of time. In the Municipality's hydrography, lakes and ponds are generally defined as inland bodies of open, standing water. Typically they are perennial features but may also form and dissipate seasonally. In any event, a 'lake' is ultimately characterized by open water. Thus, standing water that exists solely amongst vegetation (e.g., as in a swamp, marsh or mire) does not comprise a "lake".

More specifically, a Municipally-defined lake is a perennial or ephemeral inland body of open, standing water that is not actively maintained for, or constrained to, a single specific human use (e.g., wastewater treatment ponds or flood detention ponds). Thus, an inland waterbody may serve some single, important human function (e.g., water supply) but to the extent that it is maintained to serve other functions as well (e.g., provision of recreation opportunities or fish and wildlife habitat) it is identified as a lake feature. Conversely, to the extent that a standing body of water is controlled for a single, limited human use (exclusive of contact recreation and fish and wildlife habitat), it will not be identified as a lake under this classification system.

Lake features may also specifically include expanded parts of rivers, reservoirs behind permanent dams, and basins seasonally inundated by intermittent stream flows. Lakes, as defined here, then, include natural lakes, run-of the river lakes or impoundments, abandoned "gravel pit" lakes or other constructed lakes, reservoirs, and bog ponds.

Finally note that, under the Municipality's definition, lakes are generally not classified by size. Small inland waters more commonly referred to as ponds may be identified as "lake" features under this classification. However, by Municipal code any area of open water with a permanent minimum surface area at ordinary high water greater than 2,500 square feet is identified as a 'waterbody' and any inland freshwater feature meeting these criteria will typically be identified as a 'lake' under this classification.

Lake Shoreline

A lake shoreline is the boundary between lake water and the land surface. For most lakes the water level is relatively constant and the shoreline can be reasonably represented by a line tracing the elevation of the average lake level. However for ephemeral lakes or reservoirs the lake level can change dramatically either seasonally or from year to year. Therefore for Municipal maps, a lake shoreline is represented by the line tracing the lake border at the mean annual high water level (MHWL) of the lake.

Lake Feature Mapping

Standard methods for mapping Municipal lake features are necessary to ensure mapping efficiency and consistent data quality and to allow users to select and apply comparable data. Because mapping is required at different accuracies and resolutions, methodologies have been developed to support a hierarchy of mapping “levels” (see WMS document number WMP APg0101, “Municipality Of Anchorage Stream Mapping Standards, Ver. 1.01”). Five classified mapping levels and one unclassified mapping level are supported under the Municipality’s NPDES hydrography mapping program:

Unclassified (Legacy) Mapping

1. Photo Interpretive Mapping
2. Reconnaissance Mapping
3. Base Map Survey
4. Low-Resolution Controlled GPS Survey
5. High Resolution Controlled Land Survey

Legacy Stream Mapping

Until new mapping can be performed, in some areas old mapping will be used to provide basic geographic information. Unfortunately, though source information is usually available for this mapping, other information about the map data quality or mapping criteria often is not. Where the Municipality has incorporated hydrographic data into its datasets with incomplete or unknown data quality, no mapping level will be assigned and mapping level will be left as a null value. Thus Municipal map data with an unclassified map level is of unknown accuracy or quality and, in fact, data may have either high or low accuracy.

Level 1: Photo Interpretive Mapping

In this method all lake or other mapped features are interpreted through use of existing (“legacy”) mapping and aerial photography. This mapping method represents a level of effort that focuses on initial, fast, economical characterization and location of hydrographic features. No field verification or other quality assurance testing is performed. Nevertheless, mappers include features at this mapping level only where sufficient photo indicators or existing field information or mapping substantiate the presence of a lake feature. This means that unknown smaller or ephemeral lake features may not be identified in mapping performed at this level.

Level 2: Reconnaissance Mapping

Reconnaissance mapping includes all elements of photo interpretive mapping but improves mapping resolution and accuracy through additional, iterative, photo interpretive and field reconnaissance efforts. At this mapping level, limited field reconnaissance is performed after initial photo interpretive corrections are made. However, field inspections at this mapping level are performed only with the purpose of ensuring that locations and assigned attributes are grossly correct. No controlled survey or other testing is done to ensure locations are within stated accuracy limits. However, GPS point data can be, and often are, used to resolve and confirm mapped feature locations. GPS point data for Municipal stream mapping is archived in a separate data set.

Level 3: Base Map Surveys

Municipal base map surveys are performed to conform with the horizontal accuracy standards specified by the Federal Emergency Management Agency (FEMA) in its "Base Map Specifications for the New Digital Flood Insurance Rate Map Product" (May 26, 1999). Reported horizontal locations of mapped features will have a positional accuracy with respect to true ground position that is equal to or better than 38 feet (about 11.5 meters, or equivalent to that of USGS DOQs), as confirmed at the 95% confidence level by controlled surveys.

Level 4: Low-Resolution Controlled GPS Survey

Low-resolution controlled GPS surveys systematically employ GPS technology in the field to accurately locate lake shoreline features. At this mapping level, GPS location data are used to *continuously* map entire lake shoreline features.

GPS mapping at this level is used to accurately locate a series of points sufficient, when connected to form a series of arcs, to accurately represent the location of part or all of a shoreline within 1.0 meter of true ground position at a 95% confidence level. GPS methods used to map shoreline arcs shall control for a minimum horizontal accuracy of point locations of one (1.0) meter. Because different GPS instrument brands vary in control settings and parameters, operation protocols designed to achieve this accuracy are not readily standardized. The Municipality has developed suggested standard operational procedures based on specific GPS mapping receivers. These standards are detailed in WMP APg0101.

