

Geoscientists-in-the-Parks FY 2011 - Accomplishments Report

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The Geoscientist-in-the-Parks (GIP) program placed 71 participants throughout the NPS in fiscal year 2011. Interns were placed in 41 NPS units through partnerships with The Geological Society of America, National Association of Geoscience Teachers, and Association for Women Geoscientists. GIPs worked in parks in all NPS Regions, I&M Networks, and the Washington Office to assist parks in meeting their unmet geoscience needs. Fourteen (14) percent of the GIP participants were from groups typically under-represented in the geosciences, a marked increase in ethnic/racial diversity in the program over previous years. GIPs in FY 2011 completed work valued at \$1.68 million for a cost of only \$332,545 to the NPS, a noteworthy payback of 5:1. The GIP Program has grown 65% over the past 4 years (43 positions in 2008 to 71 positions in 2011), reflecting the high value parks perceive from these geoscience positions. A summary of fiscal year 2011 for the Geoscientists-in-the-Parks Program is shown below in Tables 1 – 9.

FY 2011 GIP Program Summary

There are three types of GIP positions – GIPs, Guest Scientists, and Diversity Internships. GIP positions are geared towards students that are typically only available to work during the summer. GIP positions last for 10 – 12 weeks and the participant receives a stipend of \$2,750 /3 mo. work. Guest Scientist positions are for projects that require a higher level of expertise and/or a longer term appointment to complete the project (up to one year). Stipends for Guest Scientists are range from \$1,000 - \$2,000/mo. and are based on the participant's expertise. Diversity Internships target hiring persons from under-represented groups (EEO classifications shown in Table 6). Diversity internships usually last for 3 mo and the participants receive a \$2,750 stipend plus a \$500 travel scholarship. All GIP Program participants receive free housing or a housing allowance. The distribution of GIP positions by type in FY 2011 is shown in Table 1.

Table 1: Distribution of GIP positions.

Type of Position	# positions
GIP position	51
Guest Scientist	14
Diversity Internship	6
TOTAL	71

GIPs were placed in all NPS regions, two inventory and monitoring networks, and the Washington office, with over half of the positions located in parks in the Intermountain and Pacific West Regions. This geographic distribution of GIP positions is shown in Table 2.

Table 2: GIP positions by park and region

Region	# Positions	Parks
Alaska Region	3	DENA (2), KATM
Intermountain Region	25	BITH, BRCA (2), CANY, CHCU, DINO (3), FLFO (3), FOBU (2), GLAC (2), GRCA (3), GRTE (3), GUMO (2), ROMO, WHSA
Midwest Region	2	BADL, GRPO/PIPE
National Capital	4	CATO, CHOH (2), CUE/ROCR

Region	# Positions	Parks
Region		
Northeast Region	9	ASIS, CACO, DEWA (2), FIIS/SAHI, GATE/SAHI, GATE, STLI, VAFO
Pacific West Region	19	CRMO (2), DEVA, JODA (2), MORA (7), ORCA (5), YOSE (2)
Southeast Region	4	GUIS, MACA (3)
Washington Office (WASO)	5	BRMD, GRD (4)
TOTAL	71	

GIP participants represented a broad range of geologic disciplines - from coastal geology to paleontology to hydrology (Table 3). Project categories were almost equally split with one-third inventory / monitoring, one-third interpretation / education, and one-third other multi-faceted projects (Table 4).

Table 3: GIP positions by geologic discipline.

Discipline	# Projects
Cave / Karst	6
Coastal	4
Energy and Minerals	1
Geologic Hazards	4
General Geology	23
Geomorphology	1
Glaciology	1
Hydrology - General	2
Hydrology - Groundwater	1
Hydrology - Stream	4
Multi-disciplinary	1
Paleontology	21
Volcanology	2

Table 4: GIP positions by project category.

Project Category	# Projects
Interpretation / Education	25
Inventory and Monitoring	24
Multi-faceted	8
Research	12
Restoration / Reclamation	2

Over half (58%) of program participants stated they were undergraduate or graduate students, with an additional 31% having recently earned their undergraduate or graduate degree (see Table 5).

Table 5: GIP positions by education level.

