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# Trends in Geoscience NSF Graduate Fellowships (2000-2009)

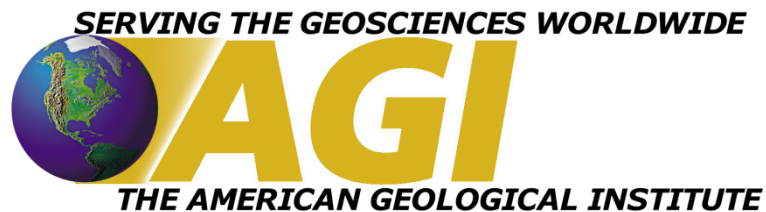
**American Geological Institute  
Geoscience Workforce Program**

**Trends in NSF Geoscience Graduate Fellowships (2000-2009)**  
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The NSF Graduate Fellowship program conferred 9,587 fellowships (Figure 1) to students in science and engineering fields between 2000 and 2009, amounting to a total value of \$388,273,500. On average, 927 ( $\pm 58$ ) graduate fellowships were awarded per year between 2000 and 2008. Between 2000 and 2008, the majority (56-59%) of these fellowships were awarded to graduate students in the life sciences and engineering fields. During this period, approximately 3.5 percent of NSF graduate fellowships (~31 fellowships / year) were awarded to graduate students in the geosciences.

In 2009, there was a 37% increase from the previous year in the number of graduate fellowships awarded, and the percentage of fellowships awarded to graduate students in the life sciences and engineering disciplines dropped to 50 percent as other disciplines were awarded a higher proportion of fellowships. The percentage of fellowships awarded to graduate students in the geosciences nearly quadrupled between 2008 and 2009 (from 26 to 94), and in 2009 geoscience graduate fellowships comprised 8 percent of the total number of NSF graduate fellowship awards. Mathematics (23 to 66 fellowships), Chemistry (57 to 115 fellowships), and Physics (45 to 88 fellowships) also had large increases in the number of graduate fellowship awards between 2008 and 2009.