Level 5: High-Resolution Controlled Land Survey

Controlled land survey lake shoreline mapping incorporates photo interpretive mapping with standardized land surveying techniques to acquire accurate horizontal locations of lake features in the field. Mapping at this level is performed so as to meet nationally established land survey standards. Municipal Rights-of-Way officers select, review and establish acceptable Municipal survey standards. For lake location mapping, however, the method of representation of linear shoreline feature using surveyed points must meet additional representational requirements similar to those described for "low-resolution GPS" mapping.

Mapping Scale and Accuracy

In general, for those areas for which ortho-imagery is available, lake features mapped at Municipal mapping levels 1 and 2 will be delineated at 1:2400 (1 map inch to 200 feet on the ground). Where no ortho-imagery is available, lakes will be represented at a scale of 1:25000 (about 1 inch to 2083 feet). Standing water bodies smaller than 2500 ft² are typically not mapped. Municipal digital mapping is prepared for optimum viewing at a scale of 1:6000 or smaller.

Table 3 summarizes accuracy standards for each of the Municipality's five mapping levels.

Table 3 MUNICIPAL LAKE MAPPING ACCURACY					
Level	Methodology	Conf.	Accuracy	Feature	Scale
	Unclassified (Legacy) Mapping		Unknown	Shoreline	
1	Photo Interpretive Mapping	Est.	± 25 meters	Shoreline	1:2400
2	Reconnaissance Mapping	Est.	± 15 meters	Shoreline	1:2400
3	Base Map Survey (FEMA)	95% @	± 11.5 meters	Shoreline	1:1200
4	Low-Resolution GPS Survey	95% @	± 1.0 meter	Shoreline	1:1200
5	High-Resolution Land Survey	95% @	± 1.0 meter	Shoreline	1:1200

Lake Features

Part 3: Data Dictionary

The following data dictionary contains basic attribute information about the MOALakes polygons featureclass. For further information about these attributes, please see Part 2: Definitions and Mapping Methods. Attributes common to both the MOAWetLnds and MOALakes datasets are described here as wetland attributes. Attributes are not listed in the order that they appear in the featureclass attribute tables.

e04MLakes attributes:

ADJ_LENGTH

Total length of all streams marginal to the wetland feature. (Source: Data Dictionary)

ADJ_STREAM

Identity of primary stream transecting or marginal to the wetland feature. (Source: Data Dictionary)

AWMPID_96

"Site" identification code assigned each wetland polygon as published in the 1996 Anchorage Wetlands Management Plan (AWMP). (Source: Data Dictionary)

DESIGNATION

Identifies the resource evaluation ranking or 'designation' of the wetland feature as established in the 1996 AWMP. (Source: Data Dictionary)

Value	Definition
A	Wetlands having a high valuation for all functional categories
B	Wetlands assigned a moderate valuation but providing significant support to key watershed and drainage area functions
C	Wetlands having a low functional valuation
D	Wetland features that have not been classified under the AWMP
U	'Interior' upland features; uplands entirely enclosed by wetland features

DRAINAGE

Code used to identify the predominant hydrographic drainage associated with the wetland. (Source: Data Dictionary)

GRIDID500

Identity of 500-scale grid map containing most of a wetland feature or that most closely occupying the wetland centroid. (Source: Data Dictionary)

GROUPID

Equivalent of the first numeric portion of the 1996 AWMP "Site" identification code assigned to groups of associated wetlands. (Source: Data Dictionary)

H2OPCTBYPA

Index value representing estimated percent reduction in all pre-development sources of surface and ground water to a wetland feature. (Source: Data Dictionary)

HABITAT

A numeric valuation given a wetland feature reflecting the wetlands functional performance relative to wildlife habitat. (Source: Data Dictionary)

HGM_CLASS

Predominant hydrogeomorphic character as described by Brinson, 1993, A Hydrogeomorphic Classification of Wetlands. (Source: Data Dictionary)

Value	Definition
1	Riverine (areas where periodic overbank flows from rivers and streams provide the dominant source of wetland water)
2	Depressional (areas where wetland hydrology is supported predominantly as a result for closed elevation contours)
3	Slope (areas where ground water discharge is the predominant source of wetland hydrology)
4	Mineral Soil Flats (areas where wetland hydrology is maintained predominantly as a result of very low slope and reduced vertical ground water movement through underlying low-permeability mineral soils)
5	Organic Soil Flats (areas where wetland hydrology is controlled predominantly by extensive accumulations of organic matter)
6	Estuarine Fringe (areas where wetland hydrology is predominantly supported by tidal waters)
7	Lacustrine Fringe (areas where lake waters maintain the ground water levels of adjacent wetlands)

HYDRO

A numeric valuation given a wetland feature reflecting the wetlands functional performance relative to hydrology. (Source: Data Dictionary)

LAKE_NAME

The commonly used or mapped name of a Lake. (Source: Data Dictionary)

MAP_ACURCY

Accuracy of location of feature boundaries. (Source: Data Dictionary)

