

APPENDIX 1 - SUMMARY OF DATASETS AND LINKS

Category	Subcategory	Filename	Source Data Location	Description	Scale	Metadata	Extent
303d List			http://www.epa.gov/waters/data/downloads.html	Lists streams and lakes in the United States that are not achieving an acceptable level of certain environmental parameters. Total Maximum Daily Loads (TMDLs).		Y	US
	rad_303d_l_sde.shp			lines		Y	US
	rad_303d_p_sde.shp			points		Y	US
Aquifers	aquifp025.mdb		www.nationalatlas.gov	The shallowest principal aquifers of the conterminous U.S.	2,500,000	Y	US
	IL - aqmbg500		http://www.isgs.uiuc.edu/nsdihome/webdocs/st-hydro.html	Major Bedrock Aquifers at Depths Greater Than 500 Feet Below Ground Surface	500,000	Y	IL
Base Layers							
	drain_sheds		USGS - Lansing	Combined 8-dig HUCs that represent major river drainages	24000?	N	US GL Basin
	ind_basin_usgs_250k		USGS website	General basin and watershed boundaries	250,000	N	US GL Basin
				As basins and broken out into individual watersheds. These are the watersheds used for basin-wide screening and match the DEM sent to us by the GL GIS project.	250,000	Y	US GL Basin
	sheds_geo_correct		NORTAD watersheds from Great Lakes Commission	General basin and watershed boundaries with masks and land-only units.	250,000	N	US GL Basin
	topo_corr_wshds		USGS website	Greater than 10,000 in population.			US GL Basin
	cities						
	diss_usawshed_huc_Project.shp						
	gl_arealand.shp						US and CA
	gl_areawtr.shp						US and CA
	gl_counties.shp						US and CA
	glbasin.shp						US and CA
	glbasin_landonly.shp						US and CA
Basins							
	4010101-04030112		EPA Basins	BASINS tools and data available for download (and/or CD's can be ordered) from: http://www.epa.gov/waterscience/basins/			Partial US Basin
C-CAP	NOAA LandCover		http://www.csc.noaa.gov/crs/ca/greatlakes.html	Landcover data from Landsat Thematic Mapper and Landsat Enhanced Thematic Mapper satellite imagery			Most US Basin
Census	BlockCentroid Populations		ESRI data CD	2000 Census	100,000	Y	US Basin
CN				The destination folder for the previously mentioned intersections and CN calculations. Further stream power calcs are stored in this folder..			
	LHB		Derived data - precipitation, statsgo soils, and NLCD land cover.				LHB
	LMB						LMB
County Water Use							
			http://water.usgs.gov/lookup/getgislist	Describes county water use for the conterminous U.S.		Y	US
Dams							
	dams00x020.shp		www.nationalatlas.gov	General layer for conterminous U.S. that describes water storage by dam. Dams 50 ft or more or normally store 5,000 acre-ft or more.		Y	US
	nid		US Army Corps of Engineers			Y	US
	DAMS_1996_EPA_IN.shp		http://igs.indiana.edu/arcims/statewide/metadata/Dams_1996_EPA_IN.html	EPA Basins dams locations.		Y	IN
	MI_dams_MIDEQ.mdb		MNDNR or MNDEQ or Michelle DePhillipe?	State dam layer, better than the NID.		Y - elec	MN
Ecoregions							
	ecoregp075.shp		www.nationalatlas.gov	Ecosystems of regional extent. Third level of detail. Differentiated by temperature, precipitation, vegetation, and terrain features.		?	US
	ecoatlas.shp		?	Canada		?	CA
	ECODIST.shp		?	Canada		?	CA
Floodzones							
	cook		http://www.isgs.uiuc.edu/nsdihome/browse/cook/index.html	100 and 500 yr floodplains	6000-24000	Y	IL
Geo	lake		http://www.isgs.uiuc.edu/nsdihome/browse/lake/index.html	100 and 500 yr floodplains	6000-24000	Y	IL
	Bedrock						
		il - bedgeo, bedtopo	http://www.isgs.uiuc.edu/nsdihome/webdocs/st-geolb.html	bedrock geology and topography	500,000	Y	IL
		in - bedrock_geol_mm48.in.shp		bedrock geology	500,000	Y - elec	IN
		mi - 1987_bedrock_geology.shp				N	MI
		mn - bgpg2000	http://www.lmic.state.mn.us/chouse/metadata/stmaps20_3.html	bedrock geology	1,000,000	Y - elec	MN
		ny - adir_bedr1a; bndadir;					
		fing_bedr1a; niag_bedr1a	http://www.nysm.nysed.gov/gis/#state	bedrock geology for GL portion of New York	250,000	Y	NY
		oh -	Ohio Geologic Survey	shaded bedrock topography		Y - elec	OH

