Wetland restoration and preservation - GIS model
June 19, 2006

Wetland restoration for water quality

Layer	Ranking	Comments	Wt (%)	Layer
DNR farmed wetlands	4/0	default	3	dnrfarmre
TMDL nutrients or sediments	4/0	default	4	tmdlcombre
TMDL high priority sites	4/0	default	4	tmdlhighprre
Land use of potential site	agriculture=4; barren=3; forest, urban, water, wetl=1	default	10	comblure2
		AA		aabetterlu
NHD Streams - 100m buffer	Scenic and scenic tributaries within watershed=4; nonscenic=2; nonstream=0	default	7	strmre2
Streams – 100m buffer		AA		aaallstrm1re
Reservoirs	Reservoir watershed=4; non=0	CR	10	crreservre
Must be hydric soil:				
Hydric soils	VPD=3; PD=4; SPD=2; Nonhydric, NoData=NoData	"ssurgo soil" or digital draft soils based on drainage classification AA, BA, CR, CE, CH, CO, DO, FR, HA, HO, KE, MO, QA, SO, TA, WA, WI, WO	7	Different for each County (e.g. draindore5; drainhare5b)

	Hydric=4; Nonhydric, NoData=NoData	"natural soils groups" based on hydric classification AL, CV, GA, PG, ST	7	Different for each County (eg. hydricalre5)
Exclude or lower rank:				
Prime farmland soils	Not prime=4; Prime when drained=2; NoData=0; Prime when irrigated, prime=NoData; NoData=0	"ssurgo soil" or digital draft soils AA, BA, CA, CE, CH, CO, DO, FR, HA, HO, KE, MO, TA, WA, WO	Exclude prime and reduce importance of prime when drained - 7	Different for each County (eg. primereba6)
	Not prime=0; prime=NoData; NoData=0	"natural soil groups" AL, CV, GA, PG, ST	Exclude all	Different for each County (eg. Primereba5)
	Not prime, NoData=0; Prime when drained, Prime when irrigated, Yes=NoData	WI/SO/QA ("ssurgo soil" or digital draft soils)	Exclude all	Primerewi14, primereso12, primereqa12
Wetlands (DNR and NWI)	Uplands, pf wetlands, NoData=0; Wetlands =NoData	default - (all wetl except DNR-identified farmed wetlands – pf)	Exclude	wetlallnopf3
Wetlands samps	Upland=0; Wetland=NoData	BA	Exclude	basampsre
Agric Easements	Absent=0; Present=NoData	SO	Exclude	agdistsore/ageasesore
PFAs	Absent=4; Present=0	Cv, Ch, Do, So, Wi, Wo - Includes Wo dev districts	7	pfareduced1
Zoning - RCA		BA		bazoningre2

Overlay: SCA survey sites having erosion, fish blockages, channelization, and poor buffers. Data added from AA, FR, HO Counties.
Layer outputs: allwqmo2 . . . , aawqaa4, allwqbc4

Wetland restoration for biodiversity

Layer	Ranking	Comments	Wt (%)	Layer
Green Infrastructure and proximity	Within-50m=4; 51-200m=2; >200m=0	default	10	gimultre
	Within-50m=4; 51-200m=2; >200m=0	PG	10	pggipathre
		AA		aagi2re
Land use of potential site	agriculture=4; barren=3; forest, urban, water, wetl=1	default	10	comblure2
		AA		aabetterlu
NHD Streams – 100m buffer	Scenic and scenic watershed=4; nonscenic=2; nonstream=0	default	5	strmre2
Streams – 100m buffer		AA		aaallstrm1re
Proximity to NTWSSC and other significant areas	Within-50m=4; 51-200m=2; >200=0	default	3	wsscallbuffre
Reservoirs	Reservoir watershed=4; non=0	Cr	10	crreservre
Must be hydric soil:				
Hydric soils	VPD=4; PD=3; SPD=2; Nonhydric, NoData=NoData	"ssurgo soil" or digital draft soils based on drainage classification AA, BA, CA, CE, CH, CO, DO, FR, HA, HO, KE, MO, QA, SO, TA, WA, WI, WO	7	Different for each County (e.g. draindore6; drainhare6b)

