

Appendix J

MWMO 2021 WMP Data Sources and Updates

Updated Tables

Natural and Semi Natural Areas	Acres	% of Watershed
Disturbed Forested Wetlands	243.90	0.955%
Disturbed Forests	0.56	0.002%
Disturbed Grasslands	239.92	0.939%
Disturbed Shrublands	11.16	0.044%
Disturbed Woodlands	6.09	0.024%
Native Forested Wetlands	175.70	0.688%
Native Forests	73.24	0.287%
Native Grasslands	41.72	0.163%
Sparse Vegetation	1.21	0.005%
Water	907.40	3.552%
Totals	1,700.90	6.659%

MWMO Area (ac)

25,543.17

Source:

MnDNR Natural and Semi-Natural Areas dataset (See Figure in plan).

Table Update Process:

- 1.) Verify the total acres of the MWMO (cell B17).
- 2.) Utilize the MnDNR Natural and Semi-Natural Areas dataset.
- 3.) Clip the land use data using the MWMO boundary.
- 4.) Sum the areas (acres) by type using a pivot table and add the land use to column A and total areas (acres) to column B.
- 5.) Column C is automatically calculated based on the MWMO total acreage.
- 6.) Totals (row 14) are automatically calculated by the table.

City	2010 Census ¹	2019 Estimate ¹	2040 Forecast ¹
Columbia Heights	17,572	19,040	20,821
Fridley	9,549	10,309	11,406
Hilltop	744	794	1,090
Minneapolis	207,748	236,695	263,365
Saint Anthony Village	4,406	4,832	4,714
Saint Paul	1,725	1,912	2,082
Lauderdale	356	366	442
Totals	242,101	273,947	303,920

¹ Population based on census data, estimates, and long-range forecasts from the Metropolitan Council. Populations adjusted by multiplying the percent of the city within the MWMO by the population of the city.

Source:

<https://metro council.org/Data-and-Maps/Research-and-Data/Annual-Population-Estimates.aspx>
<https://metro council.org/Data-and-Maps/Research-and-Data/Thrive-2040-Forecasts.aspx>

Table Update Process:

- 1.) Verify the % of each city within the MWMO (column b, rows 13-19).
- 2.) Fill in the census, estimate, and forecast data in rows 13-19 for the various years. Adjust year columns if necessary.
- 3.) Plan table (rows 1-10) will populate automatically.

City	% of City in MWMO	2010 Census	2019 Estimate	2040 Forecast
Columbia Heights	90.13%	19,496	21,124	23,100
Fridley	35.10%	27,208	29,374	32,500
Hilltop	100.00%	744	794	1,090
Minneapolis	54.30%	382,578	435,885	485,000
Saint Anthony Village	53.57%	8,226	9,020	8,800
Saint Paul	0.61%	285,068	315,925	344,100
Lauderdale	14.97%	2,379	2,442	2,950

* in both Hennepin and Ramsey Counties

Land Use	Acres	% of Watershed
Agricultural	17.6	0.1%
Golf Course	360.0	1.4%
Industrial and Utility	3165.4	12.4%
Institutional	2127.6	8.3%
Major Highway	1311.2	5.1%
Major Railway	760.9	3.0%
Manufactured Housing Parks	39.4	0.2%
Mixed Use Commercial	177.6	0.7%
Mixed Use Industrial	293.5	1.1%
Mixed Use Residential	255.2	1.0%
Multifamily	1674.4	6.6%
Office	530.2	2.1%
Open Water	879.2	3.4%
Park, Recreational, or Preserve	1567.5	6.1%
Retail and Other Commercial	1498.4	5.9%
Seasonal/Vacation	0.0	0.0%
Single Family Attached	1880.6	7.4%
Single Family Detached	8180.4	32.0%
Undeveloped	823.9	3.2%
Totals	25,543.2	100%

Source:

Metropolitan Council Generalized Land Use

Table Update Process:

- 1.) Verify the total acres of the MWMO (cell B16).
- 2.) Utilize the Metropolitan Council Generalized Land Use data set.
- 3.) Clip the land use data using the MWMO boundary.
- 4.) Sum the areas (acres) by land use type using a pivot table and add the land use to column A and total areas (acres) to column B.
- 5.) Column C is automatically calculated based on the MWMO total acreage.
- 6.) Totals (row 13) are automatically calculated by the table.

MWMO Area (ac)

25,543.17

Land Use	Acres	% of Watershed
Commercial	330.9315	1.3%
Industrial	2388.373	9.4%
Institutional	1747.519	6.8%
Mixed Use	490.2178	1.9%
Multi-Optional Development	5921.703	23.2%
Multifamily Residential	1895.205	7.4%
Open Water	887.1528	3.5%
Park and Recreation	2127.69	8.3%
Railway (inc. LRT)	728.6428	2.9%
Rights-of-Way (i.e., Roads)	1205.555	4.7%
Single Family Residential	7820.215	30.6%
Totals	25,543.2	100%

Source:

Metropolitan Council Regional Planned Land Use

Table Update Process:

- 1.) Verify the total acres of the MWMO (cell B16).
- 2.) Utilize the Metropolitan Council Regional Planned Land Use data set.
- 3.) Clip the land use data using the MWMO boundary.
- 4.) Sum the areas (acres) by land use type using a pivot table and add the land use to column A and total areas (acres) to column B.
- 5.) Column C is automatically calculated based on the MWMO total acreage.
- 6.) Totals (row 13) are automatically calculated by the table.