Category	Subcategory	Filename	Source Data Location	Description	Scale	Metadata	Extent
		pa - pagpoly.shp	http://www.pasda.psu.edu/documents/cg/dcnr/pags/dcnr_bedrockgeology_shp_2001.xml	bedrock geology	250,000	Y	PA
		superior - geology.shp	Unknown	bedrock geology	1,000,000	Y - elec	LSB
		us - kbge_project_glbasin.shp	www.nationalatlas.gov	us bedrock geology	2,500,000	Y	US
	Quaterny	CHIC	From Michelle DePhilip - from USGS data CD	surficial geology	1,000,000	Y - elec	IL
		HUDR	From Michelle DePhilip - from USGS data CD	surficial geology	1,000,000	Y - elec	NY
		il - quat96	http://www.igs.uiuc.edu/nsdihome/webdocs/st-geolg.html	surficial geology	2,500,000	N	IL
		il - quat79	http://www.igs.uiuc.edu/nsdihome/webdocs/st-geolg.html	surficial geology	500,000	Y	IL
		in - surficial_geol_mm49_in.shp	< http://igs.indiana.edu/arcims/statewide/download.html >	surficial geology	500,000	Y - elec	IN
		LERI	From Michelle DePhilip - from USGS data CD	surficial geology	1,000,000	Y - elec	PA, IN, NY
		LNIP	From Michelle DePhilip - from USGS data CD	surficial geology	1,000,000	Y - elec	
		LSUP	From Michelle DePhilip - from USGS data CD	surficial geology	1,000,000	Y - elec	WI
		LWDS	From Michelle DePhilip - from USGS data CD	surficial geology	1,000,000	Y - elec	MN
		mi		surficial geology	?	N	MI
		MINN	From Michelle DePhilip - from USGS data CD	surficial geology	1,000,000	Y - elec	MN
		MN	http://www.lmic.state.mn.us/chouse/metadata/quatgeo.html	surficial geology	500,000	Y - elec	MN
		ny - adir_s; fing_s; niag_s	www.nysgis.state.ny.us/gis3/data/sed/nyssurf.html	surficial geology	250,000	Y	NY
		oh -	Ohio Geologic Survey	surficial geology and thickness	?	Y - elec	OH
		OTTA	From Michelle DePhilip - from USGS data CD	surficial geology	1,000,000	Y	CA GL BASIN
		SUDB	From Michelle DePhilip - from USGS data CD	surficial geology	1,000,000	Y	CA GL BASIN
		sfggeom020_polygon.shp	www.nationalatlas.gov	surficial geology	2,500,000	Y	US
Graphic dls	USGS_wrir_004008						
		bed_aquifers.gif					
		carb_sand_aquifer.gif					
		gbay_confiningunit.gif					
		gbay_potent_sfc57.gif					
		gbay_potent_sfc90.gif					
		gen_gwflow.gif					
		gen_sfcgeo.gif					
		gw_decline_wlmich.gif					
		gw_sfc_comp.gif					
		gw_wdrate.gif					
		lmich_wat_bug.gif					
		loc_reg_gwflow.gif					
		toledo_pot_sfc.gif					
		evaporitic maps.jpg					
		GW-CanyonsWH-IL.jpg					
		gw_subsidence.jpg					
		peat_soils.jpg					
Grav	bouger_albers		ftp://ftpext.usgs.gov/pub/cr/co/denver/musette/pub/open-file-reports/ofr-02-0414/L27_unproj/	complete Bouguer gravity anomaly at 2.67	?	N	US
	isograv_alber		ftp://ftpext.usgs.gov/pub/cr/co/denver/musette/pub/GEOPHYSICAL_DATA/cdrom_DD_S-9/GRIDS/ARC_INFO/	isostatic residual gravity anomaly 30km, 35 g/cc	?	N	US
gw_well	wi		http://water.usgs.gov/	USGS groundwater well locations		N	WI
	ohio		http://water.usgs.gov/			N	OH
hwys	il		USDOT?	Federal Highways	?	N	IL
	in			Federal Highways	?	N	IN
	mi			Federal Highways	?	N	MI
	mn			Federal Highways	?	N	MN
	ny			Federal Highways	?	N	NY
	oh			Federal Highways	?	N	OH
	pa			Federal Highways	?	N	PA
	wi			Federal Highways	?	N	WI
isat	project_glb_isat_high		Derived data.	Percent imperviousness by 8-digit HUC. Based on NLCD and 2000 census block centroids.		N	US Basin
jia_scripts							
	cal_total_sel_area.txt			calculates length of selected lines			
	dam_distance2.txt			creates network and determines distance upstream from a dam to next impoundment and downstream to next impoundment.			
	Update_CN.txt						
karst	us	karst.shp	http://pubs.usgs.gov/of/2004/1352/		7,500,000	Y - elec	US
		subside.shp				Y - elec	US
	il	karst	http://www.igs.uiuc.edu/nsdihome/webdocs/st-hydro.html			N	IL
land_cover	glb	nlcd	GL GIS	land cover		Y - elec	US GL BASIN
	leb	nlcd	GL GIS	land cover		Y - elec	LEB
	lhb	us-nlcd	GL GIS	land cover		Y - elec	LHB

