

Geoscientists-in-the-Parks FY2013 - Accomplishments Report

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Natural Resource Stewardship and Science
Geologic Resources Division



As a longstanding partnership, the Geoscientists-in-the-Parks (GIP) Program has several key goals:

- introducing students from diverse backgrounds to potential careers in the NPS,
- providing on-the-job geoscience and natural resource management training for America's youth,
- building geoscience capacity for park management, and
- enhancing the public's understanding of the Earth sciences.

The NPS' program partners are *The Geological Society of America* and the *National Association of Geoscience Teachers*. In FY13, park participation in the GIP Program declined, with 25 fewer interns than FY12, due to federal sequestration cuts that reduced available funding for internships. In FY2013, the GIP program placed 86 participants in 40 parks in all NPS Regions, one I&M network, and several Washington offices to assist with their geoscience and integrated science needs. The program has a strong emphasis on diversity and in 2013 twenty-four percent (24%) of the GIPs were from racial and ethnic groups typically under-represented in the geosciences. This placement rate is four times higher than the current diversity in the U.S. geoscience workforce (6%). GIP interns completed work valued at \$2.52 million in 2013 at a cost of \$579,422 to the NPS, a noteworthy payback of over 4:1.

FY13 GIP Program Summary

In FY13 the GIP Program negotiated a new 5-year Cooperative Agreement with its primary partner, *The Geological Society of America*. This significant milestone created a national youth agreement authorized under the Public Lands Corps Act (16 U.S.C. §§ 1721-1726). Program participation is now focused primarily on 18-25 year olds. Under the agreement "resource assistants" may also occasionally be placed in parks that are older and/or more experienced than a typical college student. Another key component of the youth agreement is that program participants qualify for noncompetitive hiring status in the federal government after completing 640 hours of satisfactory service (see DOI Personnel Bulletin 11-02, Jan 31, 2011). Another significant change was the negotiation of a reduced DOI indirect cost rate, which reduces NPS administrative costs for each participant by \$800, resulting in NPS cost savings of \$67,200 in FY13. This cost savings offsets the \$50,000 GSA contribution required in the previous cooperative agreement.

Types of Positions

Three types of GIP positions are offered each year: standard GIPs, Guest Scientists, and Diversity Internships. Standard GIP positions typically last for 10 – 12 weeks during the summer and each intern receives a \$3,000 stipend, \$250 travel allowance, and paid housing. Guest Scientist positions are for projects that require a higher level of expertise or last longer than 3 months (positions may last up to one year). Guest Scientists are paid a stipend ranging from \$1,000 - \$2,000/month (based on the participant's expertise), \$250 travel allowance, and paid housing. Diversity Internships target youth from under-represented groups (EEO classifications shown in Table 6). Diversity interns receive a \$3,000 stipend, \$500 travel allowance, and paid housing. The distribution of GIPs by position type is shown in Table 1.

Table 1: Distribution of GIP positions

Type of Position	# positions
GIP Intern	55
Guest Scientist	20
Diversity Internship	11
TOTAL	86

GIPs were placed throughout the Service in 40 parks, one inventory and monitoring network, and several Washington offices. Over half of the positions were in Intermountain and Pacific West Region parks. The distribution of GIP positions by park and region is shown in Table 2. A listing of GIP parks, positions, and participants is shown at the end of this report in Tables 11 and 12.

Table 2: GIP positions by park and region

Region	# Positions	Park
Alaska Region	4	DENA (2), KEFJ, WRST
Intermountain Region	29	BRCA (4), CARE (2), CHCU, COLM, DINO (2), ELMA, FLFO (4), FOBU, GLAC (2), GRCA (6), GRSA, GRTE, GUMO, LIBI, ROMO
Midwest Region	5	BADL (4), PIRO
National Capital Region	4	CATO, CHOH, ROCR (2)
Northeast Region	11	ASIS (5), CACO, DEWA (2), GATE, NCBN, SHEN (2)
Pacific West Region	19	CRMO (2), GRBA, JODA (2), MORA (7), ORCA (4), REDW, YOSE
Southeast Region	7	CHAT (2), CONG (2), FOFR (2), FOPU (2), MACA
Washington Office (WASO)	7	COR, GRD (6)

Note: The number of parks can exceed the number of positions because some GIP projects are associated with more than one park.

