







Sydney Neugebauer Fellow @ LaRC

Shelby Ingram Fellow @ GA

Zach Bengtsson PC Fellow @ ARC

Cecil Byles Fellow @ JPL

PROJECT COORDINATION WEBINAR: Project summary & tech paper

PROJECT SUMMARY

What it is:

• The Project Summary provides a short overview of project information in one place.

Why it matters:

- Content is compiled for reporting to NASA HQ project indicators, tracking metrics, annual reports, quarterly program reviews, monthly reports, etc.
- Future teams will refer to this document.
- Project Summaries are commonly shared when project information is requested (ex. Legislative Affairs, Partners).

How to make it work for you:

- This is where the abstract "lives" you will iterate with the PC team in this file. Don't put the abstract on other deliverables until it's finalized here.
- Use the Project Summary to fill in the sections of the DEVELOPedia Project Page and Poster.
- Use this document in the future when you need to share information about the project you worked on.

Project Summary: http://www.devpedia.developexchange.com/dp/index.php?title=Project Summary



PROJECT SUMMARY TIPS & TRICKS

- Reuse information from your proposal, but put your own spin on it.
- Use attention grabbing quantitative metrics.
- Highlight the community and/or societal benefits of your work!

ABSTRACT

• Succinctly answer the **who**, **what**, **where**, **when**, **and why** of your projects. Add results to the final version if possible!

Abstract:

Insert here (150 to 250 words, one paragraph). Best Practices:

- 1. The abstract should be fully contained and give the reader a good grasp of the project.
- 2. While there is a maximum word limit, if you can say it with fewer words, do so.
- 3. State the most important information first.
- 4. Write in past tense.
- 5. Write in active voice and avoid passive words like "might" or "could" use powerful language.
- 6. Spell out all acronyms except NASA.
- 7. Don't include citations.
- 8. Don't define terms.
- 9. Read other projects' abstracts for inspiration.
- 10. Any major restrictions or limitations on results (if results are included) should be stated.
- 11. Reread the abstract. Did it answer: who, what, where, when, and why? If it didn't, then revise it!
- 12. Don't forget to add results for the final draft feel free to include a placeholder sentence in your rough draft!

USING THE PROJECT SUMMARY TO YOUR ADVANTAGE

- It can act as a living document to **keep track of and shape your work** over the first 8 weeks of the term.
- The project summary is a great tool for **scoping your project**.
- Completing this document in week 8 allows you to solidify the plans for your work, giving you 2 full weeks to wrap up the analysis and technical documentation of your project.



KEEP YOUR PROJECT PARTNER LIST UPDATED

It's okay if you **add a new partner or drop one** over the course of the term, but make sure to **tell someone** from **Project Coordination** and **Impact Analysis**



Proper Partner Nomenclature:

- X USDA, Pocatello Field Office
 - USDA, Natural Resources Conservation Service, Pocatello Field Office
- X Groundwork Milwaukee
 - Groundwork USA, Groundwork Milwaukee

STICK TO THE TEMPLATE!

Deliverable Templates [edit]

 BEWARE!!! Deliverables written in google docs <u>must be reformatte</u> submission. <u>DO NOT</u> convert a google doc back into a microsoft fill templates below.

• Templates:

- <u>2020 Spring Project Summary Template</u>
- 2020 Spring Tech Paper Template
- 2020 Spring Poster Templates
- 2020 Spring Website Image
- 2020 Spring Presentation Templates
- 2020 Spring Project Video Outline Template
- 2020 Spring Software Release Master Form ₽
- 2020 Spring Software Release Code README File Template
- 2020 Spring Project Feedback Form Template

NASA DEVELOP National Program Insert DEVELOP Node Name (Example: Virginia – Langley)

Spring 2020 Project Summary

Insert Short Title Here (Example: Intermountain West Health & Air Quality II) Insert Subritle Here (Example: Utilizing NASA Earth Observations to Enhance Wetland Monitoring and Management in Florida)

VPS Title: Insert here (Example: Beyond a Shadow of a Drought: Remote Monitoring in the Navajo Nation)

Project Team

Project Team: Name 1 (Project Lead) Name 2 Name 3 Name 4

Advisors & Mentors: Name 1 (Affiliation) Name 2 (Affiliation)

Name 3 (Affiliation)

Past or Other Contributors:

Name 1 Name 2 * If the project is a continuation, you must list <u>ALL</u> previous team members from past terms (who are not current team members). Do not denote who was the previous project head.*

Project Overview

Project Synopsis: This short overview provides a brief and catchy synopsis of the project and its objectives for media sources. Keep the reader in mind and make it interesting. (1 to 3 sentences; 80 to 100 words)

Abstract:

- Insert here (150 to 250 words, one paragraph). Best Practices:
 - 1. The abstract should be fully contained and give the reader a good grasp of the project.
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 - 11. Reread the abstract. Did it answer: who, what, where, when, and why? If it didn't, then revise it!
 - 12. Don't forget to add results for the final draft feel free to include a placeholder sentence in your rough draft!

Keywords:

Due: Week 5 (RD), Week 10 (FD)

TECH PAPER

What it is:

• The Tech Paper provides a synopsis of the project with technical details for partners and future DEVELOP teams to replicate and understand.

Why it matters:

- Tech Papers are the foundation for all future publications relating to the project.
- Tech Papers are commonly shared with project partners.
- Methods are a large focus of the paper and should assist others in replicating your work.

How to make it work for you:

- Develop your technical writing skills by working on the Tech Paper.
- Use content from the Tech Paper in the Poster and Presentation.
- When you are applying to jobs and schools, this can be shared as a writing sample.

