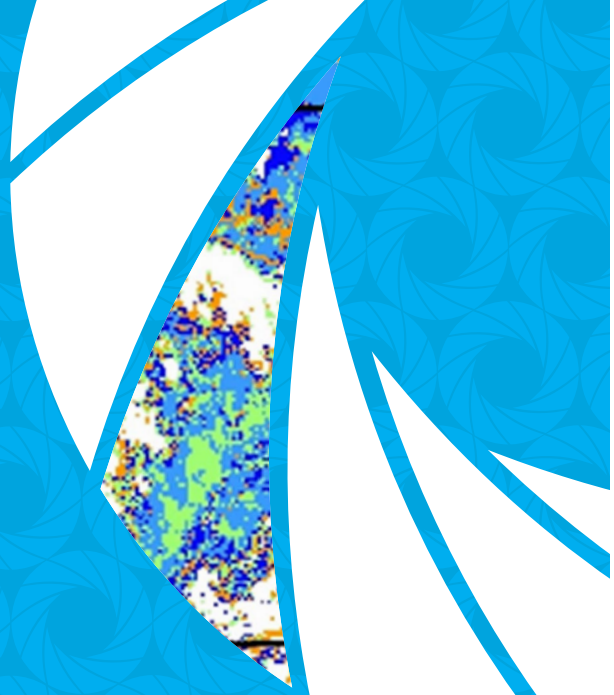


National Aeronautics and
Space Administration

SUMMER 2016
DEVELOPer NEWSLETTER

NP-2016-09-839-LaRC

PROGRAM HIGHLIGHTS

138 DEVELOPers

30 Projects

12 Locations

This summer was the last term for the DEVELOP node at the International Research Institute for Climate and Society in Palisades, NY. The Center Lead finished out his term working with a project hosted at DEVELOP's UGA node.

The DEVELOP node in Maricopa County, AZ officially opened this summer with the Maricopa County Health & Air Quality project.

DEVELOPers presented the UGA Costa Rica Water Resources and JPL Costa Rica Agriculture projects at the Costa Rican Embassy. Opening words were given by Ambassador Roman Macaya, Embassy of Costa Rica, and Sandra Cauffman, NASA's Earth Science Division Deputy Director. The presentations were followed by a panel of DEVELOPers and Embassy officials who discussed their partnership experience and the benefits to Costa Rica's future decision making.

Impact Analysis Senior Fellow Georgina Crepps published an article in *Earthzine* titled "Assessing the Impacts of Building Capacity in the Use of Earth Observations through the NASA DEVELOP Program." Click here to read the article.

ANNUAL EARTH SCIENCE APPLICATION SHOWCASE

2016

On August 10, 2016, DEVELOP participants, leadership, partners, and the public united at NASA Headquarters in Washington, D.C. to present the 30 summer DEVELOP projects. During the event, NASA leadership and the general public had the opportunity to learn more about the summer projects through two poster sessions, participant flash talks, and a highlight presentation featuring participants and project partners, jointly presenting about the project outcomes and application of the results.

University of Georgia DEVELOP Asst. Center Lead Sean Cameron speaks. Photo Credit: NASA/Bill Ingalls

Julia Marrs, center, talks to attendees about her work with the Puerto Rico Agriculture project. Photo Credit: NASA/Bill Ingalls

Hannah Rosenblum and Didi El-Behaedi present their Middle East Water Resources project results. Photo Credit: NASA DEVELOP/Carrie Kelley

SEE PHOTOS ONLINE

click here

FLICKR

#NASADEVELOP16

KAREN ALLSBROOK

NASA's SILVER ACHIEVEMENT MEDAL RECIPIENT

Awarded for *Extraordinary Contributions* to the DEVELOP Program

The Silver Achievement Medal was awarded to Karen Allsbrook for extraordinary administrative and financial management in support of the DEVELOP National Program. This prestigious NASA Achievement Medal is awarded to individuals by NASA Center Directors for stellar achievement that supports one or more of NASA's Core Values.

