**NASA DEVELOP National Program**

****Insert Team Location Here

**Spring 2016**

**Short Title: Insert here (ex. South Dakota Ecological Forecasting)**

**Subtitle:** Insert here (ex. Monitoring Forest Loss for Enhanced US Forest Service Decision Making in South Dakota’s Black Hills)

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

**Project Team & Partners**

**Project Team:**

Name (Project Lead), email address

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 ALL previous team members from past terms (who aren’t current team members)\*\**

**Partner Organizations:**

Partner Name (type), POC: Name; Boundary Organization

Partner Name (type), POC: Name; Boundary Organization

**Project Details**

**Applied Sciences National Applications Addressed:** National App 1, National App 2, etc.

**Study Area:** Geographic location of the study area. List all US states included using postal acronyms

**Study Period:** May 2000 - Nov 2010

**Earth Observations & Parameters:**

Satellite, Sensor - parameter (*example below, don’t bulletize*)

TRMM, PR – rainfall measurements

Terra, MODIS - aerosol optical depth

Landsat 8, OLI – land cover

**Ancillary Datasets Utilized:**

Provider & Dataset - Parameter (*examples below, please bulletize*)

* USGS National Land Cover Dataset (NLCD) - land cover
* NOAA Coastal Change Analysis Program (C-CAP) - regional land cover
* EPA AIRNow PM2.5 dataset - PM2.5 measurements

**Models Utilized:**

Agency & Model Name (*examples below, please bulletize*)

* USGS National Invasive Species Forecasting System (ISFS)
* NASA Regional Ocean Model System (ROMS)
* NOAA Sea, Lake and Overland Surges from Hurricanes (SLOSH) model

**Software Utilized:**

Software package - used for/data processed (*examples below, do not bulletize*)

ERDAS IMAGINE - land classification of Landsat imagery

ArcGIS - raster manipulation/analysis, image enhancement & map creation of Landsat ETM+, NPP VIIRS, Aqua/Terra MODIS

**Project Overview**

**80-100 Word Objectives Overview:**

Insert here (80-100 words max). Short and catchy synopsis of project and its objectives. 1-3 sentences. Keep the reader in mind, make it interesting!

**Abstract:**

Insert here (150 - 250 words, preferably one paragraph)

* Best Practices:
  + The abstract should be fully contained and give the reader a good grasp of the project.
  + While there is a maximum word limit, if you can say it with fewer words, do so.
  + State the most important information first.
  + Avoid passive words like “might” or “could” – use powerful language.
  + Use key words and phrases that will quickly give the reader an idea about the content and focus of the work (ex. Navajo Nation, drought, TRMM, PRISM).
  + Don’t include citations.
  + Don’t define terms.
  + Read other projects’ abstracts for inspiration.
  + Any major restrictions or limitations on results (if results are included) should be stated.
  + Reread the abstract – did it answer who, what, where, when, and why? If it didn’t, then revise it!

**Community Concerns:**

* Concern 1
* Concern 2
* Concern 3
* Etc.

**Current Management Practices & Policies**:

In a well explained nutshell, describe the current management practices that your project end-user employs. Are they conducting costly field observations or some outdated method to manage something that remote sensing and NASA Earth observations could make easier for them? Also what policies are in play - are there any Federal or state laws that oversee the management of a certain area/land cover type/issue? This should not include any information about what your project will contribute or how it will impact these practices and policies. This section should solely be focused on what the partners and any others working on this topic are doing. (one paragraph)

**Decision Support Tools & Benefits:**

|  |  |  |
| --- | --- | --- |
| **End-Product** | **Earth Observations Used** | **Benefit & Impact** |
| End-Product 1 (ex. Risk map, habitat loss map, land cover change detection, etc.) | Ex. Landsat 8 OLI (use acronyms) What EO data were used to derive your product? | Brief description of how the end-product has/will/can improve a specific decision making process or be used by the partner |
| End-Product 2 |  |  |
| End-Product 3 |  |  |

**Project Imagery**

**[Insert image here]**

**Caption:** [Insert Caption Here. Max of 25 words.] Image Credit: [Insert project short title] Team.

**Image:** File Name (Please submit your image as a separate .jpeg as well as inserting it in this document)

**Software Release Requirements**

What category do the tools your project is creating fall within? [Options: No software development involved, or if there is scripting/coding involved the category I to V]

*If your decision support tools fall within Category IV, fill out this section:*

**Software Title:** Insert here (ex. DEVELOP National Program Python Package)

**Software Abbreviation:** Insert here (ex. dnppy)

**Technical Point of Contact:** Insert full name, permanent email, and node here. Also include whether employed through SSAI or Wise County. (Team member who knows the most about the software.)

**Brief Description of the Software:** Insert here (ex. The dnppy package will be used to functionalize common programming tasks in the geospatial community, specifically for working with NASA data products. It will include functions for processing satellite data and assist in structuring analysis to reduce the startup time for DEVELOP teams to learn programming and create tools for end users.)

**Type of Code:** *Executable Code* and/or *Source Code* (Select one or both)

**Will the software include any embedded computer databases?** *Yes* or *No* (Select one)

**Does the software use or call any open software or libraries?** *Open Source* and/or *Proprietary/Commercial* (Select one or both)

**List the software or libraries used, under what license they were obtained, and the URL for the license in the table below:**

|  |  |  |
| --- | --- | --- |
| **Name** | **License** | **License URL** |
| Ex. Arcpy module | Ex. group license through ArcGIS | http://www.esri.com/software/arcgis |
| Ex. Python | Ex. Open source license | http://opensource.org/licenses/Python-2.0 |
|  |  |  |

**Full Software Description and Plan**

**Introduction/Objective:**

What motivated the creation of this software, what problem does it address?

**Applications and Scope:**

Where and how will this software be used to influence decisions?

**Capabilities:**

What can it do better than what was previously available?

**Interfaces:**

How is one expected to use the software? For example, command line, GUI, script execution, etc.

**Assumptions, limitations, & Errors:**

What areas that the software could be improved upon in the future? This is where limitations of the theory, model, science, etc should be briefly documented. If the tools only work for a specific scenario, say so.

**Testing:**

What validation techniques and testing strategy will be used to build confidence in the software?