GIP participants represented a broad range of geologic disciplines - from coastal geology to paleontology to hydrology (Table 3). The majority of the projects focused on interpretation and education followed by inventory and monitoring then research (Table 4).

Table 3: GIP positions by geologic discipline

Discipline	# Projects
Cave / Karst	6
Coastal	8
Geologic Hazards	4
General Geology	15
Geomorphology	1
Glaciology	1
Hydrology - General	1
Hydrology - Groundwater	1
Hydrology - Stream	1
Multi-disciplinary	22
Paleontology	22
Soils	2
Volcanology	2

Table 4: GIP positions by project category

Project Category	# Projects
Curation	3
GIS	1
Interpretation / Education	34
Inventory and Monitoring	24
Multi-faceted	7
Research	17

Fifty-seven percent of program participants were undergraduate or graduate students, with an additional 31% having recently earned their undergraduate or graduate degree. Twelve percent of the GIP participants did not specify their educational level (Table 5).

Table 5: GIP positions by education level

Education	# Positions
Undergraduate student	27
B.S. / B.A. degree	16
Graduate student	22
M.S. / M.A. degree	6
PhD degree	2
Graduate degree, unspecified	3
Not reported	10

GIP Program Diversity

In FY2013, increasing the racial and ethnic diversity of program participants continued to be a key objective of the GIP Program. Eleven positions were specifically advertised as diversity internships. In order to attract more diverse applicants, GSA and the NPS promoted the program and recruited from universities and organizations that serve persons under-represented in the Earth sciences (e.g., SACNAS – *Society for the Advancement of Chicanos and Native Americans in Science*, NABGG – *National Association of Black Geologists and Geophysicists*, HBCU – *Historically Black Colleges and Universities*, HACU – *Hispanic Association of Colleges and Universities*, TCU – *Tribal Colleges and Universities*, AIHEC – *American Indian Higher Education Consortium*, and others). In addition, GRD staff reached out to NPS Youth Programs Division, NPS EEO office, and others to seek applicants from under-represented groups.

Advertising positions as “diversity internships” has resulted in an overall more diverse applicant pool and the selection of more diverse participants throughout the program. Even though only 11 positions were advertised as diversity internships, parks filled twenty one positions with applicants from EEO groups typically under-represented in the Earth sciences (see Table 6). This represents a 24% ethnic diversity in the GIP Program, which is double the racial / ethnic diversity of the GIP Program in FY12.

Table 6: GIP positions by ethnicity

Ethnicity	# Positions	Program %
African American	3	3.5%
Asian	7	8.1%
Caucasian (White, not Hispanic)	51	59.3%
Hispanic	8	9.3%
Native American/ Alaskan Native	2	2.3%
Native Hawaiian / Other Pacific Islander	1	1.2%
Not reported	14	16.3%
TOTAL	86	100%

Overall, the diversity in the GIP Program is greater than that present in the U.S. geoscience workforce. For example, according to the [American Geological Institute](#), participation by under-represented populations in geoscience occupations in 2006 was 6% (3.6% - Hispanics, .9% - Blacks, and 1.5% - Native Americans).

Program participation by women in FY13 was 67% (58 interns), 25% higher than the [current female geoscience student population](#) in the United States (45%).

Table 7: GIP positions by gender.

Gender	# Persons	Program %
Female	58	67%
Male	28	33%

Program Funding and Expenditures

In FY2013 total GIP Program costs were \$661,472, of which the NPS paid \$579,422. NPS funding is obtained from a variety of sources including the Geologic Resources Division, parks, and other NPS offices and programs (e.g., Inventory and Monitoring and Volunteer in Parks Programs). The remaining \$82,050 was paid by park cooperating associations and program partners (Table 8).