SSAI SCHOLARSHIP RECIPIENTS

DARYL ANN WINSTEAD

Mekong River Basin Agriculture
DEVELOP Marshall Space Flight Center

"Her knowledge and experience truly showed when she willingly stepped up to the acting Center Lead role, while also being the Project Lead for the Mekong River Basin Agriculture project."

JARED TOMLIN

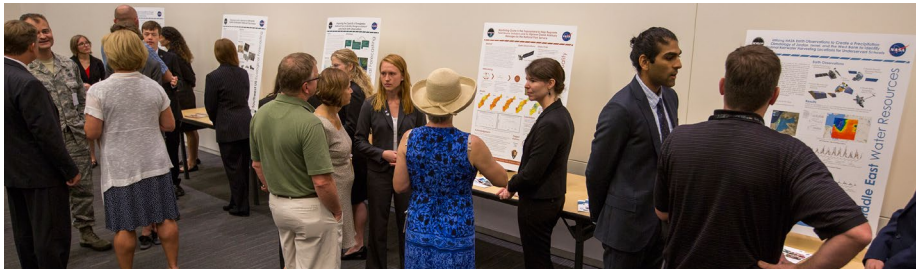
Northern Great Plains EcoForecasting
DEVELOP Goddard Space Flight Center

"He was member of the Northern Great Plains Ecological Forecasting team, and his optimism, ability to think outside of the box and troubleshoot problems assisted the team in overcoming any obstacles they faced."

RACHEL CABOSKY

Everglades EcoForecasting
DEVELOP Langley Research Center

"Her determination to enhance her skillset, positive attitude, and willingness to participate and volunteer additional hours working on other opportunities at Langley have been a huge asset to the node this summer."



NASA Langley Research Center (LaRC)

The Appalachian Trail Health & Air Quality team traveled to the Big Meadows Monitoring Station in Shenandoah National Park to meet with project partner, Jalyn Cummings, and tour one of the *in situ* monitoring stations that provided data for the project.

Dave Young (Director of the Science Directorate, Langley) and J.D. Reeves (Associate Director of the Science Directorate, Langley) visited the NASA DEVELOP Summer participants to discuss being leaders at NASA, their backgrounds in the Science Directorate, and their careers at NASA.

Langley summer participants visited with participants at Goddard Space Flight Center several times over the course of the term, including a team lead meet-up to discuss similar methodologies between the Southwest US Ecological Forecasting team and the Northern Great Plains Ecological Forecasting team, as well as a combined tour of Wallops Flight Facility on the Eastern Shore of Virginia.

University of Georgia (UGA)

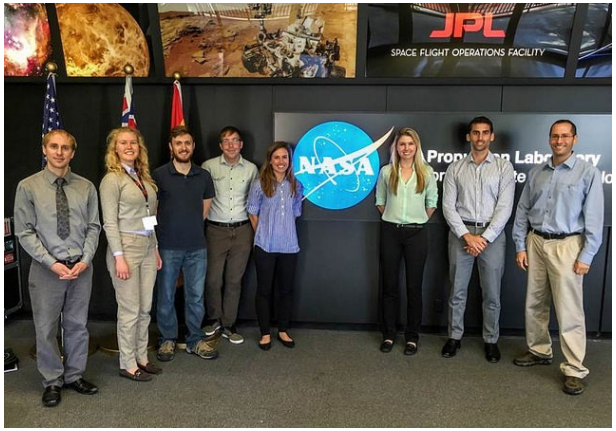
The Atlanta Water Resources team conducted fieldwork with their project partners from The Nature Conservancy to validate areas identified by their suitability analysis. They also attended a stakeholder meeting with the Atlanta Regional Commission and presented a Lunch & Learn event in Atlanta.

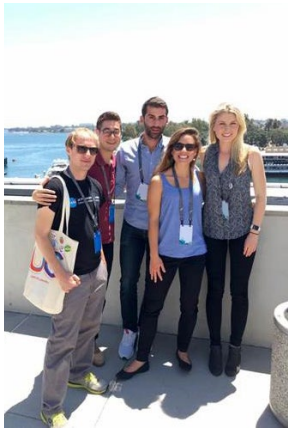
The Southeast Ecological Forecasting III team visited Lake J. Strom Thurmond on multiple occasions to meet with project partners from the US Army Corps of Engineers and collect field data. Using these data, the team created a model to accurately map the current distribution of hydrilla.

