



GEOSCIENTISTS-IN-THE-PARKS Internship Program

Program Report
Fiscal Year 2017



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Geoscientists-in-the-Parks Program Annual Accomplishments Report
Fiscal Year 2017

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National Park Service
Natural Resource Stewardship and Science

ON THE COVER: GIP Lauren Zeffer collecting vegetation data at Fire Island National Seashore, New York. (NPS photo)
ON THE BACK: April Kelly sampling at the Emmons Glacier in Mount Rainier National Park, Washington. (NPS photo)

Executive Summary

In 2017, the Geoscientists-in-the-Parks (GIP) successfully completed its 21st year and placed **169** interns in 69 parks, five Washington offices, seven regions, and four inventory and monitoring networks. These talented college students and recent graduates supported the NPS mission by completing important natural resource science projects for the National Park Service, gained on-the-ground work experience, and obtained an understanding of the importance of conservation and resource stewardship on public lands.

Nearly half of the projects focused on geologic resources, and the rest on other natural resource science disciplines. Projects ranged from inventorying and monitoring to research to developing and presenting educational and interpretive programs. This year, 20% of the participants were minorities and 69% of the interns were female undergraduate students or recent graduates. The GIP interns work contributed **113,716** hours of work doing critical science projects for the NPS at a cost of approximately \$2 MM. In FY17 the GIP Program continued its affiliation with AmeriCorps and offers Segal education awards to its participants. The GIP Program is run in partnership with The Geological Society of America and Stewards Individual Placement Program, a part of Conservation Legacy.

This year the Program added Direct Hire Authority Resources Assistant internships to target exceptional upper level undergraduate, graduate students, or recent graduates interested in natural resource science careers with the federal government.



GIP intern Eric Fiorentino caving at Jewell Cave National Monument, South Dakota. (NPS photo)

“Every day was great I got to do my dream work on a regular basis”

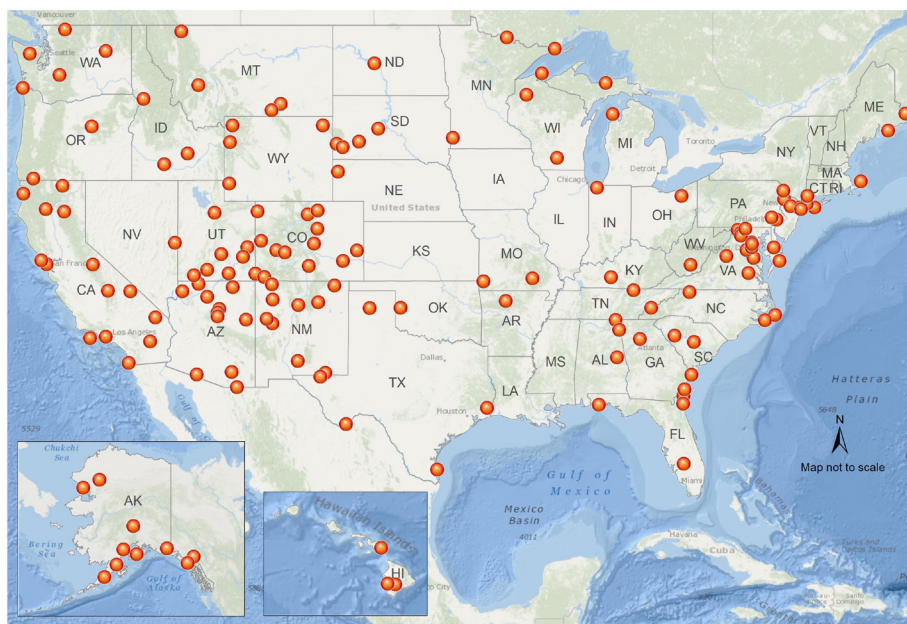


Statement of Purpose

The Geoscientists-in-the-Parks Internship Program, developed by the NPS Geologic Resources Division in 1996, provides undergraduate, graduate students and recent graduates 18 – 35 years old with on-the-ground, natural resource science-based work experience with the National Park Service. The Program fulfills requests by park and central office staff for assistance with geologic and other natural resource science projects. GIP interns enable the National Park Service to complete important natural resource projects that would not be feasible without the intern's help. This multidisciplinary program provides many opportunities for persons to work on projects focusing on inventorying and monitoring; research; curation of park natural resources; developing educational brochures, visitor materials, and educational curricula; and interpreting natural resource science information for park staff and the public. GIP projects address a broad array of natural resource science needs in air resources, biology, geology, natural sounds and night skies, water resources, and other integrated science topics.

Since the program's inception, 1,455 participants have worked with parks and central offices to further the NPS' resource management needs while gaining on-the-ground work experience.

In 2017, 169 GIP interns helped 78 NPS units and central offices fulfill their unmet natural resource science needs, while gaining practical job experience ranging from three months to one-year. GIPs served a total of 113,716 hours. Since the program's creation twenty one years ago, 1,455 participants have worked with parks and central offices. The number of program participants in fiscal year 2017 increased substantially to accommodate the large number of park requests for natural resource science technical assistance. The Geoscientists-in-the-Parks Program is run in partnership with Stewards Individual Placement Program (Stewards) and The Geological Society of America (GSA), in collaboration with the National Park Service's Natural Resource Stewardship and Science offices and divisions.



169
GIP interns



113,716
Hours of service



78
NPS parks, regions,
central offices



GIP intern Kaitlin Askelson with a fragment of fossil bone at John Day Fossil Beds National Monument, Oregon. (NPS photo)

Program Objectives

- Provide on-the-job geoscience and other natural resource science training for undergraduate and graduate students and recent graduates 18-35 years old,
- Introduce program participants to science careers in the National Park Service,
- Build natural resource science technical capacity for parks and central offices, and
- Enhance the public's understanding of the natural resource sciences.

Types of Positions

Three types of Geoscientists-in-the-Parks positions were offered in FY17 - GIP interns, Guest Scientists, and Direct Hire Authority Resource Assistants. GIP positions can last for 3 months to one year.

GIP Intern positions typically last for 3 months during the spring/summer or fall/winter seasons. These are entry level natural resource science internships that focus on career exploration and building fundamental natural resource science skills in its participants. GIP Intern positions are primarily for undergraduate students studying STEM fields. GIP Interns receive a weekly stipend of \$300, park-provided housing or a housing allowance, and a \$250 travel allowance.

Guest Scientist positions are more complex than entry level internships, may last for 3 months or more, and are usually filled by students or recent graduates with a higher level of expertise or experience. These internships are intended to further develop the participant's technical and other professional skills. Guest Scientists receive a weekly stipend of \$350 - \$500, park-provided housing or a housing allowance, and a \$250 travel allowance.

Direct Hire Authority Internships target exceptional upper level undergraduate or graduate students, or recent graduates that are interested in natural resource science careers with the federal government. DHA Resource Assistant positions are rigorous internships that develop the participant's technical and creative thinking abilities, leadership skills, and problem-solving capabilities. DHA positions must last a minimum of 11 weeks during the summer. DHA Resource Assistants receive a weekly stipend of \$400, park-provided housing or a housing allowance, and a \$250 travel allowance.

Program Summary

The GIP Program is administered through NPS youth cooperative agreements and annual task agreements with The Geological Society of America (Cooperative Agreement P13AC00336) and Conservation Legacy (Cooperative Agreement P15AC00024). These national youth agreements authorized under the Public Lands Corps Act (16 U.S.C. §§ 1721-1726) focus primarily on 18-35 year olds. A key benefit of the GIP Program is that program participants may be non-competitively hired by the federal government after completing 640 hours of satisfactory service in one or more appropriate conservation projects (see [DOI Personnel Bulletin 17-03](#), May 23, 2017 and DOI Personnel Bulletin 12-13, January 22, 2013) or directly hired after successfully completing an 11 week internship and graduating from a college or university (see [DOI Personnel Bulletin 12-15](#)).

Last year the program became affiliated with AmeriCorps. AmeriCorps engages individuals in intensive community service work with the goal of helping others and meeting critical community needs. GIPs are eligible for a \$1,221 to \$5,775 pre-tax AmeriCorps Segal Education Award upon successfully completing their internship. This award can be used for paying back student loans or for continuing the participant's higher education. In FY17 the GIP interns were eligible to receive \$225,771 in AmeriCorps education awards at no cost to the NPS. The amount of each award is based on the hours worked with most interns receiving an award of \$1,527. In addition to the AmeriCorps affiliation, medical insurance may be provided to GIP interns (not provided to their spouse or children) if the position lasts 46 weeks or more.



In FY17 NPS staff and program partners conducted site visits at eight parks and regional offices. These site visits are important because they provide an opportunity for the program staff to answer the host site's questions, receive feedback on the program, evaluate the quality of the GIP projects, and help create a more personal relationship between the GIP Program staff, host site, and interns.

Program Costs

The table shown below summarizes the costs for the 169 Geoscientist-in-the-Parks positions in FY17. These costs are the total costs for the positions that started or ended in FY17.

Table 1. GIP Program cost breakdown in FY17.

FUNDING SOURCE		COST	SUBTOTAL
NPS	Geologic Resources Division	\$316,886	\$1,898,445
	Inventory & Monitoring Program	\$111,181	
	NRSS funding	\$176,996	
	NPS regional funding	\$38,421	
	Parks	\$1,237,596	
	WASO YPD Funding	\$11,420	
	Other	\$5,945	
	Subtotal Direct Costs - NPS		
Partners	Geological Society of America Foundation	\$23,170	\$72,086
	National Park Foundation	\$6,480	
	Park Associations	\$42,436	
	Subtotal Direct Costs - Partners		
TOTAL DIRECT COSTS			\$1,970,531
In-Kind Contribution - Program Partners			\$474,611.25

The NPS Geologic Resources Division shared the costs for one GIP position per park in FY17. This funding amounted to \$3,550 per park. In addition, GRD covered the cost differential in the stipends for all of the DHA positions (\$1,200/position). Park associations, GSA Foundation, inventory and monitoring networks, and regions also assisted parks with the costs to host GIP interns.