Table 8: Geoscientists-in-the-Parks Program expenditures in FY 2013

Funding Source*	Amount Expended
Geologic Resources Division	\$288,450
Inventory & Monitoring Program (GRI, and other I&M network funds)	\$23,497
Parks	\$267,475
NPS sub-total	\$579,422
Park Cooperating Associations	\$64,150
GSA Foundation	\$11,900
National Association of Geoscience Teachers (NAGT)	\$6,000
Partner sub-total	\$82,050
TOTAL	\$661,472

*Expenditures are based on the most current data in the NPS GIP database (as of 10/4/12).

The GIP Program balance available after payment of FY13 invoices is \$393,597 (see Table 9). The available balance includes \$169,322 in Geologic Resources Division funding that covers the administrative costs for FY14 positions. An additional \$224,275 has been obligated by parks, I&M programs, and networks to cover their cost share for their GIP positions (stipends). Without the obligation of additional program funding, the current balance will not fully fund the program at current levels in FY14. Based on current projections, an additional \$268,000 will be necessary from GRD and other fund sources to maintain FY13 placement levels in FY14. At this point it is anticipated that adequate funding will be available in FY14 however program expenditures will deplete any program reserves available to cover the program's administrative costs in future years.

Table 9: Status of Funding for the GIP Program (as of 10/1/13).

Task Agreement #	Balance After Payment of FY13 Invoices
P12AC10502	\$58,572
P13AC00705	\$335,025
BALANCE	\$393,597*

*GRD's portion of the remaining balance is \$169,322 which will be used to cover the administrative costs for FY14 GIP positions.

In FY2013, GRD staff continued to seek program funding, such as preparing NPS funding proposals and working with the NRSS Partnerships office, Youth Programs Division, NPS Nature fund, and National Park Foundation to explore sustainable program funding options. An ongoing and high priority program goal is to obtain sustainable NPS or partner funding for the GIP Program.

Value and Cost Benefit of GIP Work

GIP Program participants in FY2013 worked 49,040 hours in NPS units. Under the NPS Volunteer in Parks Act (16 USC Sec. 18g) GIP participants are considered volunteers. The estimated value of an average volunteer as determined by the Federal Interagency Team on Volunteerism for 2012 is \$22.14/hour (http://independentsector.org/volunteer_time), resulting in GIP work worth \$1,085,746 which equates to a value per NPS program dollar spent of approximately 2 to 1.

Since GIPs have specialized geoscience expertise, a more appropriate value for geoscientist's work is the [2012 Bureau of Labor Statistics](#) rate of \$51.33/hour, resulting in a total FY13 valuation of \$2,517,223 which equals a payback of about 4 to 1 for every NPS dollar expended, demonstrating that geoscience work completed by GIPs is highly cost-effective for the NPS.

Program Partners

Below is a summary of the two GIP Program partnerships.

Geological Society of America – GeoCorps America™ Program

- Eighteen (18) year partnership, primary partner with the NPS Geoscientists-in-the-Parks Program;
- NPS partners with GSA's GeoCorps America™ Program to place geoscientists in NPS, USFS, BLM units, and the State of California to assist with their geoscience needs;
- The goals of the GIP/GeoCorps America partnership are to introducing students from diverse backgrounds to potential careers in the NPS, providing on-the-job geoscience and natural resource management training for America's youth, building geoscience capacity for park management, enhancing the public's understanding of the Earth sciences, and providing geoscience opportunities for GSA members.
- New five (5) year Youth Cooperative Agreement was executed in July 2013;
- GSA Foundation annually supports two or more positions, primarily in Alaska;
- GSA maintains an online system for posting position descriptions and applications, recruits qualified applicants for each position, and provides day-to-day administrative program support;
- In 2013, GSA maintained a [Facebook](#) page to help foster communication among GeoCorps/GIP participants and to convey important information related to job opportunities.

National Association of Geoscience Teachers (NAGT) – Geoscience Teachers-in-Parks

- 8 year partnership with NAGT (2006 – 2013);
- Program began at Mammoth Cave NP in 2006 and expanded to Mount Rainier NP in 2012;
- Two Earth Science teachers worked at Mount Rainier National Park in 2013 gaining on-the-ground work experience, assisting with the park's Earth science needs and building long-term relationships with neighboring schools and communities;
- NAGT provided \$6,000 in program support. Mount Rainier NP covered the remaining costs for these positions.