MWMO Area (ac)

25,543.17

City	Plan Year
Columbia Heights	2040
Fridley	2030
Hilltop	2030
Lauderdale	2040
Minneapolis	2040
Saint Paul	2030
St. Anthony Village	2040

Common Name	Genus and Species	Status
A Species of Fungus	Psathyrella rhodospora	Minnesota - Endangered
Acadian Flycatcher	Empidonax virescens	Minnesota - Special Concern
American Burying Beetle	Nicrophorus americanus	Minnesota - Watchlist
Autumn Fimbry	Fimbristylis autumnalis	Minnesota - Special Concern
Beach Heather	Hudsonia tomentosa	Minnesota - Threatened
Black Huckleberry	Gaylussacia baccata	Minnesota - Threatened
Black Sandshell	Ligumia recta	Minnesota - Special Concern
Blanding's Turtle	Emydoidea blandingii	Minnesota - Threatened
Eastern Hognose Snake	Heterodon platirhinos	Minnesota - Watchlist
Fawnsfoot	Truncilla donaciformis	Minnesota - Threatened
Ghost Tiger Beetle	Cicindela lepida	Minnesota - Threatened
Handsome Sedge	Carex formosa	Minnesota - Endangered
Higgins Eye	Lampsilis higginsii	Federal - Endangered Minnesota - Endangered
Kentucky Coffee Tree	Gymnocladus dioica	Minnesota - Special Concern
Lance-leaf Violet	Viola lanceolata var. lanceolata	Minnesota - Threatened
Late Hawthorn	Crataegus calpodendron	Minnesota - Special Concern
Leadplant Flower Moth	Schinia lucens	Minnesota - Special Concern
Mucket	Actinonaias ligamentina	Minnesota - Threatened
Mudpuppy	Necturus maculosus	Minnesota - Special Concern
Peregrine Falcon	Falco peregrinus	Minnesota - Special Concern
Plains Hog-nosed Snake	Heterodon nasicus	Minnesota - Special Concern
Prairie Vole	Microtus ochrogaster	Minnesota - Special Concern
Rusty-patched Bumble Bee	Bombus affinis	Federal - Endangered Minnesota - Watchlist
Slender Naiad	Najas gracillima	Minnesota - Special Concern
Spike	Eurynia dilatata	Minnesota - Threatened
Swamp White Oak	Quercus bicolor	Minnesota - Special Concern
Tall Nutrush	Scleria triglomerata	Minnesota - Endangered
Tricolored Bat	Perimyotis subflavus	Minnesota - Special Concern
Wartyback	Quadrula nodulata	Minnesota - Threatened

Source:

MnDNR Natural Heritage Information System
<https://www.dnr.state.mn.us/nhrp/nhis.html>

USFWS

<https://www.fws.gov/endangered/>

Table Update Process:

- 1.) Buffer the MWMO boundary by 1 miles.
- 2.) Select all of the species from the MnDNR Natural Heritage Information System data within the 1 mile buffer area. Data includes common name, genus and species, and Minnesota Status.
- 3.) Check for any Federal endangerment status of identified species on the USFWS database.
- 4.) Update column C based on state and federal status.

Permit Holder	Type of MS4	Permit ID
Anoka County	Mandatory Phase II	MW400066
Columbia Heights	Mandatory Phase II	MS400010
Fridley	Mandatory Phase II	MS400019
Hennepin County	Mandatory Phase II	MS400138
Hilltop	Mandatory Phase II	MS400023
Lauderdale	Mandatory Phase II	MS400026
Minneapolis	Phase I Large MS4	MN0061018
Minneapolis Community and Technical College	Mandatory Phase II	MS400207
Minnesota Department of Transportation	Mandatory Phase II	MS400170
Ramsey County Public Works	Mandatory Phase II	MS400191
Saint Anthony Village	Mandatory Phase II	MS400051
Saint Paul	Phase I Large MS4	MS400054
University of Minnesota – Twin Cities	Mandatory Phase II	MS400212

Source:

MN Geospatial Commons: MS4 Boundaries in MN
<https://gisdata.mn.gov/dataset/util-ms4-boundaries>

Table Update Process:

- 1.) Compare the MS4 boundaries with the MWMO boundaries in GIS.
- 2.) Select all MS4s within the MWMO boundary (be careful, some on the boundary may be selected and should not be included (i.e. Capitol Regions WD).
- 3.) Correct the table (if necessary) using the GIS attributes.