Value	Definition
1	Photo Interpretive Mapping (better than 25m, estimated)
2	Reconnaissance Mapping (better than 15m, estimated)
3	Base Map Survey (better than 11.5m, controlled survey confirmed)
4	Low Resolution GPS Survey (continuous controlled GPS survey)
5	High Resolution Land Survey (continuous controlled land survey)

MAP_DATE

Date of last mapping or survey activity. (Source: Data Dictionary)

MAP_EDITOR

Mapping science professional. (Source: Data Dictionary)

Value	Definition
MOA WMS	Municipality of Anchorage, Watershed Management Service

MAP_SOURCE

Source of feature location information. (Source: Data Dictionary)

Value	Definition
WMS	WMS standardized mapping
NETWORK	Modified WTR_WAY legacy digital mapping
WTR_WAY	MOA area-wide legacy digital mapping
USGS1:25K	Digitized 1:25K USGS DRG
USGS1:63K	1:63K USGS DLG
MAJDRN	MOA 1994 Hillside Drainage Study legacy digital mapping
TURNAGAIN	MOA Turnagain legacy digital mapping

MAPCOMPILR

Name of digital map developer. (Source: Data Dictionary)

Value	Definition
GeoNorth	Mapping Professional organization

OBJECTID

Internal feature number. (Source: ESRI)

OBJECTID_1

Internal feature number. (Source: ESRI)

PARTID

An identity value for individual wetlands or sub-groups of wetland features as identified in the 1996 AWMP. (Source: Data Dictionary)

PCTPOND

Percent of the total wetland polygon area in ponded water. A value of 100 % describes a pond-covered wetland feature. (Source: Data Dictionary)

PUB_DATE

Date of map completion/publication. (Source: Data Dictionary)

REVISIONNO

Revision. version information for published mapping data. (Source: Data Dictionary)

Value	Definition
1.11	[not provided]
1.12	Prior to Year 2001 Edits
1.13	Year 2001 Edits
2.0	Year 2002 Edits
3.0	Year 2003 Edits
4.0	Year 2004 Edits

SHAPE

Feature geometry. (Source: ESRI)

SHAPE_Area

Area of feature in internal units squared. (Source: ESRI)

SHAPE_Length

Length of feature in internal units. (Source: ESRI)

SECTIONID

Identity of US Public Land Survey township, section and range containing most of the wetland feature. (Source: Data Dictionary)

SOCIAL

A numeric valuation given a wetland feature reflection the wetlands functional performance relative to socioeconomic services. (Source: Data Dictionary)

SPECIES

A numeric valuation given a wetland feature reflection the wetlands functional performance relative to support for select species. (Source: Data Dictionary)

SUBPARTID

A unique identity value for a wetland feature that reflects further subdivision of an individual wetland within wetland 'groups' or 'parts'. (Source: Data Dictionary)

SUBSHED

Name of the associated MOA subwatershed feature. (Source: Data Dictionary)

SWCONVYNCE

Type of hydraulic connectivity of storm water runoff to wetland feature. (Source: Data Dictionary)

Value	Definition
1	Overland (storm waters cross wetlands as a non-integrated-overland-flow)
2	Channel (storm waters cross wetlands through an open channel or ditch)
3	Pipe (storm waters cross wetlands through a pipe or other closed conduit)
9	Isolated (no surface storm waters enter the wetland feature)

SWPCTBYPAS

Percent of pre-development surface water flows bypassing a wetland feature. (Source: Data Dictionary)

SWSLOPE

Reflects an estimated representative ground surface slope measured along the fall line from an upgradient wetland margin to an intersecting stream or lake feature or to a discharge point along a downgradient margin of the wetland. (Source: Data Dictionary)

TYPE

Wetland groups sharing similar geomorphologic, hydrologic, chemical, or biological factors. (Source: Data Dictionary)

Value	Definition
Open Water	Standing bodies of water with a permanent minimum surface area at ordinary high water greater than 2,500ft ² or as identified in the 1996 AWMP wetlands dataset.

VEGGROUP

Predominant plant community structure as generally based on the first hierarchical level of Viereck et. Al., 1992, Alaska Vegetation Classification. (Source: Data Dictionary)

Value	Definition
1	Forested (10 % or more tree canopy at 10 feet or taller)
2	Scrub (trees less than 10 feet and 25 % or more shrub canopy)
3	Herbaceous (less than 25 % shrub canopy and dominated by grasses; forbs-herbs, ferns, horsetails; bryophytes-mosses, lichens; or aquatic plants-sedges, rushes, and aquatic plants)
4	Wet Herbaceous (less than 25 % shrub canopy and dominated by ponded herbaceous wetlands; standing water is prominent for a significant part of the year)
5	Barren (unvegetated - less than 2 % vegetative cover; may include natural or modified wetland surfaces)
8	Complex (reserved for larger or complex wetland features where size and distribution of local variations in plant communities significantly influence the overall functional character of the wetland)
9	Water (standing open water surface)

VEGSNSTVTY

Sensitivity of wetland vegetation to storm water discharge based on qualitative assessment of potential degree of impact to wildlife and environmental functional value. (Source: Data Dictionary)

Value	Definition
1	Sensitive (important wetland plant communities are highly sensitive to changes in hydroperiod and pollutant loading associated with storm water discharges)
2	Marginal (important wetland plant communities require special storm water pre-treatment to tolerate changes in hydroperiod and pollutant loading associated with storm water discharges)
3	Tolerant (wetland plant communities have a low environmental functional value or plant communities require only normal storm water pre-treatment to tolerate changes in hydroperiod and pollutant loading associated with storm water discharges)