Table 10: Number of GIP Positions by partner organization.

Partner	# Positions
Geological Society of America (includes AWG sponsorship)	84
National Association of Geoscience Teachers	2

GIP Program Websites and Databases

The GIP Intranet and Internet sites are continually upgraded to enhance the delivery of program information and to showcase the work done by the GIPs. Recent Intranet site improvements include [information for parks interested in obtaining a GIP intern](#) and a [searchable database of GIP work products](#) (e.g., reports, videos, and trail guides). Enhancements to the GIP Internet site include an [orientation and mentoring toolkit](#) for NPS supervisors and interns and updated program information and [search capabilities for GIP project information and work products](#).

The internal NPS GIP database tracks project and participant information, funding data, task agreement and account funding status, and lists all products completed for each GIP project. FY2013 database enhancements included upgrades to conform to the new financial system, better tracking of individual project and budgetary information, new reports, and developing procedures to transfer program data from GSA's GeoCorps America database to NPS's GIP database. In FY13, NPS staff worked with David Joseph (NPS retiree) and GSA to upgrade their online application system, program databases, and data transfer capabilities.

GIP Parks and Participants for FY13

Table 11: Geoscientists-in-the-Parks positions with spring or summer start dates.

PARK		POSITION		GSA ID#
1.	Assateague Island National Seashore (Maryland, Virginia)	Coastal Geologist / Educator (Pamela Stewart)	DI	2012418
2.	Assateague Island National Seashore (Maryland, Virginia)	Coastal Geologist / Educator (Aurora Crooks)	DI	2013001
3.	Assateague Island National Seashore (Maryland, Virginia)	Coastal Geologist [Guest Scientist] (Thomas Schenck)		2013002
4.	Assateague Island National Seashore (Maryland, Virginia)	GIS Specialist (Heather Grybas)		2013003
5.	Badlands National Park (South Dakota)	Field Paleontologist (Christine Gardner)		2013004
6.	Badlands National Park (South Dakota)	Field Paleontologist (Alaina Fike)		2013005
7.	Badlands National Park (South Dakota)	Geology Exhibit Developer (Michael Catches-Enemy)	DI	2013006
8.	Badlands National Park (South Dakota)	Resource Educator / Paleontologist (Kathryn Pauls)		2013007
9.	Bryce Canyon National Park (Utah)	AstroCorps: Park Guide / Planetologist (Brian Castro)		2013009
10.	Bryce Canyon National Park (Utah)	Field Paleontologist (Stephanie Lukowski)		2013010
11.	Bryce Canyon National Park (Utah)	Park Guide / Pod Cast Developer (Katherine Lodder)		2013011
12.	Bryce Canyon National Park (Utah)	Park Guide / Pod Cast Developer (Andrew Patel)	DI	2013012
13.	Cape Cod National Seashore (Massachusetts)	Coastal Geologist [Diversity Internship] (Catalina Mejia)	DI	2013015
14.	Capitol Reef National Park (Utah)	Geology Interpreter (Joshua Johnson)		2013016
15.	Capitol Reef National Park (Utah)	Geology Interpreter [Diversity Internship] (Jennifer Kolm)	DI	2013017
16.	Catoctin Mountain Park (Maryland)	Geomorphology [Guest Scientist] (Kent Walters)		2013067
17.	Chaco Culture National Historical Park (New Mexico)	Interpretation Specialist (Kayla Lanoue)		2013019
18.	Chattahoochee River National Recreation Area (Georgia)	Geologic Mapping Technician Mentor (Randy Kath)		2013018
19.	Chattahoochee River National Recreation Area (Georgia)	Geologic Mapping Technician (Haley Harden)		2013020
20.	Colorado National Monument (Colorado)	Paleontologist (Cyrus Green)		2013023
21.	Craters of the Moon National Monument & Preserve (Idaho)	Geologic Media Developer (Sonja Melander)		2013024
22.	Craters of the Moon National Monument & Preserve (Idaho)	Geology Educator (Holly Keimig)		2013025

