

Door County, WI Greenprint Project Goal Maps

Door County Greenprint Goals

The Greenprint process is organized based on a set of targeted land use management and planning goals, specific to Door County. These goals, identified by local and regional advisors, provide a thematic framework for the Greenprint analysis. Each goal has been characterized using best available data, scientific review, and advanced analysis. The maps, reports, and interactive tools on this website will enable you to identify and explore locations of highest concern for each goal.

Door County Greenprint Goals:

1. Protect Habitat for Native Plants and Animals
2. Restore Landscape Connectivity
3. Protect Surface Water Quality
4. Protect Ground Water Quality

How the Goal Maps were Created

Each goal map in the Door County Greenprint is a composite of a number data layers known as “metrics” or “criteria”. The criteria data layers were created in consultation with the Door County Greenprint Technical Advisory Team comprised of resource experts and water scientists from Door County and across the region. For detailed information on data and methodology used to create the criteria layers, refer to document *Greenprint Criteria – Methodology and Data Sources*, available on the Door County Greenprint mapping site.

The composite map for each goal was created by combining the criteria data layers using a “weighted overlay” process. The Technical Advisory Team was responsible for determining a relative weight for each criterion layer, based on their knowledge of the subject areas and the datasets. The rationale that was used for assigning a higher or lower weight to a specific criterion included:

- Importance of that criterion for meeting the goal
- Quality or currency of the data used in the model
- Comprehensiveness of the data or modeling process

The following tables summarize the criteria layers considered for each goal and the relative weights used in the overlay process to create the composite goal maps.

Goal	Criteria	Weight
Protect Habitat for Native Plants and Animals	Large, Unfragmented Natural Areas	11%
	Habitat Richness	11%
	Escarpment	9%
	Embayment Complexes	9%
	Riparian Habitat	9%
	Migratory Bird Stopover Habitat	9%
	Coastal Wetlands	9%
	Coastal Habitats and Undeveloped On-Shore	9%
	Natural Communities and Habitats	8%
	Rare Species	4%
	Bedrock Beaches	4%
	Undeveloped Off-Shore	4%
	Conservation Opportunity Areas	4%
		TOTAL

Rationale:

- *The two criteria analyzing natural blocks (Large Unfragmented Natural Areas and Habitat Richness) were given highest weight to emphasize the importance of size and diversity in currently undisturbed blocks of natural land.*
- *High importance was also assigned to criteria that characterize “Sensitive” features across the landscape, including the escarpment, embayment complexes, riparian habitat, migratory bird habitat, coastal wetlands, and other coastal habitats.*
- *Natural Communities and Habitats was assigned moderate weight, because of the more generalized nature of the model results.*
- *Rare Species, Bedrock Beaches, and Undeveloped Offshore were all assigned less weight due to lower confidence in available data and/or modeling results. For example:*
 - *There is high variability in the resolution at which rare species are recorded in Natural Heritage Inventory dataset.*
 - *There were modeling limitations on representing exact width of bedrock beaches.*
- *Conservation Opportunity Areas was also assigned lower weight because of its generalized nature. However, it does incorporate additional analysis not captured in other criteria (breeding bird surveys, tied to wildlife action plan, other specific DNR studies and expertise)*

Goal	Criteria	Weight
Restore Landscape Connectivity		
	Connectivity Supporting Movement of Wildlife	100%
	TOTAL	100%

Rationale:

- *There was only a single criterion in this Greenprint Goal. The Connectivity for Wildlife Movement required a complex model that considered a host of factors such as natural land “hubs” for habitat, riparian corridors, canals, shoreline, trails, landcover disturbance, currently protected areas, and barriers such as paved roads and urban areas.*

Goal	Criteria	% Weight
Protect Surface Water Quality		
	Close proximity to drainage channels	23%
	Steep slopes	20%
	Depth to bedrock	14%
	Depth to water table	14%
	Soil infiltration rates	14%
	Sub-watersheds with high percentage of impervious cover	9%
	Unfractured bedrock and absence of Karst features	6%
	TOTAL	100%

Rationale:

- *The criteria that will have the greatest impact on surface water quality are steep slopes and the proximity to drainage channels; projects within these areas have the greatest potential to impact surface water independent of other criteria.*
- *The greatest time of concern for surface water quality is during periods of increased runoff; with this concept in mind, the soil characteristics associated with the depth to bedrock, depth to water table, and soil infiltration criteria are not going to carry as much weight during frozen and saturated times, which provide the greatest opportunity for seasonal runoff.*
- *The impact of the percentage of impervious cover in a sub-watershed is dependent on the size of the watershed; while it is important for certain water quality parameters, it should not carry as much weight as activity adjacent to the feature.*
- *Unfractured bedrock and the absence of karst features present problems because the data sets are not complete and may not always be an accurate depiction of the true conditions.*

Goal	Criteria	Weight
Protect Ground Water Quality		
	Depth to bedrock	30%
	Depth to water table	20%
	Closed depressions and principal bedrock outlets	20%
	Fractured bedrock and Karst features	10%
	Soil infiltration rates	20%
	Municipal water supply ZOCs	0%
	TOTAL	100%

Rationale:

- *The soil characteristic with the greatest influence on groundwater quality is the depth to bedrock; regardless of the other properties, if there is only six inches of soil to rely on to buffer surface activities it will be a problem.*
- *Closed depressions are nearly as important, since they are concentrated areas where surface runoff has nowhere to go but into the ground. Depth to water table and soil infiltration rates were also weighted moderately high for their contribution to ground water quality.*
- *Fractured bedrock and karst features are opportunities for open conduits to the drinking water supply; incomplete data and inaccurate locations make a density approach more reasonable than trying to deal with individual features in a specific location but should still not carry as much weight.*
- *Municipal water supplies (Zones of Contribution) was used as an overlay, as they are not representative of the whole county and they are not natural features; we are not trying to protect a well but rather the drinking water supply.*