Mean Monthly Precipitation, 1981 - 2010	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Annual
Precipitation (inches)	0.90	0.77	1.89	2.66	3.36	4.25	4.04	4.30	3.08	2.43	1.77	1.16	30.61
Mean Monthly Snowfall, 1981 - 2010	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Annual
Snowfall (inches)	12.2	7.7	10.3	2.4	-	-	-	-	-	0.6	9.3	11.9	54.4
Mean Temperature, 1981 - 2010	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Annual
Max °F	23.7	28.9	41.3	57.8	69.4	78.8	83.4	80.5	71.7	58.0	41.2	27.1	55.2
Min °F	7.5	12.8	24.3	37.2	48.9	58.8	64.1	61.8	52.4	39.7	26.2	12.3	37.2
Mean °F	15.6	20.8	32.8	47.5	59.1	68.8	73.8	71.2	62.0	48.9	33.7	19.7	46.2

Source:

NOAA National Climatic Data Center

<https://www.ncdc.noaa.gov/>

Note for this update: the MnDNR had already calculated these statistics and this data set was used for reference:

https://files.dnr.state.mn.us/natural_resources/climate/twin_cities/msp_normals_1981-2010.pdf

Table Update Process:

- 1.) Determine a 30-year period.
- 2.) Download the monthly average precipitation, snowfall, and max/min/average temperature data from NOAA NCDC for the Minneapolis-St. Paul Airport (MS).
- 3.) This data may already be available from another local agency (i.e. MPCA, MnDNR, etc.) and could be used to populate the table, rather than getting the data directly from NOAA.

Probability of Exceedance	Return Period	Duration of Storm Event							
		24-hour	12-hour	6-hour	3-hour	2-hour	1-hour	30-min.	15-min.
100%	1-year	2.47	2.14	1.89	1.61	1.44	1.17	0.89	0.63
50%	2-year	2.85	2.51	2.20	1.88	1.70	1.38	1.06	0.75
20%	5-year	3.56	3.23	2.82	2.42	2.18	1.76	1.35	0.94
10%	10-year	4.26	3.92	3.44	2.93	2.62	2.11	1.60	1.11
4%	25-year	5.38	5.01	4.44	3.76	3.32	2.64	1.96	1.36
2%	50-year	6.36	5.97	5.34	4.48	3.91	3.08	2.24	1.56
1%	100-year	7.44	7.02	6.34	5.29	4.56	3.55	2.53	1.76

Source:

NOAA National Weather Service

https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=mn

Note for this update: the values should not have changed (i.e. Atlas 14 did not change).

However, this seems to be some uncertainty between the table caption and the plan text as to whether the data is based on the MSP airport or the MWMO centroid.

Table Update Process:

- 1.) Go to the NOAA/NWA website for Atlas 14.
- 2.) Enter the location of the data request (i.e. MSP, MWMO centroid, etc.)
- 3.) The NOAA/NWS website provides a table for design storm depths.

MWMO Centroid is:

Latitude: 44.9964°

Longitude: -93.2538°

Waterbody	Year Listed	Impairment	Target Completion Year or Status
Streams			
Bassett Creek - Medicine Lake to Mississippi River ¹	2010	Chloride	TMDL Approved in 2016
	2008	Fecal Coliform	TMDL Approved in 2014
	2004	Fish Bioassessment	2025
Mississippi River - Crow River to Upper St. Anthony Falls	2006	Fecal Coliform	2024
	1998	Mercury in Fish Tissue	TMDL Approved in 2007
	2016	Nutrients	2018
Mississippi River - Upper St. Anthony Falls to St. Croix River	2002	PCB in Fish Tissue	2020
	1994	Fecal Coliform	2022
	1998	Mercury in Fish Tissue	TMDL Approved in 2007
	1998	Mercury in Water Column	TMDL Approved in 2007
	2016	Nutrients	2018
	1998	PCB in Fish Tissue	2020
	2008	PFOS in Fish Tissue	2025
	2014	PFOS in Water Column	2025
2014	TSS	TMDL Approved in 2016	
Lakes			
Loring (South Bay)	2014	Chloride	TMDL Approved in 2016
Kasota Pond North	2014	Chloride	TMDL Approved in 2016
Kasota Pond West	2014	Chloride	TMDL Approved in 2016
Mallard Marsh	2014	Chloride	TMDL Approved in 2016
Sandy	2002	Nutrients	2025
Unnamed (Highland Lake)	2004	Nutrients	2025

¹ Bassett Creek is wholly contained underground within the MWMO.

PCB = Polychlorinated biphenyl
 PFOS = Perfluorooctane Sulfonate
 TSS = Total Suspended Solids

Source:

MPCA 2018 Impaired Waters List
<https://www.pca.state.mn.us/water/2018-impaired-waters-list>
 Note for this update: the 2020 impaired waters list was available, but in draft still.

Table Update Process:

- 1.) Go to the MPCA website and download the current impaired waters spreadsheet and the associated shapefile.
- 2.) Select all of the impaired waters (lakes and streams) within the MWMO. Note some waterbodies flow into the edge of the MWMO (e.g. Bassett Creek).
- 3.) Enter any new data and update old data using the MPCA impaired waters spreadsheet.

Note: The AUID column is included for reference and should not be included in the plan table.