		"natural soils groups" based on hydric classification AL, CV, GA, PG, ST	7	Different for each County (eg. Hydricalre5)
	Hydric=4; Nonhydric, NoData=NoData			
Exclude or lower rank:				
Prime farmland soils	Not prime=4; Prime when drained=2; NoData=0; Prime when irrigated, prime=NoData; NoData=0	"ssurgo soil" or digital draft soils AA, BA, CA, CE, CH, CO, DO, FR, HA, HO, KE, MO, TA, WA, WO	Exclude prime and reduce importance of prime when drained – 7	Different for each County (eg. Primereba6)
	Not prime=0; prime=NoData; NoData=0	"natural soil groups" AL, CV, GA, PG, ST	Exclude all	Different for each County (eg. Primereba5)
	Not prime, NoData=0; Prime when drained, Prime when irrigated, Yes=NoData	WI/SO/QA ("ssurgo soil" or digital draft soils)	Exclude all	primerewi14, primereso12, primereqa12
Wetlands (DNR and NWI)	Uplands, pf wetlands, NoData=0; Wetlands =NoData	default - (all wetl except DNR-identified farmed wetlands – pf)	Exclude	wetlallnopf3
Wetlands samps	Upland=0; Wetland=NoData	BA	Exclude	basampsre
Agri Easements	Absent=0; Present=NoData	SO	Exclude	agdistsore/ageasesore
PFAs	Absent=4; Present=0	default - includes Wo dev districts	7	pfareduced1
Zoning - RCA		BA		bazoningre2

Overlay: SCA survey sites having erosion, fish blockages, channelization, and poor buffers. Data added from AA, FR, HO Counties.

Layer outputs: alldivmo6 . . . , alldivaa7

Wetland preservation on private land

Layer	Ranking	Comments	Wt	Layer
NTWSSC and other significant areas proximity	Within-50m=4; 51-200m=2; >200m=0	default	20	wsscallbuffre
Ecologically Sign Areas and proximity	Yes=4; No=0	default	5	esa2re
Green Infrastructure and proximity	Within-50m=4; 51-200m=2; >200m=0	default	10	gimultre
		PG		pggipathre
		AA		aagi2re
Rural Legacy Areas	Yes=4; No=0	default	8	rlegre
Surface water reservoirs and watersheds	Yes=4; No=0	default	3	reservoir8re
		Cr	10	crreservre
Scenic Rivers and 100m buffer and scenic watersheds	Yes=4; No=0	default	7	strmreprot2
		AA		aaallstrm1re1
Development risk	1-100 grid	default	0.4	cellrisk
Must be:				
Wetlands (DNR/NWI)	Wetland=0; upland=Nodata	default	Must be wetland	wetlcombbare
Exclude:				
Currently protected areas (County, DNR, Fed, METs, Private Conservation; Rural Legacy, Additional County data)	Yes=NoData; No=0	default	Exclude	protallnodata

Overlay: Tidal reference sites used in DNR veg community survey.
Layer outputs: allprotmo4 (default), allprotpg4, allprotcr4, allprotaa5, allprotho4

Wetland preservation on protected land

Layer	Ranking	Comments	Wt	Layer
NTWSSC and	Within-50m=4;	default	20	wsscallbuffre

other significant areas proximity	51-200m=2; >200m=0			
Ecologically Sign Areas and proximity	Yes=4; No=0	default	5	esa2re
Green Infrastructure and proximity	Within-50m=4; 51-200m=2; >200m=0	default	10	gimultre
		PG		pggipathre
		AA		aagi2re
Surface water reservoirs and watersheds	Yes=4; No=0	default	2	reservoir8re
		Cr	10	crreservre
Scenic Rivers and 100m buffer and scenic watersheds	Yes=4; No=0	default	7	strmreprot2
		AA		aaallstrm1re1
Must be:				
Wetlands (DNR/NWI)	Wetland=0; upland=Nodata	default	Must be wetland	wetlcombbare
Protected land (County, DNR, Federal, METs, Private Conservation, rural legacy easements, county data)	Yes=0; No & NoData=NoData	default	Must be "protected land"	protall0

Layer outputs: protlandmo2 (default), protlandpg2, protlandcr2, protlandaa3, protlandho2