PARK	POSITION	GSA ID#
23. Delaware Water Gap National Recreation Area (New Jersey, Pennsylvania)	GIS Technician (Kelly Gray)	2013026
24. Denali National Park (Alaska)	Paleontologist / GIS Technician (Amy Atwater)	2013027
25. Denali National Park (Alaska)	Paleontologist / GIS Technician (Montana Hodges)	2013028
26. Dinosaur National Monument (Colorado, Utah)	Field Paleontologist (Garrison Loope)	2013029
27. Dinosaur National Monument (Colorado, Utah)	Field Paleontologist (Phil Varela)	2013030
28. El Malpais National Monument (New Mexico)	Cave Surveyor and Data Manager (Justin Peinado)	DI 2013031
29. Florissant Fossil Beds National Monument (Colorado)	Paleontology / Museum Intern (Lindsey Yann)	2013032
30. Florissant Fossil Beds National Monument (Colorado)	Paleontology / Museum Intern (Heather Falkner)	2013033
31. Florissant Fossil Beds National Monument (Colorado)	Paleontology / Museum Intern (Kelly Hattori)	DI 2013034
32. Florissant Fossil Beds National Monument (Colorado)	Paleontology / Museum Intern (Alison Dernbach)	2013037
33. Fort Frederica National Monument (Georgia), Fort Pulaski National Monument (Georgia)	Geologic / Geomorphic Mapping Technician - mentor (Chester Jackson)	2013013
34. Fort Frederica National Monument (Georgia), Fort Pulaski National Monument (Georgia)	Geologic / Geomorphic Mapping Technician (Ryan Jubran)	2013035
35. Fossil Butte National Monument (Wyoming)	Public Education Geology / Paleontology (Taryn O'Connell)	2013036
36. Gateway National Recreation Area (New Jersey, New York), Northeast Coastal and Barrier Network (Massachusetts)	Geology / GIS Specialist (Randall Fullmer)	2013039
37. Glacier National Park (Montana)	Geology Interpreter / Educator (Siobhan Kenney)	2013042
38. Glacier National Park (Montana)	Geology Interpreter / Educator (Nicole Bader)	2013043
39. Grand Canyon National Park (Arizona)	Educational Park Guide / Geologist (Maria Princen)	2013045
40. Grand Canyon National Park (Arizona)	Geologist - Geohazards [Guest Scientist] (Russell Rosenberg)	2013046
41. Grand Canyon National Park (Arizona)	Cave Management Technician (Direct Placement) (Graham Schindel)	2013068
42. Grand Teton National Park (Wyoming)	Interpretive Geologist [Guest Scientist] (Erica Stephens)	2013048
43. Great Basin National Park (Nevada)	Field Paleontologist (Chris Ciervo)	2013049
44. Great Sand Dunes National Park (Colorado)	Physical Scientist (Katie Schultz)	2013050
45. Guadalupe Mountains National Park (Texas)	Paleontology Technician (Jory Lerback)	2013051
46. John Day Fossil Beds National Monument (Oregon)	Geologist / Paleontologist (Elizabeth Baker)	2013052
47. John Day Fossil Beds National Monument (Oregon)	Geologist / Paleontologist [Guest Scientist] (Steven Lundblad)	2013053
48. Mammoth Cave National Park (Kentucky)	Karst Geoscience Research Assistant (Courtney Van Stolk)	2013054
49. Mount Rainier National Park (Washington)*	Geoscience-Teacher-in-Parks Intern (Greg Stott)	NA
50. Mount Rainier National Park (Washington)*	Geoscience-Teacher-in-Parks Intern (Amy Rutz)	NA