Map Figures- List of Map Figures with Data Source and Year

Existing Figures					
Figure #	Name	Layer	Source	Year	Notes
1	MWMO Boundary	MWMO Boundary	MWMO	2014	
2	Potential Limitations to Infiltration				
3	Location Map of Special Area Plans	Special Area Plans	MWMO	2014	
3	Topography	Contours	Minnesota DNR	2011	
4	Surficial Geology	Surficial Geology	Minnesota Geological Survey (M-178)	2007	
5	Bedrock Geology	Bedrock Geology	MPCA Metropolitan Groundwater Mo	2000	
6	Bedrock Units		(Ojakangas and Marsh, 1982)	1982	
7	Historic Hydrologic Soil Group	Hydrologic Soils	NRCS	2007	
8	Present Day Urban Soils	Soil Type	NRCS		Unedited From Previous Plan
9	Modern Secondary Soil Information	Soil Information	NRCS		Unedited From Previous Plan
10	Combined Historic and Modern Soil Information	Modern Soil Unit	NRCS		Unedited From Previous Plan
11	Soil Series	Hennepin NRCS Soil Units	NRCS		Unedited From Previous Plan
12	Soil Orders	NRCS Natural Soil or Complex	NRCS		Unedited From Previous Plan
13	NRCS Based Vegetation	NRCS Vegetation	NRCS		Unedited From Previous Plan
14	Historic Estimate of Soil Hydrologic Group	?	?		Unedited From Previous Plan
15	Natural and Semi Natural Areas	Natural and Semi Natural Areas	Minnesota DNR	2008	
16	Population Density	Block Groups	U.S. Census Bureau	2010	
17	Areas of Concentrated Poverty	ACP 50	Met Council		
18	Population Density	2010 Population	Census	2010	
19	Neighborhood Boundaries	Minneapolis Neighborhoods	City of Minneapolis	2014	
20	Historic Subwatersheds	Historic Subwatersheds	MWMO	2009	
21	Present land use	Land Use	Metropolitan Council	2011	
22	2020 Future Land Use	2020 Land Use	Metropolitan Council	2014	
23	Surface and Groundwater Appropriations	Water Use Permit	Minnesota DNR	2014	
24	Parks and Open Space	Map Created By City	City of Minneapolis	2008	
25	Regional Parks and Trails	Map Created By City	City of Minneapolis	2008	
26	Existing Minneapolis Park System	Map Created By City	Minneapolis Park and Recreation Board	2007	
27	Minneapolis Trail System and Regional Park System	Map Created By City	Minneapolis Park and Recreation Board	2007	
28	Minneapolis Existing Land Use	Map Created By City	City of Minneapolis	2009	
29	Minneapolis Future Land Use	Map Created By City	City of Minneapolis	2009	
30	City of Saint Anthony Village Existing Land Use	Map Created By City	City of Saint Anthony Village	2008	
31	City of Lauderdale Existing Land Use	Map Created By City	City of Lauderdale	2008	
32	City of Saint Paul Park System	Map Created By City	City of Saint Paul	2008	
33	Columbia Heights Existing Land Use	Land Use	City of Columbia Heights	2008	
34	Columbia Heights Future Land Use	2030 Land Use	City of Columbia Heights	2008	
35	Fridley Existing Land Use	Land Use	City of Fridley	2007	
36	Friday Future Land Use	2030 Land Use	City of Friday	2007	
37	Hilltop Existing Land Use	Land Use	City of Hilltop	2009	
38	Hilltop Future Land Use	2030 Land Use	City of Hilltop	2009	
39	Mississippi National River and Recreation Map	Map Created By Agency	National Park Service	No date	Unedited From Previous Plan
40	Permitted Wastewater and Industrial Stormwater Sites	Industrial Stormwater Permit	Minnesota Pollution Control Agency	2014	
		Wastewater Discharge Sites	Minnesota Pollution Control Agency	2014	
41	Known and Potential Sources of Soil and Groundwater Contamination	Contaminated Sites	Minnesota Pollution Control Agency	2014	
42	Environmental Hazards	Potentially Contaminated Sites	Minnesota Pollution Control Agency	2014	
		County Well Index	Minnesota Department of Health	2014	
		Leaking Underground Storage Tanks	Minnesota Pollution Control Agency	2014	
43	Surface Water Resources	Wetlands (NWI)	U.S. Fish and Wildlife Service	2007	
		Bridal Veil Falls	EOR	2009	
		Public Waters Inventory (PWI)	Minnesota DNR	2009	
44	Metropolitan Mosquito Control District Wetlands	MMCD Wetlands	Metropolitan Mosquito Control Distric	2014	
45	Impaired Waters	Impaired Waters	Minnesota Pollution Control Agency	2014	

