**LakeConn\_1ha\_LAGOS\_NHD\_Xwalk.csv**

Description: Crosswalk table for linking LAGOS lake connectivity classes to National Hydrography Dataset plus v2 (NHD) lakes

Location: FreshwaterConservation/Data

Generated: LakeCat\_LAGOS\_connectivity\_crosswalk.R

Columns

lagoslakei: unique LAGOS lake ID

LakeConnec: lake connectivity class (isolated, headwater, drainage stream, drainage lake/stream)

nhdplusv2\_reachcode: attribute from NHD; used for locating waterbody

nhdplusv2\_comid: unique NHD lake ID

**LakeProtection\_byNARS.csv**

Description: output data file of protected lakes by National Aquatic Resource Survey (NARS) ecoregion. Lakes from the National Hydrography Dataset plus v2 (NHD).

Location: FreshwaterConservation/Data

Generated: LakeProtectionByStateEcoregion.R

Columns

Ecoregion: ecoregion name, 3-letter abbreviation

nLakes: number of lakes >= 1 ha

ProtectedLakes\_gap12\_ctr: number of protected lakes based on lake centroids occurring in strictly protected areas

ProtectedLakes\_gap3\_ctr: number of protected lakes based on lake centroids occurring in multi-use areas

ProtectedLakes\_gap12\_Cat100: number of protected lakes based on full catchments occurring in strictly protected areas

ProtectedLakes\_gap3\_Cat100: number of protected lakes based on full catchments occurring in multi-use areas

unprotected\_lakes: number of lakes with centroids occurring in neither strictly protected nor multi-use areas

PropProtected\_gap12\_ctr: proportion of lakes protected based on lake centroids occurring in strictly protected areas

PropProtected\_gap3\_ctr: proportion of lakes protected based on lake centroids occurring in multi-use areas

PropProtected\_gap12\_Cat100: proportion of lakes protected based on full catchments occurring in strictly protected areas

PropProtected\_gap3\_Cat100: proportion of lakes protected based on full catchments occurring in multi-use areas

PropUnprotected: proportion of lakes with centroids occurring in neither strictly protected nor multi-use areas

**LakeProtection\_byNARS\_perm.csv**

Description: output data file of protected lakes by National Aquatic Resource Survey (NARS) ecoregion; same as LakeProtection\_byNARS.csv, but includes only permanent lakes.

**LakeProtection\_byState.csv**

Description: output data file of protected lakes by US state. Lakes from the National Hydrography Dataset plus v2 (NHD).

Location: FreshwaterConservation/Data

Generated: LakeProtectionByStateEcoregion.R

Columns

State: state name

nLakes: number of lakes >= 1 ha

Strict\_ctr: number and proportion (in parentheses) of protected lakes based on lake centroids occurring in strictly protected areas

Multi\_ctr: number and proportion (in parentheses) of protected lakes based on lake centroids occurring in multi-use areas

Strict\_Cat100: number and proportion (in parentheses) of protected lakes based on full catchments occurring in strictly protected areas

Mutli\_Cat100: number and proportion (in parentheses) of protected lakes based on full catchments occurring in multi-use areas

Unprotected: number and proportion (in parentheses) of unprotected lakes based on lake centroids occurring in neither strictly protected nor multi-use areas

**LakeProtection\_byState\_perm.csv**

Description: output data file of protected lakes by US state; same as LakeProtection\_byState.csv, but includes only permanent lakes.

**PADUS.csv**

Description: percent lake catchments and watersheds protected based on US Protected Areas Database (v 1.4) (PADUS). See dataset for details: <https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual>.

GAP status 1: managed for biodiversity – disturbance events proceed or are mimicked (strict protection)

GAP status 2: managed for biodiversity – disturbance events suppressed (strict protection)

GAP status 3: managed for multiple uses – subject to extractive (e.g. mining or logging) or OHV use

GAP status 4: no known mandate for biodiversity protection (may include easements, land trusts, etc., but no permanent legal protection)

Location: FreshwaterConservation/Data

Generated: by Marc Weber and Ryan Hill of US EPA (source of LakeCat catchments and watersheds)

Columns

COMID: unique NHD lake ID; used to link to lakes from the National Hydrography Dataset plus v2 (NHD).