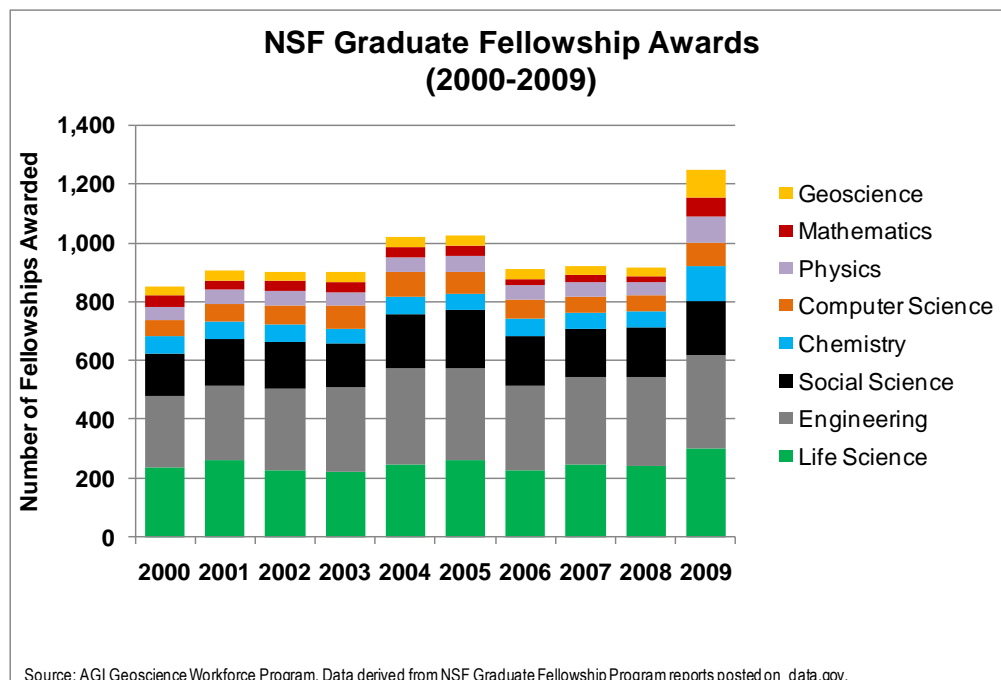
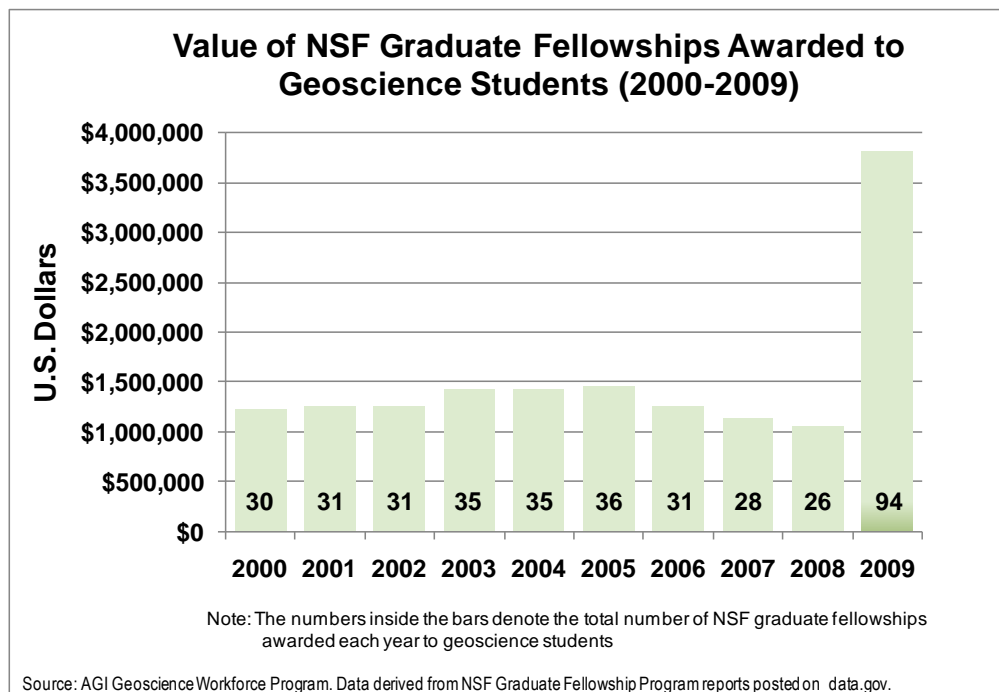


Figure 1: NSF Graduate Fellowships (2000-2009)

Between 2000 and 2009, a total of 350 geoscience NSF graduate fellowships were awarded. With the large increase in the number of fellowships awarded in 2009, the total value of the NSF graduate fellowships awarded to geoscience students jumped from just over \$1 million dollars to \$3.8 million dollars (Figure 2).



**Figure 2: Value of NSF Graduate Fellowships Awarded to Geoscience Students (2000-2009)**

Between 2000 and 2009, geoscience graduate fellows from 152 baccalaureate institutions (including two international programs) attended 77 graduate institutions, four of which were international programs (Appendix A). Forty-three percent of geoscience graduate fellows received their baccalaureate degrees from 19 schools (Table 1), and 48 percent of geoscience graduate fellows attended 11 graduate institutions (Table 2). The percentage of geoscience graduate fellows earning their bachelor degrees from institutions within the same geographic region was lowest for the West (36%) and highest for the South (46%) (Figure 3). The percentage of geoscience graduate fellows attending the top 11 graduate institutions who earned their bachelor’s degrees from the same group of institutions varies between 18 percent (Yale University) and 47 percent (California Institute of Technology) (Figure 4).