The Costa Rica Water Resources team included participants from the University of Georgia and University of Costa Rica. They effectively collaborated across borders to create a drought monitoring and water balance assessment to enhance decision making and response planning in the Guanacaste Province.

The Peru Climate team worked closely with their project partners, who connected them with four entomologists who are experts on the potato weevil, a pest that causes serious damage to the potato crop at high altitudes in the Peruvian Andes. This collaboration offered the team a greater understanding of how this insect impacts potato suitability.

The Atlanta Water Resources and Peru Climate project partners attended the Annual Earth Science Application Showcase in Washington, D.C. Local representatives from the Maryland/DC Chapter of The Nature Conservancy were also in attendance.





NASA Jet Propulsion Laboratory (JPL)

DEVELOPers from the California Water Resources team were invited to the National Weather Service in Oxnard to meet with their partners to discuss the project, as well as participate in video interviews.

DEVELOP participants were able to attend the goodbye ceremony held for Dr. Charles Elachi, the former Director for the Jet Propulsion Laboratory. Here, participants had a chance to talk with Dr. Elachi about NASA JPL and the DEVELOP Program.

Ben Holt, the DEVELOP mentor for JPL, hosted a remarkable BBQ reunion for current and past DEVELOPers, including JPL science advisors for the Costa Rica Agriculture team. The BBQ was a great opportunity for current DEVELOP participants to learn where past participants have gone after their experience with DEVELOP and share their DEVELOP experiences together.

NOAA National Centers for Environmental Information (NCEI)

NCEI hosted a multi-node tag-up with the Wise County node on June 21st. The meeting provided participants at both nodes with the opportunity to meet other DEVELOPers, learn about different summer projects, and receive/give advice on project issues. Participants also had the chance to talk with a career panel of experts in various fields including: academic research, applied climate science, meteorology, and even venture capitalism. The event helped to connect the resources and expertise of each node, as well as showcase the diversity between different DEVELOP locations.

The Pacific Water Resources II team created operational tools to be used by various meteorologists in the U.S. Affiliated Pacific Islands (USAPI), which will fill in detrimental data gaps with near-real time precipitation estimates. Preliminary results and descriptions of the tools were sent to future end users in the USAPI – all of which responded with positive and excited feedback. "…This allows us to look at the ocean areas without 'data'. Actually, you show that there is data, but you make that data usable. This [is] important for inhabited islands that do not have measured rainfall information" -Chip Guard, Warning Coordination Meteorologist-National Weather Service.

NCEI hosted a collaborative summer closeout event with the NASA DEVELOP nodes at the University of Georgia and Wise County, VA. This event was the first multi-node closeout held at the Collider in Asheville - a collaborative space for climate science and resiliency. The event exposed local scientists and businesses in Asheville, NC to diverse and impactful NASA DEVELOP projects from across the Southeastern U.S. The event was also shown remotely through a live webcast to our partners and others. Participants had the chance to present their hard work and network with experts in their prospective fields.

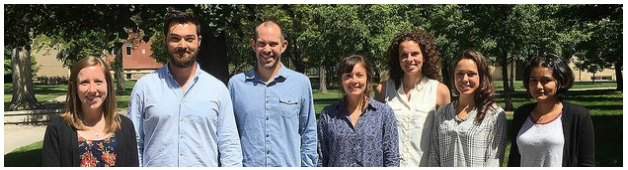
NASA Goddard Space Flight Center (GSFC)

The Northern Great Plains Ecological Forecasting team developed a novel methodology in distinguishing cheatgrass and Japanese brome from native grasses in the northern Great Plains, comparing the green-up and senescence of different grasses with vegetation indices using a suite of coarse and high-resolution sensors. The Puerto Rico Agriculture team was excited in creating a methodology for tracking mites from space, showing how leaf damage and changes in canopy structure can guide entomologists and agronomists in locating the red palm mite, the biggest mite explosion ever observed in the Americas.