PARK	POSITION	GSA ID#
51. Mount Rainier National Park (Washington)	Geomorphology / Glaciology Technician (Jonathon Beyeler)	2013055
52. Mount Rainier National Park (Washington)	Geomorphology Technician (Rebecca Rossi)	2013056
53. Mount Rainier National Park (Washington)	Interpretation Specialist (Erin Smith)	2013057
54. Mount Rainier National Park (Washington)	Interpretation Specialist (Eric McPherrren)	2013058
55. Mount Rainier National Park (Washington)	Interpretation Specialist (Amishi Kumar)	DI 2013059
56. Geologic Resources Division (Colorado)	Paleontology Assistant (Matthew Miller)	2013022
57. Geologic Resources Division (Colorado)	Geologic Information Specialist and Web Developer (Heather Walborn)	2013040
58. Geologic Resources Division (Colorado)	National Fossil Day Coordinator (Cassie Knight)	2013041
59. Oregon Caves National Monument (Oregon)	Field Geologist and Geology Interpretation (Flora Sperberg)	2013014
60. Oregon Caves National Monument (Oregon)	Geo-Interpreter (Michelle Torres)	2013060
61. Oregon Caves National Monument (Oregon)	Field Geologist and Geology Interpretation (Laura Gerbi)	2013061
62. Oregon Caves National Monument (Oregon)	Geo-Interpreter (Chuqiao Dong)	2013062
63. Pictured Rocks National Lakeshore (Michigan)	Geologic/Geomorphic Mapping Technician (Sarah Blakeley)	2013044
64. Rock Creek Park (Virginia, District of Columbia, Maryland)	Geoscience Interpreter (Chelsea Lewis)	DI 2013063
65. Rock Creek Park (Virginia, District of Columbia, Maryland)	Hydrologist, Hydrogeologist, or Fluvial Geomorphologist (Robert Kelly)	2013064
66. Shenandoah National Park (Virginia)	Geological Interpreter (George Carson)	2013065
67. Shenandoah National Park (Virginia)	Geological Interpreter (Dennae Moore)	DI 2013066

*Teacher internships sponsored by the National Association of Geoscience Teachers.

=67 spring/ summer GIP positions

Table 12: Geoscientists-in-the-Parks positions with fall or winter start dates.

PARK		POSITION	GSA ID#
68.	Assateague Island National Seashore (Maryland, Virginia)	Coastal Geologist / Educator (Joshua Hansen)	2013416
69.	Center for Outdoor Recreation (District of Columbia)	Geographic Information System (GIS) Specialist (Peter Bonsall)	2012426
70.	Chesapeake & Ohio Canal National Historical Park (District of Columbia, Maryland, Virginia, West Virginia)	Outreach Paleontologist / Geologist [Guest Scientist] (Ivan Carabajal)	2013021
71.	Congaree National Park (South Carolina)	Earth Science Educator (Samantha Stanford)	2013402
72.	Congaree National Park (South Carolina)	Earth Science Educator (Katheryn Moldawer)	2013403
73.	Delaware Water Gap National Recreation Area (New Jersey, Pennsylvania)	GIS Technician	2013405
74.	Grand Canyon - Parashant National Monument (Arizona)	Physical Science Technician (Mitra Sartipi)	2013407
75.	Grand Canyon National Park (Arizona)	Earth Science Week Coordinator (South Rim) (Christine Chan)	DI 2012413
76.	Grand Canyon National Park (Arizona)	Hydrologist (Cynthia Valle)	2012425
77.	Grand Canyon National Park (Arizona)	Paleontologist [Guest Scientist] (Cassi Knight)	2013047
78.	Kenai Fjords National Park (Alaska)	Geologic Outreach Specialist (Julie Markus)	2013408
79.	Little Bighorn Battlefield National Monument (Montana)	Soil Scientist / Physical Scientist / Natural Resources (Nancy Parker)	2013409
80.	Geologic Resources Division (Colorado)	Geologic Heritage Outreach Coordinator (Lynn Moore)	2012405
81.	Geologic Resources Division (Colorado)	Soils Resources Management Program Assistant (Steven Park)	2012414
82.	Geologic Resources Division (Colorado)	Coastal Geologist (Direct Placement) (Maria Caffrey)	2012419
83.	Redwood National Park (California)	Hydrological Technician (Kendall Story)	2012424
84.	Rocky Mountain National Park (Colorado)	Geology Education Instructor (Lana Morris)	2012411
85.	Wrangell-St Elias National Park & Preserve (Alaska)	Geologist / GIS Technician (Harpreet Narang)	2012408
86.	Yosemite National Park (California)	Geologist [Guest Scientist] (Jessica Thompson)	2012412

=19 fall/winter GIP positions