Category	Subcategory	Filename	Source Data Location	Description	Scale	Metadata	Extent
	lhb	canada - lulc - omnir	GL GIS	land cover		Y - elec	LHB - Canada
	lmb	nlcd	GL GIS	land cover		Y - elec	LMB
	lob	nlcd	GL GIS	land cover		Y - elec	LOB
	lsb	nlcd	GL GIS	land cover		Y - elec	LSB
	wiscland	wlcw930.tif	Wisconsin Department of Administration GIS, Jerry Sullivan	land use land cover		?	WI
mag_field	USmag_origmrg_LL27_grd		ftp://ftpext.usgs.gov/pub/ct/co/denver/musette/pub/open-file-reports/ofr-02-0414/	Magnetic Anomaly Data	1,000,000	N	US
matrix_comp	matrix_1		Derived data	Summation of critical hydrologic factors as determined by the group.	varies	N	US GL BASIN
	matrix_2						
	matrix_3						
	matrix_4						
	matrix_5						
	matrix_6						
	matrix_7						
natcons_class	edu.shp		Michelle DePhilip	Nature Conservancy hydrologic/ecological groupings	?	Y - elec	US GL BASIN
NHD	ditch						
	grids						
	high_res_data	NHDH0401.mdb - NHDH0415.mdb, n	USGS	High resolution hydrography, no area 413, however.	24,000	N	US GL BASIN
	med_res_data	NHDH0401.mdb - NHDH0415.mdb	USGS	Medium resolution hydrography	1,000,000	N	US GL BASIN
	polylines						
	Shapefiles						
	streamdensity						
precip	2yr_event						
	24_hour - f_2y24h	24_hour - f_2y24h	http://www.tucson.ars.ag.gov/agwa/rainfall_frequency.html	2-yr storm event in 24 hours	?	N	US GL BASIN
	2_hour - f_2y2h	2_hour - f_2y2h	http://www.tucson.ars.ag.gov/agwa/rainfall_frequency.html	2-yr storm event in 2 hours	?	N	US GL BASIN
	apr		http://www5.ncdc.noaa.gov/cgi-bin/climaps/climaps	Avg annual precip for the month			US
	aug		http://www5.ncdc.noaa.gov/cgi-bin/climaps/climaps	Avg annual precip for the month			US
	dec		http://www5.ncdc.noaa.gov/cgi-bin/climaps/climaps	Avg annual precip for the month			US
	feb		http://www5.ncdc.noaa.gov/cgi-bin/climaps/climaps	Avg annual precip for the month			US
	jan		http://www5.ncdc.noaa.gov/cgi-bin/climaps/climaps	Avg annual precip for the month			US
	jul		http://www5.ncdc.noaa.gov/cgi-bin/climaps/climaps	Avg annual precip for the month			US
	jun		http://www5.ncdc.noaa.gov/cgi-bin/climaps/climaps	Avg annual precip for the month			US
	mar		http://www5.ncdc.noaa.gov/cgi-bin/climaps/climaps	Avg annual precip for the month			US
	may		http://www5.ncdc.noaa.gov/cgi-bin/climaps/climaps	Avg annual precip for the month			US
	nov		http://www5.ncdc.noaa.gov/cgi-bin/climaps/climaps	Avg annual precip for the month			US
	oct		http://www5.ncdc.noaa.gov/cgi-bin/climaps/climaps	Avg annual precip for the month			US
	sep		http://www5.ncdc.noaa.gov/cgi-bin/climaps/climaps	Avg annual precip for the month			US
	snow		http://www5.ncdc.noaa.gov/cgi-bin/climaps/climaps	Avg annual precip for the month			US
	precip		Derived from us_poly.shp	Derived from us_poly.shp	2,000,000	Y	US
	us_poly.shp		http://www.ncgc.nrcs.usda.gov/products/datasets/climate/data/precipitation-metadata.html	This data set shows polygons of average annual precipitation in the contiguous United States, for the climatological period 1961-1990.	2,000,000	Y	US
presett_veg							
	il		Illinois Natural History Survey		?	Y - elec	IL
	mi		Michigan Native Landscape, As Interpreted from the GLO Surveys 1816-56	Michigan Native Landscape, As Interpreted from the GLO Surveys 1816-57	24,000	Y - elec	MI
	mn	grid and shapefile	hal.watson@dnr.state.mn.us (651) 297-2330	Presettlement vegetation of Minnesota based on Marschner's original analysis of Public Land Survey notes and landscape patterns. Marschner compiled his results in map format, which was subsequently captured in digital format	1,000,000	Y-elec	MN
	mn	grid of wetlands	derived		1,000,000	N	MN
	wi	grid and shapefile		pre-settlement vegetation		N	WI
	wi	grid of wetlands	derived			N	WI
	in	n/a					
	pa	n/a					
	ny	n/a					
	oh	n/a					
rfl			www.epa.gov	Reach File 1	500,000	Y	US
Scans							
	widptbdk		Roger Kuhns	georeferenced TIF	1,000,000	N	WI
	BEDROCK NORTHWEST GEOLOGY.TIF		Roger Kuhns			N	WI, IL, MI
	GENERALIZED BEDROCK.TIF		Roger Kuhns			N	WI, IL, MI
	HYDROGEO A-A.TIF		Roger Kuhns			N	IL, IN, OH
	HYDROGEO B-B.tif		Roger Kuhns			N	
	ne_wi_simpotent_sandstone.gif		Roger Kuhns			N	NE WI
	PHYSICAL SETTING.TIF		Roger Kuhns			N	WI - LMB