Education	# Positions
Undergraduate student	25
Graduate student	16
B.S. / B.A. degree	14
M.S. / M.A. degree	2
PhD degree	1
Graduate degree, unspecified	5
Not reported	8

GIP Program Diversity

In 2010, diversity internships were added as a central component of the GIP Program. Diversity internships are those defined by the EEO classes shown in Table 6. The reported GIP Program diversity represents only the narrowly defined EEO racial and ethnic classes and does not take

in to account other more broadly defined types of diversity (e.g., gender, creed, age, marital status, national origin, sexual orientation, disability). This year, six positions were specifically advertised for and filled by diverse applicants, and an additional four positions were filled by applicants from these under-represented groups, for a total of ten positions, representing a 14% diversity in the GIP Program. The diversity in the applicant pool was higher than that of the staff actually hired into the program because the parks' selection of the GIP participant is basing solely on merit, without consideration of ethnic or racial diversity. In addition, the diversity in the GIP Program is most likely under-reported because nearly 20% of the participants chose not to disclose their ethnicity on his/her application.

In order to attract diverse applicants, GSA and the NPS promote the program and recruit for program participants from universities and organizations that serve under-represented populations (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, AIHEC – American Indian Higher Education Consortium, and others). In addition, GRD staff reaches out to NPS Youth Programs' office, the NPS EEO office, and others to seek applicants from under-represented groups.

Table 6: GIP positions by ethnicity.

Ethnicity	# Positions	Program %
Asian	2	2.8%
Black	0	0%
Caucasian (White, not Hispanic)	49	69%
Hispanic	5	7%
Native American/ Alaskan Native	1	1.4%
Native Hawaiian / Other Pacific Islander	1	1.4%
Not reported	13	18.3%

Overall, the diversity in the GIP Program is greater than that represented 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 3.6% for Hispanics, 1.9% for Blacks, and 1.5% for Native Americans (<http://www.agiweb.org/workforce/Currents/Currents-035-MinoritiesinGeosciOccupations.pdf>).

Program participation by women in FY 2011 was 65% (46 interns), 20% higher than the current percentage of female geoscience students in the U.S. (http://gsa.confex.com/gsa/2008AM/finalprogram/abstract_149887.htm).

Table 7: GIP positions by gender.

Gender	# Persons	Program %
Female	46	65%
Male	25	35%

FY Program Expenditures

Table 8: Geoscientists-in-the-Parks Program expenditures in FY 2011.

Funding Source¹	Amount Expended	
Geologic Resources Division	\$132,031	
Inventory & Monitoring Program (GRI, and other I&M network funds)	\$33,375	
NRPP funding	\$11,250	
Youth Internship Program funding	\$17,904	
Recreation Fee funding	\$529	
Parks	\$140,205	
NPS sub-total		\$332,545
Park Associations	\$31,500	
Geological Society of America (in-kind contribution)	\$50,000	
GSA Foundation	\$19,985	
Association for Women Geoscientists (AWG)	\$8,250	
National Association of Geoscience Teachers (NAGT)	\$4,000	
Partner sub-total		\$113,735
TOTAL		\$446,280

¹ Expenditures are based on the most current data in the NPS GIP database (as of 9/30/11).

Value and Cost Benefit of GIP Work

The 71 GIP Program participants contributed 37,522 hours of work in FY 2011. Under the NPS Volunteer in Parks Act (16 USC Sec. 18g) GIP participants are considered volunteers. Using a conservative estimate of \$21.36/hour for the value of an average volunteer as determined by the Federal Interagency Team on Volunteerism (http://independentsector.org/volunteer_time), GIP participant's work in 2011 is worth \$801,470 which equates to a value per NPS program dollar spent of approximately 2.4 to 1.

Since GIPs are volunteers with specialized expertise, it is more appropriate to use the Bureau of Labor Statistics value of \$44.89/hour for geoscientist work (<http://www.bls.gov/oes/2010/may/oes192042.htm>). This valuation results in the GIP hours being worth \$1,684,363 which equals a payback of about 5 to 1 for every NPS dollar expended, demonstrating that geoscience project work completed by GIPs is highly cost-effective for the NPS.

GIP Program Funding

To-date, no sustained base program funding has been obtained for the GIP Program. Program funding continues to be from annual NRSS project funds, year-end GRD funds, and other NPS funding sources. In FY 2011 GRD was able to contribute considerable funding (\$302,000), which at current participation levels will ensure the continued success of the GIP Program for approximately two years. Sustainable program funding continues to be an issue for the long-term viability for the GIP Program.

In FY-2011, GRD staff continued efforts to seek program funding, such as preparing Natural Resource Preservation Program, Recreation Fee, and OFS funding proposals. GRD staff also worked with the NPS Partnerships Program (WASO Youth Programs office) and NRPC Partnerships office to explore sustainable program funding options.

