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Data Type	Summary	Attributes
Raster	Raw DEM with 3 meter resolution and elevation values in feet.	
Raster	Hillshade of the raw 3 meter DEM with standard settings applied.	
Polyline	accurate HydroDEM.	Desktop Interpretation Source – LiDAR, Aerial, LiDAR & Aerial Confidence – High, Medium, Low Type – Culvert, Bridge, Tile Road Type – Highway/County/Township, Field Approach, Field Crossing Internal Review – None, Flagged Internal Review Comments – Description of review needs
Polyline	Used to create hydrologic barriers where required to produce an accurate HydroDEM.	Desktop Interpretation Source – LiDAR, Aerial, LiDAR & Aerial Confidence – High, Medium, Low

## drology\_Products.gdb

seed by the boundary	Data Type	Summary	Attributes	
	Raster	DEM with reconditioning applied not considering noncontributing areas and tile inlet as extractions	Elevation value	
	Raster	DEM with reconditioning applied considering noncontributing during the XX-year and 24-hour rainfall event and tile inlet as extractions	Elevation value	
	Raster	Sinks are filled within the entire watershed	Elevation value	
	Raster	Sinks are filled within the contributing drainage area during the XX-year 24-hour rainfall event.	Elevation value	
	Raster	Indicates the direction of flow from each cell within the entire watershed.	Flow direction value	
	Raster	Indicates the direction of flow from each cell within the contributing drainage area during the XX-year 24-hour rainfall event.	Flow direction value	
	Raster	The accumulated number of cells upstream of each cell within the entire watershed.	Upstream Cell Count	
	Raster	The accumulated number of cells upstream of each cell within the contributing drainage area during the XX-year 24-hour rainfall event.	Upstream Cell Count	
	Raster	Hydrologically reconditioned DEM.	Elevation value	
	Polyline	LiDAR derived flowpaths for areas with > 5 acres of drainage area.	<ul> <li>Type – Flow Regime:         <ul> <li>Overland (greater than 5 acres of drainage area but less than 0.5 sq. km.)</li> <li>In-channel (greater than 0.5 sq. km. drainage area)</li> </ul> </li> <li>WatershedType – Indicates whether the catchment is:         <ul> <li>Contributing surface drainage area</li> </ul> </li> <li>Non-contributing depression drainage area</li> <li>Tile inlet drainage area</li> </ul>	
	Polygon	Total watershed area corresponding to the most downstream pour point.	Square_Mi – Drainage area in square miles.  Acres – Drainage area in acres.  NonContrib Sq Mi – Sum of non-contributing areas in watershed in square miles.	

		conditioning process.	Source - LiDAR, Aerial, LiDAR & Aerial  public System - Yes, No  Confidence Level - High, Medium, Low  Internal Review - None, Flagged  Internal Review Comments - Description of review needs
NonContrib_Basin_10yr24hr	Polygon	Footprint of non-contributing basins at the spill out elevation for the depressed area.	GridCode – Basin ID  Fill Depth  Acres – Depression area in acres.
NonContrib_DrainageArea_10yr24hr	Polygon	Drainage area to non-contributing basins.	GridCode – Corresponds to Basin ID Square_Miles – Drainage area leading to inlet in square miles. Acres – Drainage area in acres.
tt_hrs_w	Raster	The time of concentration (downstream travel time) for each grid cell estimated using a Travel Time Routine developed by the Minnesota Department of Natural Resources. This routine uses the NLCD landuse, slope, and stream network to calculate the travel time for water to travel from grid cell to grid cell on the DEM to the outlet of the watershed.	Value
tt_hrs_sw	Raster	The time of concentration (downstream travel time) for each grid cell to the outlet of the subwatershed.	Value
tt_hrs_fl	Raster	The time of concentration (downstream travel time) for each grid cell to the concentrated flow path.	
time_grid_sec	Raster	The time of travel in seconds to the downstream cell (cell to cell).	Value
CN	Raster	The curve number values were determined using methods presented in Technical Release 55 (Urban Hydrology for Small Watersheds) based on the combination of the hydrologic soil type (Soil Survey Geographic (SSURGO) Database) and the landuse (National Land Cover).	Value
Flowlength	Raster	Upstream flow length in meters	Value