Category	Subcategory	Filename	Source Data Location	Description	Scale	Metadata	Extent
	WATER RESOURCE 2.TIF		Roger Kuhns			N	WI - LMB
	WATER RESOURCE OF WI.TIF		Roger Kuhns		1,000,000	N	WI - LMB
	WATER RESOURCE3.TIF		Roger Kuhns		1,000,000	N	WI - LMB
	wi depth to bedrock.tif		Roger Kuhns				
statsgo							
	hyd_group		derived	soils broken out by soil hydrologic grouping	250,000		US GL BASIN
	hydric_grid		derived	hydric soils	250,000		US GL BASIN
	IL		http://www.ncgc.nrcs.usda.gov/products/datasets/statsgo/	coverages and tables	250,000	Y	IL
	IN		http://www.ncgc.nrcs.usda.gov/products/datasets/statsgo/	coverages and tables	250,000	Y	IN
	layers		derived	layer files for hydrologic groupings	250,000	Y	US GL BASIN
	lhb		http://www.ncgc.nrcs.usda.gov/products/datasets/statsgo/	From merging state coverages into a shapefile.	250,000	N	LHB
	lmb		http://www.ncgc.nrcs.usda.gov/products/datasets/statsgo/	From merging state coverages into a shapefile.	250,000	N	LMB
	lsb		http://www.ncgc.nrcs.usda.gov/products/datasets/statsgo/	From merging state coverages into a shapefile.	250,000	N	LSB
	MI		http://www.ncgc.nrcs.usda.gov/products/datasets/statsgo/	coverages and tables	250,000	Y	MI
	MN		http://www.ncgc.nrcs.usda.gov/products/datasets/statsgo/	coverages and tables	250,000	Y	MN
	NY		http://www.ncgc.nrcs.usda.gov/products/datasets/statsgo/	coverages and tables	250,000	Y	NY
	OH		http://www.ncgc.nrcs.usda.gov/products/datasets/statsgo/	coverages and tables	250,000	Y	OH
	PA		http://www.ncgc.nrcs.usda.gov/products/datasets/statsgo/	coverages and tables	250,000	Y	PA
	WI		http://www.ncgc.nrcs.usda.gov/products/datasets/statsgo/	coverages and tables	250,000	Y	WI
	glb_statsgo_comp_proj		http://www.ncgc.nrcs.usda.gov/products/datasets/statsgo/	From merging state coverages into a shapefile.	250,000	Y	US GL BASIN
	broken down my states		http://www.ncgc.nrcs.usda.gov/products/datasets/statsgo/	From merging state coverages into a shapefile.	250,000	Y	US GL BASIN
storet							
	usstoret.shp		http://www.epa.gov/storet/	Locations of US STORET locations	?	N	US
stream_gage							
	gl_sg.shp		http://waterdata.usgs.gov/nwis/sw	Location of GL stream gages	?	N	US GL BASIN
	Ontario_Q_data		Michele Dephilip	Location of Ontario stream gages	?	N	ONTARIO
stream_rd_intersect							
	leb		derived from nhd canals/streams and TIGER roads	Point shapefiles showing the intersection of streams and roads.		N	
	lhb		derived from nhd canals/streams and TIGER roads	Point shapefiles showing the intersection of streams and roads.		N	LEB
	lmb		derived from nhd canals/streams and TIGER roads	Point shapefiles showing the intersection of streams and roads.		N	LHB
	lob		derived from nhd canals/streams and TIGER roads	Point shapefiles showing the intersection of streams and roads.		N	LMB
	lsb		derived from nhd canals/streams and TIGER roads	Point shapefiles showing the intersection of streams and roads.		N	LOB
			derived from nhd canals/streams and TIGER roads	Point shapefiles showing the intersection of streams and roads.		N	LSB
streamflow							
	realstx.shp		http://water.usgs.gov/lookup/getspatial?realstx	Shows USGS sampling stations that are actively transmitting information.	24,000	Y	USA
