Powell Center Data Management Plan: Ecological Forecasting

Data Inputs (list of datasets used to produce the synthesized data product(s))				
Title	**Format (csv, ascii)**	**Data Volume Estimate (MB, GB, TB)**	**Source/URL**	**Use Restrictions**
Yellowstone Bison	csv	1 kB	http://datadryad.org/resource/doi:10.5061/dryad.181qq	Cite original work
Sea Otter	csv	1 MB	Not currently online	Cite original work
Breeding Bird Survey	csv	285 MB	https://www.pwrc.usgs.gov/bbs/	Cite data producers
Dipodomys spp. (Kangaroo rats)	csv	2.2 MB	http://portal.weecology.org/portal_data	Cite data papers
Grasshopper spp.	csv	5 MB	http://ghopclimate.colorado.edu/index.html	none
Sagebrush steppe plants	csv	15 kB	http://esapubs.org/archive/ecol/E091/243/metadata.htm	Cite data paper
AZ Desert Annuals (Portal LTREB)	csv	528 kB	http://portal.weecology.org/portal_data	Cite data papers
Artemisia spp.	csv	36 MB	https://figshare.com/articles/sageAbundance/3485237	Cite original papers
Alpine tundra plants (Niwot LTER)	csv	6.5 MB	http://niwot.colorado.edu/data/data/plant-species-composition-data-for-saddle-grid-1989-ongoing	Cite data producers
Winter Annuals (Desert Lab LTREB)	csv	7 MB	http://www.eebweb.arizona.edu/faculty/venable/LTREB/LTREB%20data.htm	Cite data paper(s)
Mt. St. Helens plants	csv	390 kB	https://dx.doi.org/10.6084/m9.figshare.c.3303093.v1	Cite data paper
Antarctic Penguins	csv	3 MB	http://www.penguinmap.com/	Cite MAPPD project

Data Processing (will occur during the course of Working Group activities)	
Access and Sharing	*All data will be hosted on GitHub for access by working group members. Large datasets will be hosted on USGS server or Google Drive.*
Data Storage	*Data will be permanently stored on:* ● *Option 1: USGS ScienceBase through Powell Center*
Transformation and processing workflow	*Data may be transformed or aggregated. All processing will be done using R script with heavy comments. These R scripts will "travel" with the data in metadata files.*
Technology needs	*Free SQL software and R.*

Proposed Data Publishing[1] (repeat if there will be multiple derived data products)	
Title	*PopEnvTS (Population and Environment Time Series)*
Description	*Database of publicly-available population time series and associated environmental covariates.*
Format	*SQLite Database (.db3 or .sqlite)*
Data Volume Estimate	*10 GB*
Data Storage	*The derived data will be hosted and made available online using:* ● *Option 1: USGS ScienceBase through Powell Center*
Metadata Point of Contact	*Andrew Tredennick*
Restrictions	*No. All data is already in the public domain.*

Proposed Data Publishing[2] (repeat if there will be multiple derived data products)	
Title	*PopForecasts (Forecasts of population abundances)*
Description	*Repository of population forecasts for specific times and locations.*
Format	*SQLite Database (.db3 or .sqlite)*
Data Volume Estimate	*10 GB*
Data Storage	*The derived data will be hosted and made available online using:* ● *Option 1: USGS ScienceBase through Powell Center*
Metadata Point of Contact	*Andrew Tredennick*
Restrictions	*No. All forecasts will be made public.*

[1] USGS has outlined a new, formal data publishing process, applicable to all projects started in FY17+, as part of its Fundamental Science Practices. More details on this can be found here: https://www.usgs.gov/fsp/policies.asp

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