DEVELOP projects from Goddard were featured in two online publications. Himalayan Disasters (2015) was featured on NASA Earth Observatory, and Great Lakes Ecological Forecasting (spring 2016) was featured in the Detroit Free Press.

On June 17th, the Great Lakes Ecological Forecasting team (spring 2016) was invited to present their results at the Great Lakes and St. Lawrence Cities Initiative Annual Meeting in Niagara Falls, NY. On August 9th, the Northern Great Plains Ecological Forecasting team presented their research in Washington, D.C. at the Department of the Interior. In August, participants from both Puerto Rico Agriculture and Northern Great Plains Ecological Forecasting presented their research at Goddard Space Flight Center during the node closeout event and at NASA Headquarters during the Annual Earth Science Applications Showcase.

DEVELOPers went on impressive tours at both Goddard Space Flight Center and Wallops Flight Facility. They learned about and saw current spacecraft under construction, sounding rockets, scientific balloons, testing facilities, and mission control for Earth Observing Missions.



USGS at Colorado State University (FC)

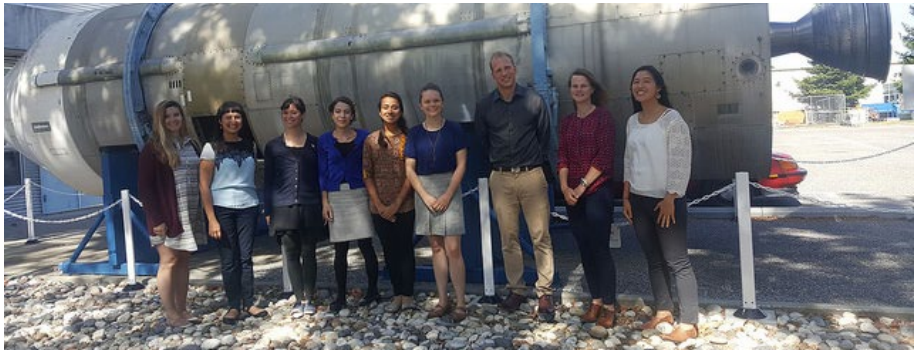
The Rocky Mountain Agriculture team utilized 30 years of Landsat imagery to produce maps of historic forest disturbances in the southern Rockies of Colorado and Wyoming. Because existing records over this period are incomplete, non-digitized, or lost to history, these maps will allow project partners to confidently look back in time as they plan for the future of their forested lands.

The Rocky Mountain Agriculture team visited the National Park Service Rocky Mountain National Park on a two day field trip in July. On the first day, the team was led by ecology, GIS, and forestry National Park Service staff to see examples of forest management activities. The following day, the Rocky Mountain Agriculture team explored the park's wide ranging ecosystems to document beetle kill, thinning, landslides, and wildfire disturbance events in order to validate and improve their disturbance maps.

The Laramie Mountains Ecological Forecasting II team traveled to Medicine Bow National Forest in June to collect field data describing quaking aspen stands in the Laramie Mountain Range. Over the course of four days, they had the opportunity to observe the diversity of aspen communities across the study area, and to meet with their project partner at the Wyoming Game and Fish Department to discuss agency habitat management objectives. The aspen cover probability map that was produced this term will be directly implemented in the department's carrying capacity estimates for mule deer and elk.

The Laramie Mountains Ecological Forecasting II team met with the participants from term I to discuss ways to connect the project directly with products developed last term. Together, they generated an innovative approach to investigate the relationship between aspen vitality and fire history in the region by analyzing changes in the spectral response of aspen stands over time following fire disturbance.

Participants at the Fort Collins node had the pleasure of meeting with Catherine Jarnevich, a Research Ecologist at the USGS Fort Collins Science Center. They discussed the Software for Assisted Habitat Modeling, an interface that both teams used to conduct a variety of statistical models on both sets of project data, and reviewed preliminary outputs with Catherine on the Visualization Wall, which is an array of 24 monitors that allowed for easy comparisons of model outputs.