streams							
	hydrogl020.shp		www.nationalatlas.gov	Streams and water bodies.	2,000,000	Y - elec	USA
swss							
	sw9194x020.shp		www.nationalatlas.gov	91 and 94 NAWQA study units' major surface-water sampling sites. This sites are in NAWQA's fixed network and/or in a bed sediment and tissue network.	?	Y	USA
tiger							
	illi_	illi_roads.shp	http://www.esri.com/data/download/census2000_tigerline/	Merged from cty files	100,000	N	IL
	indi_	indi_roads.shp	http://www.esri.com/data/download/census2000_tigerline/	Merged from cty files	100,000	Y	IN
	leb_	leb_tiger.shp, leb_tiger_maj.shp, leb	http://www.esri.com/data/download/census2000_tigerline/	Merged from cty files, major and minor roads selected.	100,000	N	LEB
	lhb_	lhb_tiger.shp, lhb_tiger_maj.shp, lhb	http://www.esri.com/data/download/census2000_tigerline/	Merged from cty files, major and minor roads selected.	100,000	N	LHB
	lmb_	lmb_tiger.shp, lmb_tiger_maj.shp, lmb	http://www.esri.com/data/download/census2000_tigerline/	Merged from cty files, major and minor roads selected.	100,000	N	LMB
	lob_	lob_tiger.shp, lob_tiger_maj.shp, lob	http://www.esri.com/data/download/census2000_tigerline/	Merged from cty files, major and minor roads selected.	100,000	N	LOB
	lsb_	lsb_tiger.shp, lsb_tiger_maj.shp, lsb	http://www.esri.com/data/download/census2000_tigerline/	Merged from cty files, major and minor roads selected.	100,000	N	LSB
	mich_	mich_roads.shp	http://www.esri.com/data/download/census2000_tigerline/	Merged from cty files.	100,000	N	MI
	minn_	minn_roads.shp	http://www.esri.com/data/download/census2000_tigerline/	Merged from cty files.	100,000	N	MN
	newy_	newy_roads.shp	http://www.esri.com/data/download/census2000_tigerline/	Merged from cty files.	100,000	N	NY
	ohio_	ohio_roads.shp	http://www.esri.com/data/download/census2000_tigerline/	Merged from cty files.	100,000	N	OH
	penn_	penn_roads.shp	http://www.esri.com/data/download/census2000_tigerline/	Merged from cty files.	100,000	N	PA
	wisc_	wisc_roads.shp	http://www.esri.com/data/download/census2000_tigerline/	Merged from cty files.	100,000	N	WI
	gl_roads_usa2.shp		http://www.esri.com/data/download/census2000_tigerline/	Merged from state files.	100,000	N	US GL BASIN
	gl_roads_usa2_Intersect.shp		http://www.esri.com/data/download/census2000_tigerline/	Merged from state files.	100,000	N	US GL BASIN
	gl_roads_usa2_Project		http://www.esri.com/data/download/census2000_tigerline/	Merged from state files.	100,000	N	US GL BASIN
	linedenglr1_summ_huc.shp						
topography							
	GLB	glb_ned_1as	All topography from the GL GIS.	NED		Y	LEB
		glb_slope		derived slope		N	LEB
		glbslop_summ_huc.shp		shapefile that summarized slope by 8 dig HUC.		N	LEB
		project_glb_1		projected NED		N	LEB
						N	LEB
	il_mi_wi_topogrid	il	MI USGS	hydrologically correct DEM by processing unit		N	IL
		mi	MI USGS	hydrologically correct DEM by processing unit		N	MI, IN
		wi	MI USGS	hydrologically correct DEM by processing unit		N	WI
	LEB	leb_ned_1as		NED		N	LEB
		fill_leb		Filled NED with spatial analyst 'fill' command.		N	LEB
		project_leb_1		projected NED		N	LEB
		slope_leb		derived slope		N	LEB