Tech Paper: http://www.devpedia.developexchange.com/dp/index.php?title=Tech Paper



By the Way...

Any external distribution or publications of this work must go through NASA export control. Contact Amanda Clayton for more information about this process.

ELEMENTS OF A SCIENTIFIC RESEARCH PAPER

Experimental Process Question Section of Paper What did I do in a nutshell? —— Abstract What is the problem? ——• Introduction How did I solve the problem? ——• Materials & Methods What did I find out? —— Results What does it mean? ——• Discussion & Conclusion Who helped me out? ——• Acknowledgments Whose work did I refer to? ——• Literature Cited What extra information could — Appendices be beneficial to include?

REMINDERS AS YOU GET STARTED

You are making an argument - support it!

When in doubt, refer back to your **objectives**.

Harness the power of **topic sentences**!

Use **past tense** throughout!

Be specific. Remember who, what, when, where, why, & how!

YOUR INTRODUCTION MUST INCLUDE...

NASA DEVELOP National Program California – Ames

Fall 2019

Hawai'i Water Resources Monitoring the Impacts of Land-Based Sources of Pollution on Water Quality Along the Coast of West Maui, Hawai'i, to Assess Coral Reef Condition

DEVELOP Technical Report

Azev Markarian (Project Lead) Emily Deardorff Arthur <u>Statel</u> Sophia Skoglund

Dr. Juan Torres-Pérez, Bay Area Environmental Research Institute, NASA Ames Research Center (Science Advisor)

1. Abstract
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Aeywords remote sensing, Landsat, land use and land cover change (LULCC), turbidity, coral ceefs, Google Earth Engine

2. Introduction

2.1 Background Information

Mine, Hawa'i is the second largest island in the Hawa'ian archipslage and is located between the Big Island of Hawa'i and <u>Mologic processions</u>, 2,500 miles off the west coart of the United States (Fig. 1). The island was formed by two shield volcances, West Mawi Mountain (now West Mawi and Hakakala, which are connected by a low-jung sistemus.



Figure 7. The study area is comprised of five watersheds in West Maui, HI.

The problem being investigated

- Project partners
- Project objectives
- Study area with a map
- 5. Study period
- Related previous DEVELOP work (2nd or 3rd term projects only)
- Scientific basis of your methods
 - At least 5 references from peer-reviewed literature

Y()[[R_I_N_I_R()])[[[]] **Project** partners **Project objectives** The scientific basis of your project, as written in the intro section, sets the stage for the relevance, novelty, and importance of your research!

Introduction

1 Background Information

i, Hawaii in the second hegers island in the Hawaiins archipshags and is learned between the Big Island Hawaii and <u>Modernia</u> Approximation 2,500 mills of the wave coart of the United Stears (Fig. 1). The simulation formed by two sheld voltances, West Mass Moostnin (now West Miss) and Halaskala, which are used by a low-himin industru.



At least 5 references from peer-reviewed literature



- Explain your steps in chronological order.
- Give your reader enough **specific details** that they can understand and replicate your research.
- Make sure the "**why**" and "**how**" behind data acquisition, processing, and analysis is clearly understood by the reader.
- Remember: use past tense & an active voice throughout!



DATA ACQUISITION

- What data did you get?
- What level products are they?
- For what dates did you get the data?
- Where did you get the data from?



TABLES CAN EFFECTIVELY DISPLAY DATA PRODUCTS

Table 2

List of Sensors and Data Products utilized for this project

Platform and Sensor	Data Product	Dates	Acquisition Method
Aqua MODIS	MYD16A2 Net Evapotranspiration 8-Day L4 Global 500m SIN Grid V006	April to September 2016 & 2017	ÉARTHDATA
Terra MODIS	MOD16A2 Net Evapotranspiration 8-Day L4 Global 500m SIN Grid V006	April to September 2016 & 2017	EARTHDATA
Suomi-NPP VIIRS	VNP21A1D Land Surface Temperature and Emissivity Daily L3 Global 1km SIN Grid Day V001	April to September 2016 & 2017	LP DAAC AppEEARS
Suomi-NPP VIIRS	VNP13A1 Vegetation Indices 16- day L3 Global 500m SIN Grid V001	April to September 2016 & 2017	LP DAAC AppEEARS

Credit: Lauren Lad, Helena Bierly, Amber Hobbs, Gavin Pirrie, Great Basin Ecological Forecasting, Fall 2019

DATA PROCESSING

- What did you do to the data?
- Were there conversions needed to be able to analyze it?
- Did you have to mosaic or composite images?
- What software, scripting, or modeling did you utilize?
- Did you run an NDVI calculation, change detection, etc.?





• How did you analyze the data – statistical analysis, validation, etc.?

• Many teams continued writing data processing steps in the data analysis section! Try not to mix them up!



FLOWCHARTS VISUALLY COMMUNICATE METHODOLOGY



Credit: Josh Verkerke, Anna McGarrigle, John Dilger, Lassen Volcanic National Park Disasters, Summer 2017

REFERENCES - USE THE GUIDE!!!



The PC Team Presents: Everything you always wanted to know about properly citing your sources and data



REFERENCING SATELLITE DATA

- Proper and MANDATORY Copernicus acknowledgement wording: "contains modified Copernicus Sentinel data (yyyy e.g. 2018), processed by ESA."
- Understand your satellite data products:
 - Explore the DAAC and product websites
 - Find the formal dataset name
 - Thoroughly read metadata
 - Cite using Digital Object Identifiers (DOI)