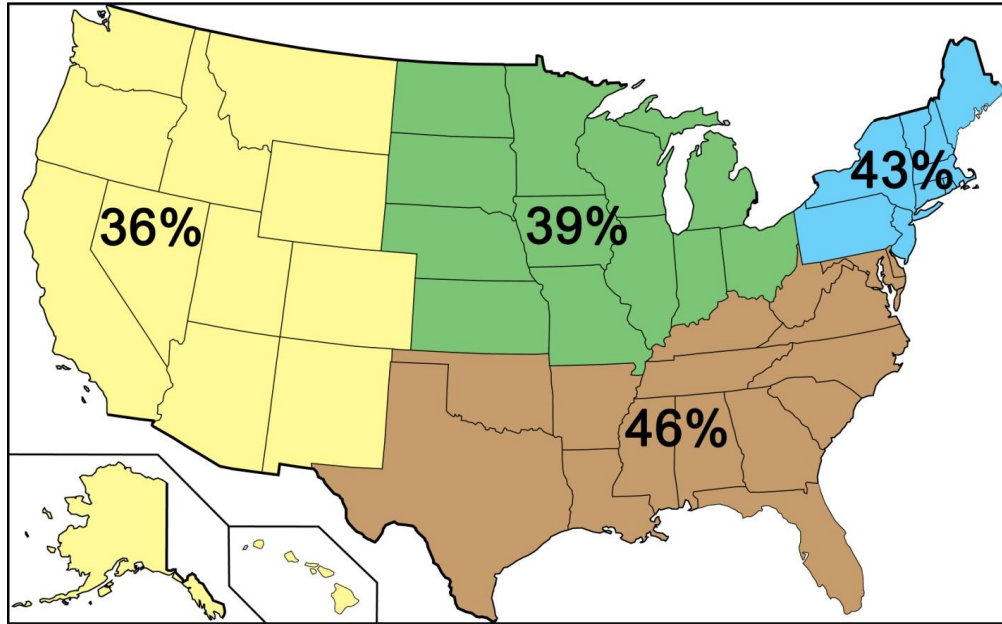
| <b>Baccalaureate Institution of Geoscience NSF Graduate Fellows</b> | <b>Number of Fellows (2000-2009)</b> | <b>State</b> |
|---|--------------------------------------|--------------|
| Harvard University  | 14                                   | MA           |
| California Institute of Technology                                  | 13                                   | CA           |
| Carleton College  | 13                                   | MN           |
| University of California - Berkeley                                 | 11                                   | CA           |
| Massachusetts Institute of Technology                               | 10                                   | MA           |
| Stanford University   | 8                                    | CA           |
| University of Chicago   | 8                                    | IL           |
| University of Arizona   | 7                                    | AZ           |
| University of California - Santa Barbara                            | 7                                    | CA           |
| University of Michigan  | 7                                    | MI           |
| Pennsylvania State University - University Park                     | 7                                    | PA           |
| Brown University  | 7                                    | RI           |
| Princeton University  | 6                                    | NJ           |
| Cornell University  | 6                                    | NY           |
| Yale University   | 5                                    | CT           |
| Washington University   | 5                                    | MO           |
| Dartmouth College   | 5                                    | NH           |
| Columbia University   | 5                                    | NY           |
| Oberlin College   | 5                                    | OH           |

**Table 1: Top Baccalaureate Institutions of NSF Geoscience Graduate Fellows (2000-2009)**

| <b>Graduate Institution of Geoscience NSF Graduate Fellows</b> | <b>Number of Fellows (2000-2009)</b> | <b>State</b> |
|--|--------------------------------------|--------------|
| Massachusetts Institute of Technology                          | 25                                   | MA           |
| Harvard University   | 20                                   | MA           |
| University of Washington                                       | 20                                   | WA           |
| University of California - Berkeley                            | 18                                   | CA           |
| Columbia University  | 16                                   | NY           |
| California Institute of Technology                             | 15                                   | CA           |
| University of Arizona  | 12                                   | AZ           |
| University of California - San Diego                           | 12                                   | CA           |
| Yale University  | 11                                   | CT           |
| Stanford University  | 10                                   | CA           |
| Pennsylvania State University - University Park                | 10                                   | PA           |