Category	Subcategory	Filename	Source Data Location	Description	Scale	Metadata	Extent
		lebslop_summ_huc		shapefile that summarized slope by 8 dig HUC.		N	LEB
		flodir_leb		derived flowdir		N	LEB
		leb_floacc		derived flow accumulation		N	LEB
		leb_stream_400		derived stream shapefile using fa of 400 as cutoff		N	LEB
		lebstream_summ_slope		derived watershed shapefile summarizing slope		N	LEB
		leb_stream400		derived stream grid using 400 f.a. as a treshhold		N	LEB
		leb_str (1000)		derived stream grid using 1000 f.a. as a treshhold		N	LEB
		leb_str (400)		derived stream grid using 400 f.a. as a treshhold (not sure the diff from above)		N	LEB
	LHB	lhb_ned_1as		NED		Y	LHB
		project_lhb		projected NED		N	LHB
		slope_lhb		derived slope		N	LHB
		lhblop_summ_huc		shapefile summarizing slope by HUC		N	LHB
		lhb_dropras		Drop Raster		N	LHB
		lhb_fill		derived fill		N	LHB
		lhb_floacc		derived flowacc		N	LHB
		lhb_flodir		derived flowdir		N	LHB
		lhb_holes		grid of [lhb_fill] - [project_lhb]		N	LHB
		lhb_stream_1000		shapefile of flow accum > 1000		N	LHB
		tittawa_1000_summ_work		shapefile using zonal statistics to summarize floacc by shapefile of stream			
		tittawa_power		work multiplied by slope			
		tittawa_stream_1000		shapefile of lhb_stream_1000 clipped by tittawabassee watershed.			
		lhb_str_1000		grid of flow acc >1000			LHB
		lhb_str		grid of flow acc >1000			LHB
	LMB	lmb_ned_1as		NED		Y	LMB
		lmb_str_order		Stream Order of streams derived from NED		N	LMB
		mil_current		Milwaukee Watershed discharge and power and slink shapefiles.		N	MIL WS
		mil_presettlement		Milwaukee Watershed pre-settlement discharge, power and slink shapefiles. Also includes the power difference shapfiles.		N	MIL WS
		flowdir_lmb		Derived flow direction.		N	LMB
		lmb_floacc		Derived flow accumulation.		N	LMB
		lmb_slopecopy		Derived slope.		N	LMB
		lmb_str_1000		Derived stream using the value of 1000 as the cutoff from flow accumulation.		N	LMB
		lmb_stre_1000		Same as above		N	LMB
		lmblop_summ_huc.shp		Slope summarized by 8 digit HUC		N	LMB
		project_lmb_1		projected NED		N	LMB
		slink_lmb		Derived SLINK for streams from the NED		N	LMB
		sorder_lmb		Derived Stream Order		N	LMB
	LOB	lob_ned_1as		NED		Y	LOB
		lob_floacc		Derived flow accumulation		N	LOB
		lob_flodir		Derived flow direciton		N	LOB
		lob_dropras		Drop Raster		N	LOB
		lob_fill		derived fill		N	LOB
		loblop_summ_huc		shapefile summary of slope by 8 digit HUC.		N	LOB
		project_lob		projected NED		N	LOB
		slope_lob		Derived Slope.		N	LOB
	LSB	lsb_ned_1as		NED		Y	LSB
		fill_lsb		Derived fill		N	LSB
		floacc_lsb		Derived flow accumulation.		N	LSB
		flowdir_lsb		Derived Flow Direction.		N	LSB
		project_lsb		Projected NED.		N	LSB
		slope_lsb		Derived slope.		N	LSB
		lsb_stream_1000		shapefile of derived stream at f.a. cutoff of 1000		N	LSB
		lsblop_summ_huc		shapefile summarizing slope by 8 digit HUC		N	LSB
		lsbstream_summ_slope		shapefile summarizing slope by stream segment		N	LSB
		str_ord_1000		grid of stream order at 1000 f.a. cutoff.		N	LSB
		lsb_str1000		grid of streams derived from NED at f.a. cutoff of 1000		N	LSB
		lsb_str_1000		grid of streams derived from NED at f.a. cutoff of 1000		N	LSB
		lsb_str_400		grid of streams derived from NED at f.a. cutoff of 400		N	LSB
usgs data			Ed Bissel USGS	Various data sets done by Ed Bissel for the aquatic GAP program		N	Menominee
usps			USPS	Point data on every post office delivery spot in US		Y	US
water intakes				Large water intakes in areas around the GL		N	US GL BASIN
well borings			http://www.isgs.uiuc.edu/nsdihome/browse/cook/index.html	Well-borings in Illinois by county.		N	IL GL
wetlands			usgs in Madison	NWI		N	US GL BASIN