VEGTREND

Apparent overall response of wetland vegetation as an indicator of the trend in hydrologic regime relative to predevelopment conditions. (Source: Data Dictionary)

Value	Definition
1	Dry Impacted (wetland vegetation reflects a marked longterm response to a lowered ground water elevation or to a reduction in surface water input or both)
2	Drying (cumulative evidence indicates vegetation is responding to a decreasing (lowering) ground water elevation or to a reduction in surface water input)
3	Flood Impacted (wetland vegetation reflects a marked longterm response to rising ground water elevation or to an increase in surface water input or both)
4	Flooding (cumulative evidence indicates vegetation is responding to an increase in (raising of) ground water elevation or to increased surface flooding or both)
9	Predevelopment (the hydrologic regime generally reflects conditions similar to those prior to any development within the contribution watershed)

WETLNDID

A unique wetland polygon identification used for feature cataloguing purposes. (Source: Data Dictionary)

WSHED

Name of the associated MOA watershed feature. (Source: Data Dictionary)

Lake Features

Part 4: FGDC Metadata

Identification_Information:

Citation:

Citation_Information:

Originator: MOA Watershed Management Section

Publication_Date: 01/15/2005

Title: e04MLakes

Geospatial_Data_Presentation_Form: vector digital data

Online_Linkage: \\Zim\Data\wms\031016_sde_selected\SDEDevelopment031024updates.mdb

Description:

Abstract: MOALakes depicts lake features within the Municipality of Anchorage corporate area. Data are stored in a geodatabase format and are compiled for distribution in ArcInfo and ArcView formats. All features can be derived from single ArcInfo or ArcView Shape files. MOALakes digital mapping includes 'openwater' features specifically delineated and updated through a cooperative mapping effort between the Municipality and the United States Army Corps of Engineers (USACOE). Mapping data is transferred to digital format through heads up screen digitizing using digital ortho-imagery as a background. Linework is imported to a geodatabase where polygon topology is then built in conformance with MOA hydrography mapping logic.

Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 2003

Currentness_Reference:

Status:

Progress: Ongoing

Maintenance_and_Update_Frequency: As needed.

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -150.286523

East_Bounding_Coordinate: -148.465179

North_Bounding_Coordinate: 61.482332

South_Bounding_Coordinate: 60.748169

Keywords:

Theme:

Theme_Keyword_Thesaurus: hydrology, lakes, wetland, streams

Theme_Keyword: hydrology, lakes, wetland, streams

Place:

Place_Keyword: Anchorage, Alaska

Access_Constraints:

Refer to Municipality of Anchorage GIS Web page

(<http://www.ci.anchorage.ak.us/gis/gisinternet/htmls/gishome.htm>)

for official policy on use of MOA GIS data.

Use_Constraints:

Refer to Municipality of Anchorage GIS Web page

(<http://www.ci.anchorage.ak.us/gis/gisinternet/htmls/gishome.htm>)

for official policy on use of MOA GIS data. Point_of_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Phil Manke

Contact_Organization: MOA-DPW-Technical Services

Contact_Position: IT Supervisor

Contact_Address:

Address_Type: mailing address

Address: Department of Public Works, P.O. Box 196650

City: Anchorage

State_or_Province: AK

Postal_Code: 99519-6650

Country: USA

Contact_Voice_Telephone: (907) 343-8220

Contact_Electronic_Mail_Address: MankePJ@muni.org

Hours_of_Service: 8-5

Contact_Instructions: Please use phone as primary contact interface

Data_Set_Credit: MOA WMS

Native_Data_Set_Environment: Microsoft Windows 2000 Version 5.1 (Build 2600) Service Pack 1; ESRI ArcCatalog 8.3.0.800

Data_Quality_Information:

Process_Step:

Process_Description: Dataset copied.

Source_Used_Citation_Abbreviation: \\JUGGERNAUT\Data\WMS\WETLANDS\WETLANDS_FINAL.mdb

Process_Step:

Process_Description: Dataset copied.

Source_Used_Citation_Abbreviation: \\JUGGERNAUT\Data\WMS\WETLANDS\WETLANDS_FINAL.mdb

Process_Step:

Process_Description: Dataset copied.

Source_Used_Citation_Abbreviation:

Process_Step:

Process_Description: Dataset copied.

Source_Used_Citation_Abbreviation: \\BOOMHAUER\Data\Projects\WMS\WMS
GEODATABASE\WMS_PILOT_GDB.mdb

Process_Step:

Process_Description: Metadata imported.

Source_Used_Citation_Abbreviation: C:\Documents and Settings\vmartin\Desktop\mlakes_metadata.xml

Process_Step:

Process_Description: Dataset copied.

Source_Used_Citation_Abbreviation:
\\ZIM\Data\wms\031016_sde_selected\SDEDevelopment031023updates.mdb

Process_Step:

Process_Description: Metadata imported.