46	Minor Pipeshed Boundaries	Minneapolis Pipesheds	City of Minneapolis	2006	
		Lauderdale Pipesheds	City of Lauderdale	2008	
		Saint Anthony Village Pipesheds	City of Saint Anthony Village	2008	
		Saint Paul Pipesheds		No date	
		Columbia Heights Pipesheds	Columbia Heights	2014	
47	Subwatersheds	MWMO Subwatersheds	MWMO	2014	
48	New H&H and P8 Modeling Subwatersheds	MWMO Modeled Subwatersheds	MWMO	2020	
49	Storm Tunnel System	Map Created by Minneapolis	City of Minneapolis	No date	
50	FEMA Designated Flood Plains	Floodplains	Federal Emergency Management Agen	2007	
51	Sensitivity to Groundwater Pollution	Sensitivity to Goundwater Pollution	Minnesota Geological Survey	1989	
52	Groundwater Management Areas	Wellhead Protection Areas	Minnesota Department of Health	2019	
		Source Water Assessment Areas	Minnesota Department of Health	2014	
		Drinking Water Supply Management Area Vul	Minnesota Department of Health	2014	
53	Monitoring Locations of the MWMO	Monitoring Sites	MWMO	2020	

Data Dictionary- Source Data and Reference

Data Name	Description	Received	Updated Filename	Metadata	Source	Source Contact Information	Existing Plan Year	Update (Y/N)	Update Year	Notes
Aerial Imagery (Web Service)	Aerial imagery			N/A	MnGeo	MnGeo WMS service	2013	Y	2016	Used a service layer for imagery and not a raster. https://imageserver.gisdata.mn.gov/cgi-bin/wms?VERSION=1.3.0&SERVICE=WMS&REQUEST=GetCapabilities
Alternative Historic Subwatersheds	MWMO alternative historic subwatersheds	Yes	Historic_WS_AltBound	Limited Info	MWMO			N		
Approximate Stormwater Tunnels	Approximate Stormwater Tunnels	From Previous	StormTunnel_approx	Limited Info	City of Minneapolis Public Works Engineering Services	612-673-2965, karl.westermeyer@ci.minneapolis.mn.us	2014	Y		Used data from old plan
Bedrock	Metro Area bedrock layers	Yes	Metro_Bedrock	Created	MPCA	https://www.pca.state.mn.us/water/metropolitan-area-groundwater-model	2010	N		
Bridal Veil Falls	Location of Bridal Veil Falls	From Previous			Historic Waters Study					
Bridal Veil Wetland	Location of Bridal Veil Falls	From Previous			Historic Waters Study					
Census Block Groups - population	Population density (pop per acre)	Yes	Census_Block_Groups_In_MWMO	From Source	TIGER	https://www.census.gov/cgi-bin/geo/shapefiles/index.php?year=2019&layergroup=Blocks+%282010%29	2010	Y	2018	2014-2018 American Community Survey and Metro Council Areas of Concentrated Poverty
Census Tracts in MWMO	US Census Bureau, 2014-2018 five-year American Community Survey estimates	Yes	Census_Tracts_In_MWMO	From Source	TIGER			Y	2018	
Columbia Heights Parcel Land Use	Columbia Heights Parcels Current and Future (2040) Land Use	Yes	Columbia_Heights_Parcel_Land_Use	Created	Columbia Heights	p.10 https://cms5.revize.com/revize/columbiaheightsmn/document_center/2040%20Comp%20Plan/3_LandUse.pdf	2008	Y	2020	This parcel layer has current land use as of 10/2020 and future land use for 2040 as of the 2016 comprehensive plan.
Columbia Heights Pipe Watersheds	Columbia Heights Pipe Watersheds	Yes	Pipeshed_Catchments	Created	Columbia Heights	info@columbiaheightsmn.gov	2014	Y	2020	

Contours	50' Elevation Contours	Yes	Contours_50ft	Created	DNR LiDAR		2011	Y	2011	No elevation data newer than 2011 available for full area. If this layer was created from the DEM_elev below, it can be updated to the 2011 dataset.
County Well Index	Minnesota County Well Index	Yes	County_Well_Index	From Source	MPCA	https://www.mngeo.state.mn.us/chouse/metadata/wells.html	2014	Y	2019	
CTUs MWMO	Cities, Townships, Unorganized Territories	Yes	CTUs	From Source	Metropolitan Council	https://gisdata.mn.gov/dataset/us-mn-state-metc-bdry-metro-counties-and-ctus	2014	Y	2020	
DEM_elev	Digital Elevation Model	Yes	DEM_3m_m	Created	DNR LiDAR	ftp://ftp.lmic.state.mn.us/pub/data/elevation/lidar/	2001	Y	2011	30m DEM
DNR Lakes	Lakes	Yes	DNR_Lakes	From Source	DNR	https://gisdata.mn.gov/dataset/water-dnr-hydrography	2011	Y	2020	
DNR National Wetlands Inventory	DNR National Wetlands Inventory	Yes	MN_NWI	From Source	DNR	https://gisdata.mn.gov/dataset/water-nat-wetlands-inv-2009-2014		Y	2019	
DNR Public Waters Inventory	DNR Public Waters Inventory	Yes	Public_Waters_Inventory_Basins_2020	From Source	DNR	https://gisdata.mn.gov/dataset/water-mn-public-waters		Y	2020	
Drinking Water Supply Management Areas for Surface Water	Surface and subsurface area surrounding a public water supply intake	Yes	drinking_water_supply_management_area_surface_water	From Source	MDH	https://www.health.state.mn.us/communities/environment/water/swp/maps/index.htm	2009	N	2009	This layer has not been updated since 2009.
DWSMA Vulnerability	Assessment of the likelihood for a potential contaminant source within the drinking water supply management area to contaminate a public water supply	Yes	DWSMA_Vulnerability	From Source	MDH	https://www.health.state.mn.us/communities/environment/water/swp/maps/index.htm	2013	Y	2019	
FEMA Flood Zones	FEMA 100- and 500-yr flood zones	Yes	FEMA_Flood_Zones	Updated From Source	FEMA	https://gisdata.mn.gov/dataset/water-dnr-fema-dfirm	2003	Y	2020	
Flood Numbers	Annotation labels for floods where the label on the georeferenced image falls outside the city limits (masked).	From Previous	MPLS_1997_Flood_Annotations	Created	City of Minneapolis		2014	Y		