Intern and Supervisor Webinars

In February and June, the GIP Program led webinars to launch the spring / summer and fall / winter internships. The webinars provided information on this year's program changes and enhancements, AmeriCorps affiliation and requirements, roles and responsibilities, selection process, and costs. All current webinars are recorded and posted on the [GIP intranet website](#). In addition, the GIP Program in collaboration with the Youth Programs Division hosted two Direct Hire Authority webinars (February and June) to introduce the supervisors and interns to the requirements for the DHA positions.

Stewards conducts individual webinars for each GIP supervisor and intern to go over program procedures and requirements. The supervisor's orientation covers Stewards and NPS supervisor's roles and responsibilities, program reporting, AmeriCorps benefits and requirements, and paperwork (enrollment, and time-sheet approval). The GIP intern orientation introduces the interns to the GIP

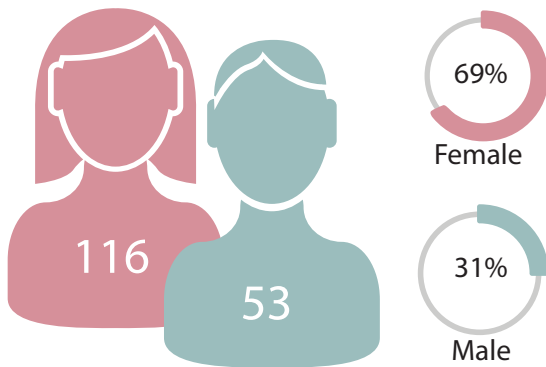
Program and Stewards, covers roles and responsibilities, AmeriCorps benefits and requirements, and paperwork requirements (background clearances, enrollment, and time-sheet submittal).



GIP interns Sarah Ciarrachi and Phillip Andrews surveying for California condors at Grand Canyon National Park, Arizona. (NPS photo)

Demographic Information

Gender and Ethnicity of GIP Interns



Sixty nine percent of GIP interns in FY17 were women.

Participation by women in the GIP Program is very high and exceeds the nationwide percentage of women studying and working in STEM fields. Participation in the GIP Program by women is 16% higher than the percentage of women earning undergraduate degrees in natural resource science fields in the U.S. ([National Science Foundation](#), 2012 data).

This year one fifth of the 2017 GIP participants (20%) were from minority groups under-represented in STEM career fields. Participation by minority students may be higher than is reported because nearly 4% of the program participants chose not to disclose their race / ethnicity on their applications. The program's goal of increasing diversity in the NPS STEM workforce aligns

closely with the goals in the U.S. Department of Interior's STEM Education and Employment Pathways Strategic Plan for Fiscal Years 2013-2018. The five-year goal in the strategic plan is "that our youth and the American public become scientifically literate stewards of our natural and cultural heritage and that today's youth, especially those underrepresented in STEM fields of study, become inspired to choose career paths at DOI or related agencies and partners".

Overall, the diversity in the GIP Program does not adequately represent the diversity of the U.S. population but is over three times that of the U.S. STEM workforce (6%) and nearly than seven times that of the [NPS STEM workforce](#) (3%) as shown on next page.

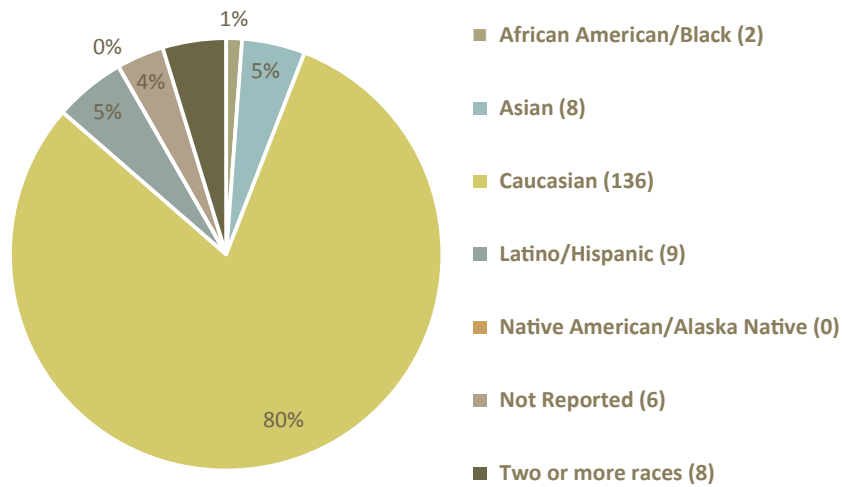


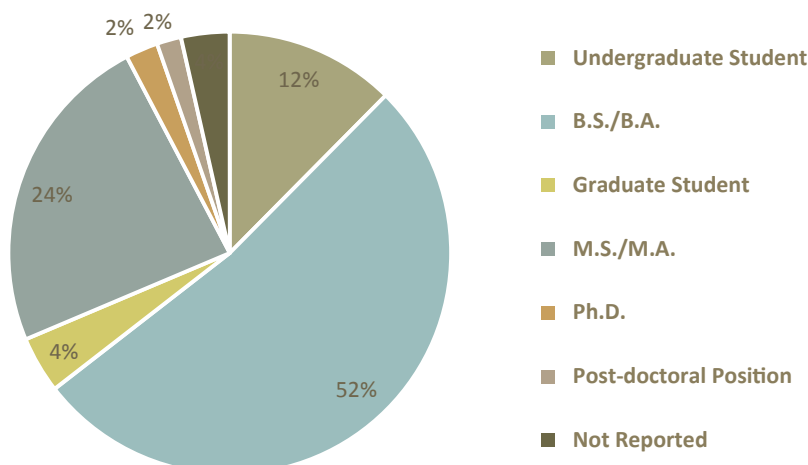
Table 2 lists the racial/ethnic diversity of the overall NPS workforce and in STEM fields. The NPS statistics were compiled from 2014 NPS employment data compiled by James Wiggins, NPS Equal Employment Opportunity Specialist.

Table 2. Diversity of the overall NPS workforce and in STEM fields (2014 NPS data).

CATEGORY	# EMPLOYEES	%
NPS Employees	23,529	100%
NPS Racial/Ethnic Diversity (excluding Caucasian) of NPS Workforce	4,183	18%
NPS workforce - Caucasian	19,346	82%
NPS Workforce – STEM fields	5,054	21%
NPS Workforce – Racial /Ethnic Diversity in STEM Fields	698	14% of NPS STEM employees, 3% of total NPS workforce

Educational Status of GIP Interns

Sixty four percent of program participants reported to be undergraduate students or had recently earned their undergraduate degree. The remainder of the GIPs were in graduate school, had earned a graduate degree, or did not report their educational status. This year, 4% of the interns reported receiving a Ph.D. or had completed a post-doctoral position, demonstrating the high caliber of participants in the program.



Schools Attended by the GIP Interns

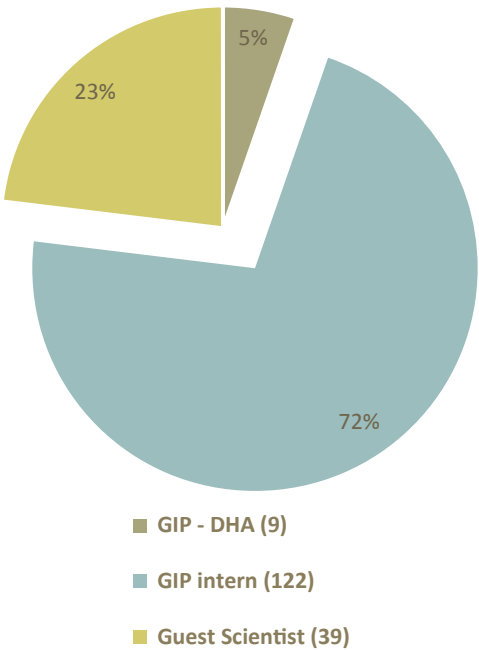
Table 3. Schools attended by GIP interns in FY17.

The table below displays the universities or colleges that had two or more GIP interns attended or graduated in FY17.

COLLEGES & UNIVERSITIES
Brown University
California State University, Dominguez Hills
California State University, Los Angeles
Colorado State University
Dartmouth College
East Tennessee State University
Eastern Michigan University
Humboldt State University
Kansas State University
Mississippi State University
Montclair State University
Northern Arizona University
Portland State University
South Dakota School of Mines and Technology
The George Washington University
University at Buffalo
University of Alaska Fairbanks
University of Colorado Boulder
University of Minnesota, Duluth
University of Pennsylvania
University of Rhode Island
University of Texas at Austin
University of Wisconsin-Madison
Whitman College
Williams College

Distribution of Positions by Type

The majority of the GIP internships (72%) in FY17 were entry-level GIP intern positions, which is typical in most program years. Only 5% of the positions were DHA positions. Since this was the first year that DHA positions were offered in the program, only 9 rigorous DHA internships were competitively selected for the program.



GIP interns Kimber Godfrey and Annalyn Chia conducting a bat survey at Lava Beds National Monument, California. (NPS photo)

List of Intern Projects

Geoscientists-in-the-Parks (GIP) positions for spring/summer are shown in Table 4. Positions for fall/winter are shown in Table 5. Guest Scientist (GS) and Direct Hire Authority (DHA) are marked in the position title column.

Table 4. GIP positions with spring or summer start dates in FY17.

