***File:***

Birding\_GL\_GLEAM\_data.shp

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***Description:***

This data set was created as part of a larger work, the Great Lakes Environmental Assessment and Mapping (GLEAM) Project. For a full description of the GLEAM project, please see:

Allan, J.D., et al., 2015. Using cultural ecosystem services to inform restoration priorities in the Laurentian Great Lakes. *Frontiers in Ecology and the Environment*, 13(8): 418-424. doi:10.1890/140328

Please cite Allan et al. 2015 when using this dataset.

*Birding (eBird locations and visits).* To identify actively used bird-watching locations, we used the citizen-science database eBird (Sullivan 2009), which in recent years has become widely used by the birding community. We selected birding locations from a database of eBird “hotspots” (eBird 2013), which are point locations for which users can upload bird observations. Hotspots can be suggested by any user, but a verification process is in place to ensure they are unique and represent publicly-accessible locations. Hotspots were included if within 5 km of the lakes’ shoreline, a distance that represents the lake influence on migratory bird populations (Bonter 2009; Ewert 2011). Use of each hotspot was calculated by summing the logged visits to a hotspot from January 1, 1999 through December 31, 2012. We selected only those locations that had 5 or more return visits to ensure each hotspot represents a service people utilize.

Mapped eBird locations corresponded well with a previous mapping of birding activity using the location of birding trails and festivals and noted hotspots (Allan et al. 2013), and with published lists of top birding sites. For example, 14 sites on the Great Lakes are included in the “Top 250 birding sites in North America” (Thayer 2011), and all 14 rank among the top 10% of visited hotspots in the Great Lakes eBird dataset.

***Resources:***

Allan JD*, et al.* (2013) Joint analysis of stressors and ecosystem services to enhance restoration effectiveness. *P Natl Acad Sci USA* 110(1):372-377.

Bonter DN, Gauthreaux SA, & Donovan TM (2009) Characteristics of Important Stopover Locations for Migrating Birds: Remote Sensing with Radar in the Great Lakes Basin. *Conservation Biology* 23(2):440-448.

eBird (2013) eBird Basic Dataset. Version: EBD\_relMay-2013. (Cornell Lab of Ornithology, Ithaca, New York, USA). Available at http://www.ebird.org. Accessed June 2013.

Ewert DN, Hamas MJ, Smith RJ, Dallman ME, & Jorgensen SW (2011) Distribution of Migratory Landbirds Along the Northern Lake Huron Shoreline. *Wilson J Ornithol* 123(3):536-547.

Sullivan BL*, et al.* (2009) eBird: A citizen-based bird observation network in the biological sciences. *Biol Conserv* 142(10):2282-2292.

Thayer P (2011) Top 250 Birding Locations. Available at http://www.wildbirds.com/Default.aspx?tabid=104. Accessed April 2014.

***Field map:***

|  |  |
| --- | --- |
| **State** | **state** |
| **LOCALITYID** | **eBird hotspot unique identifier** |
| **country\_co** | **Country (US/CA)** |
| **lng** | **Longitude** |
| **lat** | **latitude** |
| **NAME** | **Hotspot description (place)** |
| **CREATION\_D** | **Date on which hotspot first created** |
| **VISITS** | **Number of logged hotspot visits from 1999-2012** |
| **FIPS** | **County FIPS code (when available)** |