The GIP Program balance available after payment of remaining FY 2011 invoices is \$545,739 (see Table 9). Of these funds, \$419,744 are GRD funds to be used to support GRD and other NRSS GIP positions, pay for 50% of the costs for each position, and to provide scholarships to parks unable to support a GIP. The remaining \$125,995 obligated by parks, I&M programs, and networks will be used to cover their 50% cost match for GIP positions.

Table 9: Funding Status for the GIP Program.

Task Agreement #	Current Balance (11/2011)	Amount Yet to be Invoiced for FY 2011 Projects	Balance After FY 2011 Invoices Paid	FY 2012 Discretionary GRD / NRSS Funding	FY 2012 Park / I&M Funding
J2360097111	\$2,988.58	\$2,988.58	\$0	\$0	\$0
J2360108001	\$2,500.00	\$2,500.00	\$0	\$0	\$0
J2360101022	\$155,595.00	\$61,668.86	\$93,926.14	\$87,426.00	\$6,500.14
P11AT00428	\$57,381.00	\$27,080.59	\$30,300.41	\$23,000.00	\$7,300.41
P11AT70915	\$440,892.00	\$37,230.00	\$403,662.00	\$302,000.00	\$101,662.00
Balance	\$659,357	\$131,468.03	\$527,888.55	\$412,426.00	\$115,462.55

Program Partners

External program partners contributed 25% of the program costs (\$113,735) to support GIP positions in NPS units in FY 2011. Below is a brief summary of the two GIP Program partnerships.

Geological Society of America partnership

- NPS partners with GSA's GeoCorps America program to place geoscientists in NPS, USFS, and BLM units to assist with their geoscience needs;
- 15 year partnership, core partner to the GIP program;
- 5 year Cooperative Agreement executed in 8/08, amended in 2009;
- GSA annually contributes a minimum of \$50,000 towards the program;
- In addition, the GSA Foundation annually supports two or more positions, primarily in Alaska;
- GSA maintains online system for posting position descriptions and applications, recruits qualified applicants for each position, and provides day-to-day administrative program support;
- The Association for Women Geoscientists annually contributes funding to the GSA to place 3 GIPs in NPS units; and
- In 2011 the GSA Foundation created a video and other outreach material to raise funding for the GeoCorps America™ Program. These funds would be used to support positions in the NPS, BLM, and USFS and to support diversity internships program-wide.

National Association of Geoscience Teachers (NAGT) partnership

- 6 year agreement with NAGT (2006 – 2011);

- Two Earth Science teachers work annually at Mammoth Cave NP to assist the park with their Earth science needs and to build long-term relationships with neighboring schools and communities;
- NAGT pays participant's stipend and contributes to participant obtaining Continuing Education Credits to enhance their Earth Science teaching skills; and
- NAGT is interested in continuing program at another park in 2012.

Table 10: Number of GIP Positions by partner organization.

Partner	# Positions
Geological Society of America (includes AWG sponsorship)	69
National Association of Geoscience Teachers	2

GIP Program Websites and Databases

The GIP Intranet and Internet sites are continually being upgraded to enhance the delivery of program information and to showcase the work done by the GIPs. FY 2011 Intranet site improvements include providing resources for parks interested in obtaining a GIP intern and presenting non-proprietary/nonsensitive GIP products (reports, videos, trail guides etc.) to park staff. Intranet site: <http://inside.nps.gov/waso/waso.cfm?prg=748&lv=4>, contains program overview, provides guidance to NPS staff on how to obtain GIP assistance, and users can view/download completed GIP products. The GIP Internet site is used frequently by the public to search for projects and products, and results in many inquiries by persons interested in participating in the GIP Program and other NPS volunteer opportunities. Internet site: <http://nature.nps.gov/geology/gip/index.cfm>, contains program overview, and guidance on obtaining geoscience jobs in the NPS, capability to search for parks that have had a GIP, and users can view/download completed GIP products.

The NPS GIP Database includes project and geoscience participant information, funding data, funding status, and a listing of all products completed for each project. FY 2011 database enhancements include upgrades to better track individual project and budgetary information, improved program reporting capabilities, and the development of procedures to easily transfer program data from GSA's GeoCorps America database to NPS's GIP database. In FY 2011, NPS staff worked with David Joseph (NPS retiree) and GSA to upgrade their online application system, program database, and data transfer capabilities.