NPS UNIT		POSITION TITLE		ID #
1.	Air Resources Division (Colorado)	Visual Resources intern (Anthony DePriest)		2017001
2.	Alaska Region (Alaska)	Geologist/Report Writer (Amanda Lanik)		2017113
3.	Alaska Region (Alaska), Katmai National Park & Preserve (Alaska), Lake Clark National Park & Preserve (Alaska)	Paleontologist/Archaeologist (Charles Linneman)		2017003
4.	Amistad National Recreation Area (Texas)	Aquatic Invasive Species Intern (Anna Starks)		2017076
5.	Assateague Island National Seashore (Maryland, Virginia)	GIS Specialist (Abby Buarapha)	GS	2017004
6.	Badlands National Park (South Dakota)	Fossil Preparator (Kayleigh Muilenburg)		2017005
7.	Badlands National Park (South Dakota)	Geology/Paleontology Education Intern (Julianne Chessia)		2017006
8.	Badlands National Park (South Dakota)	Geology/Paleontology Education Intern (Justin Coats)		2017007
9.	Badlands National Park (South Dakota)	Paleontology Intern (Margaret Kuzemchak)	GS	2017008
10.	Badlands National Park (South Dakota)	Fossil Preparator (Imran Omar Siegmund)		2017070
11.	Big Thicket National Preserve (Texas)	GIS Technician – Land Management Specialist (Kristin Schoenecker)		2017080
12.	Biological Resources Division (Colorado)	Institutional Animal Care and Use Committee Assistant (Allison Petersen)		2017099
13.	Biological Resources Division (Colorado)	Data Management Technician (Alexandra Stoneburner)		2017114
14.	Bryce Canyon National Park (Utah)	Astronomy/Geology Park Guide (Kevin Kopec)		2017009
15.	Bryce Canyon National Park (Utah)	Geology Park Guide (Keith James Moore)		2017010
16.	Bryce Canyon National Park (Utah)	Geology Park Guide (Jesse Kikuchi Gates)		2017111
17.	Cape Cod National Seashore (Massachusetts)	GIS Hydrology/Biology Assistant (Katherine Lavallee)	DHA	2017300
18.	Cape Cod National Seashore (Massachusetts)	GIS Hydrology/Biology Assistant (Elizabeth MacDougal)	DHA	2017308
19.	Capitol Reef National Park (Utah)	Geology Interpreter (Sarah Dunn)		2017011
20.	Carl Sandburg Home National Historic Site (North Carolina)	Resources Restoration Technician (Tara Burnett)		2017012
21.	Carl Sandburg Home National Historic Site (North Carolina)	Resources Restoration Technician (Conrad Bekta)		2017013
22.	Chesapeake & Ohio Canal National Historical Park (District of Columbia, Maryland, Virginia, West Virginia)	Geologic Technician (Karst & Paleontology) (Justin Peinado)	GS	2017068
23.	Chiricahua National Monument (Arizona), Coronado National Memorial (Arizona)	Resource Management Assistant (Claire Morris)		2017109
24.	Climate Change Response Program (District of Columbia)	Climate Change Response Program Assessment Intern (Ryan Roberts)	GS	2017115
25.	Colonial National Historical Park (Virginia)	Hydrology Assistant (Ellyn Rickels)	GS	2017014

NPS UNIT		POSITION TITLE		ID #
26.	Craters of the Moon National Monument & Preserve (Idaho)	Earth Science Interpreter (Laura Bader)		2017015
27.	Craters of the Moon National Monument & Preserve (Idaho)	Earth Science Interpreter (Jennifer Anderson)		2017016
28.	Delaware Water Gap National Recreation Area (New Jersey, Pennsylvania)	GIS Technician (Alyssa Grell)		2017078
29.	Denali National Park & Preserve (Alaska)	Science Communicator, Wildlife Biology (Lindsey Taylor)		2017017
30.	Denali National Park & Preserve (Alaska)	Avian Biological Technician (Cole Rankin)		2017018
31.	Denali National Park & Preserve (Alaska)	Biology Technician (Samantha Winder)	GS	2017019
32.	Denali National Park & Preserve (Alaska)	Geospatial Technician (Luke Gersz)		2017020
33.	Denali National Park & Preserve (Alaska)	Science Communicator (Kira Heeschen)		2017021
34.	Denali National Park & Preserve (Alaska)	Biology Technician (Felix Bruner)		2017071
35.	Denali National Park & Preserve (Alaska)	Social Science Technician (Alex Graf)		2017077
36.	Denali National Park & Preserve (Alaska)	Avian Biological Technician (Jordan Tippetts)		2017091
37.	Denali National Park & Preserve (Alaska)	Wildlife Management Guest Scientist (Jacob Gasposchkin)		2017103
38.	Denali National Park & Preserve (Alaska)	Geologist Intern (Michael Frothingham)		2017117
39.	Denali National Park & Preserve (Alaska)	Park Geologist Apprentice (Howasta Tahiry)	DHA	2017301
40.	Devils Tower National Monument (Wyoming)	Astronomy Assistant (Devin Cherry)		2017084
41.	Devils Tower National Monument (Wyoming)	Astronomy Assistant (Heather Pantell)		2017085
42.	Dinosaur National Monument (Colorado, Utah)	Paleontology Guest Scientist (Nicole Ridgwell)	GS	2017022
43.	Fire Island National Seashore (New York), Northeast Coastal and Barrier Network (Massachusetts)	Biology Technician (Lauren Zeffer)		2017048
44.	Florissant Fossil Beds National Monument (Colorado)	Paleontology Assistant (Erikka Olson)		2017023
45.	Florissant Fossil Beds National Monument (Colorado)	Postdoctoral Paleontologist (Sarah Allen)		2017024
46.	Florissant Fossil Beds National Monument (Colorado)	Postdoctoral Paleontologist (Evan Anderson)		2017086
47.	Florissant Fossil Beds National Monument (Colorado)	Paleontology Assistant (Alexander Lowe)		2017090
48.	Florissant Fossil Beds National Monument (Colorado)	Paleontology Research and Education Specialist (Ricardo Escobar)		2017643
49.	Fossil Butte National Monument (Wyoming)	Public Education Geology/ Paleontology (Elizabeth Bargdill)		2017025
50.	Gates of the Arctic National Park & Preserve (Alaska)	Dall's Sheep Technician (Mark Melham)	GS	2017074
51.	Gateway National Recreation Area (New Jersey, New York), Northeast Coastal and Barrier Network (Massachusetts)	Geologist/GIS Specialist (Julie Blum)	GS	2017049

NPS UNIT		POSITION TITLE		ID #
52.	Gateway National Recreation Area (New Jersey, New York), Northeast Coastal and Barrier Network (Massachusetts)	Geologist/GIS Specialist (Kelly Butler)	DHA	2017306
53.	George Washington Memorial Parkway (District of Columbia, Maryland, Virginia)	Interpreter / Education Technician (Ivana Szwejkowski)		2017026
54.	Glen Canyon National Recreation Area (Arizona, Utah)	Paleontology Assistant (Maggie Irwin)		2017027
55.	Glen Canyon National Recreation Area (Arizona, Utah)	Paleontology Assistant (Maria Rodriguez)		2017100
56.	Grand Canyon National Park (Arizona)	Wildlife Program Field Assistant (Desiree Espericueta)		2017028
57.	Grand Canyon National Park (Arizona)	Interpretive Park Guide/Geologist (Hannah Black)		2017029
58.	Grand Canyon National Park (Arizona)	Hydrology Technician (Claire Spangenberg)	GS	2017079
59.	Grand Canyon National Park (Arizona)	Wildlife Program Field Assistant (Phillip Andrews)		2017092
60.	Grand Canyon National Park (Arizona)	Hydrology Technician (Natalie Tanski)	GS	2017104
61.	Grand Canyon National Park (Arizona)	Hydrology Technician (Krista Keski-Hyynila)	GS	2017105
62.	Grand Canyon National Park (Arizona)	Hydrology Technician (Taylor Oster)	GS	2017106
63.	Great Basin National Park (Nevada)	Astronomy Intern (Brenna Rodriguez)		2017617
64.	Hagerman Fossil Beds National Monument (Idaho)	Paleontology Field Assistant (Spencer Irvine)		2017030
65.	Hagerman Fossil Beds National Monument (Idaho)	Science Education Intern (Danielle Jackson)		2017032
66.	Hot Springs National Park (Arkansas)	Wildlife Management, Tracking, and Acoustic Monitoring Intern (Kelly Bufkin)		2017035
67.	Hot Springs National Park (Arkansas)	Thermal Water Quality and Thermophilic Organisms Intern (Paul Solis)	DHA	2017303
68.	Hot Springs National Park (Arkansas)	Thermal Water Quality and Thermophilic Organisms Intern (Meg O'Connor)	DHA	2017307
69.	Hot Springs National Park (Arkansas)	Thermal Water Quality and Thermophilic Organisms Intern (Meg O'Connor)	GS	2017648
70.	Jewel Cave National Monument (South Dakota)	Integrated Resource Management Assistant (Eric Fiorentino)		2017036
71.	John Day Fossil Beds National Monument (Oregon)	Geologist/Paleontologist Intern (Klara Widrig)		2017037
72.	John Day Fossil Beds National Monument (Oregon)	Geologist/Paleontologist (Dana Reuter)	GS	2017038
73.	John Day Fossil Beds National Monument (Oregon)	Geology/Interpretation Specialist (Kaitlin Askelson)		2017039
74.	Klamath I&M Network (Oregon)	Bat Monitoring Intern (Kimber Godfrey)	GS	2017041
75.	Klamath I&M Network (Oregon)	Bat Biologist (Annalyn Chia)	DHA	2017304
76.	Lake Mead National Recreation Area (Arizona, Nevada)	Paleontologist/Geologist (Aubrey Bonde)		2017089
77.	Lassen Volcanic National Park (California)	Resource Management Assistant (Samantha Snowden)		2017042
78.	Lassen Volcanic National Park (California)	Resource Management Assistant (Lindy Gasta)		2017069