**Table 2: Top Graduate Institutions of NSF Geoscience Graduate Fellows (2000-2009)**

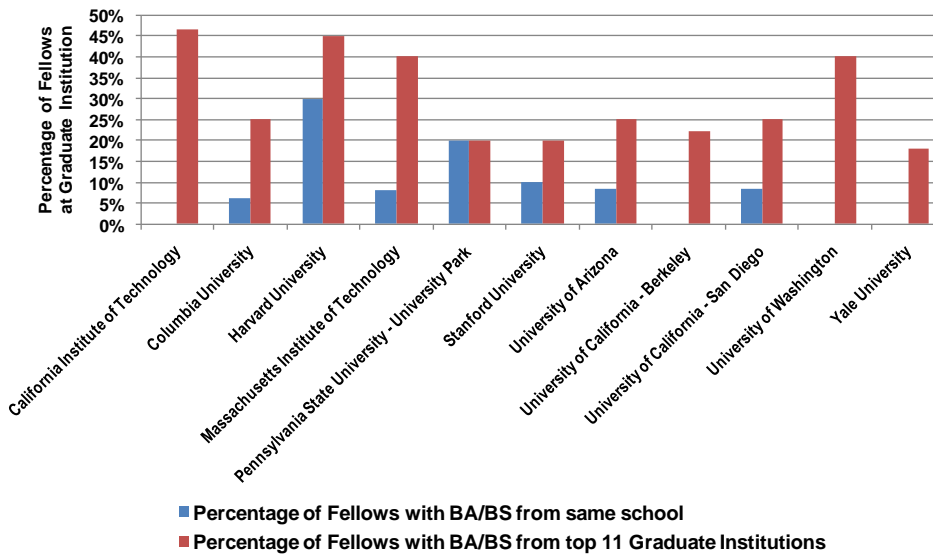
Percentage of Geoscience NSF Graduate Fellows Who Earned Bachelor Degrees in the Same Region



Source: AGI Geoscience Workforce Program. Data derived from NSF Graduate Fellowship Program reports posted on data.gov

Figure 3: Percentage of Geoscience NSF Graduate Fellows Who Earned Bachelor's Degrees in the Same Geographic Region (2000-2009)

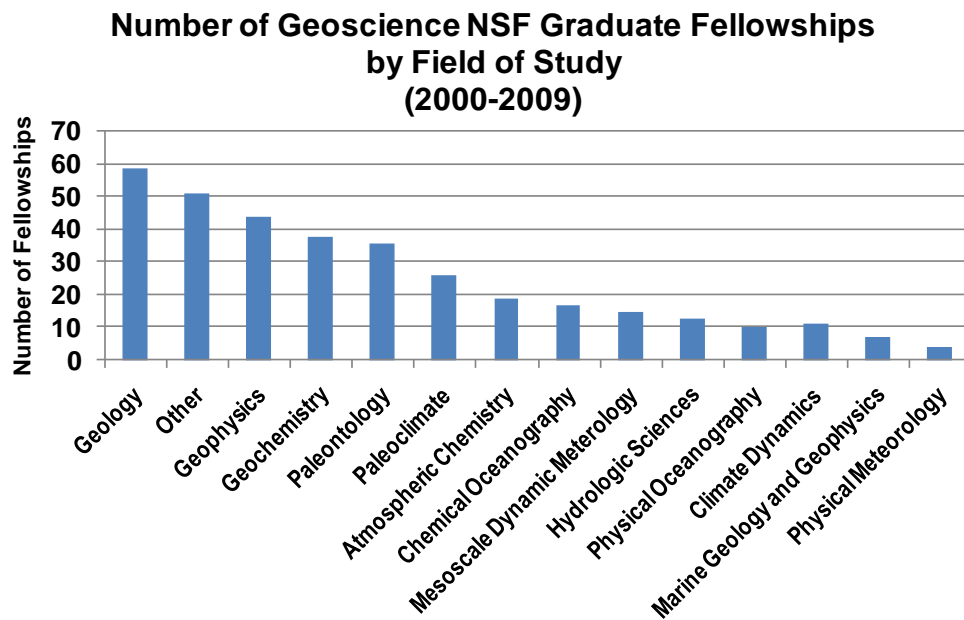
Percentage of Geoscience NSF Graduate Fellows who Earned BA/BS Degree from Top 11 Graduate Institutions