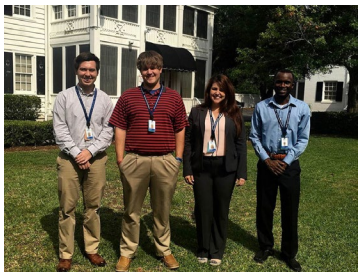


NASA Ames Research Center (ARC)

On June 24th, the Caribbean Oceans II team presented their work from the spring and summer 2016 DEVELOP terms at the Society of Conservation GIS conference in Pacific Grove, California. Their oral presentation, which described their methods of detecting Sargassum in the Caribbean Sea and collaborating with various stakeholders from Caribbean nations, was received warmly by the audience.

On June 27th, the Elkhorn Slough Ecological Forecasting team met with end users from the Elkhorn Slough National Estuarine Research Reserve in Watsonville, California to view tidal systems, aquatic mammals and birds, and agricultural input sites in the slough. During this visit, the team presented their preliminary work to an audience of water quality stakeholders who provided input on the objectives, available datasets, and end-products of the project. At the end of the term, the team presented their results from Earth Trends Modeler, Land Change Modeler, and the Soil & Water Assessment Tool to these stakeholders.

On June 28th, the San Francisco Bay Area Health & Air Quality team met with project partners from the Bay Area Air Quality Management District in San Francisco, California to present their goals for the project and receive feedback on maps, methodologies, and results that would benefit the agency. The team also collaborated with the NASA Alpha Jet Atmospheric eXperiment group throughout the term and benefitted greatly from their airborne methane measurements.

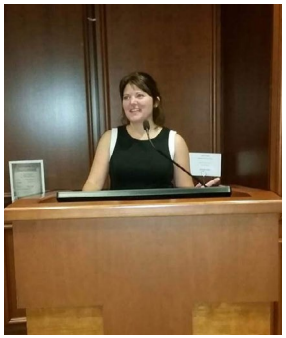


Mobile County Health Department (MCHD)

This summer, the Mobile Bay Ecological Forecasting II team had the opportunity to take a boat tour of marshes in their study area. While on the tour, the team learned more about the incredible marsh ecosystems in Coastal Alabama, gathered valuable project footage and imagery, and observed native wildlife like osprey and alligators up close!

The Mobile Bay Ecological Forecasting II team was visited early in the term by the DEVELOP National Program Science Advisor Dr. Ross. During Dr. Ross's visit to the node, the team was able to discuss project ideas and objectives with him, as well as gain knowledge and first-hand experience using new software.

The Mobile Bay Ecological Forecasting II team concluded their term with a closeout at the Ben May Main Library in downtown Mobile. The closeout was attended by their partners at the Alabama Coastal Foundation and the Dauphin Island Sea Lab. Many local decision makers, researchers, and professors attended the closeout as well, allowing for open discussion focused on the current state of marshes and watersheds in Coastal Alabama.



BLM at Idaho State University GIS TReC (ID)

The Eastern Idaho Disasters team traveled to Craters of the Moon National Monument and Preserve to meet with project partners and Craters staff to learn about the different types of flora and fauna that exist throughout the park. Todd Stefanic, NPS Wildlife Biologist, personally showed the team through the park highlighting its unique features. Additionally, DEVELOPers went spelunking through lava tube caves formed millions of years ago by volcanic activity during their visit.

The Eastern Idaho Disasters project compared the performance of four wildfire susceptibility models with different spatial resolutions. The team leveraged 10-meter Sentinel-2 imagery and 30-meter Landsat 8 data to identify critical mule deer and greater sage-grouse habitats. These have an increased susceptibility to wildfires based upon surrounding fuel loads. Through their analysis, they were able to determine locations of high-fire susceptibility in a well-known mule deer migration path that runs through Craters of the Moon National Monument and Preserve.

NASA Marshall Space Flight Center (MSFC)

The East Africa Disasters II team visited a local landslide at Monte Sano in Huntsville, Alabama to see landslide damage first hand and collect VPS footage.