NPS UNIT		POSITION TITLE		ID #
79.	Lassen Volcanic National Park (California)	Resource Management and Research Assistant (Stephanie Latour)		2017122
80.	Mesa Verde National Park (Colorado)	Paleontology Assistant (George William Harrison)		2017043
81.	Mount Rainier National Park (Washington)	Geomorphology Technician (Joseph Leo George)		2017044
82.	Mount Rainier National Park (Washington)	Geomorphology Technician (April Kelly)		2017045
83.	Mount Rainier National Park (Washington)	Interpretive Intern - Astronomy (Katherine Karnes)		2017046
84.	Mount Rainier National Park (Washington)	Interpretive Intern (Elsa Saelens)		2017047
85.	Mount Rainier National Park (Washington)	Geomorphology Technician (Taylor Kenyon)	GS	2017093
86.	Mount Rainier National Park (Washington)	Geomorphology Technician (Sarah Hinshaw)		2017094
87.	Mount Rainier National Park (Washington)	Ecology Technician (Timothy Wuenscher)		2017101
88.	Mount Rainier National Park (Washington)	Ecology Technician (Mackenzi Marti)		2017102
89.	Mount Rainier National Park (Washington)	Interpretive Intern (Christina Seeger)		2017112
90.	Mount Rainier National Park (Washington)	Interpretive Intern (Christine Taylor Jurado)	DHA	2017305
91.	Natchez Trace Parkway (Alabama, Mississippi, Tennessee)	Lead Geologic Mapper (Rayford Parnell)		2017120
92.	National Capital Parks-East (Maryland, District of Columbia), Urban Ecology Research Learning Alliance (Washington DC)	Paleontology Intern (Margot Nelson)		2017075
93.	North Cascades National Park (Washington)	Natural Resources Assistant (Jacqueline Meyer)		2017082
94.	North Cascades National Park (Washington)	Air Resources Assistant (Rebecca Evans)		2017088
95.	Northeast Region (Pennsylvania)	Geographer / GIS Specialist (Charlotte Skolnick)		2017107
96.	Olympic National Park (Washington)	Interpretive Intern - Coast (Claire Burke)		2017050
97.	Olympic National Park (Washington)	Interpretive Intern (Taylor Hartman)		2017051
98.	Oregon Caves National Monument (Oregon)	Chiroptologist Monitoring Specialist (Laura Heiker)	GS	2017052
99.	Oregon Caves National Monument (Oregon)	Environmental Educator (Dana Cohen-Kaplan)		2017053
100.	Oregon Caves National Monument (Oregon)	Environmental Educator (Hanna Bartram)		2017119
101.	Oregon Caves National Monument (Oregon)	Environmental Educator (Olivia Patick)		2017626
102.	Pictured Rocks National Lakeshore (Michigan)	Lead Geologic Mapper (Sarah VanderMeer)	GS	2017108
103.	Redwood National Park (California)	Geoscience and Forestry Research Assistant (Justin Hobart)		2017054
104.	Redwood National Park (California)	Geoscience and Forestry Research Assistant (Madeline Wilner)		2017055
105.	Rock Creek Park (Virginia, District of Columbia, Maryland)	Interpretive Geologist (Leiaka Welcome-Shepherd)		2017056
106.	Saguaro National Park (Arizona)	Hydrological Assistant (Courtney King)	GS	2017057
107.	Saguaro National Park (Arizona)	Hydrological Assistant (Samuel Merrens)	GS	2017096
108.	Saguaro National Park (Arizona)	Hydrological Assistant (Keenan Duncan)	GS	2017097
109.	San Juan Island National Historical Park (Washington)	Biological Technician (Christina Menniti)	GS	2017058
110.	Shenandoah National Park (Virginia)	Interpretation Intern (Jennifer Lewis)		2017060
111.	Shenandoah National Park (Virginia)	Interpretation Intern (Hanna Brooks)		2017061
112.	Sierra Nevada Network (California)	Biological Science Technician (Keven Griffen)		2017062

NPS UNIT		POSITION TITLE		ID #
113.	Southwest Alaska Network (Alaska)	Remote Sensing Analyst (Caleb Pan)	GS	2017121
114.	Timpanogos Cave National Monument (Utah)	Geologist/Civil Engineer Intern (Crystal Lambert)		2017063
115.	Timucuan Ecological & Historical Preserve (Florida)	Biological Science Aid (Shawna Melby)		2017064
116.	Timucuan Ecological & Historical Preserve (Florida)	Biological Science Aid (Samuel Howarth)		2017065
117.	Waco Mammoth National Monument (Texas)	Fossil Preparator Intern (Tabatha Gabay)		2017066
118.	Water Resources Division (Colorado)	Hydrologic Technician (Tae Wan Kim)	GS	2017067
119.	White Sands National Monument (New Mexico)	Soil Scientist (Megan Stovall)		2017118
120.	Yellowstone National Park (Idaho, Montana, Wyoming)	Interdisciplinary Resource Technician (Melissa Fry)		2017072
121.	Yellowstone National Park (Idaho, Montana, Wyoming)	Geoscience Technician (Stanley Mordensky)		2017073
122.	Yellowstone National Park (Idaho, Montana, Wyoming)	Geoscience Technician (Alison Kristine Tune)		2017083
123.	Yellowstone National Park (Idaho, Montana, Wyoming)	Geoscience Technician (Behnaz Hosseini)		2017098
124.	Yellowstone National Park (Idaho, Montana, Wyoming)	Geologic Resource Assistant (Barrett Flynn)	GS	2017110

There are a total of 124 spring/ summer GIP positions.

Table 5. GIP positions with fall or winter start dates in FY17

NPS UNIT		POSITION TITLE		ID #
125.	Agate Fossil Beds National Monument (Nebraska)	Paleontology Intern (Jessica De Smet)		2017600
126.	Biological Resources Division (Colorado), Climate Change Response Program (District of Columbia)	Biological Technician (Maria Caffrey)	GS	2017116
127.	Chattahoochee River National Recreation Area (Georgia)	Hydrology Assistant (Elinor Utevsky)	GS	2016600
128.	Chattahoochee River National Recreation Area (Georgia)	Hydrology Assistant (Heather Lancaster)	GS	2016601
129.	Chiricahua National Monument (Arizona), Coronado National Memorial (Arizona)	Resource Management Assistant (Claire Morris)		2016627
130.	Climate Change Response Program (District of Columbia)	Climate Change Adaptation Science Assistant (Amanda Carlson)		2016635
131.	Colorado National Monument (Colorado)	Geology Interpreter (Erik Anderson)		2017607
132.	Congaree National Park (South Carolina)	GIS Specialist (Kirin Gay)	GS	2017608
133.	Cuyahoga Valley National Park (Ohio)	Cuyahoga River Visual Resource Intern (Christina Tenison)	GS	2017610
134.	Death Valley National Park (California, Nevada)	Paleontology Intern (Matthew Ferlicchi)		2016604
135.	Death Valley National Park (California, Nevada)	Hydrology Technician (Blake Stone)		2016629

NPS UNIT		POSITION TITLE		ID #
136.	Denali National Park & Preserve (Alaska)	Biological Technician (Reina Galvan)		2016605
137.	Denali National Park & Preserve (Alaska)	Biological Technician (Charles Grigsby)		2016642
138.	Florissant Fossil Beds National Monument (Colorado)	Paleontology Assistant (Ariana Miranda)		2016645
139.	Florissant Fossil Beds National Monument (Colorado)	Paleontology Technician (Carolyn Thornton)	GS	2016638
140.	Geologic Resources Division (Colorado)	Education and Outreach Specialist (Rebecca McCracken)	GS	2016037
141.	Geologic Resources Division (Colorado)	Writer/Editor (Michael Barthelmes)	GS	2016606
142.	Grand Canyon National Park (Arizona)	Wildlife Program Field and Data Assistant (Sarah Ciarrachi)		2016639
143.	Grand Canyon National Park (Arizona)	Wildlife Program Field and Data Assistant (Skye Salganek)		2016646
144.	Grand Canyon National Park (Arizona)	Karst Technician (Sarah Zappitello)	GS	2016647
145.	Grand Canyon National Park (Arizona)	Karst Technician (Natalie Jones)	GS	2016648
146.	Grand Canyon National Park (Arizona)	Wildlife Program Field Assistant (Tessa Corsetti)		2017616
147.	Gulf Islands National Seashore (Florida, Mississippi)	Turtle T.H.i.S. Leader (Heather Afford)	DHA	2017302
148.	Hagerman Fossil Beds National Monument (Idaho)	Interpretive Program Intern (Rebecca Rost)		2016611
149.	Hot Springs National Park (Arkansas)	Physical Science and Interpretive Intern (Kelly Bufkin)		2016644
150.	Isle Royale National Park (Michigan), Keweenaw National Historical Park (Michigan)	Geoheritage / GIS Specialist (Daniel Lizzadro-McPherson)		2017640
151.	Joshua Tree National Park (California)	Climate Change Communication Intern (Kimberly Chamales)		2016613
152.	Joshua Tree National Park (California)	Climate Change Communication Intern (Kimberly Chamales)		2017081
153.	Kaloko-Honokohau National Historical Park (Hawaii)	Biological Technician (Cole Rankin)	GS	2017639
154.	Kenai Fjords National Park (Alaska)	Geologic Outreach Specialist (Molly Tankersley)		2016614
155.	Klondike Gold Rush National Historical Park (Alaska)	Education Specialist (Bethany Morter)		2017620
156.	Lake Mead National Recreation Area (Arizona, Nevada)	Paleontologist/Geologist (Aubrey Bonde)		2016615
157.	Lassen Volcanic National Park (California)	Resource Management and Research Assistant (Stephanie Latour)		2016632
158.	Lassen Volcanic National Park (California)	GIS Intern (Kristen Jurica)		2017621
159.	Mammoth Cave National Park (Kentucky)	Natural Resource Assistant (Melissa Fry)		2017622
160.	Mesa Verde National Park (Colorado)	GIS/Database Specialist (Howasta Tahiry)		2016616
161.	Rocky Mountain National Park (Colorado)	GIS Specialist (Margaret Paige Lambert)		2016619
162.	Salinas Pueblo Missions National Monument (New Mexico)	Paleontologist/Geologist (Emily Thorpe)		2016074
163.	Water Resources Division (Colorado)	Hydrologic Technician (Tae Wan Kim)	GS	2016621
164.	Whiskeytown-Shasta-Trinity National Recreation Area (California)	Geologist (Annie Smoot)		2016622

NPS UNIT		POSITION TITLE		ID #
165.	Whiskeytown-Shasta-Trinity National Recreation Area (California)	Geologist / Paleontologist (Leathon Femmel)		2016623
166.	White Sands National Monument (New Mexico)	Archeologist (Ray Reser)	GS	2016641
167.	Yellowstone National Park (Idaho, Montana, Wyoming)	Geologic Resource Assistant (Barrett Flynn)		2016624
168.	Yosemite National Park (California)	Geologist (Camille Collett)	GS	2016625
169.	Zion National Park (Utah)	Geologist/Civil Engineer (Justin LaForge)		2016626

There are a total of 45 fall/winter GIP positions.