Water Quality Products.gdb

Water_Quality_Production	Data Type	Summary	Attributes (Red means it can be queried in the viewer)
LS_Factor	Raster	Length/Slope factor used in RUSLE. It is created from the hydrologically conditioned DEM and methodology from USDA Agricultural Handbook No. 703.	Value
Kw_factor	Raster	K factor used in RULSE. It is taken from the SSURGO soils database.	Value
C_factor	Raster	Cover Management factor used in RUSLE. It is created from the hydrologically conditioned DEM and methodology from USDA Agricultural Handbook No. 703 using USDA-NASS data.	Value
NASS_2012	Raster	The National Agricultural Statistics Service (NASS) 20XXCropland Data Layer (CDL) was used for assigning C values for various land use practices in the study area.	Value
R_factor	Raster	The R-factor accounts for the impact of meteorological characteristics on erosion rates and is taken from the Minnesota NRCS field guide.	Value
Slope	Raster	Slope value in percent.	Value
SPI	Raster	Raster cell values represent the result of the SPI equation.	Value
sed_mass	Raster	The sediment mass in (tons/acre/year) leaving the landscape estimated using the Revised Universal Soil Loss Equation.	Value

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sed_mass_fl	Raster	The estimated sediment mass (tons/acre/year) transported by overland flow reaching the nearest flow line computed as sed_mass multiplied by the overland sediment delivery ratio	Value
sed_mass_sw	Raster	The estimated sediment mass (tons/acre/year) transported by channelized flow reaching the subwatershed outlet computed as sl mass fl multiplied by the subwatershed sediment delivery ratio	Value
sed_mass_w	Raster	The estimated sediment mass (tons/acre/year) transported by channelized flow reaching the watershed outlet computed as sl_mass_fl multiplied by the watershed sediment delivery ratio	Value
sed_fl_sdr	Raster	The ratio of the sed_mass raster value that is delivered to the nearest flow line	Value
TP_mass	Raster	The estimated TP mass in (lbs/acre/year) leaving the landscape.	Value
TP_mass_fl	Raster	The estimated TP (lbs/acre/year) transported by overland flow reaching the nearest flow line computed as TP_mass multiplied by the overland delivery ratio.	Value
TP_mass_sw	Raster	The estimated TP (lbs/acre/year) transported by channelized flow reaching the subwatershed outlet computed as TP_mass_fl multiplied by the subwatershed delivery ratio	Value
TP_mass_w	Raster	The estimated TP (lbs/acre/year) transported by channelized flow reaching the watershed outlet computed as TP_mass_fl multiplied by the watershed delivery ratio	Value
TN_mass	Raster	The estimated TN mass in (lbs/acre/year) leaving the landscape.	Value
TN_mass_fl	Raster	The estimated TN (lbs/acre/year) transported by overland flow reaching the nearest flow line computed as TP_mass multiplied by the overland delivery ratio.	Value
TN_mass_sw	Raster	The estimated TN (lbs/acre/year) transported by channelized flow reaching the subwatershed outlet computed as TP_mass_fl multiplied by the subwatershed delivery ratio	Value
TN_mass_w	Raster	The estimated TN (lbs/acre/year) transported by channelized flow reaching the watershed outlet computed as TP_mass_fl multiplied by the watershed delivery ratio	Value

Derived\_Water\_Quality\_Products.gdb

File Name	Data Type	Summary	Attributes (Red means it can be queried in the viewer)
Overland_Catchments	Polygon	Drainage area delineations using a threshold of 124 acres to define the	Grid_code – Unique ID for overland catchments
		transition from concentrated overland flow to in-channel flow. A	WatershedType – Indicates whether the catchment is:
		minimum drainage area of 5 acres was also applied.	Contributing surface drainage area
			Non-contributing depression drainage area
			Area – Overland catchment area in acres.
			Square_Miles - Drainage area in square miles.
			WQI_mass - WQI value computed as (0.5*sed_mass_rk + 0.25* TP_mass_rk + 0.25* TN_mass_rk) based on the mass/acre rate
			leaving the landscape from the overland catchment relative to other overland catchments in the watershed.
			WQI_fl - WQI value computed as (0.5*sed_mass_rk + 0.25* TP_mass_rk + 0.25* TN_mass_rk) based on the mass/acre rate
			reaching the overland catchment outlet relative to other overland catchments in the watershed.
			WQI_sw - WQI value computed as (0.5*sed_mass_rk + 0.25* TP_mass_rk + 0.25* TN_mass_rk) based on the mass/acre rate
			reaching the subwatershed outlet relative to other overland catchments in the watershed.
			WQI_w - WQI value computed as (0.5*sed_mass_rk + 0.25* TP_mass_rk + 0.25* TN_mass_rk) based on the mass/acre rate
			reaching Lake Minnewaska relative to other overland catchments in the watershed.
			MeanSPI - The average Stream Power Index rank for erosive potential within the overland catchment.