APPENDIX 2 - WATER ALLOCATION PROGRAM LIST

Short Name	Descriptive Name	Model Development	Organization Contact
<u>Models Developed by the Corps of Engineers</u>			
HEC-5	Simulation of Flood Control and Conservation Systems	USACE Hydrologic Engineering Center	http://www.hec.usace.army.mil/
HEC-PRM	Prescriptive Reservoir Model	USACE Hydrologic Engineering Center	http://www.hec.usace.army.mil/
SSARR	Streamflow Synthesis and Reservoir Regulation	USACE North Pacific Division	http://www.nwd-wc.usace.army.mil/report/ssarr.htm
<u>Models Developed by State Agencies</u>			
WRIMS (CALSIM)	Water Resources Integrated Modeling System	CA Department of Water Resources	http://modeling.water.ca.gov/hydro/model/description.html
StateMOD	State of Colorado Stream Simulation Model	CO Water Conservation Board CO Division of Water Resources	http://cdss.state.co.us/
<u>Models Developed by International Consulting Firms and Research Institutes</u>			
OASIS	Operational Analysis and Simulation of Integrated Systems	HydroLogics, Inc.	http://www.hydrologics.net/
ARSP	Acre Reservoir Simulation Program	Acre International, BOSS International	http://civilcentral.com/html/arsp_tech_info.html
MIKE BASIN	GIS-Based Decision Support for Water Planning & Mgmt	Danish Hydraulic Institute	http://www.dhisoftware.com/mikebasin/
RIBASIM	River Basin Simulation	Delft Hydraulics	http://www.wldelft.nl
WEAP	Water Evaluation and Planning	Stockholm Environment Institute	http://weap21.org
<u>General River and Reservoir Simulation Models</u>			
Short Name	Descriptive Name	Model Development	Organization Contact
SUPER SWD	Reservoir System Model	USACE Southwestern Division	http://www.swd.usace.army.mil/
HEC-ResSim	Reservoir System Simulation	USACE Hydrologic Engineering Center	http://www.hec.usace.army.mil/
RiverWare	River and Reservoir Operations	Bureau of Reclamation, TVA,	http://animas.colorado.edu/riverware/
MODSIM	Generalized River Basin Network Flow Model	Colorado State University	http://modsim.engr.colostate.edu/modsim.html
WRAP	Water Rights Analysis Package	USACE, TWRI	http://ceprofs.tamu.edu/rwurbs/wrap.htm
	TX Commission on Environmental Quality		103