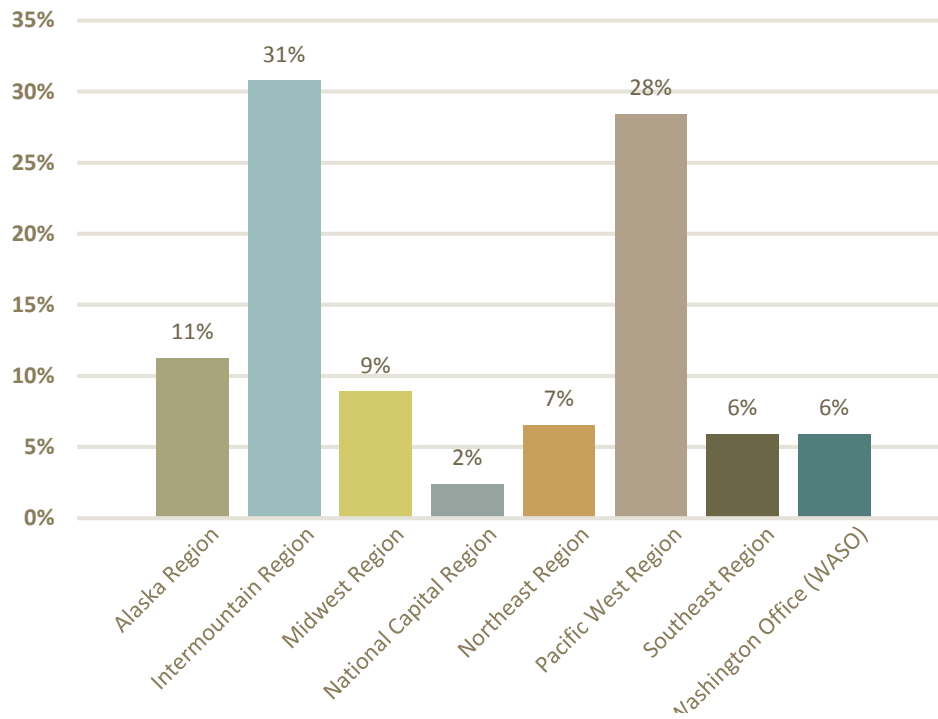
Regional Distribution of Projects

GIP interns worked throughout the Service in 69 parks, five Washington offices, and four inventory and monitoring networks. Approximately two-thirds of the GIP positions were in the Intermountain and Pacific West Regions (31% and 28% respectively). The number of GIP positions by park and region are shown in Table 6 and the percentage distribution for each region is shown in the graphic on the next page.

Table 6. Distribution of GIP positions by NPS region. The number of positions is shown in parenthesis after the park program.

REGION	# POSITIONS	PARK
Alaska	19	AKRO (2), DENA (13), GAAR, KATM, KEFJ, KLGO, LACL, SWAN
Intermountain	52	AMIS, BITH, BRCA (3), CARE, CHIR (2), COLM, CORO (2), DETO (2), DINO, FLFO (7), FOBU, GLCA (2), GRCA (12), MEVE (2), ROMO, SAGU (3), SAPU, TICA, WACO, WHSA (2), YELL (6), ZION
Midwest	15	AGFO, BADL (5), CUVA, HOSP (5), ISRO, JECA, KEWE, PIRO
National Capital	4	CHOH, GWMP, NACE, ROCR, UERL
Northeast	11	ASIS, CACO (2), COLO, DEWA, FIIS, GATE (2), NCBN (3), NERO, SHEN (2)
Pacific West	48	CRMO (2), DEVA (2), GRBA, HAFO (3), JODA (3), JOTR (2), KAHQ, KLMN (2), LAKE (2), LAVO (5), MORA (10), NOCA (2), OLYM (2), ORCA (4), REDW (2), SAJH, SIEN, WHIS (2), YOSE
Southeast	10	CARL (2), CHAT (2), CONG, GUIS, MACA, NATR, TIMU (2)
WASO	10	ARD, BRD (3), CCRP (3), GRD (2), WRD (2)

Percentage Distribution of GIP positions by NPS region.



Distribution of Positions by Discipline

In fiscal year 2017, GIP participants represented a broad range of natural resource science disciplines - from biology to geology to hydrology. Close to half of the projects focused on geologic resources, followed by biology (21%) and hydrology (11%). The graphic shown on the next page displays the number and percentage distribution for GIPs for each natural resource field. Table 7 lists the project sub-disciplines, and the accompanying chart illustrates the disciplines grouped by type of project. The graphic on page 19 illustrates the type of projects for FY17.



GIP intern Laura Heiker handling a bat at Oregon Caves National Monument & Preserve, Oregon. (NPS photo by Adam Yates)

Distribution of GIP positions for each natural resource science field.

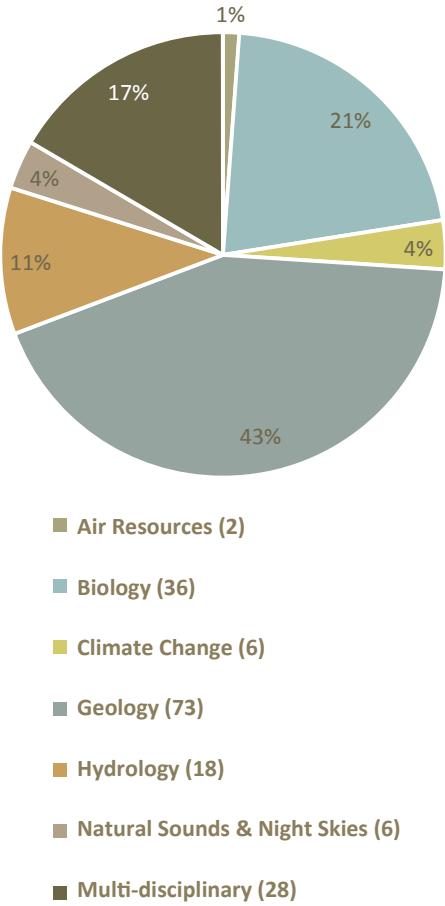


Table 7. GIP positions by natural resource sub-discipline.

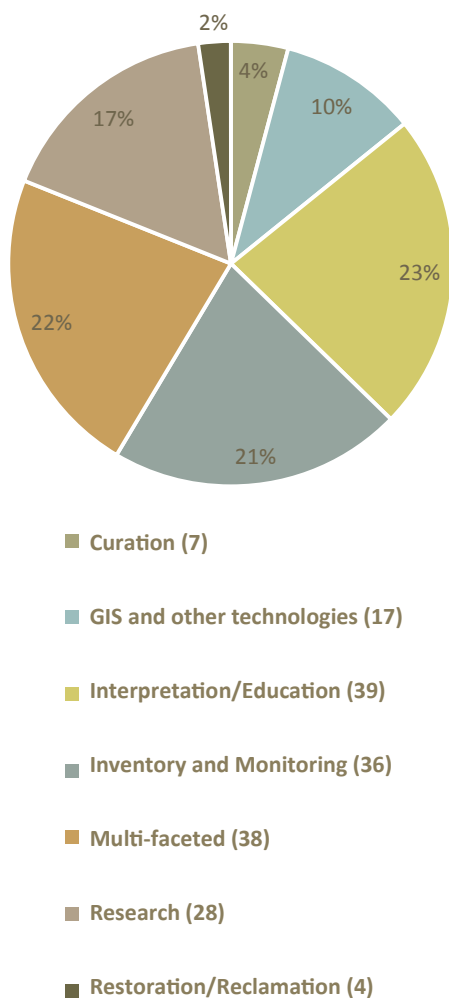
PROJECT DISCIPLINES	# OF PROJECTS	%
Air Resources	2	1%
Biology - General	36	21%
Cave / Karst	1	1%
Climate Change	6	4%
Coastal Geology	2	1%
Geoheritage	1	1%
Geologic Hazards	5	3%
Geology - General	40	24%
Geothermal	3	2%
Hydrology - General	15	9%
Hydrology - Groundwater	3	2%
Multi-disciplinary	28	17%
Night Skies	5	3%
Paleontology	20	12%
Soils	1	1%
Soundscapes	1	1%
Paleontology	20	17%

In FY17, the majority of the projects were interpretation and education (23%) followed by multi-faceted (22%), and inventory and monitoring (21%). The internship categories for all of the projects are shown on the following page.



GIP supervisor Neil Winn (left) and Jamie Pfadt (right) surveying at Assateague Island National Seashore, Maryland and Virginia. (NPS photo)

GIP positions by type of project.



GIP intern Taylor Hartman delivering an interpretive program at Olympic National Park, Washington. (NPS photo)

Site Visits

A total of 8 site visits were conducted this year by NPS and Stewards staff. During the site visits, the staff met with the GIP interns and supervisors to answer questions, obtain feedback on the program, learn about the GIP projects, perform field work, and help to create a more personal relationship between the GIP Program staff, host site, and interns.

Table 8. GIP site visits conducted in FY17.