Source_Used_Citation_Abbreviation: C:\DOCUME~1\vmartin\LOCALS~1\Temp\xml2E.tmp

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: G-polygon

Point_and_Vector_Object_Count: 1146

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Planar:

Grid_Coordinate_System:

Grid_Coordinate_System_Name: State Plane Coordinate System 1983

State_Plane_Coordinate_System:

SPCS_Zone_Identifier: 5004

Transverse_Mercator:

Scale_Factor_at_Central_Meridian: 0.999900

Longitude_of_Central_Meridian: -150.000000

Latitude_of_Projection_Origin: 54.000000

False_Easting: 500000.000000

False_Northing: 0.000000

Planar_Coordinate_Information:

Planar_Coordinate_Encoding_Method: coordinate pair

Coordinate_Representation:

Abscissa_Resolution: 0.000512

Ordinate_Resolution: 0.000512

Planar_Distance_Units: survey feet

Geodetic_Model:

Horizontal_Datum_Name: North American Datum of 1983

Ellipsoid_Name: Clarke 1866

Semi-major_Axis: 6378206.400000

Denominator_of_Flattening_Ratio: 294.978698

Vertical_Coordinate_System_Definition:

Altitude_System_Definition:

Altitude_Resolution: 0.000010

Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates

Entity_and_Attribute_Information:

Detailed_Description:

Entity_Type:

Entity_Type_Label: e04MLakes

Attribute:

Attribute_Label: OBJECTID_1

Attribute_Definition: Internal feature number.

Attribute_Definition_Source: ESRI

Attribute_Domain_Values:

Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.

Attribute:

Attribute_Label: OBJECTID

Attribute_Definition: Feature geometry.

Attribute_Definition_Source: ESRI

Attribute_Domain_Values:

Unrepresentable_Domain: Coordinates defining the features.

Attribute:

Attribute_Label: MAP_ACURCY

Attribute_Definition: Mapping method and associated stream centerline location accuracy.

Attribute_Definition_Source: Data Dictionary

Attribute:

Attribute_Label: MAP_SOURCE

Attribute_Definition: Revision.version information for published mapping data.

Attribute_Definition_Source: Data Dictionary

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: WMS

Enumerated_Domain_Value_Definition: WMS standardized mapping

Enumerated_Domain_Value_Definition_Source: Data Dictionary

Enumerated_Domain:

Enumerated_Domain_Value: NETWORK

Enumerated_Domain_Value_Definition: Modified WTR_WAY legacy digital mapping

Enumerated_Domain_Value_Definition_Source: Data Dictionary

Enumerated_Domain:

Enumerated_Domain_Value: WTR_WAY

Enumerated_Domain_Value_Definition: MOA area-wide legacy digital mapping

Enumerated_Domain_Value_Definition_Source: Data Dictionary

Enumerated_Domain:

Enumerated_Domain_Value: USGS1:25K

Enumerated_Domain_Value_Definition: Digitized 1:25K USGS DRG

Enumerated_Domain_Value_Definition_Source: Data Dictionary

Enumerated_Domain:

Enumerated_Domain_Value: USGS1:63K

Enumerated_Domain_Value_Definition: 1:63K USGS DLG

Enumerated_Domain_Value_Definition_Source: Data Dictionary

Enumerated_Domain:

Enumerated_Domain_Value: MAJDRN

Enumerated_Domain_Value_Definition: MOA 1994 Hillside Drainage Study legacy digital mapping

Enumerated_Domain_Value_Definition_Source: Data Dictionary

Enumerated_Domain:

Enumerated_Domain_Value: TURNAGAIN

Enumerated_Domain_Value_Definition: MOA Turnagain legacy digital mapping

Enumerated_Domain_Value_Definition_Source: Data Dictionary

Attribute_Definition_Source: Data Dictionary

Attribute:

Attribute_Label: MAP_EDITOR

Attribute_Definition: Source of feature location information

Attribute_Definition_Source: Data Dictionary

Enumerated_Domain:

Enumerated_Domain_Value: MOA WMS

Enumerated_Domain_Value_Definition: Municipality of Anchorage, Watershed Management Service

Attribute:

Attribute_Label: MAP_DATE
 Attribute_Definition: Date of last mapping or survey activity
 Attribute_Definition_Source: Data Dictionary
 Attribute:
 Attribute_Label: PUB_DATE
 Attribute_Definition: Date of map completion/publication
 Attribute_Definition_Source: Data Dictionary
 Attribute:
 Attribute_Label: AWMPID_96
 Attribute_Definition: Unique code assigned to individual wetland features
 Attribute_Definition_Source: Data Dictionary
 Attribute:
 Attribute_Label: GROUPID
 Attribute_Definition: Identical to first numeric portion of AWMPID_96
 Attribute_Definition_Source: Data Dictionary
 Attribute:
 Attribute_Label: PARTID
 Attribute_Definition: An identity value for individual wetlands or sub-groups of wetland features as identified in the 1996 AWMP.
 Attribute_Definition_Source: Data Dictionary
 Attribute:
 Attribute_Label: SUBPARTID
 Attribute_Definition: Name of the associated MOA watershed feature.
 Attribute_Definition_Source: Data Dictionary
 Attribute:
 Attribute_Label: WETLNDID
 Attribute_Definition: A unique wetland polygon identification used for feature cataloguing purposes.
 Attribute_Definition_Source: Data Dictionary
 Attribute:
 Attribute_Label: WSHED
 Attribute_Definition: Name of the associated MOA watershed feature.
 Attribute_Definition_Source: Data Dictionary
 Attribute:
 Attribute_Label: SUBSHED
 Attribute_Definition: Name of the associated MOA watershed feature.
 Attribute_Definition_Source: Data Dictionary
 Attribute:
 Attribute_Label: ADJ_STREAM
 Attribute_Definition: Identity of primary stream transecting or marginal to the wetland feature
 Attribute_Definition_Source: Data Dictionary
 Attribute:
 Attribute_Label: ADJ_LENGTH
 Attribute_Definition: Total length of all streams marginal to the wetland feature.
 Attribute_Definition_Source: Data Dictionary
 Attribute:
 Attribute_Label: DRAINAGE
 Attribute_Definition: Code used to identify the predominant hydrographic drainage associated with the wetland.
 Attribute_Definition_Source: Data Dictionary
 Attribute:
 Attribute_Label: GRIDID500
 Attribute_Definition: Identity of 500-scale grid map containing most of a wetland feature or that most closely occupying the wetland centroid
 Attribute_Definition_Source: Data Dictionary
 Attribute:
 Attribute_Label: SECTIONID
 Attribute_Definition: Identity of US Public Land Survey township, section and range containing most of the wetland feature
 Attribute_Definition_Source: Data Dictionary
 Attribute:
 Attribute_Label: TYPE
 Attribute_Definition: Wetland groups sharing similar geomorphologic, hydrologic, chemical, or biological factors.
 Attribute_Definition_Source: Data Dictionary