Source: AGI Geoscience Workforce Program. Data derived from NSF Graduate Fellowship Program reports posted on data.gov.

Figure 4: Percentage of Geoscience NSF Graduate Fellows who Earned BA/BS Degree from Top 11 Graduate Institutions (2000-2009)

The top six fields of study for NSF graduate fellowships awarded to geoscience students between 2000 and 2009 (e.g. Geology, Other, Geophysics, Geochemistry, Paleontology and Paleoclimate) account for 73 percent of all fellowship awards (Figure 5). In 2009, the top three fields of study were Geology, Geophysics, and Paleoclimate with 12 fellowships awarded per field. Other fields with more than 5 fellowships awarded in 2009 were Chemical Oceanography, Paleontology, Other, Geochemistry, and Hydrological Sciences (10, 9, 8, 7, and 6 fellowships respectively).



Source: AGI Geoscience Workforce Program. Data derived from NSF Graduate Fellowship Program reports posted on [data.gov](http://data.gov).

**Figure 5: Top Graduate Institutions of NSF Geoscience Graduate Fellows (2000-2009)**

## Appendix A: NSF Geoscience Graduate Fellows (2000-2009)

| Baccalaureate Institution of<br>Geoscience NSF Graduate Fellows | Number of Fellows<br>(2000-2009) | State /<br>Country |
|---|----------------------------------|--------------------|
| Harvard University  | 14                               | MA                 |
| California Institute of Technology                              | 13                               | CA                 |
| Carleton College  | 13                               | MN                 |
| University of California - Berkeley                             | 11                               | CA                 |
| Massachusetts Institute of Technology                           | 10                               | MA                 |
| Stanford University   | 8                                | CA                 |
| University of Chicago   | 8                                | IL                 |
| University of Arizona   | 7                                | AZ                 |
| University of California - Santa Barbara                        | 7                                | CA                 |
| University of Michigan  | 7                                | MI                 |
| Pennsylvania State University - University Park                 | 7                                | PA                 |
| Brown University  | 7                                | RI                 |
| Princeton University  | 6                                | NJ                 |
| Cornell University  | 6                                | NY                 |
| Yale University   | 5                                | CT                 |
| Washington University   | 5                                | MO                 |
| Dartmouth College   | 5                                | NH                 |
| Columbia University   | 5                                | NY                 |
| Oberlin College   | 5                                | OH                 |
| University of Southern California                               | 4                                | CA                 |
| Georgia Institute of Technology                                 | 4                                | GA                 |
| University of Colorado  | 3                                | CO                 |
| University of Illinois  | 3                                | IL                 |
| University of Notre Dame  | 3                                | IN                 |
| Amherst College   | 3                                | MA                 |
| Boston University   | 3                                | MA                 |
| University of Maryland  | 3                                | MD                 |
| Bates College   | 3                                | ME                 |
| Macalester College  | 3                                | MN                 |
| Duke University   | 3                                | NC                 |
| University of North Carolina                                    | 3                                | NC                 |
| Rensselaer Polytechnic Institute                                | 3                                | NY                 |
| Ohio State University   | 3                                | OH                 |
| University of Oklahoma  | 3                                | OK                 |
| University of Texas - Austin                                    | 3                                | TX                 |
| University of Washington  | 3                                | WA                 |
| Beloit College  | 3                                | WI                 |
| University of Wisconsin - Madison                               | 3                                | WI                 |
| University of Arkansas  | 2                                | AR                 |
| Pomona College  | 2                                | CA                 |
| University of California - Los Angeles                          | 2                                | CA                 |
| Colorado College  | 2                                | CO                 |
| Connecticut College   | 2                                | CT                 |
| University of Florida   | 2                                | FL                 |
| University of South Florida                                     | 2                                | FL                 |
| Iowa State University   | 2                                | IA                 |
| Northwestern University   | 2                                | IL                 |
| Purdue University   | 2                                | IN                 |
| Harvard College   | 2                                | MA                 |
| Smith College   | 2                                | MA                 |
| Williams College  | 2                                | MA                 |