NPS UNIT	GIP NAME	SUPERVISOR NAME (S)	CONDUCTED
Alaska Regional Office, Katmai NP&P, Lake Clark NP&P	Amanda Lanik Charles Linneman	Chad Hults Katie Myers	Lisa Norby & Mandy Eskelson
Coronado National Memorial &/OR Chiricahua National Monument		Jessica Garcia*	Lima Soto

NPS UNIT	GIP NAME	SUPERVISOR NAME (S)	CONDUCTED
Denali National Park and Preserve	Alex Graf Cole Rankin Felix Bruner Jacob Gaposchkin Jordan Tippetts Kira Heeschen Lindsey Taylor Luke Gersz	Bridget Borg Britta Schroeder Dave Schirokauer Davyd Betchkal Ellen Grover Emily Williams Greg Colligan Jessica Rykken Laura Phillips Pat Owen Rose Keller Sierra McLane Pat Owen	Lisa Norby & Mandy Eskelson
Grand Canyon National Park	Claire Spangenberg Krista Keski-Hyynila Natalie Tanski Phillip Andrews Sarah Ciarrachi Taylor Oster	Ben Tobin Ed Schenk Mike Kearsely Miranda Terwilliger	Lima Soto
Klamath I&M Network	Annalyn Chia* Kimber Godfrey*	Alice Chung-MacCoubrey*	Lima Soto
Lassen Volcanic National Park	Lindy Gasta Samantha Snowden Stephanie Latour	Elizabeth Hale Jason Mateljak Mike Magnuson* Steve Buckley	Lima Soto
North Cascade National Park Service Complex	Jacqueline Meyer Rebecca Evans	Regina Rochefort Samantha Richert Tonnie Cummings	Krista Rogers
Olympic National Park	Claire Burke Taylor Hartman	Chris Eckard Greg Marsh Jared Low	Krista Rogers
San Juan Island National Historical Park	Christina Menniti	Elexis Freddy Jenny Shrum	Krista Rogers

* Met supervisor or intern at Lava Beds National Monument



GIP and Mosaics in Science interns at Lassen Volcanic National Park, California (from left to right; Noelani Parker, Lindy Gasta, Stephanie Latour, and Samantha Snowden). (NPS photo)

Participant and Project Highlights

A few of the outstanding projects completed this year's GIP interns are described below. This is a small sampling of the great work that GIPs are doing in NPS units.

Kira Heeschen, Science Communicator – Denali National Park and Preserve, Alaska

Kira Heeschen spent her internship at the Murie Science and Learning Center developing interactive science exhibits for youth, updating the [park's wilderness website](#) and [butterfly species list](#), developing and presenting youth science programs and exhibits, and using social media to highlight the science activities going on in the park. One of Kira's big accomplishments over the summer was the Discovery Camp—for students in first and second grade—that she worked on in collaboration with other instructors. She also created hands on "Learning Lab" materials for park visitors to enjoy. One of the fun activities Kira created for the Learning Lab was to teach visitors about insect pollinators by having visitors make their own bug collector using pipe cleaners and other materials.

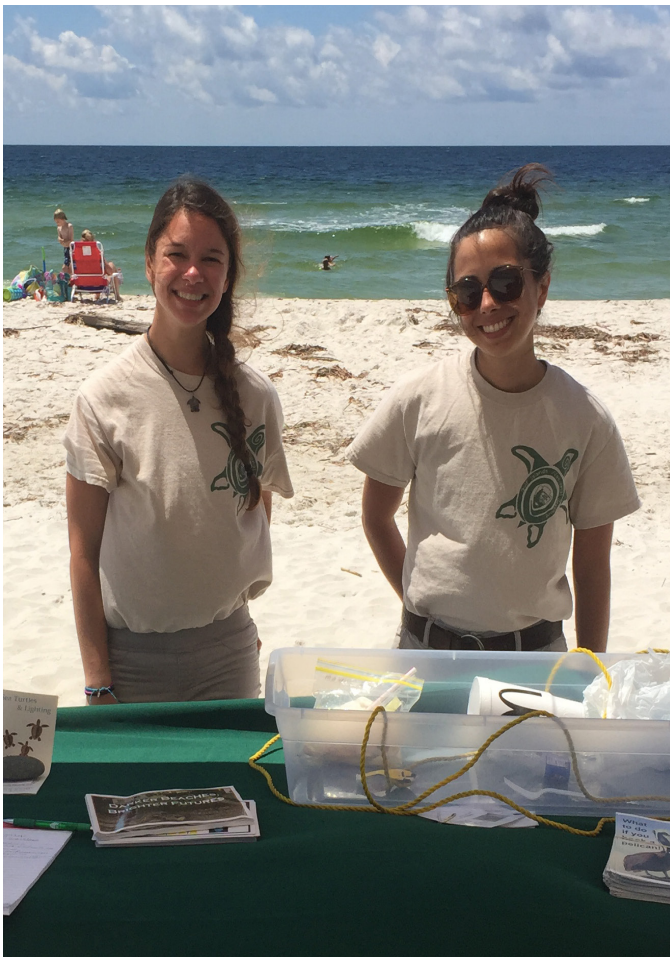


Kaymbra Mortensen (left) and GIP Kira Heeschen, (right) doing a nature activity with 1st and 2nd graders at the Discovery Camp at Denali National Park and Preserve.(NPS photo)

Heather Afford, Turtle T.H.I.S. Leader – Gulf Islands National Seashore, Florida

The data collection, citizen science projects, and community outreach events Heather carried out as a GIP for the Turtle T.H.I.S. (Teens Helping in the Seashore) Program at Gulf Islands National Seashore greatly improved the quality of these large studies and sea turtle public education. Heather helped develop and improve methodologies for light study projects of turtle nesting areas and transect studies that may be impacted by different light changes throughout the seasons. She spent considerable time mentoring and guiding new interns and volunteers when conducting field surveys and management. Heather was responsible for important data collection for these projects/studies, and she also educated everyone involved in the project about the importance of sea turtles as an ecological resource for Gulf Islands National Seashore's waters and shorelines.

Heather will continue contributing to the Turtle T.H.I.S. Program in the future, and she has recently submitted a paper to the George Wright Society about her research and analyses for the Turtle T.H.I.S. project.



GIP Heather Afford and her colleague, Natalia Bayona, celebrated World Oceans Day by speaking with beach goers about the importance of seas turtles and how they are impacted by light and pollution (left photograph). Heather training new interns at Perdido Key (right photograph). (NPS photos)

Meg O'Connor and Paul Solis, DHA / Thermal Water Quality and Thermophilic Organisms Interns – Hot Springs National Park, Arkansas

Direct Hire Resource Assistants Meg O'Connor and Paul Solis collected water quality data from the approximately 35 hot springs that feed into the park's thermal water system. Meg and Paul monitored the temperature, pH, specific conductance, dissolve oxygen, and acidity of the waters and input the data into the park's database system. The GIPs collaborated with the U.S. Geological Survey on different hydrology projects. As a result of their work Meg and Paul were able to identify at least five new species of Ostracods, or "seed shrimp" in the thermal waters of the Park. These ostracods are a class of microscopic crustaceans that thrive in extreme conditions.



GIP Paul Solis and Meg O'Connor collecting water samples at Hot Springs National Park, Arkansas (left photograph). GIP Paul Solis testing the water quality of one of the springs that feed into Hot Springs National Park, Arkansas (right photograph). (NPS photos)

Christina Seeger, Interpretive Intern – Mount Rainier National Park, Washington

Building upon her previous experience as a GIP at Mount Rainier last year, Christina (Tina) Seeger took on more responsibilities as an Interpretive Intern this year, including updating and creating new telescope-based astronomy programs about dark sky preservation and astronomical observation, guiding geology walks, leading Junior Ranger programs, and mentoring other GIP interns. Tina also collaborated with her supervisors and park staff to develop activities for Audience Centered Experience focused interpretive programs.

Tina's experience allowed her to make recommendations on how to improve park interpretive programs and create more interactive and engaging ways to teach park visitors about Mount Rainier's natural resources. Tina said, "It meant a lot to see the program I worked so hard on last year becoming more established, and get to have a say in how it develops." Mount Rainier and her supervisors value Tina's efforts and work so much they have extended a tentative offer to come back as Mount Rainier's first dedicated Astronomy Ranger next year, which is, "a dream come true," according to Tina.



Katie Karnes and Tina Seeger, GIP Interpretive Interns at Mount Rainier National Park next to the new telescope the park purchased for their astronomy programs. (NPS photo)

Emily Thorpe, Paleontologist/Geologist – Salinas Pueblo Missions National Monument, New Mexico

Emily Thorpe worked as a GIP intern for three months at Salinas Pueblo Missions National Monument inventorying the park's fossil resources. While returning after a day in the field, Emily and Resource Specialist Ron Fields discovered some vertebrate fossil remains which are a rare discovery in the park. After collecting the specimen, it was discovered to possibly be a new species of a synapsid (mammal-like) reptile from the Permian age Arroyo de Alamillo Formation. 3D models of the specimen will be created for further study under the tutelage of Dr. Spencer Lucas at the New Mexico Museum of Natural History. Due to Emily's outstanding work as a GIP, she will be returning for a second GIP position in the fall of 2017. An article about the work that Emily has done can be found in the [Park Paleontology Newsletter](#).



GIP Emily Thorpe curating fossil specimen at Salinas Pueblo Missions National Monument, New Mexico (photo by Todd Dickson/Telegraph) (left photograph). Emily Thorpe pointing out a fossil specimen at Salinas Pueblo Missions National Monument, New Mexico (right photograph). (NPS photos)

Justin LaForge, Geologist/Civil Engineer – Zion National Park, Utah

Justin LaForge inventoried and assessed the geohazards of over 200 unstable slopes that threaten roads and buildings in Zion National Park. This assessment was done in partnership with the Unstable Slope Management Program (USMP) to field test a slope evaluation tool that is under development. During his work at the Park he was able to predict a slope failure by rating the area as having a high hazard potential due to undercutting from water seeping out of the slope. A month after assessing the slope it failed blocking a scenic road at the Park. Justin's documentation will provide Zion NP and USMP with specific slopes that show a quantitatively higher risk of rockfalls and landslides, which will help mitigate damage to structures and accidents.