APPENDIX 3 - PRESENTATIONS AND MEETINGS

Presentations/Meetings

June 2005 - Great Lakes Protection Fund Growing Water Initiative Workshop, Evanston, IL
Presentation: Identifying and Valuing Restoration Opportunities and Resource Improvements at Watershed and Subwatershed Scales

January 2006 – Project Site Visit with local Nature Conservancy Staff – Shiawassee Watershed - Owosso, MI
Project Update and Field Validation: Identifying and Valuing Restoration Opportunities and Resource Improvements at Watershed and Subwatershed Scales

February 2006 – Project Site Visit with local Nature Conservancy Staff – St. Joseph Watershed - Angola, IN
Project Update and Field Validation: Identifying and Valuing Restoration Opportunities and Resource Improvements at Watershed and Subwatershed Scales

February 2006 - Project Site Visit with University of Wisconsin at Milwaukee Staff – Milwaukee River Watershed - Milwaukee, WI
Project Update and Field Validation: Identifying and Valuing Restoration Opportunities and Resource Improvements at Watershed and Subwatershed Scales

October 2006 - Minnesota GIS/LIS Consortium – St. Cloud, MN
Presentation: Prioritizing and Valuing Hydrologic Restoration Opportunities & Evaluating the Effects of Differing BMPs on Pollutant Load Reductions Using Custom GIS Tools

July 2006 – The Joyce Foundation – Chicago, IL
Presentation: Identifying and Valuing Restoration Opportunities and Resource Improvements at Watershed and Subwatershed Scales

January 2007 - Project Presentation – The Conservation Fund – Brodhead, WI
Presentation: Identifying and Valuing Restoration Opportunities and Resource Improvements at Watershed and Subwatershed Scales

February 2007 – Wisconsin Wetlands Association, Conference: Riverine Wetlands: Connections, Corridors and Catchments – La Crosse, WI
Presentation: “Wetlands as Regulators of Flow Regime in the Milwaukee River Watershed”

February 2007 – (MN) Wetland Professionals Association, Conference: Landscape Level Functional Assessment
Presentation: Landscape Assessments of Hydrologic Restoration Opportunities and BMP's Using GIS Tools

March 2007 – Lake Erie Millennium Workshops on Implementing Watershed/Nearshore Nutrient Loading Management and Targets, Lake Erie Lakewide Management Plan - Windsor, ON
Presentation: Identifying and Valuing Restoration Opportunities and Resource Improvements at Watershed and Subwatershed Scales

March 2007 – U.S. EPA, Great Lakes National Program Office – Chicago, IL
Presentation: Identifying and Valuing Restoration Opportunities and Resource Improvements at Watershed and Subwatershed Scales

April 2007 – Bay Lakes Regional Planning Commission, USFWS, Wisconsin DNR – Green Bay, WI
Presentation: Identifying and Valuing Restoration Opportunities and Resource Improvements at Watershed and Subwatershed Scales

April 2007 – 2nd National Conference on Ecosystem Restoration – Kansas City, MO
Presentation: Identifying and Valuing Hydrologic Restoration Opportunities in the Great Lakes Basin

May 2007 – International Association for Great Lakes Research - 50th Conference on Great Lakes Research – College Station, PA