***Files:***

Parks\_point\_GL\_GLEAM\_data.shp (centroid of park polygon)

Parks\_polygon\_GL\_GLEAM\_data.shp (park polygon)

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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.

*Park use (park locations and visits)*. State, provincial and national park boundaries were compiled from a variety of sources due to disparate spatial coverage. U.S. parks were selected from the Great Lakes Conservation and Recreational Lands database (CARL), maintained by Ducks Unlimited, Inc. (2008), and the Protected Areas Database (PAD-US) produced by the Conservation Biology Institute (2010), both of which source data from state and local agencies. Minnesota State Parks were provided by the Minnesota Department of Natural Resources (2002). Some parks and protected areas were omitted, including municipal parks and wildlife areas, due to lack of location or visitation data. Ontario Provincial and National Parks were selected from a Protected Lands database maintained by the Ontario Ministry of Natural Resources (2012). Wilderness parks, waterway parks, and nature reserve parks were removed from the Ontario dataset, as they are not available to public visitors, have no recorded visitation data, or contain no U.S. counterpart. Parks were selected if the polygon, or any portion of the polygon, fell within 5 km of the Great Lakes shoreline. While some parks extend beyond 5 km inland, each park was clipped to our 5 km boundary. A total of 144 parks (U.S., 97; Canada, 47) were included.

Visitation records were compiled for the years 2005-2010 (U.S.) and 2008-2011 (CA). U.S. visitation records were provided by individual state agencies, and National Parks visitation records were accessed on the National Parks Service Visitor Use Statistics webpage (National Parks Service 2013). Mackinac Island State Park (MI) was not included in the above source but visits by ferry passengers were recorded until 2009. Over 80% of the island is within the State Park, so all passengers are assumed to be visitors. Two Pennsylvania State Parks, Erie Bluffs and Presque Isle, were reported as combined visitation. In light of Presque Isle’s proximity to the city of Erie and extensive facilities, as well as Erie Bluff’s minimal infrastructure (small parking lot, no beach), we assigned all visitation to Presque Isle. Provincial park visitation records (2008-2011) came from OMNR (Ontario parks 2008-2011), and Canadian National Park visitation data were accessed on the Parks Canada (2013) website. We calculated a single visitation metric as the annual mean to account for interannual variation. We were unable to obtain visitation for 13 of the parks, which lie predominantly in remote locations (uninhabited island, or limited road access). We assume these parks receive few visitors and do not contribute significantly to total visitation.

***References:***

Conservation Biology Institute (2010) Protected Areas Database of the US. Available at http://consbio.org/products/projects/pad-us-cbi-edition. Accessed September 2012.

Ducks Unlimited Inc. (2008) Great Lakes Conservation and Recreational Lands (CARL) GIS layer. Available at http://www.ducks.org/conservation/glaro/carl-gis-layer. Accessed September 2012.

Minnesota Department of Natural Resources (2002) State Park Statutory Boundaries. Available at http://deli.dnr.state.mn.us/metadata.html?id=L220000190201. Accessed September 2012.

National Park Service (2013) Visitor Use Statistics. Available at https://irma.nps.gov/Stats/. Accessed September 2013.

Ontario Ministry of Natural Resources (2012) Protected Lands database. Available at http://www.mnr.gov.on.ca/en/Business/LIO/index.html?x=15&y=13. Accessed September 2012.

Ontario Parks (2008-2011) Ontario Provincial Parks Statistics. (Ontario Ministry of Natural Resources, Ontario, Canada). Available at http://www.ontarioparks.com/statistics. Accessed September 2013.

Parks Canada (2013) Parks Canada Attendance 2007-09 to 2011-12. Available at http://www.pc.gc.ca/eng/docs/pc/attend/table3.aspx. Accessed September 2013.

***Field map (this is the same for both park files).***

|  |  |
| --- | --- |
| PK\_NAME | Name of park |
| VisitData | Source of visitation data |
| Spatial | Source of spatial data |
| Visit\_2008 | Annual visit data for Canadian parks, 2008 |
| Visit\_2009 | Annual visit data for Canadian parks, 2009 |
| Visit\_2010 | Annual visit data for Canadian parks, 2010 |
| Visit\_2011 | Annual visit data for Canadian parks, 2011 |
| X010 | Annual visit data for U.S. parks, 2010 |
| X009 | Annual visit data for U.S. parks, 2009 |
| X008 | Annual visit data for U.S. parks, 2008 |
| X007 | Annual visit data for U.S. parks, 2007 |
| X006 | Annual visit data for U.S. parks, 2006 |
| X005 | Annual visit data for U.S. parks, 2005 |
| State | State or province |
| VISIT\_AVG | Average annual visits to Canadian (2008-11) and U.S. parks (2005-10). |
| AREA\_KM | Area of park in square kilometers |
| 5kmAREA\_KM | *\*only in polygon feature class*. Area of park in square kilometers that is within 5km of Great Lakes |