Fridley Existing Land Use	Fridley Existing Land Use	Yes	Fridley_Existing_Land_Use	Created	City of Fridley	p.27 https://fridleymn.gov/DocumentCenter/View/5290/2040-Comp-Plan---Full	2007	Y	2020	
Fridley Future Land Use	Fridley Future Land Use	Yes	Fridley_Future_Land_Use	Created	City of Fridley	p.29 https://fridleymn.gov/DocumentCenter/View/5290/2040-Comp-Plan---Full	2007	Y	2020	
Fridley Pipe Watershed Catchments	Pipesheds for the City of Fridley	Yes	Fridley_Pipesheds_2020	From Source	City of Fridley		-	Y	2020	
Groundwater Sensitivity to Pollution	Groundwater Sensitivity to Pollution	Yes	Groundwater_Sensitivity	Limited Info	DNR	https://www.dnr.state.mn.us/waters/groundwater_section/mapping/status.html	1989	N		This dataset is based on a study from 1989 and has most likely not changed.
Hennepin Soils 1929	Historic soils map for Hennepin County - image	Yes	Hennepin_Soils_1929_image	Created	NRCS	https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/minnesota/HennepinMN1929/soilmap.pdf	1929	N		This is a georeferenced image pulled from a historic source and no GIS data maybe be available.
Hennepin/Ramsey Historic Soil Survey	Digitized polygons of historic soil maps	Yes	Henn_Ramsey_Historic_Soil_Survey	From Source	Minnesota Geological Survey		2009	N		
Hillshade	Hillshade created from DEM	Yes	Hillshade_DEM_3m_m	Created	DNR LiDAR		2001	Y	2011	Create from updated DEM
Historic MWMO Planning Areas	Historic MWMO Planning Areas	Yes	Historic_Planning_Areas	Limited Info	MWMO			N		
Historic Subwatersheds	MWMO Historic	Yes	Historic_Sub_WS	Limited Info	MWMO			N		
Impaired Lakes 2014	MPCA's Impaired Lakes 2014	Yes	Impaired_Lakes_2018	From Source	MPCA	https://gisdata.mn.gov/dataset/env-impaired-water-2018	2014	Y	2018	
Impaired Streams 2015	MPCA's Impaired Streams 2015	Yes	Impaired_Streams_2018	From Source	MPCA	https://gisdata.mn.gov/dataset/env-impaired-water-2018	2014	Y	2018	
Land Use Land Class	Natural Areas from the Minnesota Land Cover Classification System	Yes	Land_Use_Land_Cover_2018	From Source	DNR	https://gisdata.mn.gov/dataset/biota-landcover-mlccs	2014	Y	2018	

Lauderdale Existing Land Use	Lauderdale Existing Land Use	Yes	Lauderdale_Land_Use_Designations	Created	City of Lauderdale Draft Comprehensive Plan	p.38 https://lauderdale.mn.org/vertical/sites/%7B5F73237E-9F78-407B-A785-DA0D9F5C945F%7D/uploads/2040_City_of_Lauderdale_Comprehensive_Plan_Final_Version.pdf	2008	Y	2017	
Lauderdale Pipe watersheds	Lauderdale pipe watersheds	Yes	Lauderdale_Pipesheds_2018	Limited Info	City of Lauderdale			Y	2018	
Metro Collaborative Parks	Parks from local, state, and federal partners	Yes	Metro_Collaborative_Parks	From Source	MetroGIS	https://gisdata.mn.gov/dataset/us-mn-state-metrogis-bdry-metro-colabtiv-parks		Y	2020	This dataset contains parks/open spaces from cities, counties, regional partners, and federal entities.
Metro Collaborative Trails and Bikeways	Trails and bikeways from local, state, and federal partners	Yes	Metro_Collaborative_Trails	From Source	MetroGIS	https://gisdata.mn.gov/dataset/us-mn-state-metrogis-trans-metro-colabtiv-trails-bike		Y	2020	This dataset contains trails/bikeways from cities, counties, regional partners, and federal entities.
Metro Generalized Land Use Inventory 2016	Land Use data from 2010	Yes	GeneralizedLandUse2016	From Source	Metropolitan Council	https://gisdata.mn.gov/dataset/us-mn-state-metc-plan-general-Induse2016	2010	Y	2016	
Metro Mosquito Control District Wetlands	wetlands and wet areas tracked by the Metropolitan Mosquito Control District (MMCD) as potentially holding water long enough to support mosquito larval development	Yes	Mosquito_Control_District_Wetlands_2017	From Source	MMCD	https://gisdata.mn.gov/dataset/org-mmcd-env-wetland-mosquito-wet-areas	2014	Y	2017	
Metro Open Space Parcels	Parcels selected from the current Metro Parcels with land use categories of "Parks, Forest and Wildlife Refuge", "Public Cemetery", or "Private Cemetery".	Yes	Metro_Open_Space_Parcels	Created	Minneapolis Community Planning and Economic Development Department - Planning Division	http://www2.minneapolis.gov/www/groups/public/@cped/documents/webcontent/vert_286387.pdf	2009	Y	2016	