## Appendix A: NSF Geoscience Graduate Fellows (2000-2009)

| Baccalaureate Institution of<br>Geoscience NSF Graduate Fellows | Number of Fellows<br>(2000-2009) | State /<br>Country |
|---|----------------------------------|--------------------|
| Michigan Technological University                               | 2                                | MI                 |
| Vassar College  | 2                                | NY                 |
| College of Wooster  | 2                                | OH                 |
| University of Tulsa   | 2                                | OK                 |
| Portland State University                                       | 2                                | OR                 |
| Franklin and Marshall College                                   | 2                                | PA                 |
| Swarthmore College  | 2                                | PA                 |
| Clemson University  | 2                                | SC                 |
| University of Tennessee - Knoxville                             | 2                                | TN                 |
| Rice University   | 2                                | TX                 |
| College of William and Mary                                     | 2                                | VA                 |
| University of Virginia  | 2                                | VA                 |
| Middlebury College  | 2                                | VT                 |
| Western Washington University                                   | 2                                | WA                 |
| Whitman College   | 2                                | WA                 |
| Hendrix College   | 1                                | AR                 |
| Prescott College  | 1                                | AZ                 |
| California Polytechnic State University                         | 1                                | CA                 |
| Chapman University  | 1                                | CA                 |
| Occidental College  | 1                                | CA                 |
| San Diego State University                                      | 1                                | CA                 |
| San Jose State University                                       | 1                                | CA                 |
| University of California - Davis                                | 1                                | CA                 |
| University of California - Irvine                               | 1                                | CA                 |
| University of California - Riverside                            | 1                                | CA                 |
| University of California - San Diego                            | 1                                | CA                 |
| University of California - Santa Cruz                           | 1                                | CA                 |
| University of San Francisco                                     | 1                                | CA                 |
| University of British Columbia - Victoria                       | 1                                | Canada             |
| Colorado State University                                       | 1                                | CO                 |
| University of Connecticut - Storrs                              | 1                                | CT                 |
| Georgetown University   | 1                                | DC                 |
| Howard University   | 1                                | DC                 |
| University of Delaware  | 1                                | DE                 |
| University of Georgia   | 1                                | GA                 |
| Grinnell College  | 1                                | IA                 |
| University of Iowa  | 1                                | IA                 |
| University of Idaho   | 1                                | ID                 |
| Augustana College   | 1                                | IL                 |
| Indiana University of Pennsylvania                              | 1                                | IN                 |
| Ben Gurion University of the Negev                              | 1                                | Israel             |
| University of Kansas  | 1                                | KS                 |
| Eastern Kentucky University                                     | 1                                | KY                 |
| Tulane University   | 1                                | LA                 |
| University of Louisiana - Lafayette                             | 1                                | LA                 |
| University of New Orleans                                       | 1                                | LA                 |
| College of the Holy Cross                                       | 1                                | MA                 |
| Mount Holyoke College   | 1                                | MA                 |
| Tufts University  | 1                                | MA                 |
| Wellesley College   | 1                                | MA                 |
| Bowdoin College   | 1                                | ME                 |