MSFC DEVELOPers visited the United States Space and Rocket Center, where they were able to learn about the Sally Ride EarthKAM during their live mission. In addition, the MSFC DEVELOPers were able to connect with DEVELOP alumni Timothy Klug, Tyler Finley, and Dawn White, who are all part of the Sally Ride EarthKAM.

Lauren Childs-Gleason and Jamie Favors, from DEVELOP's National Program Office, visited MSFC to meet the participants and learn about the projects for the summer term.

The node attended a presentation titled, “Overview and Early Results from NASA's Global Precipitation Measurement (GPM) Mission,” given by Dr. George Huffman (Deputy Project Scientist for the GPM, Goddard Space Flight Center) and hosted by NASA SPoRT. The East Africa Disasters team connected with Dr. Walter Peterson after the presentation and received advice about incorporating GPM in their project.

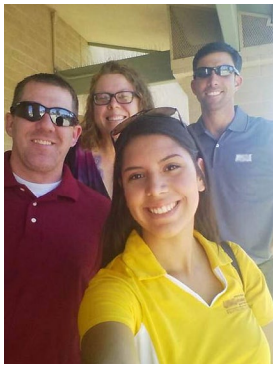
Wise County Clerk of Court's Office (WC)

The Wise County node had the opportunity to have dinner with the Lieutenant Governor of Virginia, Ralph Northam. The teams were permitted several minutes of one-on-one time to discuss their projects and their DEVELOP experience. The Lieutenant Governor was especially interested in the opinion of the foreign national participants on DEVELOP and Southwest Virginia.

The Southeast Agriculture team spent the majority of their term analyzing Soil Moisture Active/Passive (SMAP) data. Since SMAP is such a new sensor, the validation process proved to be more extensive than it would have been with more established sensors. Their partners at the USDA will integrate the validated SMAP data into their existing service to notify stakeholders about changes in soil moisture.

The node took a kayak trip on the Clinch River, which was the focus of the spring 2016 term project, Wise Disasters. Science Advisor Bob VanGundy led the trip while informing the node of the flooding history, geology, and prospective projects that may be of interest in the Clinch River Basin.

During week three of the term, the WC team made the trip to Asheville, NC and the NCEI node. During this cross-node meeting, the teams had the opportunity to discuss their project progress and any roadblocks that they thought they may face along the way. There was a career panel consisting of NOAA NCEI scientists, as well as private sector scientists and entrepreneurs.



Arizona State University (AZ)

The Maricopa County Health & Air Quality team met with partners from Maricopa County Department of Public Health and Maricopa County Air Quality Department (MCAQD) at an air quality monitoring site. Here, they got first-hand experience with the equipment used to measure particulate matter in Maricopa County. The team was also able to visit the data center where MCAQD processes and analyzes air quality data.

The Maricopa County Health & Air Quality team had a video conference with Dr. Itai Kloog. Dr. Kloog is a senior lecturer at Ben-Gurion University of the Negev in Israel and an expert in using NASA Earth observations to estimate particulate matter. The team gained valuable insight on the mixed effects model they worked with throughout the summer term.

The Maricopa County Health & Air Quality team gained experience acquiring and processing MODIS AOD and MISR AOD data throughout the term. Prior to this term, no one on the team had experience with NASA Earth observations. By the end of the term, the team was able to incorporate NASA Earth observations into a model predicting air particulates throughout Maricopa County, Arizona.

DEVELOPer OF THE TERM
SUMMER 2016

PRISCILLA ADDISON

Eastern Idaho Disasters
DEVELOP BLM at ISU GIS TReC

From the onset of the Eastern Idaho Disasters summer project, it was clear that Priscilla Addison was going to be an exceptional member of the team. She brought to the project many valuable qualities and has used her time with DEVELOP to expand her understanding of different remote-sensing software and satellite imagery and improve upon her time management skills. Priscilla was a great teacher to the Eastern Idaho team this term and helped improve the team's understanding of how to thoroughly analyze remote-sensing data. Her initiative and commitment to the project and team improved the result of this project and increased the knowledge of each DEVELOPer. Priscilla, originally from Ghana, Africa, is currently pursuing her PhD at Michigan Tech and studying debris flows. She is working on building predictive models that will inform agencies where the debris may end up if a precipitation effect occurred post-fire. This information will be fed into the NASA RECOVER decision support system that is designed to aid the wildfire community in planning for ecosystem recovery post-wildfire.