Metro Planned Land Use	Regional Planned Land Use - Trin Cities Metropolitan Area	Yes	Metro_Planned_Land_Use	From Source	Metropolitan Council	https://gisdata.mn.gov/dataset/us-mn-state-metc-plan-pland-land-use	2014	Y	2020	This is an aggregated dataset that contains future land use for both 2030 and 2040 depending on the CTU.
Metro Regional Parks	Regional Park System in the Twin Cities Metropolitan Area	Yes	Regional_Parks	From Source	Metropolitan Council	https://gisdata.mn.gov/dataset/us-mn-state-metc-plan-parks-regional		Y	2018	This is a regional park layer that can be used to replace one of the georeferenced images in the Regional Parks and Trails Map
Minneapolis Trails	Minneapolis Trail System	Yes	Minneapolis_Ped_Bike_Trails	Created	City of Minneapolis	http://opendata.minneapolismn.gov/datasets/pedestrian-and-bicycle-trails?geometry=-93.784%2C44.891%2C-92.742%2C45.061	2014	Y	2015	
Minneapolis Future Land Use	Minneapolis Future Land Use	Yes	MPLS_Future_Land_Use_2040	Created	City of Minneapolis	http://opendata.minneapolismn.gov/datasets/future-land-use-and-built-form-2040		Y	2019	Or this Future Land Use and Built Form 2040: http://opendata.minneapolismn.gov/datasets/515048a2bf6e4025b33de3466e3b1ef_0
Minneapolis Mask	Mask created by erasing the city borders of Minneapolis out of a larger polygon	Yes	MPLS_mask	Created				Y	2019	Create from updated city boundaries
Minneapolis Neighbors	Minneapolis Neighbors	Yes	Minneapolis_Neighborhoods	Created	City of Minneapolis	http://opendata.minneapolismn.gov/datasets/minneapolis-neighborhoods		Y	2019	
Minneapolis Parks	Mpls city parks	Yes	Minneapolis_Parks	Created	City of Minneapolis	http://opendata.minneapolismn.gov/datasets/parks?geometry=-93.412%2C44.946%2C-93.151%2C44.988	2014	Y	2015	Open Minneapolis Parks layer
Minneapolis Pipe watersheds	Small storm drain catchment areas within the City of Minneapolis	Yes	MPLS_Pipesheds_20200916	Created	City of Minneapolis Public Works Engineering Services	612-673-2965, karl.westermeyer@ci.minneapolis.mn.us	2002	Y	2020	

Minneapolis Storm Tunnel System	Minneapolis Storm Tunnel System	From Previous	MSP_StormTunnelSystem	Created	City of Minneapolis		2014	Y	Received new data from the city, but no metadata or tunnel conditions. This is a georeferenced image from a report. I was unable to locate the original or an update. Need "Storm Tunnel System" layer to recreate.	
Minor Roads	Minor streets/roads for zoomed-in maps	Yes	Minor_Roads	From Source	MnDot	https://gisdata.mn.gov/dataset/trans-streets			2020	Used for street names in the Hillside land use maps
Mississippi River Recreation Areas	Mississippi River Recreation Areas	No			National Park Service	https://www.nps.gov/miss/planyourvisit/maps.htm https://www.nps.gov/miss/planyourvisit/missrivercomp.htm https://www.nps.gov/miss/planyourvisit/upload/CompanionMaps-final-Section-B.pdf	2014	Y	This is a georeferenced screenshot of a map in the first link. Need "Mississippi National River and Recreation Area", "State, Regional, and Local Parks", "National Park Service Facilities", "Bike, Pedestrian, and River Trails", "Scenic Byways", "Transit Lines", "Transit Points", "Points of Interest", "Boating Infrastructure", "Powerlines", "Navigation Markers", "River Mile Markers", and "Dams" layers to recreate.	
MnDOT 2011 Roads	MnDOT road centerlines	Yes	Metro_Roads	From Source	Metropolitan Council	https://gisdata.mn.gov/dataset/us-mn-state-metc-trans-fcntrl-clr-rds	2011	Y	2019	This was probably misnamed in the database. Should be MnDOT2011_rds.
Modeling Initiatives Status	Modeling areas within MWMO and their model status	Yes	Modeling_Initiatives_Status	Created - very basic	MWMO				2020	