## Appendix A: NSF Geoscience Graduate Fellows (2000-2009)

| Baccalaureate Institution of<br>Geoscience NSF Graduate Fellows | Number of Fellows<br>(2000-2009) | State /<br>Country |
|---|----------------------------------|--------------------|
| University of Maine - Orono                                     | 1                                | ME                 |
| Andrews University  | 1                                | MI                 |
| Hope College  | 1                                | MI                 |
| Michigan State University                                       | 1                                | MI                 |
| Mississippi State University                                    | 1                                | MI                 |
| Saint Olaf College  | 1                                | MN                 |
| St. Cloud State University                                      | 1                                | MN                 |
| University of Minnesota - Twin Cities                           | 1                                | MN                 |
| Southeast Missouri State University                             | 1                                | MO                 |
| University of Missouri - Rolla                                  | 1                                | MO                 |
| University of Mississippi                                       | 1                                | MS                 |
| Montana State University  | 1                                | MT                 |
| Appalachian State University                                    | 1                                | NC                 |
| Rutgers State University - Camden                               | 1                                | NJ                 |
| University of Rochester   | 1                                | NJ                 |
| University of New Mexico  | 1                                | NM                 |
| Barnard College   | 1                                | NY                 |
| Colgate University  | 1                                | NY                 |
| State University of New York - Buffalo                          | 1                                | NY                 |
| State University of New York - Stony Brook                      | 1                                | NY                 |
| Case Western Reserve University                                 | 1                                | OH                 |
| Denison University  | 1                                | OH                 |
| Ohio University   | 1                                | OH                 |
| University of Dayton  | 1                                | OH                 |
| Oklahoma State University                                       | 1                                | OK                 |
| Reed College  | 1                                | OR                 |
| University of Oregon  | 1                                | OR                 |
| Bucknell University   | 1                                | PA                 |
| Dickinson College   | 1                                | PA                 |
| Indiana University-Bloomington                                  | 1                                | PA                 |
| Juniata College   | 1                                | PA                 |
| University of Pennsylvania                                      | 1                                | PA                 |
| University of Pittsburgh  | 1                                | PA                 |
| University of Puerto Rico - Rio Piedras                         | 1                                | PR                 |
| Furman University   | 1                                | SC                 |
| University of South Carolina - Columbia                         | 1                                | SC                 |
| South Dakota School of Mines and Technology                     | 1                                | SD                 |
| University of Memphis   | 1                                | TN                 |
| Vanderbilt University   | 1                                | TN                 |
| Southern Methodist University                                   | 1                                | TX                 |
| University of Texas - El Paso                                   | 1                                | TX                 |
| Brigham Young University  | 1                                | UT                 |
| James Madison University  | 1                                | VA                 |
| Virginia Polytechnic Institute and State University             | 1                                | VA                 |
| Lyndon State College  | 1                                | VT                 |
| University of Puget Sound                                       | 1                                | WA                 |
| Lawrence University   | 1                                | WI                 |
| University of Wisconsin - Eau Claire                            | 1                                | WI                 |
| West Virginia University  | 1                                | WV                 |
| University of Wyoming   | 1                                | WY                 |