CatAreaSqKm: catchment area, square kilometers

WsAreaSqKm: watershed area, square kilometers

PctNo\_GAP\_StatusCat: percent of catchment under any protection status (GAP 1-4)

PctGAP\_Status1Cat: percent of catchment under GAP status 1 (strict protection)

PctGAP\_Status2Cat: percent of catchment under GAP status 2 (strict protection)

PctGAP\_Status3Cat: percent of catchment under GAP status 3 (multi-use)

PctGAP\_Status4Cat: percent of catchment under GAP status 4 (no permanent protection)

PctNo\_GAP\_StatusWs: percent of watershed under any protection status (GAP 1-4)

PctGAP\_Status1Ws: percent of watershed under GAP status 1 (strict protection)

PctGAP\_Status2Ws: percent of watershed under GAP status 2 (strict protection)

PctGAP\_Status3Ws: percent of watershed under GAP status 3 (multi-use)

PctGAP\_Status4Ws: percent of watershed under GAP status 4 (no permanent protection)

**state\_NARS\_COMID.csv**

Description: lookup table for state and ecoregion (National Aquatic Resources Survey; NARS) for each lake in the National Hydrography Dataset plus v2 (NHD).

Location: FreshwaterConservation/Data

Generated: LakeProtectionByStateEcoregion.R

Columns

COMID: unique NHD lake ID

WSA9: ecoregion name, 3-letter abbreviation

WSA9\_NAME: full ecoregion name

STUSPS: state name, 2-letter abbreviation (postal code)

**unprotected\_COMID.csv**

Description: table of unprotected lakes IDs in the National Hydrography Dataset plus v2 (NHD).

Location: FreshwaterConservation/Data

Generated: Lakes\_in\_ProtectedAreas\_2019.csv

Columns

x: COMID; unique NHD lake ID

**catchment\_table.csv**

Description: table of lake and catchment variables for analysis of protected lake characteristics. See Hill et al. (2018) for detailed variable descriptions from LakeCat.

Hill, R. A., Weber, M. H., Debbout, R. M., Leibowitz, S. G., & Olsen, A. R. (2018). The Lake-Catchment (LakeCat) Dataset: characterizing landscape features for lake basins within the conterminous USA. *Freshwater Science*, *37*(2), 208-221.

Location: FreshwaterConservation/Data/Nick (zipped folder)

Generated: LakeCat\_prep\_data\_4Nick.csv

Columns

COMID: unique NHD lake ID

PctGAP\_Status12Cat: percent of catchment under strict protection (GAP status 1 or 2)

PctGAP\_Status3Cat: percent of catchment under multi-use (GAP status 3)

ProtectGAP12\_ctr: protected or unprotected based on lake centroid occurring in strictly protected area

ProtectGAP3\_ctr: protected or unprotected based on lake centroid occurring in multi-use area

ProtectGAP12Cat\_100: protected or unprotected based on full catchment occurring in strictly protected area

ProtectGAP3Cat\_100: protected or unprotected based on full catchment occurring in multi-use area

Unprotected: protected or unprotected based on lake centroid occurring in strictly protected or multi-use area

AREASQKM: lake area, square kilometers (from NHD plus v2)

CatAreaSqKm: catchment area, square kilometers (from NHD plus v2)

DrainageRatio: lake area/watershed area ratio (approximation of drainage ratio; unitless) (from NHD plus v2)

ElevCat: mean catchment elevation, meters (from NHD plus v2)

WetIndexCat: catchment topographic wetness index (from LakeCat WetIndx.csv)

PctTotalForest2011Cat: percent of catchment covered by forest based on 2011 NLCD (evergreen, mixed, deciduous) (from LakeCat NLCD2011.csv)

PctTotalAg2011Cat: percent of catchment covered by agriculture based on 2011 NLCD (cropland, hay) (from LakeCat NLCD2011.csv)

PctTotalWetland2011Cat: percent of catchment covered by wetlands based on 2011 NLCD (woody, herbaceous) (from LakeCat NLCD2011.csv)

PctConf2011Cat: percent of catchment covered by evergreen forest based on 2011 NLCD (from LakeCat NLCD2011.csv)

RdDensCat: catchment road density (2010) (km/square km) (from LakeCat RoadDensity.csv)

PctImp2011Cat: percent catchment covered by impervious surface (2011) (from LakeCat ImperviousSurfaces.csv)

RunoffCat: mean catchment runoff (1971-2010) (mm) (from LakeCat Runoff.csv)

BFICat: catchment baseflow index (baseflow/total inflow) (2003) (%) (from LakeCat BFI.csv)

SN\_2008Cat: catchment sulfur and nitrogen deposition (2008) (kg/ha/yr) (from LakeCat NADP.csv)

TotalPctFrstLossCat: percent catchment total forest loss (2002-2013) (from LakeCat ForestLossByYear0013.csv)

Precip8110Cat: catchment mean annual precipitation (1981-2010) (mm) (from LakeCat PRISM\_1981\_2010.csv)

Tmean8110Cat: catchment mean annual air temperature (1981-2010) (deg C) (from LakeCat PRISM\_1981\_2010.csv)

WSA9: ecoregion name, 3-letter abbreviation

WSA9\_NAME: full ecoregion name

STUSPS: state name, 2-letter abbreviation (postal code)