Catchment_Outlets	Point	The outlet for the overland catchment.	
	1 Onit	The outlet for the overland catchment.	Grid_code – Unique ID for overland catchments
			Acres - Area measured in acres
			Square Miles Design
	l l		Square_Miles — Drainage area square miles.
6.1			Watersnearype - Indicates whether the catalyne at the catalyne
Subwatersheds	Polygon		WatershedType – Indicates whether the catchment contributes to surface runoff, a noncontributing depression, or a tile inlet MeanSPI - The average Stream Power Index rank for erosive potential within the overland catchment.
	1 51/8511		Grid code Grid code
	1		Acres - Area measured in acres
	1		Square Miles - Drainage -
			Square_Miles – Drainage area square miles.
	1		Sed_Mass - Sum of "sed_mass_sw" raster values within the subwatershed (tons/year)  TP_Mass - Sum of "TP_mass_sw" raster values within the subwatershed (tons/year)
cod many			
sed_mass_rank	Raster	The percentile rank of the sed_mass raster values using a normal	The same of the mass sw raster values within the subwatershed (the ways)
		distribution across the extents of the watershed	Value Value
TP_mass_rank	Raster	The news with the first extents of the watershed	
	Master	The percentile rank of the TN_mass raster values using a normal	Value
TN_mass_rank		distribution across the extents of the watershed	
TI	Raster	The percentile rank of the TP_mass raster values using a normal	Value
WOL		distribution across the extents of the watershed	Value
WQI_mass	Raster	Water Quality Index for raw loading	
sed_mss_fl_rk	Raster	The perceptile rank of the said	Value - 0.5*sed_mass_rk + 0.25* TP_mass_rk + 0.25* TN_mass_rk
		The percentile rank of the sed_mass raster values using a normal	Value Value
TN_mss_fl_rk	Raster	distribution across the extents of the watershed	
	raster	The percentile rank of the TN_mass_fl raster values using a normal	Value
TP_mss_fl_rk		distribution across the extents of the watershed	value
11 _11133_11_1K	Raster	The percentile rank of the TP_mass_fl raster values using a normal	
W. C.		distribution across the extents of the watershed	Value
WQI_mass_fl	Raster	Water Quality Index at the field scale	
sed_mss_sw_rk	Raster	The percentile work of the	Value - 0.5*sed_mss_fl_rk + 0.25* TP_mss_fl_rk + 0.25* TN_mss_fl_rk
	, idotei	The percentile rank of the sed mass sw raster values using a normal	Value Value
N_mss_sw_rk	Doct	distribution across the extents of the watershed	
	Raster	The percentile rank of the TN_mass_sw raster values using a normal	Value
"P_mss_sw_rk	4	usurbution across the extents of the watershed	Value
	Raster	The percentile rank of the TP_mass_sw raster values using a normal	
		distribution across the extents of the watershed	Value
VQI_mass_sw	Raster	Water Quality Index at the submeters to the Watershed	
ed_mss_w_rk	Raster	Water Quality Index at the subwatershed scale	Value - 0.5*sed_mss_sw_rk + 0.25* TP_mss_sw_rk + 0.25* TN_mss_sw_rk
	Musici	The percentile rank of the sed_mass_w raster values using a normal	Value Value
N_mss_w_rk		distribution across the watershed	
··	Raster	The percentile rank of the TN_mass_w raster values using a normal	Value
D mana		distribution across the watershed	value
P_mss_w_rk	Raster	The percentile rank of the TP_mass_w raster values using a normal	
		distribution across the watershed	Value
VQI_mass_w	Raster	Water Quality Index at the watershed	
Pl_rank	Raster	Water Quality Index at the watershed scale	Value - 0.5*sed_mss_w_rk + 0.25* TP_mss_w_rk + 0.25* TN_mss_w_rk
cc_sed_fl_mass		Percentile ranking of the SPI raster	Value
	Raster	The Sed_mass_fl raster accumulated in the downstream direction	
so sod fl man		excluding cells upstream flow lengths less than 300 feet	Value
cc_sed_fl_mass_rnks	Raster	Percentile rankings of the Sed_mass_fl raster accumulated in the	
		downstream direction and then a new arrangement accumulated in the	Value
		downstream direction and then a percentile rank is computed using a	
ediment Catchments	Voctor	Hormar distribution across the watershed.	
	Vector	Overland catchments less than 40 acres in size attributed with the mean	Acres - Area measured in acres
		accumulated sediment rank value of flowpaths within the catchment.	
		- Facility William the Catchinent.	Sediment Rank – Normal distribution percentile rank

Ranked_Sediment_Flowpaths	Raster	The flowpaths with > 300 feet of upstream flow length but less than 40 acres of upstream contributing area are classified into prioritization categories based on the Sed_mass_fl_rnks percentile ranks.	Implementation_Priority_Level  Extremely Low: <65% Percentile  Low: 65-75% Percentile  Moderate: 75-85% Percentile  High: 85-95% Percentile  Very High: >95% Percentile
Buffer Area	Polygon	The areas suitable for installation of vegetated buffer strips based on the suitability criteria.	Acres
Buffer Drainage Area	Raster	The drainage areas to areas determined suitable for vegetative buffer strips.	Acres - Area measured in acres

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