MAYA MIDZIC

San Francisco Bay Health & AQ
DEVELOP Ames Research Center

The lead of this summer's San Francisco Bay Area Health & Air Quality team, Maya Midzik, is a recent graduate from Yale University with degrees in English and Geology & Geophysics. Since her initial experience with remote sensing, Maya has gone on to pursue independent remote-sensing research through both the NASA Student Airborne Research Program and a Geology thesis focusing on satellite monitoring of harmful algal blooms. This summer at Ames DEVELOP, Maya had the opportunity to engage with project partners from the local San Francisco regulatory agencies. They created a video about the need for better methane monitoring in the area to facilitate collaborations between NASA and local agencies. In the coming years, she plans to stay engaged with air quality issues in the Bay Area, expanding on relationships built during the DEVELOP term with an eye toward future collaboration.

Jim VonHarden, NPS, and Tyler Rhodes, NASA DEVELOP, at the Department of the Interior in Washington, D.C. Photo Credit: NASA DEVELOP/Carrie Kelley

PARTNERING WITH THE NATIONAL PARK SERVICE

By Ryan Schick

DEVELOP partnered with the National Park Service this year in an effort to help address issues within national parks across the country, while simultaneously highlighting the NPS centennial.

Through this collaborative effort, DEVELOP partnered with the National Park Service (NPS) to conduct nine projects this summer and will continue the collaboration in the fall with an additional eight projects. While DEVELOP has partnered with NPS in the past, there has never been an initiative of this magnitude. DEVELOP reached out to Coastal Texas Water Resources partner and NPS hydrologist, Joe Meiman, who spoke with colleague Don Weeks, Intermountain Region Physical Resources Manager, about getting the NPS more involved with DEVELOP as part of a NASA-wide effort to support the National Park Service's 100th anniversary. Together, Don and others at NPS helped spur ideas for six of the projects. The projects from this summer covered various topics and spatial areas and helped the National Park Service incorporate remotely-sensed Earth observation data to address and mitigate issues across their parks. Several of these projects and partnerships will continue into the future, helping to further build the National Park Service's capacity. Following are short excerpts about each of the nine National Park Service projects that were conducted during the summer term.

Chaco Canyon Cross-Cutting

The Chaco Canyon Cross-Cutting project partnered with Tom Lincoln, the Intermountain Region Assistant Regional Director for Cultural Resources at the National Park Service, to demonstrate how NASA Earth observations can aid in identification and protection efforts of ancient Chaco roads and communities.

Participants shared Their National Park Service project results during a poster session at the Department of the Interior in Washington, D.C.

Everglades Ecological Forecasting

The Everglades National Park is undergoing extensive hydrological changes that affect mangrove to marsh transition zones. The Everglades Ecological Forecasting team partnered with Everglades National Park to use NASA and other Earth observations and random sampling techniques to detect changes along 10-15% of the Park coastline in order to map the rate of change from the 1990s to 2015. This rate was used to forecast future changes to the mangrove-marsh transition zone.

Northern Great Plains Water Resources

The Northern Great Plains Water Resources team at the Wise County and City of Norton Clerk of Circuit Court's Office in Wise, VA partnered with Rocky Mountain National Park to identify changes in Persistent Ice and Snow Cover within the park. Using Earth observations to explore these previously covered areas will help the National Park Service to protect sensitive archaeological sites and assess land cover change.

East Idaho Disasters

The East Idaho Disasters project team partnered with Craters of the Moon National Monument and Preserve (CMNMP) to identify critical wildlife habitats threatened by heightened wildfire susceptibility. Utilizing NASA and other Earth observations to analyze sage-grouse, an umbrella species in the sage-brush ecosystem, and mule deer habitats will aid CMNMP staff with habitat management plans.