Enumerated_Domain:
Enumerated_Domain_Value: Open Water
Enumerated_Domain_Value_Definition: Standing bodies of water with a permanent minimum surface area at ordinary high water greater than 2,500ft² or as identified in the 1996 AWMP wetlands dataset.
Enumerated_Domain_Value_Definition_Source: Data Dictionary

Attribute:
Attribute_Label: DESGNTION
Attribute_Definition: Identifies the resource evaluation ranking or 'designation' of the wetland feature as established in the 1996 AWMP
Attribute_Definition_Source: Data Dictionary

Enumerated_Domain:
Enumerated_Domain_Value: A
Enumerated_Domain_Value_Definition: Wetlands having a high valuation for all functional categories
Enumerated_Domain_Value_Definition_Source: Data Dictionary

Enumerated_Domain:
Enumerated_Domain_Value: B
Enumerated_Domain_Value_Definition: Wetlands assigned a moderate valuation but providing significant support to key watershed and drainage area functions
Enumerated_Domain_Value_Definition_Source: Data Dictionary

Enumerated_Domain:
Enumerated_Domain_Value: C
Enumerated_Domain_Value_Definition: Wetlands having a low functional valuation
Enumerated_Domain_Value_Definition_Source: Data Dictionary

Enumerated_Domain:
Enumerated_Domain_Value: D
Enumerated_Domain_Value_Definition: Wetland features that have not been classified under the AWMP
Enumerated_Domain_Value_Definition_Source: Data Dictionary

Enumerated_Domain:
Enumerated_Domain_Value: U
Enumerated_Domain_Value_Definition: 'Interior' upland features; uplands entirely enclosed by wetland features
Enumerated_Domain_Value_Definition_Source: Data Dictionary

Attribute:
Attribute_Label: HYDRO
Attribute_Definition: A numeric valuation given a wetland feature reflecting the wetlands functional performance relative to hydrology
Attribute_Definition_Source: Data Dictionary

Attribute:
Attribute_Label: HABITAT
Attribute_Definition: A numeric valuation given a wetland feature reflecting the wetlands functional performance relative to wildlife habitat
Attribute_Definition_Source: Data Dictionary

Attribute:
Attribute_Label: SPECIES
Attribute_Definition: A numeric valuation given a wetland feature reflection the wetlands functional performance relative to support for select species
Attribute_Definition_Source: Data Dictionary

Attribute:
Attribute_Label: SOCIAL
Attribute_Definition: A numeric valuation given a wetland feature reflection the wetlands functional performance relative to socioeconomic services
Attribute_Definition_Source: Data Dictionary

Attribute:
Attribute_Label: SWSLOPE
Attribute_Definition: Reflects an estimated representative ground surface slope measured along the fall line from an upgradient wetland margin to an intersecting stream or lake feature or to a discharge point along a downgradient margin of the wetland
Attribute_Definition_Source: Data Dictionary

Attribute:
Attribute_Label: PCTPOND
Attribute_Definition: Percent of the total wetland polygon area in ponded water. A value of 100 % describes a pond-covered wetland feature
Attribute_Definition_Source: Data Dictionary

