

# National Cooperative Geologic Mapping Program

STATEMAP Component: States compete for federal matching funds for geologic mapping



## Contact information

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| COMPLETED STATEMAP GEOLOGIC MAPPING PROJECTS IN ALASKA |  |                    |                    |                    |
|--|--|--------------------|--------------------|--------------------|
| Federal Fiscal Year                                    | Project  | State funds        | Federal funds      | Total              |
| 1993   | Castle Mountain fault system, northern halves of Anchorage C-7 & C-8 quadrangles | 59,570             | 51,993             | 111,563            |
| 1994   | Charley River C-1 and D-1 quadrangles Access Corridor                            | 50,779             | 50,000             | 100,779            |
| 1995   | Fairbanks Urban Area & Mining District   | 31,379             | 30,000             | 61,379             |
| 1996   | Rampart Mining District, Tanana B-1 Quadrangle                                   | 106,041            | 98,817             | 204,858            |
| 1996   | Digital Compilation of eastern half McGrath Quadrangle                           | 40,158             | 39,865             | 80,023             |
| 1997   | Rampart Mining District, Tanana A-1 and A-2 quadrangles                          | 120,564            | 118,400            | 238,964            |
| 1998   | Upper Chulitna Mining District, Healy A-6 Quadrangle                             | 122,322            | 121,500            | 243,822            |
| 1999   | Sagavanirktok B-1 Quadrangle   | 276,220            | 125,000            | 401,220            |
| 2000   | Fortymile Mining District, Eagle A-2 Quadrangle                                  | 140,413            | 130,000            | 270,413            |
| 2001   | Philip Smith C-5 Quadrangle with portions of surrounding quadrangles             | 150,636            | 149,640            | 300,276            |
| 2001   | Fortymile Mining District, Eagle A-1 Quadrangle                                  | 106,571            | 106,403            | 212,974            |
| 2001   | Enter DGGGS maps into NGMDB  | 7,567              | 8,731              | 16,298             |
| 2002   | Salcha River-Pogo: Big Delta C-3, SW¼ C-2, NW¼ B-3 quads                         | 252,917            | 252,903            | 505,820            |
| 2003   | Kanayut River: Chandler Lake B-2 and C-2 quadrangles                             | 155,569            | 150,844            | 306,413            |
| 2003   | Livengood SE C-4, SW C-3 quadrangles   | 90,915             | 85,069             | 175,984            |
| 2004   | Council mining areas, Solomon Quadrangle   | 145,276            | 145,258            | 290,534            |
| 2004   | Tiglukpuk Creek: Eastern Chandler Lake B-4 Quadrangle                            | 107,666            | 107,588            | 215,254            |
| 2005   | Siksikpuk River: Chandler Lake B-4 & C-4 quadrangles                             | 144,751            | 144,507            | 289,258            |
| 2005   | Liberty Bell area, southern Fairbanks A-4 Quadrangle                             | 81,583             | 81,561             | 163,144            |
| 2006   | Casadapega River Bluff area, Solomon Quadrangle                                  | 321,144            | 179,992            | 501,136            |
| 2006   | Kavik River area, Mt. Michelson Quadrangle                                       | 75,804             | 39,992             | 115,796            |
| 2007   | NE Fairbanks Mining District, parts of Circle A-4, A-5, B-4, B-5 quads           | 158,261            | 158,246            | 316,507            |
| 2007   | Alaska Highway corridor, northeast Mount Hayes C-2 quadrangle                    | 96,142             | 76,054             | 172,196            |
| 2008   | Eastern Bonnifield Mining District, Fairbanks and Healy quadrangles              | 145,547            | 145,496            | 291,043            |
| 2008   | Sagavanirktok River area, Sagavanirktok quadrangle                               | 105,155            | 72,344             | 177,499            |
| 2009   | Menasta-Slana area, parts of Mt. Hayes A-2 & A-3 quads                           | 73,009             | 73,000             | 146,009            |
| 2009   | Tyonek-Capps Glacier area, Tyonek Quadrangle                                     | 258,141            | 147,958            | 406,099            |
| 2010   | Tyonek-Capps Glacier area (year 2)   | 151,082            | 150,839            | 301,921            |
| 2010   | Kivalina area, parts of Noatak C-5, D-5, and D-6 quads                           | 75,791             | 75,313             | 151,104            |
| <b>TOTALS</b>  |  | <b>\$3,650,973</b> | <b>\$3,117,313</b> | <b>\$6,768,286</b> |

#### Alaska STATEMAP fact sheet (FY2011)

Since 1993, the National Cooperative Geologic Mapping Program through STATEMAP has made a significant contribution to expanding geologic knowledge in Alaska where current geologic mapping is limited or nonexistent. Alaska is endowed with a rich resource potential but also has significant natural hazards. The state has a resourced-based economy and supplies a significant portion of the nation's energy and mineral resources. Our STATEMAP projects are primarily directed toward detailed mapping and analysis in areas of high resource potential and hazards to help meet the resource needs of the state and the nation, as well as to mitigate hazard risks. Alaska is the only state developing new, large mineral deposits, yet less than 10 percent of Alaska land has been geologically mapped at a scale of 1 inch = 1 mile or better. STATEMAP is helping to expand that coverage where it is needed for future resource-exploration and development projects, construction-materials evaluation, and geologic hazards identification. Through 2010, the Alaska Division of Geological & Geophysical Surveys (ADGGS) has completed new geologic mapping for 10,009 square miles of Alaska as part of STATEMAP.

STATEMAP projects by ADGGS have mapped portions of strategic commercial access corridors, mining districts, and frontier oil and gas provinces. Products of these projects have contributed to increased oil and gas lease sales and mineral exploration, and have helped Alaska Native corporations

evaluate the mineral resources of their lands. In FY2010, ADGGS used STATEMAP funds to complete a two-year geologic mapping program of 853 square miles in the Tyonek-Capps Glacier area along the northwestern margin of Cook Inlet basin, and 167 square miles of the Kivalina area in far northwestern Alaska. The Tyonek-Capps Glacier project includes stratigraphic and structural features important to understanding the oil and gas potential of the basin and geologic hazards potentially impacting existing petroleum production infrastructure. The Kivalina project provides geologic mapping and hazard evaluation in support of community and state planning for mitigating coastal erosion and other hazards, including possible relocation of the village.

Users of ADGGS STATEMAP products frequently attest to their benefits for addressing particular needs. With regard to the Tyonek-Capps Glacier project, Senior Staff Geophysicist Paul Daggett with Pioneer Natural Resources writes, *"The [previously] published geologic maps of the Tyonek area are of limited value to building depositional models because they are too regional and pre-date modern stratigraphic concepts. The ADGGS has consistently developed STATEMAP products that are accurate and reliable. I believe that the Tyonek mapping project will become a valuable resource for future oil and gas exploration in the basin."*