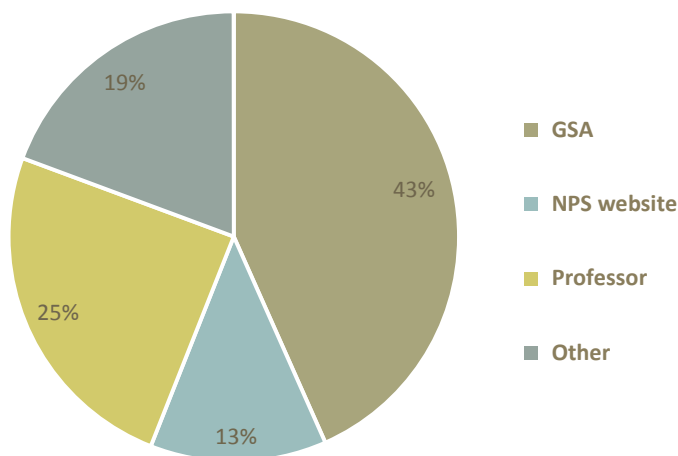


GIP Justin LaForge evaluating a potential rockfall slope in Zion Canyon, Zion National Park, Utah (left photograph). Rockfall that closed the Scenic Drive in Zion Canyon that was assessed by Justin LaForge prior to failure (right photograph). (NPS photos)

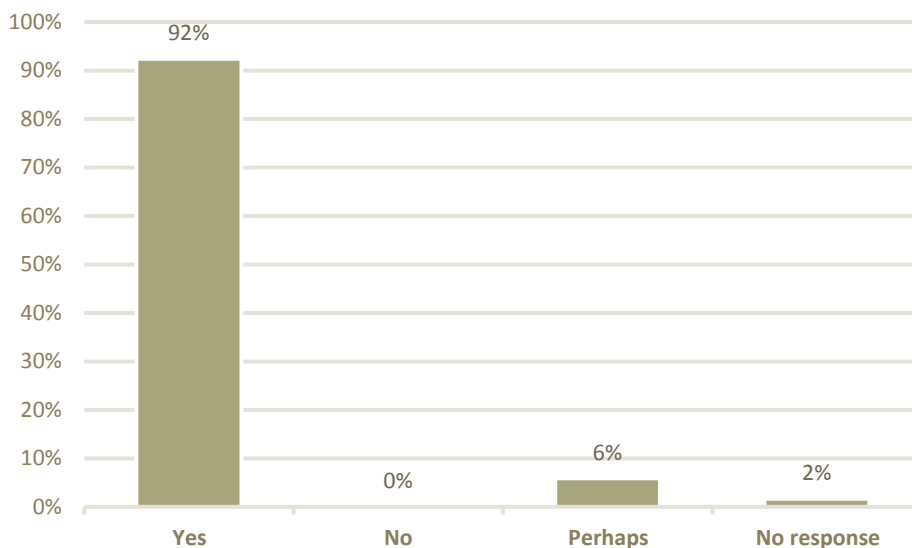
Program Evaluations

GIP Program participants were asked to complete pre - and post program evaluations in order to help the NPS understand the participant's backgrounds, experiences, and to improve the program and interns experience.

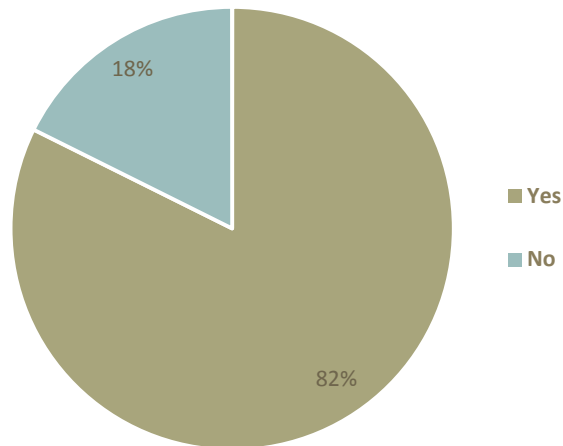
Prior to their internships, GIPs were most familiar with careers in academia or research with 62% of the respondents having a very good or excellent knowledge of academic and research career fields. Forty nine percent of the respondents had very good to excellent knowledge of career fields with federal, state, and local government agencies. Nearly all of the GIPs had previously visited a national park (97%). Almost half (43%) of the GIPs learned about the GIP Program from information provided by The Geological Society of America, and the remainder of the GIP interns heard about the program from their professors (25%), NPS websites (13%), and other sources.



Most of the GIPs stated that they had a good (9%) or very good to excellent (86%) experience as a GIP intern and stated that are interested in pursuing a career with a state or federal land management agency. Ninety-two percent stated that would recommend the program to others. All of the interns believed that their work greatly contributed to the mission of the National Park Service.



Overall, the majority of the GIPs stated that they had discussions about careers with their supervisor (82%) and that other NPS staff were available to provide professional development input and guidance (97%). At the completion of their internships, GIP's knowledge of federal careers had increased from 49% to 68%, with all respondents having some knowledge of federal career paths.



Quotes from Participants

Did you enjoy working with the NPS unit that hosted your project?

- The people were friendly and always there to provide support and guidance throughout my internship.
- I absolutely loved working for John Day Fossil Beds National Monument. I gained so much knowledge, and it was a summer I will never forget. The monument will always have a special place in my heart.
- I had a phenomenal experience serving at Redwood National and State Parks. My coworkers were awesome people to work with (and just awesome people in general!) and the work that we accomplished was fulfilling and rewarding.
- I was so fortunate to work with a wonderfully dedicated and enthusiastic group at Great Basin National Park. I am so happy to have made all of the professional and personal relationships which I will forever treasure.

Please describe your favorite aspect of your experience as a GIP participant.

- I appreciated that the GIP program is designed as both a learning experience and a service project. I grew professionally from the experience, and I feel that my work made a difference.
- The best part was inspiring the people I met everyday to care about the National Parks. While it is not possible



GIP intern Keith Moore at Bryce Canyon National Park, Utah. (NPS photo)

to make an impact on everyone, it was a great feeling to know I inspired even just a few people to care more for our parks and to have a positive impact on them.

- My favorite aspect of my GIP experience was working with kids and junior rangers at my astronomy program. Talking to them was really fun because they had great questions about space and were really enthusiastic. I especially enjoyed feeling like I could inspire them to continue on studying science. I hadn't really considered education as a career before this, but now I am.
- I love working in a National Park. It has been my dream to work for the parks since I was a child, and working in a beautiful landscape is truly inspiring.

Comments on your overall experience as a GIP participant:

- Amazing!! The freedom to develop an independent project and the support to execute it was instrumental in making this internship such a successful time.
- The GIP program was fantastic. I was able to get real-world experience in a constructive and positive way.
- Thank you for this opportunity, it was the best experience I have ever had in a position.
- Life changing (in a good way). Thank you for having such a fantastic program! This was a great way to kick start my career after graduation. I hope this program continues for many years to come.

If you could make one recommendation to the Director of the National Park Service on how to better engage young people/adults and diverse communities what would you say?

- Video and social media are powerful communication tools that can educate and inspire people to action. These tools should be used to reach out to young people and diverse communities to educate on the importance of the parks, and inspire them to visit.
- Reach out to communities that aren't usually exposed to conservation and really make an effort to diversify the workforce as well as the visitors. There are lots of white people working in parks.
- Keep these important programs! I think that younger people seeing my passion for this work inspired how important it is to protect our public lands for all people and future generations.
- The amount of protected land should increase at a higher rate. There should be no debate whatsoever about using federally protected land for resource extraction. If there are no parks to visit, there is no way to increase engagement or diversity of visitors.
- I would recommend continuing to support and build connections with underrepresented populations through programs like GIP, SCA, VIP, and others. These programs allow participants to develop deep and meaningful connections with their public lands while simultaneously building a sense of community belonging, which can then be shared with their communities at home. Participants in these types of programs become advocates, ambassadors, and storytellers capable of shifting the narrative to become more inclusive and culturally relevant.



GIP intern Hannah Brooks at Shenandoah National Park, Virginia. (NPS photo)

Program Publicity

The following are examples of promotional materials, articles, and videos prepared about this year's GIP participants.

