Plan Overview

A Data Management Plan created using DMP Tool

Title: Coho watershed hydrologic resilience dataset

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Copyright information:

Coho watershed hydrologic resilience dataset

1. Project and Contact Information

What is the name of the project?
Include any identifiers related to the project (e.g. Project ID, Funding ID etc).

USGS Pacific Coastal Fog Project: Mapping hydrologic resilience of coho watersheds to climate change

What is the name of the USGS Center/Program that oversees the project?
Include contact information (email, phone, address).

Western Geographic Science Center

Summary description of the project.
Include reason why the data is being collected.

Map hydrologic resilience for Central California Coast Coho Salmon Recovery Plan watersheds by combining two datasets: fog and low cloud cover and baseflow. Using the derived maps conduct hydrologic resilience assessments for the 28 coho populations in the 299 subwatersheds prioritized for restoration and abatement activies under the Recovery Plan.

What is the project start date?
Start date.

2016-09-01

What is the project's expected end date?
Estimated end date. This field can be updated as needed.

2018-02-01

Are there additional information available?
Include any web links with more information related to the project, if applicable.

http://www.westcoast.fisheries.noaa.gov/protected_species/salmon_steelhead/salmon_and_steelhead_listings/coho/central_california_coast_coho.html

Who is the main point of contact for the project and its data?
Also list any alternate points of contact, if any.

Alicia Torregrosa

Are there collaborating/funding agencies and organizations?
Who are they and who are the main points of contact?

Question not answered.

2. Plan and Acquire

How will the data be acquired?
Are they newly collected or using existing datasets?

The two datasets used to derive the hydrologic resilience metrics are both available at the California Climate Commons: fog and low cloud cover (http://climate.calcommons.org/datasets/summertime-fog) and subsurface recharge (http://climate.calcommons.org/dataset/2014-CA-BCM)

If acquiring existing datasets, include more information.
Include the name, format, a persistent identifier, and source citation, if any. Are there any restrictions or agreements such as Memorandum of Understandings (MOUs) for use and storage?

The thematic subsets of data that will be used from the(http://climate.calcommons.org/datasets/summertime-fog) are the decadal average fog and low cloud cover data the coeffiecient of variation. The thematic subset of the (http://climate.calcommons.org/dataset/2014-CA-BCM) are the historic 1981- 2010 and future 2011- 2069 recharge under 4 global climate models (MIROC, GSM. GFDL, and CSM) and temperature for the same periods and from same models. The spatial subset for all thematic subsets is northern CA (from Oregon border to Santa Cruz). Analyses use the shapefile provided by http://www.westcoast.fisheries.noaa.gov

If collecting new data, include more information.
Are there special processes or procedures for collecting the data (e.g. licenses, permissions, equipment, software)?

n/a

What is the estimated volume of the data collected, transformed, and/or generated?
For example in megabyte (MB), GB, TB, or PB.

2 Megabytes

Will the data be static or frequently updated?
If frequent updates, describe how frequent (e.g. Continuously, weekly, annually, irregular etc)

static

Are the appropriate equipment and staff resources accounted for in the budget?
Include estimated time and cost for such data management activities.

yes

3. Describe/Metadata and Manage Quality

How many new datasets will be created?
List the anticipated title of each dataset.

One new dataset will be produced that is a merger of 3 subsets as described above

What are the data types and formats, in which the data will be maintained?
Open data formats such as csv, tiff, mp3, are required.

ArcGIS raster joined to an MS Excel spreadsheet file

Briefly describe the data processing steps or provide the scientific workflow.
Also identify any software or technology needs where applicable.

The following steps are in ArcGIS 1) subwatersheds from the CCC Coho Recovery Plan Prioritization Map that have core, phase 1 or phase 2 ranks form the base layer for further analysis; 2) data from Fog and Low Cloud Cover, BCM temperature, and recharge for historic and future are joined into subwatershed attribute file; 3) analyses are conducted to summarize combinations of all data.

How will the metadata for each dataset be created?
Who will be responsible for the metadata creation and update? Include their contact information.

Metadata is embedded into the ArcGIS file as an associated xml file.

Which metadata standard will be used to describe each dataset?
For USGS, FGDC-CSDGM or ISO 19115 series are required.

FGDC

What procedures will be used for ensuring data quality (QA/QC)?
If using a known standard or protocol, include the citation source.

QA/QC includes 1) assessing final subwatershed polygons to ensure slivers are not incorrectly influencing the summary results; 2) checking each summary calculation with checksum methods; and 3) submitting the final calculations. maps, and summary to technical review

4. Backup/Secure and Preserve

Where will the data be stored in the short-term?
Is it properly secured, backed up, and environmentally controlled?

in-house server

What will be the approach for routine backup of the data?
Include the frequency, duration, software, and media information. Will the data be stored in multiple places and on different media types (recommended minimum of 3 copies with 1 stored in an offsite location)?

backups performed in-house on RAID system and copies sent off-site to colleagues

Describe any potential access restrictions.
For example if the data contain Personally Identifiable Information (PII). Please include any practices to ensure access will be restricted.

What will be the final format of the data product?
Will there be any software needs? Will the data format be appropriate for long-term preservation? Open data formats such as csv, tiff, mp3, are required.

The data are in ArcGIS format and will be uploaded to the ESRI Arc Online platform

Where will the data and metadata be preserved in the long-term?
And which funding Program if in collaboration, will be responsible for the preservation of the data? Who will be the point of contact?

Data will become part of the PLOS One online repository as Supplemental Information associated with the publication

If costs are associated with long-term storage, how will they be provided for?
Are there agreements made for the preservation of the data and metadata?

The up front publishing costs, that will be paid by the USGS WGSC, will cover housing the supplemental information (e.g. GIS shapefile embedded with ancillary data).

5. Publish and Share

How will the data be shared and made available to the public?
For example a web page, system or application, data portal, repository, USGS Data Series, etc. Are there data release policies that need to be followed?

PLOS One website

Will there be access or use restrictions on the data?
For example for sensitive data, restricted data, privacy, software with license restrictions, etc. Provide justification for the restriction citing any policies or legal reasons.

No restrictions

How can someone overcome any access restrictions?
For example are the following required? Fees, non-disclosure statements, special authorization, data embargo or hold, MOUs/MOAs.

N/A

Identify any anticipated publications or electronic outlets resulting from the data.
For example, peer-reviewed articles, information/fact sheets, web pages. If a USGS publication, indicate type (e.g. Open File Report, Provisional Release etc).

Publication titled "Hydrologic resilience from summertime fog and watershed recharge: coho salmon recovery planning with an eye to the future"

Where will metadata be stored to enable data discovery by the public?
USGS requires that your metadata must be available for harvest by the USGS Science Data Catalog. Contact sciencedatacatalog@usgs.gov for more information.

On the USGS Sciencebase

How and where will you obtain a digital object identifier (DOI) for the data?
USGS provides a Digital Object Identifier Creation Tool available at https://www1.usgs.gov/csas/doi/

When the results are published the manuscript and supplemental data will recieve a DOI.