Appalachian Trail Health & Air Quality

The Appalachian Trail Health & Air Quality team partnered with the Shenandoah National Park and other national parks along the Appalachian Trail, which stretches across 14 states from Georgia to Maine. The focus was to introduce NASA Earth observations to the National Park Service to enhance current research and monitoring practices of ozone and oxides of nitrogen and sulfur.

Southwest Ecological Forecasting

The Southwest Ecological Forecasting team partnered with Bandelier National Monument, Big Bend National Park, Glen Canyon National Recreation Area, and Valles Caldera National Preserve to create an alternative method to resource intensive field observations for monitoring Bromus tectorum (cheatgrass), Arundo donax (giant reed), and Saccharum ravennae (ravenna grass). Integrating NASA Earth observations will give park staff additional resources to help remotely locate and monitor populations of invasive grasses, making large-scale management more feasible and efficient.

Northern Great Plains Ecological Forecasting

The Northern Great Plains Ecological Forecasting team partnered with the National Park Service's Northern Great Plains Inventory & Monitoring Network to identify areas of invasive cheatgrass and Japanese brome using Earth observations. Capturing the early phenology identifies bromes from surrounding native grasses and aids the development of a comprehensive management plan for the Northern Great Plains park units.

Western U.S. Water Resources

In collaboration with the Inventory & Monitoring Program of the National Park Service and the Southwest Biological Science Center of USGS, the Western U.S. Water Resources team used Earth observation data to assess which vegetation types are most vulnerable to drought and climate change. This project specifically focused on Capitol Reef National Park in Utah, but methods and results can be utilized by other national parks throughout the region for land management efforts and decision making.

Rocky Mountain Agriculture

The Rocky Mountain Agriculture team partnered with the National Park Service to identify, characterize, and map disturbances within Colorado's Rocky Mountain National Park. Inspiration for the project came from conversations with the team's project partners about the difficulties in evaluating the influence of historical disturbances in the park without a complete record of these events. The final maps assisted partners at Rocky Mountain National Park in devising land management plans and preparing for future disturbance events.

"This was my first time working with a team from the NASA DEVELOP Program, and it was more than productive, it was rewarding. Shenandoah National Park has one air quality monitoring station to cover a very long, narrow park. The idea was to see if NASA satellites could reproduce ozone levels in the park close enough to what we monitor on the ground. The team generated an idea, formulated a plan, and produced defendable results with very little assistance from me. However, what impressed me the most was the team's ability to explore other research questions I had while simultaneously concentrating on the task at hand. It was truly a rewarding experience. Thanks, NASA!"

- Jalyn Cummings, Program Manager with Shenandoah National Park

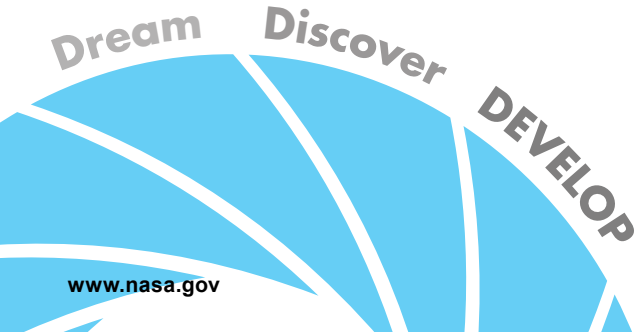
GET YOUR DEVELOP GEAR *Online!*

The DEVELOP gear webstore is now available online. Order individually or as a node @ http://tinyurl.com/gs6oq8h anytime from anywhere.

Orders will be processed on the last day of every month and sent directly to the shipping address provided.

UPCOMING EVENTS

August 29 - October 7	Spring 2017 Term Application Window
September 28	AGU VPS Deadline
November 17	Fall 2016 Earthzine Virtual Poster Session Launch
November 18	Fall 2016 Term Ends
December 12 - 16	AGU Fall Meeting
January 9 - February 17	Summer 2017 Term Application Window
January 23 - March 31	Spring 2017 Term
June 5 - August 11	Summer 2017 Term
June 2017 - September 2018	Various 20th Anniversary Events



FOLLOW US

#NASADEVELOP