MPCA Permits	MPCA discharge and storm water permit points	Yes	Wastewater_Discharge_Permits	From Source	MPCA	https://gisdata.mn.gov/dataset/util-wastewater-discharge	2014	Y	2019	
MPCA What's In My Neighborhood Sites	Location of facilities with discharge permits/violations	Yes	Whats_In_My_Neighborhood	From Source	MPCA	https://gisdata.mn.gov/dataset/env-my-neighborhood	2014	Y	2017	
Mpls Flood Graphics	Layer created to be text background for labels in 1997 Flood Areas Map	From Previous	MPLS_1997_Flood_Anno_Backgrounds	Created	City of Minneapolis		2014	N		
Municipalities	Municipalities within MWMO	Yes	Municipalities_MWMO	Edited from Source	Metropolitan Council	https://gisdata.mn.gov/dataset/us-mn-state-metc-bdry-metro-counties-and-ctus	2008	Y	2020	Metadata name: political_jurisdiction_area-municipality_metrogis, This is a polygon dataset for county boundaries as well as for city, township and unorganized territory (CTU) boundaries in the Twin Cities 7-county metropolitan area. The linework for this dataset comes from individual counties and is assembled by the Metropolitan Council for the MetroGIS community.
MWMO Boundary	MWMO Boundary	Yes	MWMO_Boundary	Limited Info	MWMO		2014	Y	2014	No update provided yet.
MWMO Draft Watersheds	MWMO Draft Watersheds	Previous	MWMO_DRAFT_Watersheds	Limited Info	MWMO		2014	N		dataset for this
MWMO Monitoring Sites	Water quantity and quality monitoring sites	Yes	MWMO_Monitoring_Sites_Sept2020	Created	MWMO		2014	Y	2020	Received 2020 update and updated map 5/26/2020
Project Corridors	Capital Improvement Project lines	No			MWMO	Various, see pages 25-27 of MWMO Plan Text	2014	Y		
Project Points	Capital Improvement Project points	No			MWMO	Various, see pages 25-27 of MWMO Plan Text	2014	Y		
Projects	Capital Improvement Project polygons	No			MWMO	Various, see pages 25-27 of MWMO Plan Text	2014	Y		

Ramsey Soil Pages 1916	Historic soils map for Ramsey County - image	Yes	Ramsey_Soil_Pages_1916	Created	NRCS	https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/minnesota/ramseyMN1916/soil_map.pdf	1916	N		This is a georeferenced image pulled from a historic source and no GIS data maybe be available.
Regional Trail Search Corridors	Search corridors for new regional trails	Yes	Regional_Trail_Search_Corridors	From Source	Metropolitan Council	https://gisdata.mn.gov/dataset/us-mn-state-metctrans-regional-trails-search-cor		Y	2019	
Regional Trails	Regional trails	Yes	Regional_Trails	From Source	Metropolitan Council	https://gisdata.mn.gov/dataset/us-mn-state-metctrans-regional-trails-exst-plan		Y	2018	
St. Anthony Pipe watershed	St. Anthony Pipe watershed	Yes	StAnthony_Subwatersheds	Limited Info	St. Anthony Village	https://www.savmn.com/190/Planning		Y		Previous report states that the Village's storm sewer system in not available electronically
St. Anthony Village Current Land Use	St. Anthony Village Current Land Use	Yes	StAnthony_Current_Land_Use	Limited Info	St. Anthony Village	https://www.savmn.com/DocumentCenter/View/979/StAnthony-2040-Comprehensive-Plan	2008	Y	2010	This is a georeferenced image from a report. The updated report is linked. Need "Current Land Use" layer to update. Used "Generalized Land Use 2016" as replacement.
St. Paul Recreation Centers	Recreation Centers as points created from Metro Collaborative Parks layer	Yes	St_Paul_Recreation_Centers	Created	MetroGIS			Y	2020	
Stream Tunnel	Bassett Creek Watershed Managemet Commission Streams and Tunnel digitized from aerial photography	From Previous			Barr Engineering Company for BCWMC		2008			
Supplement Area		Yes	Supplemental_Area	Limited Info	MWMO			N		This layer outlines a small section of the northern portion of the MWMO boundary. It's metadata says it's the municipal boundaries of Anoka County

Surface Water Centerline	Surface water course centerlines	Yes	SurfaceWater_Centerlines	From Source	DNR	https://gisdata.mn.gov/dataset/water-dnr-hydrography		Y	2020	
Surficial Geology	Surficial Geology of the Twin Cities	Yes	Surficial_Geology_Strata	From Source	Minnesota Geological Survey	https://conservation.umn.edu/handle/11299/58220	2007	N		
Water Use Permits	Permitted water use	Yes	Surface_Water_Use_Permits	Created	DNR	https://www.dnr.state.mn.us/waters/watermgmt_section/appropriations/wateruse.html https://files.dnr.state.mn.us/waters/watermgmt_section/appropriations/mpars_wa_permits_installations_uses.lpk	2014	Y	2019	
Wellhead Protection Areas	Surface and subsurface area surrounding a public water supply well or well field that supplies a public water system	Yes	Wellhead_Protection_Areas	From Source	MDH	https://gisdata.mn.gov/dataset/water-mgmt-area-surface-water	2013	Y	2019	