Attribute:
Attribute_Label: HGM_CLASS
Attribute_Definition: Predominant hydrogeomorphic character as described by Brinson, 1993, A Hydrogeomorphic Classification of Wetlands
Attribute_Definition_Source: Data Dictionary
Enumerated_Domain:
Enumerated_Domain_Value: 1
Enumerated_Domain_Value_Definition: Riverine (areas where periodic overbank flows from rivers and streams provide the dominant source of wetland water)
Enumerated_Domain_Value_Definition_Source: Data Dictionary
Enumerated_Domain:
Enumerated_Domain_Value: 2
Enumerated_Domain_Value_Definition: Depressional (areas where wetland hydrology is supported predominantly as a result for closed elevation contours)
Enumerated_Domain_Value_Definition_Source: Data Dictionary
Enumerated_Domain:
Enumerated_Domain_Value: 3
Enumerated_Domain_Value_Definition: Slope (areas where ground water discharge is the predominant source of wetland hydrology)
Enumerated_Domain_Value_Definition_Source: Data Dictionary
Enumerated_Domain:
Enumerated_Domain_Value: 4
Enumerated_Domain_Value_Definition: Mineral Soil Flats (areas where wetland hydrology is maintained predominantly as a result of very low slope and reduced vertical ground water movement through underlying low-permeability mineral soils)
Enumerated_Domain_Value_Definition_Source: Data Dictionary
Enumerated_Domain:
Enumerated_Domain_Value: 5
Enumerated_Domain_Value_Definition: Organic Soil Flats (areas where wetland hydrology is controlled predominantly by extensive accumulations of organic matter)
Enumerated_Domain_Value_Definition_Source: Data Dictionary
Enumerated_Domain:
Enumerated_Domain_Value: 6
Enumerated_Domain_Value_Definition: Estuarine Fringe (areas where wetland hydrology is predominantly supported by tidal waters)
Enumerated_Domain_Value_Definition_Source: Data Dictionary
Enumerated_Domain:
Enumerated_Domain_Value: 7
Enumerated_Domain_Value_Definition: Lacustrine Fringe (areas where lake waters maintain the ground water levels of adjacent wetlands)
Enumerated_Domain_Value_Definition_Source: Data Dictionary

Attribute:
Attribute_Label: VEGGROUP
Attribute_Definition: Predominant plant community structure as generally based on the first hierarchical level of Viereck et. Al., 1992, Alaska Vegetation Classification
Attribute_Definition_Source: Data Dictionary
Enumerated_Domain:
Enumerated_Domain_Value: 1
Enumerated_Domain_Value_Definition: Forested (10 % or more tree canopy at 10 feet or taller)
Enumerated_Domain_Value_Definition_Source: Data Dictionary
Enumerated_Domain:
Enumerated_Domain_Value: 2
Enumerated_Domain_Value_Definition: Scrub (trees less than 10 feet and 25 % or more shrub canopy)
Enumerated_Domain_Value_Definition_Source: Data Dictionary
Enumerated_Domain:
Enumerated_Domain_Value: 3
Enumerated_Domain_Value_Definition: Herbaceous (less than 25 % shrub canopy and dominated by grasses; forbs-herbs, ferns, horsetails; bryophytes-mosses, lichens; or aquatic plants-sedges, rushes, and aquatic plants)
Enumerated_Domain_Value_Definition_Source: Data Dictionary
Enumerated_Domain:
Enumerated_Domain_Value: 4

Enumerated_Domain_Value_Definition: Wet Herbaceous (less than 25 % shrub canopy and dominated by ponded herbaceous wetlands; standing water is prominent for a significant part of the year)

Enumerated_Domain_Value_Definition_Source: Data Dictionary

Enumerated_Domain:

Enumerated_Domain_Value: 5

Enumerated_Domain_Value_Definition: Barren (unvegetated - less than 2 % vegetative cover; may include natural or modified wetland surfaces)

Enumerated_Domain_Value_Definition_Source: Data Dictionary

Enumerated_Domain:

Enumerated_Domain_Value: 8

Enumerated_Domain_Value_Definition: Complex (reserved for larger or complex wetland features where size and distribution of local variations in plant communities significantly influence the overall functional character of the wetland)

Enumerated_Domain_Value_Definition_Source: Data Dictionary

Enumerated_Domain:

Enumerated_Domain_Value: 9

Enumerated_Domain_Value_Definition: Water (standing open water surface)

Enumerated_Domain_Value_Definition_Source: Data Dictionary

Attribute:

Attribute_Label: VEGSNSTVTY

Attribute_Definition: Name of the associated MOA watershed feature.

Attribute_Definition_Source: Data Dictionary

Enumerated_Domain:

Enumerated_Domain_Value: 1

Enumerated_Domain_Value_Definition: Sensitive (important wetland plant communities are highly sensitive to changes in hydroperiod and pollutant loading associated with storm water discharges)

Enumerated_Domain_Value_Definition_Source: Data Dictionary

Enumerated_Domain:

Enumerated_Domain_Value: 2

Enumerated_Domain_Value_Definition: Marginal (important wetland plant communities require special storm water pre-treatment to tolerate changes in hydroperiod and pollutant loading associated with storm water discharges)

Enumerated_Domain_Value_Definition_Source: Data Dictionary

Enumerated_Domain:

Enumerated_Domain_Value: 3

Enumerated_Domain_Value_Definition: Tolerant (wetland plant communities have a low environmental functional value or plant communities require only normal storm water pre-treatment to tolerate changes in hydroperiod and pollutant loading associated with storm water discharges)

Enumerated_Domain_Value_Definition_Source: Data Dictionary

Attribute:

Attribute_Label: VEGTREND

Attribute_Definition: Name of the associated MOA watershed feature.