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| Graduate Institution of<br>Geoscience NSF Graduate Fellows | Number of Fellows<br>(2000-2009) | State /<br>Country |
|--|----------------------------------|--------------------|
| Massachusetts Institute of Technology                      | 25                               | MA                 |
| Harvard University   | 20                               | MA                 |
| University of Washington                                   | 20                               | WA                 |
| University of California - Berkeley                        | 18                               | CA                 |
| Columbia University  | 16                               | NY                 |
| California Institute of Technology                         | 15                               | CA                 |
| University of Arizona                                      | 12                               | AZ                 |
| University of California - San Diego                       | 12                               | CA                 |
| Yale University  | 11                               | CT                 |
| Pennsylvania State University - University Park            | 10                               | PA                 |
| Stanford University  | 10                               | CA                 |
| Brown University   | 9                                | RI                 |
| University of Chicago                                      | 9                                | IL                 |
| University of Colorado at Boulder                          | 9                                | CO                 |
| University of Wisconsin - Madison                          | 8                                | WI                 |
| Cornell University   | 7                                | NY                 |
| University of California - Santa Cruz                      | 7                                | CA                 |
| University of Michigan                                     | 6                                | MI                 |
| University of Oklahoma                                     | 6                                | OK                 |
| Boston University  | 5                                | MA                 |
| Duke University  | 5                                | NC                 |
| Oregon State University                                    | 5                                | OR                 |
| Princeton University                                       | 5                                | NJ                 |
| University of California - Santa Barbara                   | 5                                | CA                 |
| Woods Hole Oceanographic Institute                         | 5                                | MA                 |
| Georgia Institute of Technology                            | 4                                | GA                 |
| Purdue University  | 4                                | IN                 |
| University of California - Los Angeles                     | 4                                | CA                 |
| University of Texas - Austin                               | 4                                | TX                 |
| Ohio State University                                      | 3                                | OH                 |
| State University of New York - Stony Brook                 | 3                                | NY                 |
| University of California - Riverside                       | 3                                | CA                 |
| University of New Mexico                                   | 3                                | NM                 |
| University of Pennsylvania                                 | 3                                | PA                 |
| Colorado State University                                  | 2                                | CO                 |
| Johns Hopkins University                                   | 2                                | MD                 |
| North Carolina State University                            | 2                                | NC                 |
| Rutgers University New Brunswick                           | 2                                | NJ                 |
| State University of New York - Buffalo                     | 2                                | NY                 |
| Tulane University  | 2                                | LA                 |
| University of Cambridge                                    | 2                                | Britain            |
| University of Hawaii                                       | 2                                | HI                 |
| University of Maryland                                     | 2                                | MD                 |
| University of Massachusetts - Amherst                      | 2                                | MA                 |
| University of New Hampshire                                | 2                                | NH                 |
| University of North Carolina - Chapel Hill                 | 2                                | NC                 |
| University of Notre Dame                                   | 2                                | IN                 |
| University of Southern California                          | 2                                | CA                 |
| University of Vermont - Burlington                         | 2                                | VT                 |
| Virginia Polytechnic Institute and State University        | 2                                | VA                 |
| American Museum of Natural History                         | 1                                | NY                 |

## Appendix A: NSF Geoscience Graduate Fellows (2000-2009)

| Baccalaureate Institution of<br>Geoscience NSF Graduate Fellows | Number of Fellows<br>(2000-2009) | State /<br>Country |
|---|----------------------------------|--------------------|
| Arizona State University  | 1                                | AZ                 |
| Drexel University   | 1                                | PA                 |
| Florida International University                                | 1                                | FL                 |
| International Max Planck Research School                        | 1                                | Germany            |
| Michigan Tech University  | 1                                | MI                 |
| New Mexico Institute of Mining and Technology                   | 1                                | NM                 |
| Northwestern University   | 1                                | IL                 |
| Rice University   | 1                                | TX                 |
| Scripps Research Institute                                      | 1                                | CA                 |
| Southern Methodist University                                   | 1                                | TX                 |
| Swiss Federal Institute of Technology (ETH)                     | 1                                | Switzerland        |
| Syracuse University   | 1                                | NY                 |
| University of Alabama - Huntsville                              | 1                                | AL                 |
| University of California - Davis                                | 1                                | CA                 |
| University of California - Irvine                               | 1                                | CA                 |
| University of Florida   | 1                                | FL                 |
| University of Minnesota - Twin Cities                           | 1                                | MN                 |
| University of Missouri - Columbia                               | 1                                | MO                 |
| University of Nevada - Reno                                     | 1                                | NV                 |
| University of Oregon  | 1                                | OR                 |
| University of Saskatchewan                                      | 1                                | Canada             |
| University of South Florida                                     | 1                                | FL                 |
| University of Texas - El Paso                                   | 1                                | TX                 |
| University of Utah  | 1                                | UT                 |
| University of Virginia  | 1                                | VA                 |
| Western Washington University                                   | 1                                | WA                 |