Congaree National Park, South Carolina

GIP Claudia Santiago worked with Congaree National Park in FY16 and FY17, guiding approximately 900 third graders on a journey to discover their natural environment. Claudia was part of the program named Linking Ecology and Art of Floodplains (LEAF). The LEAF program allows third graders to interact physically and intellectually with natural and physical science concepts through hands-on cognitive and effective experiences. For many of the students that participate in the program this is the first time that they have visited a national park and experienced wilderness because many of the students were minorities living at or near poverty line in nearby Columbia, SC and had not visited the park. Claudia recounts her experience as a GIP and how her upbringings help her connect with the students visiting the Park. During her time at Congaree National Park she was able to understand and get familiar with the difficulties faced by other communities in the United States. To read more about Claudia's experience at Congaree National Park visit:

<https://elpasoheraldpost.com/utep-grad-ameri-corps-sc/>



GIP intern Claudia Santiago working at Congaree National Park, South Carolina. (NPS photo)

Dinosaur National Monument, Colorado and Utah

Ben Otoo worked as a GIP intern at Dinosaur National Monument in 2014 was interviewed as part of an article looking into the stereotypes people have of geologists specifically paleontologists. When you think of a paleontologist what comes to mind to many people is a white men with a beard, wearing a wide-brimmed hat, that is dressed for adventure. However, that is not the true anymore. There are different types of people in geology, even though the stereotype still exists. In fact, there are more women studying geology now that in the past. Ben is one of only two black students at the University of Chicago working on his PhD in paleontology. In order to increase diversity in Earth sciences, academia, and various programs such as GIP, bureaus need to encourage diversity and become role models and mentors for the new generation of scientists. To read more about Ben's interview about diversity in paleontology visit: <https://www.theguardian.com/science/2017/aug/16/beards-and-gore-tex-does-palaeontology-have-an-image-problem>



GIP intern Ben Otoo working at Dinosaur National Monument, Colorado. (NPS photo)

Florissant Fossil Beds National Monument, Colorado

Facebook post about Alex Lowe and Erikka Olson's paleontology work in the park can be found at: <https://www.facebook.com/FlorissantNPS/posts/1405346462833958>

Geologic Resources Division and Intermountain Regional Office, Colorado

In the Fall of 2016, the Geoscientists-in-the-Parks and Mosaics in Science Diversity internships programs were highlighted in the National Park Intermountain Region's Crossroads in Science—Centennial Issue. One of the interns featured in the article was GIP William Harrison, who worked at Mesa Verde National Park in 2015, and discovered a new and rare species of a cartilaginous fish egg capsule (chimaeroid) closely related to sharks. In 2015, the Intermountain region hosted 48 interns in both the GIP and Mosaics programs at 25 parks. This article was published in the NPS [CROSSROADS](#) in Science – Fall 2016 – Centennial Issue.



GIP intern Alex Lowe collecting GPS data at Florissant Fossil Beds National Monument, Colorado. (NPS photo)

Grand Canyon National Park, Arizona

Under the supervision of the Grand Canyon National Park Cave Resource Manager—Ben Tobin, GIP interns Saj Zappitello and Robyn Hendereck studied the paleontology and water resources of the Park's caves. Saj focused on hydrogeology and aquifer characterization of the Grand Canyon. She led the geospatial analysis of the first dye trace ever conducted at Grand Canyon Park. She created GIS maps, and synthesized the information to understand and explain the underlying aquifer. Robyn studied the Grand Canyon Split Twig Figurine Complex which is believed to be an archaic hunting ritual performed in the caves by the hunter-gatherers who inhabited the canyon thousands or years ago. She researched the connection between the hunting ritual and the fossils of an extinct mountain goat that lived in the caves during the Ice Age 11,000 years ago. Saj's and Robyn's experience at the Grand Canyon was published in the National Speleological Society News—May 2017, volume 75, number 5.

Hot Springs National Park, Arkansas

This summer, GIPs Meg O'Connor and Paul Solis identified at least five new species of Ostracods, or "seed shrimp" in the thermal waters of Hot Springs National Park. These ostracods are a class of microscopic crustaceans that thrive in extreme conditions. Besides the five new species that Meg and Paul discovered, they rediscovered two species previously located in the park. To read more about Meg's and Paul's discovery, visit: <http://www.hotsr.com/news/2017/aug/14/small-discovery-interns-find-tiny->



GIP intern William Harrison at Mesa Verde National Park, Colorado. (NPS photo)



GIP intern Saj Zappitello caving at Grand Canyon National Park, Arizona. (Photograph courtesy of Kasia Biernacki)

[crust/](#)

Jewel Cave National Monument, South Dakota

Facebook post about Eric Fiorentino's cave and karst project at the park can be found at: <https://www.facebook.com/JewelCaveNPS/photos/a.706597079395003.1073741827.111297378924979/1416440135077357/?type=3&theater>.

Salinas Pueblo Missions National Monument, New Mexico

Emily Thorpe worked as a Paleontologist/Geologist during the summer of 2017. During her internship she made a rare discovery of a synapsid (mammal-like reptile). An article about her work can be found in the Park Paleontology Newsletter at: <https://www.nps.gov/articles/park-paleo-spring-2017-thorpe-sapu.htm>.

Long Term Goals

- Improving implementation of the Direct Hire Authority (DHA) Resource Assistant internships,
- Streamlining NPS and partner administrative processes to improve program management and day-to-day operations,
- Developing supervisor and intern handbooks and distributing them to GIP interns and host sites,
- Better communicating the Public Land Corps and Direct Hire Authority special hiring authorities to interns, supervisors, and human resource personnel,
- Developing and implementing mentoring and cultural competency training for NPS supervisors, and career development webinars for the GIPs,
- Continuing to focus on increasing racial and ethnic diversity in the program through improved outreach and recruiting and advertising to minority serving institutions and organizations, and
- Securing sustainable program funding to ensure long-term viability of the GIP Program.

Conclusion

The National Park Service successfully completed the 21st year of the Geoscientists-in-the-Parks Program and is continually striving to enhance the program and make it a more highly sought after internship program for college students, recent graduates, and NPS units. Since the program's inception 1,455 interns have completed 779,610 hours of service in 192 parks and central offices.



GIP intern Samantha Snowden at Lassen Volcanic National Park, California. (NPS photo)

With the completion of 169 important science projects in 2017 totaling 113,716 service hours in parks and central offices, the NPS has been able to move science-based decision-making and resource management forward for the Service. GIP interns gained valuable on-the-ground training, personal and professional development skills, and an increased awareness of conservation and environmental stewardship on public lands. The interns qualified for the Public Land Corps non-competitive hiring authority or the Direct Hire Authority. A program goal is to use these special hiring authorities to hire outstanding GIP graduates into the NPS workforce.

Funding from the NPS Geologic Resources Division, Natural Resource Stewardship and Science Directorate, Intermountain Region, parks, networks, central offices, park associations, and the substantial cost share by the program partners has leveraged NPS

funding to complete highly critical science projects for the NPS, training for America's youth, and furthering the NPS mission. These internship opportunities will help grow a stronger and more diverse STEM workforce in the NPS and throughout the American workforce.

The program partners offered innovative ideas that have improved the GIP Program in 2017, have recruited highly talented participants, and effectively managed the day-to-day program operations. The NPS is looking forward to another successful year in 2018 with The Geological Society of America, Stewards Individual Placement Program, NPS staff, and our future scientists!



GIP Team Lima Soto, Lisa Norby, Joey Ruehrwein, Krista Rogers, and Matt Dawson (missing from the photo are Mandy Eskelson and Allison Kerns. (NPS photo)

Acknowledgments

The NPS would like to gratefully acknowledge the outstanding efforts and contributions of its 169 program participants this year. Every person who worked as a GIP intern contributed valuable work, perspectives, and completed essential natural resource science work that furthers the goals and objectives of the National Park Service and grows each participant personally and professionally.

NPS supervisors and mentors also provided essential support for the program by identifying projects, overseeing the participant's work, ensuring project success, and providing mentoring and guidance to help the interns to grow personally, technically, and professionally, and help focus the participant's future career goals.

Park associations, park's, NPS Directorates, networks, and regions provided funding for GIP positions throughout the Service. This funding greatly increased the park's ability to bring interns to parks and central offices to gain valuable work experience and complete critical natural resource science projects.

The NPS Youth Programs Division provided valuable input and guidance to help improve and grow the GIP Program. Special thanks go out George McDonald for his continued support and feedback on the program.

The GIP Program will like to thank Dave Steensen, Chief of the NPS Geologic Resources Division for his support of the program. Without GRD's financial and administrative support, the GIP Program would not be as successful as it is.

David Joseph, NPS retiree, support to the GIP Program and for updating and maintaining the NPS' program database is greatly appreciated. His work made it easy to respond to NPS data calls, track program costs and expenditures and other information.

GSA provided excellent support advertising and recruiting candidates to help the NPS find the best and brightest interns, and managed the program's on-line application system. The NPS sincerely appreciates the great work of Matt Dawson and Allison Kerns and the generous support of Sally Newcomb through her donation to the GSA Foundation that was used for GIP projects at Denali National Park and Preserve.

We also acknowledge Stewards for partnering with the GIP Program and providing outstanding support from completing all enrollment paperwork with the interns, to working closely with the supervisors and GIPs to ensure success of the program, and administering the AmeriCorps component of the program. We appreciate the excellent work of Joey Ruehrwein, Jill Harley, Krista Rogers, Mandy Eskelson, and many others at Stewards.

Coordinating Organizations

National Park Service, Geologic Resources Division



The Geologic Resources Division assists the National Park Service and partners in the Service-wide coordination, support, and guidance necessary to understand and implement science-informed stewardship of geologic and associated park resources; reduce impacts from energy, mineral, and other development; and protect visitor values. The Division created and manages the GIP Program and cost shares positions with NPS units. GRD manages two Service-wide internship programs – the Geoscientists-in-the-Parks and Mosaics in Science Programs.

For more information about GIP: go.nps.gov/gip

NPS intranet website: <http://inside.nps.gov/waso/waso.cfm?prg=1117&lv=3>

Facebook: <https://www.facebook.com/Geoscientists.in.the.Parks/>

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The Geological Society of America



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The Geological Society of America (GSA) is a global professional society with a growing membership of more than 26,000 individuals in 115 countries. GSA provides access to elements that are essential to the professional growth of earth scientists at all levels of expertise and from all sectors: academic, government, business, and industry. The Society unites thousands of earth scientists from every corner of the globe in a common purpose to study the mysteries of our planet (and beyond) and share scientific findings. GSA is responsible for advertising, recruiting, and managing the application system for the GIP Program. GSA Foundation annually supports two or more positions in Alaska.

For more information about GSA: www.geosociety.org

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Stewards Individual Placement Program



Stewards Individual Placement Program offers land and water management agencies and other non-profit organizations opportunities to accomplish specific projects by providing individual placements (internships) on public lands. Stewards is responsible for administering the GIP Program once the interns have been hired (enrollment, payment of stipends, travel, and housing allowance, issue resolution, and preparation of final program report).

For more information about Stewards: <http://www.stewardslegacy.org/>

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For more information visit
[go.nps.gov/gip](https://www.nps.gov/gip)
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