Attribute_Definition_Source: Data Dictionary

Enumerated_Domain:

Enumerated_Domain_Value: 1

Enumerated_Domain_Value_Definition: Dry Impacted (wetland vegetation reflects a marked longterm response to a lowered ground water elevation or to a reduction in surface water input or both)

Enumerated_Domain_Value_Definition_Source: Data Dictionary

Enumerated_Domain:

Enumerated_Domain_Value: 2

Enumerated_Domain_Value_Definition: Drying (cumulative evidence indicates vegetation is responding to a decreasing (lowering) ground water elevation or to a reduction in surface water input)

Enumerated_Domain_Value_Definition_Source: Data Dictionary

Enumerated_Domain:

Enumerated_Domain_Value: 3

Enumerated_Domain_Value_Definition: Flood Impacted (wetland vegetation reflects a marked longterm response to rising ground water elevation or to an increase in surface water input or both)

Enumerated_Domain_Value_Definition_Source: Data Dictionary

Enumerated_Domain:

Enumerated_Domain_Value: 4

Enumerated_Domain_Value_Definition: Flooding (cumulative evidence indicates vegetation is responding to an increase in (raising of) ground water elevation or to increased surface flooding or both)

Enumerated_Domain_Value_Definition_Source: Data Dictionary

Enumerated_Domain:
 Enumerated_Domain_Value: 9
 Enumerated_Domain_Value_Definition: Predevelopment (the hydrologic regime generally reflects conditions similar to those prior to any development within the contribution watershed)
 Enumerated_Domain_Value_Definition_Source: Data Dictionary

Attribute:
 Attribute_Label: SWPCTBYPAS
 Attribute_Definition: Percent of pre-development surface water flows bypassing a wetland feature
 Attribute_Definition_Source: Data Dictionary

Attribute:
 Attribute_Label: H2OPCTBYPA
 Attribute_Definition: Index value representing estimated percent reduction in all pre-development sources of surface and ground water to a wetland feature
 Attribute_Definition_Source: Data Dictionary

Attribute:
 Attribute_Label: SWCONVYNCE
 Attribute_Definition: Type of hydraulic connectivity of storm water runoff to wetland feature
 Attribute_Definition_Source: Data Dictionary

Enumerated_Domain:
 Enumerated_Domain_Value: 1
 Enumerated_Domain_Value_Definition: Overland (storm waters cross wetlands as a non-integrated-overland-flow)
 Enumerated_Domain_Value_Definition_Source: Data Dictionary

Enumerated_Domain:
 Enumerated_Domain_Value: 2
 Enumerated_Domain_Value_Definition: Channel (storm waters cross wetlands through an open channel or ditch)
 Enumerated_Domain_Value_Definition_Source: Data Dictionary

Enumerated_Domain:
 Enumerated_Domain_Value: 3
 Enumerated_Domain_Value_Definition: Pipe (storm waters cross wetlands through a pipe or other closed conduit)
 Enumerated_Domain_Value_Definition_Source: Data Dictionary

Enumerated_Domain:
 Enumerated_Domain_Value: 9
 Enumerated_Domain_Value_Definition: Isolated (no surface storm waters enter the wetland feature)
 Enumerated_Domain_Value_Definition_Source: Data Dictionary

Attribute:
 Attribute_Label: SHAPE
 Attribute_Definition: Feature geometry.
 Attribute_Definition_Source: ESRI
 Attribute_Domain_Values:
 Unrepresentable_Domain: Coordinates defining the features.

Attribute:
 Attribute_Label: MAPCOMPILR
 Attribute_Definition: Feature geometry.
 Attribute_Definition_Source: ESRI
 Attribute_Domain_Values:
 Unrepresentable_Domain: Coordinates defining the features.

Attribute:
 Attribute_Label: SHAPE_Length
 Attribute_Definition: Length of feature in internal units.
 Attribute_Definition_Source: ESRI
 Attribute_Domain_Values:
 Unrepresentable_Domain: Positive real numbers that are automatically generated.

Attribute:
 Attribute_Label: SHAPE_Area
 Attribute_Definition: Area of feature in internal units squared.
 Attribute_Definition_Source: ESRI
 Attribute_Domain_Values:
 Unrepresentable_Domain: Positive real numbers that are automatically generated.

Attribute:

Attribute_Label: REVISIONNO
Attribute_Definition: Area of feature in internal units squared.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.

Attribute:
Attribute_Label: LAKE_NAME
Attribute_Definition: Length of feature in internal units.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.

Attribute:
Attribute_Label: SHAPE_Length
Attribute_Definition: Length of feature in internal units.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.

Attribute:
Attribute_Label: SHAPE_Area
Attribute_Definition: Area of feature in internal units squared.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.

Distribution_Information:
Distributor:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Phil Manke
Contact_Organization: MOA-DPW-Technical Services
Contact_Position: IT Supervisor
Contact_Address:
Address_Type: Dept of Public Works, PO Box 196650
City: Anchorage
State_or_Province: AK
Postal_Code: 99519-6650
Country: USA
Contact_Voice_Telephone: (907) 343-8220
Contact_Electronic_Mail_Address: MankePJ@muni.org
Hours_of_Service: 8-5
Contact_Instructions: Please use phone as primary contact interface

Resource_Description: Downloadable Data

Metadata_Reference_Information:
Metadata_Date: 20031029
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: MOA-DPW-WMS
Contact_Person: Scott Wheaton
Contact_Position: Watershed Scientist
Contact_Address:
Address_Type: mailing address
Address: Department of Public Works, P.O. Box 196650
City: Anchorage
State_or_Province: AK
Postal_Code: 99519-6650
Country: USA
Contact_Voice_Telephone: (907) 343-8117
Contact_Electronic_Mail_Address: WheatonSR@muni.org
Hours_of_Service: 8-5
Contact_Instructions: Please use telephone as primary contact interface

Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998

Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: <http://www.esri.com/metadata/esriprof80.html>
Profile_Name: ESRI Metadata ProfileAttribute: