WANTED - TPG ARTICLES
Instructions to Authors

The TPG accepts articles of modest length for publication. Submittals should be no more than approximately 1600 words, or six typed pages, double spaced. Longer articles may be divided into parts (e.g. part 1 and part II), but this is not encouraged. Articles may be technical or professional in nature. General topics are listed below. Articles containing news of importance to professional geologists will also be considered. Except for news articles, or articles containing dated materials, submittals should be sent to AIPG headquarters twelve weeks in advance of expected publication. Some technical topic issues are planned up to one year before printing, therefore early submittals will be preferred.

Manuscripts should have the following section:

Title
Author(s) with CPG number and address
Text
Tables if included
Figures with captions if included
Appendix(es) if included
Acknowledgements
References Cited

One original and two copies of each manuscript should be submitted. Whenever possible, text should also be submitted on diskette. Headquarters uses WordPerfect 7 for Windows '95, which is preferred, but Word, ASCII, RTF, or translatable files are acceptable. The program or format of the text should be clearly marked on the diskette. Articles can also be transmitted by e-mail.

Graphics should be clear, camera-ready, line drawings whenever possible. Photographs (color or black and white) are also encouraged. Whenever possible, drawings may be submitted on diskette in .pcx, .bmp, .tif, .gif or other standard formats.

TPG wants color slides and photographs. Slides and photographs alone may be submitted for the cover. They should have a geologic theme and an informational caption.

General Topics:

Technical
- Mining (January)
- Petroleum Geology (March)
- Hydrogeology (July)
- Environmental Geology (September)
- Geophysical/Engineering (November)

Professional (any issue)
- Government and the Geologist
- Ethics and Standards of Practice
- Public Perception of Geology and Geologists
- Definition, Certification, and Licensing
- Practicing Geology Internationally

Other suggestions: Forensic Geology, History of Practice in a given field, Book Reviews, and Geology and the Military, Unusual Applications of Geology.

Authors are encouraged to communicate with Headquarters via mail, fax, or Internet. Send your article and/or photographs, or communicate questions to:

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The Professional GEOLOGIST

PEER REVIEWED PAPERS

Groundwater Resource Evaluation, Maun, Botswana, Southern Africa

Vincent W. Uhl, CPG-5619, Anthony J. Rana, CPG-09577, and Jacquelyn A. Baron

National Institute for the Environment: Sound Science for the Environment

David Blockstein, Ph.D.

Mississippi Grandfathering to End

Kansas Licenses Geologists

Call for Nominations for AIPG Officers

AIPG Publication Committee Report

Charles D. Fletcher, Chairman of the Publications Comm.

AIPG Publications - Abstracts

Community Stewardship: Our Opportunity to Excel

Susan G. Browne, CPG-08886

FRONT COVER - View of the famed White Cliffs in the Missouri River Breaks region of north-central Montana. The hauminly beautiful columns, pilpits, minarretes, pedestals, and other unique features of the White Cliffs, immortalized in the epic journals of Lewis and Clark (1805) and the unsurpassed, meticulous accurate watercolors and sketches of Karl Bodmer (1833), were formed in the Cretaceous-age Eagle Sandstone, which is often capped by iron-rich concretions that partially protect the weakly cemented sandstone from erosional forces.

BACK COVER - Photographs/Slides were provided courtesy of the Anchorage Convention and Visitor’s Bureau, Glee Anderson, Representative (ACVB) and Evelyn’s Focus Photography, Evelyn S. Erickson, Photographer (EFP, ESE).

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November, 1998
Volume 35, Number 12
DON'T GET ANGRY - GET INVOLVED!

Over the course of this year, your Executive Committee has had several controversial, multi-faceted issues to address. These issues have in turn generated responses, both favorably and to a lesser degree unfavorably, from the membership, and in some cases from individuals outside of AIPG. Some of the issues on which AIPG had to consider formulating a position this year included the use of prescriptive standards in conducting geologic and environmental assessments and investigations, competition between government and the public sector, the significance of global climate change in relation to the implementation of public policy, and financial stability of the Institute and the resulting need for implementation of a dues increase, to name a few.

These issues have not necessarily been straightforward and easy to address; in fact, they have resulted in much debate and discussion, both pro and con, at the membership, respective committees and national levels within AIPG. In some cases, certain issues such as competition between government and the public sector have generated significant interest both internally and externally, resulting in documented case histories of such practice being supplied to the subcommittee, for AIPG participation in United States Geological Survey workshops and planning sessions, and for formal testimony to be provided to the National Research Council planned for December, 1998.

All of this correspondence (not all of it cordial, but all of it welcome) has ended up on my desk and for subsequent discussion and action by the Executive Committee, as appropriate. Typically, such responses are initially forwarded to the respective committee(s) where they are subsequently reviewed and discussed. The committee chair then forwards the analysis of the issue and recommendations for further consideration and action to the Executive Committee, as deemed appropriate. Such correspondence, I assure you, is read and thoroughly discussed, with consideration given to the views presented relative to all the information and data the Executive Committee has before it regarding a particular matter.

What I have found disconcerting, however, is that, in some instances, when a Member was not pleased with a certain position or course of action taken, the member has threatened to either resign from AIPG, or cancel their membership in AIPG in the forthcoming year. Although this is not the norm, as most responses have been favorable to the course of action taken by your Executive Committee, I am completely at a loss as to why anyone would think of quitting the only national organization that addresses what's best for the professional geologist just because one does not agree with a specific decision or position taken. Such action is analogous to not liking or trusting politicians, thus, why vote. This has the inevitable result of less individual involvement, and increased apathy and frustration toward the system.

As an alternative to quitting, I would like to take this opportunity to propose a few alternatives for consideration by those who hold this view. Whether you are pleased or displeased with how a particular issue is addressed, there are several mechanisms by which to voice your opinion. The following actions can easily be taken on your part to be proactive in your Institute.

- Provide written comment, and documentation, as appropriate, to the Executive Committee, or contact headquarters for the name of the chairman of the appropriate committee to further discuss the issue.
- Discuss the issue at hand directly with the respective committee responsible for evaluating a specific issue (i.e., Subcommittee on Competition Between Government and the Public Sector). All committees have the responsibility of evaluating certain issues that fall under their mandate or charge, and reporting back to the Executive Committee with suggestions and recommendations for appropriate action(s).
- Volunteer to be an active participant on certain committees. Over the course of this year, participants on committees have significantly increased from about 40 to 218 members (I assume that such increase reflects the recognition by our members of the need for more involvement and political advocacy, notably, in the areas that affect the economic well-being of our members and the Institute, and not perceived as indicative of the membership's overall unhappiness with the actions of the Executive Committee).
- Provide a written formal response to be published in The Professional Geologist (don't be shy), and thus, opening the issue up for further debate and discussion among a larger knowledgeable audience.
- Notify your Advisory Board Representative of the issue for discussion at the annual meeting. Or better yet, attend the annual meeting and promote your position directly.
- Get involved in the activities of your State section, and bring to the forefront issues of concern to you.

This is your Institute and your opinion is important, thus, several mechanisms are in place for your opinion to be heard and counted. Getting more involved, not only when you are in agreement with the manner in which an issue is being addressed, but also when you disagree, is the surest way of promoting your position, and ensuring that the Institute is acting on your behalf. Although one can please some of the people all the time, or all of the people some of the time, one cannot please all of the people all of the time, and I certainly do not see how quitting pleases anybody, let alone provide any benefit to you, anyone else, or the Institute. Thus, realizing that the information the Executive Committee may have at its disposal is in most cases representative of the diverse view of all the membership, I strongly urge that you not get angry, but get involved!
As so many interesting things happen, our project in Botswana was somewhat of a surprise in the way it came about from a meeting on a journey for a different purpose. During a trip to Mozambique and various other places in Southern Africa in 1992, I met an old Kashmiri friend with whom I had once worked on a large drilling project in India 20 years ago. This old friend, Tej Bakaya, had emigrated to Botswana in Southern Africa where he now has a consulting practice (Water Resources Consultants) specializing in groundwater supply projects. These projects rely heavily on geophysics for the siting of test and production wells. Tej was looking for new opportunities in the local arena and we in Pennsylvania were generally looking at foreign (subsurface saturated) soil to do something beneficial and different.

The project on which we successfully bid together in March of 1995 was large and complicated and required a meeting of our respective strengths, i.e., Tej’s geophysics, pumping test team, contacts, and knowledge of the country, with my firm’s capacity in drilling and hydrogeologic data analysis. We also contributed our very American can-do attitude and concentration on the bottom line.

Our location was the town of Maun in Ngamiland in northwest Botswana. Our purpose was to explore for groundwater to supply this rapidly growing town which currently holds 30,000 inhabitants and is expected to grow to over 75,000 by 2012. The expected water demand in the year 2012 is 4 million cubic meters per year (MCM/yr) or about 3 million gallons per day (mgd). Maun is absolutely unique, situated both on the edge of the Kalahari Desert and the Okavango Delta. Not often has a town been so encouraged yet so constrained by its natural environment. Water is the key to the area’s internationally-acclaimed beauty and to its survival.

The Okavango Delta is one of the world’s largest inland river deltas. It is created by two parallel faults which serve to dam the Okavango River that spreads out into a fan-shaped pattern of perennial and seasonal swamps that are home to myriad wildlife including elephant, cape buffalo, big cats, hippo, kudu, countless small animals and birds. Maun is rapidly growing as the jumping off point for safari camps (generally reached by small chartered aircraft) in the verdant delta. At the same time, being located about 15 km southeast of the distal end of the delta, Maun is a dry dusty place most of the year where many people still spend much time and effort hauling water.

The river enters the delta in a large channel called the Panhandle at a substantial average annual flow rate of around 9,000 million cubic meters per year (MCM/yr) or 2.4 x 10⁶ million gallons per year. The average annual flow leaving the delta via the main delta distributary (the Boro River) is a trickle compared to this torrent, about two percent of the inflow, or 195 MCM/yr (5.0 x 10⁶ million gallons per year). The outflow is seasonal and the outflow channels are often dry for months at a time. In recent years (1990s), the water leaving the delta flows through Maun for just a short time each year during the annual flood, which occurs in the southern hemisphere winter (June-August). Photo 1 shows the 1996 delta outflow which reached the junction of the Boro and Thamalakane Rivers in early September. The mean annual flow for the 1990s at this junction is about 20 percent of what it had been during the 1970s. The 1995 and 1996 floods were the worst on record. No one knows whether this severe dry spell is permanent or will reverse itself in our lifetimes.

The groundwater exploration project for Maun’s water supply was initiated by our client, the Department of Water Affairs of the Government of Botswana. This project followed on the heels of large-scale engineering schemes proposed by a large engineering firm working for the Department of Water Affairs for the region, which entailed dredging, dams and reservoirs.

These schemes were judged faulty by the International Union for the Conservation of Nature (IUCN) review team, who recommended that the conjunctive use of surface water and groundwater be examined. Local conservation organizations and residents also assayed in defeating these schemes which were contemplated with much consternation because of their extensive disturbance to the natural environment. During our time in Maun, we naturally heard much local lore and many colorful stories. Not the least of these were stories of attempts to change or clear the water channels of the delta, which purportedly always ended in failure. The moral of the story was to not try to force changes, the consequences of which could not be understood or predicted, and which would undoubtedly be ill-fated. Groundwater was a possible and benign alternative.

Some of the stories we heard were strange indeed and amusing to our modern minds. One story was of a German engineer who was hired to build a small dam across one of
the water channels in the Delta sometime in the early part of the century. When the dam was partially built and water was flowing freely through the opening, he reportedly convinced a colonial government official that partially built dams increased the flow of water and was allowed to construct many of these monuments. Certainly a story out of another time!

Although the current supply for Maun came from a wellfield (Shashe Valley), very little was known about groundwater occurrence and availability in our 5,000 square mile study area, roughly half the size of New Jersey (Figure 1). Much of this area was absolutely unexplored in terms of groundwater occurrence and availability. During the project inception period, we used all available tools and the technical expertise around us in several disciplines to synthesize a conceptual picture of the area and identify areas for exploration in the drilling program. We hired professors at the University of Botswana to study and report on vegetation, geomorphology, geologic structure, surface water hydrology, and remote sensing (satellite imagery). An Australian firm conducted an airborne electro-magnetic (EM) survey over a large chunk of the project area, and we conducted ground geophysical surveys. We did a reconnaissance of existing wells (called boreholes in Botswana). The wells we found included those for private residences and ostrich farms, for remote villages and cattle posts, in addition to the supply systems for Maun and the outlying village of Matlapaneng, which was our home (base camp) during the project.

Our conceptual picture evolved from the research during the inception period. The river channels came into high focus as the areas to target for groundwater exploration. The airborne geophysics indicated areas of fresh water beneath and, in certain cases, extending far beyond the boundaries of these channels. Vegetation analysis from the satellite imagery showed freshwater loving species in extensive riparian forests bordering these channels and extending far beyond their boundaries in the same areas as the geophysics. Analysis of all the data indicated that the chance of finding significant freshwater supplies in the vast interfluvies between these channels was minimal. In addition, the available data for valleys such as the Shashe with its existing wellfield indicated that the freshwater underlying these channels was underlain by brackish and then saline water within a few tens of meters. The freshwater layer in this aquifer was being depleted.

Therefore, at the start of the exploration drilling program, we were faced by several challenges. Not the least of these was our uncertainty that we would be successful in finding sufficient overall freshwater resources, which, given the hydrogeologic setting, seemed a formidable task. In addition, there was the need to find areas where wellfields would be feasible; i.e. where the aquifer conditions could support pumping without depletion or significant upward of water of unacceptable quality, and would permit decent well yields.

During the drilling program, we installed and pumped-tested about 50 exploration and test wells, many in remote areas reached by sand tracks in four-wheel drive vehicles. A number of these wells were installed in wildlife areas where encounters with elephants were not uncommon. We were very grateful to our young Botswana scientists and technicians; not just for their technical input, but for their guidance in this wild part of the planet where getting lost or stuck or making
a mistake can be fatal. The discharge end of pumping test pipes encouraged locals to collect water during these tests (Photo 2) and on occasion, lions and other animals.

The freshwater aquifers encountered in the exploration program were all similar in nature and consisted of multi-layered, fine-to medium-sand aquifer systems with semi-confining beds of clays, sandy silts and sandy clays, overlying a brackish/saline aquifer. Test pumping in the middle semi-confined freshwater aquifers with observation wells indicated that these aquifers and confining beds are interconnected. The individual aquifers exhibited a range of hydraulic characteristics with well yields from 5 to 220 gpm.

Even back at base camp, the project could never be far from our thinking. We leased a non-working tourist camp on the banks of the Thamalakane (pronounced Tom-a-la-con-ee) River with thatched cottages, a kitchen and a cook which sometimes swelled to 30 people during the busiest phases of the project. The Thamalakane River is the channel that runs through Maun, and a main group of the Delta outlet channels are tributary to this river. The primary Delta outlet channel at present, the Boro River, meets the Thamalakane within walking distance of our base camp (see Photo 1).

The Thamalakane channel was dry for 10 out of 12 months per year during the project (1995 to 1997) and comprised a wide and grand pathway for parading groups of horses, wandering herds of cows and goats, villagers, children on donkeys, and certain hydrogeologists out for a stroll in the early evening. There is something slightly askew in the picture; concrete balustrades, floating docks, big motor boats sitting, that are peculiar reminders of the wet 1970s and 1980s, when tourists could be ferried up into the Delta along this wide and fast flowing river. Now the boats are piled up by the side of the channel, and all of the camps including ours, are hurting for water.

The project resulted in the identification of at least five areas along the river channels that could be utilized for future groundwater development for Maun into the 21st century and delineated over 10,000 million cubic meters (MCM) of fresh groundwater in storage. Three of these areas are located where the annual delta floods are still active. A phased development program was recommended. In addition, a successful pilot test indicated that artificial recharge basins could be used to restore the existing depleted Shashe wellfield during the annual flood in nearby channels, if wetter conditions return and sufficient surface water were to be available.

In the long term, the sustainability of the water resource will depend on continued recharge to these aquifer systems from the annual flood from the Delta. The volume of these flood waters as well as the preservation of the Delta itself will require international cooperation. Already, plans by Namibia to divert water from upstream points of the Okavango River to its capital city area (Windhoek) are undergoing intense scrutiny by interested parties in Botswana. The future of the Delta will be determined by how these issues are resolved in conjunction with the naturally shifting hydrology in this region.

Although we finished the 2-year project and headed home due to domestic obligations, we look forward to practicing again at some future time in this lovely and interesting country. This project was the largest groundwater contract to date awarded by the Government of Botswana, and was the first time an American firm was selected. As newcomers to Maun, we very quickly attracted attention as the water people who were consulted by many different people (entrepreneurs, tour operators, reporters, school founders), both local and passing through from all over the world. The Batswana people were charming hosts. We would love to return.


Reviewers: Kerry M. Hanlon, CPG-09866, and Dale H. Rezabek, CPG-09285

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A practicing geologist is one who practices any branch of geology, presents himself/herself by any means orally or in writing as a 'geologist', who performs or claims to be qualified to perform any geological services, and/or who makes any geologic determinations or evaluations which may affect the public's physical health and safety as well as its financial welfare. Employees of state and federal government are exempted from registration.

An applicant must be a graduate of an accredited (4 year) college or university with at least 30 semester hours or 45 quarter hours of credit in the study of geology or a geological specialty and have a minimum of 4 years qualifying experience in geology or a geological specialty. In addition, applicants are required to take and pass a written examination administered by the Board.

A 'grandfather period' was established for those geologists practicing at the time the law went into effect. December 31, 1998 is the deadline set, ending this grandfather period. During the 'grandfather period', geologists meeting the minimum statutory requirements stated above may apply for registration without taking any examinations. Geologists who meet the educational requirement but lack the required experience may apply for certification as geologists-in-training without an examination.

Registration is granted for a period of two years, subject to renewal every two years, and includes the issuance of an official seal, with name, registration and inscription of "Professional" designations, to be used on all geologic reports and documents.

Applications for registration may be downloaded from the Board's web site or requested by mail, phone, or e-mail: <http://geology.deq.state.ms.us/geologyreg>. MS Board of Registered Professional Geologist, P.O. Box 22742, Jackson, MS 39225-2742, Telephone (601) 961-5507, e-mail: Rick_Erickson@deq.state.ms.us.

"ATTENTION GEOLOGISTS" Kansas Licenses Geologists

On or about November 1, 1998, the Kansas State Board of Technical Professions will begin distributing applications to those who would like to be licensed as a professional geologist under the "grandfather provision". Geologists must meet minimum educational and experience qualifications and provide both employer and professional references in order to be licensed under the provision. The "grandfather" period for licensing in Kansas will close on June 30, 2000, and all applications must be received in their entirety by that date to be eligible for processing through the "grandfather provision".

The licensing fee for geology applicants by the grandfather provision is $295.00 ($250 application fee and $45 administrative fee). All applications submitted prior to July 1, 1999 are eligible to take a $50 discount. The grandfather licensing fee is non-refundable.

For more information the Kansas State Board of Technical Professions can be contacted at: Landon State Office Building, Suite 507, 900 S.W. Jackson Street, Topeka, Kansas 66612-1257, telephone (785) 296-3053. Information and applications are also available from the Board's web site at: <http://www.ink.org/public/ksbip/>.

American Geological Institute 1999-2000 CONGRESSIONAL SCIENCE FELLOWSHIP

The American Geological Institute is offering a Congressional Science Fellowship for the geosciences. The successful candidate will spend 12-16 months (starting September 1999) in Washington working as a staff member for a member of Congress or congressional committee. The fellowship is a unique opportunity to gain first-hand experience with the legislative process and make practical contributions to the effective and timely use of geoscientific knowledge on public policy issues.

Prospective applicants should have a broad geoscience background and excellent communications skills. Minimum requirements are a master's degree with at least three years of post-degree work experience or a Ph.D. at the time of appointment. Prior experience in public policy is not required, but a demonstrable interest in applying science to the solution of public problems is desirable. The fellowship carries a stipend up to $42,000. Funding is provided by the AGI Foundation.

Interested candidates should submit a cover letter and a resume or curriculum vitae with three letters of reference to AGI Congressional Science Fellowship, 4220 King Street, Alexandria VA 22302-1502. For further details, visit <www.agiweb.org>, call 703-379-2480, or e-mail <govt@agiweb.org>. EOE

Application materials must be postmarked by Feb. 1, 1999.
As past issues of The Professional Geologist have demonstrated, there is no shortage of environmental challenges facing the nation and the world. The geographic scale of these challenges range from local to global, the time frames range from immediate to somewhere in the future, and the severity ranges from "overhyped" to extremely serious. Given this vast array, how does the average citizen, let alone a politician, decide what is important? Typically, the public and the politicians turn to scientists for the answers.

Unfortunately, the answers from scientists are as diverse as the problems. For example, on the issue of climate change, although a vast majority of atmospheric scientists agree that global warming is a serious and likely possibility, a vocal minority has raised many doubts in the minds of the public and politicians. Similarly, on other issues, the range of scientific "opinions" is wide. There is no institution that provides periodic summaries of the state of scientific knowledge on environmental issues. Such information is needed and must be communicated in a way that is understandable to the public and their elected officials.

For strictly geological issues, decision-makers can turn to the U.S. Geological Survey and to the Board on Earth Sciences and Resources of the National Research Council. However, most environmental issues have multidisciplinary dimensions and involve human components not addressed by the physical sciences alone. Examples of such problems (from a 1995 white paper by the Environmental Geoscience Advisory Committee of the American Geological Institute) include: urban impacts on estuarine systems, evaluation of coastal land loss and restoration strategies, soil diversity and management for sustainable agricultural ecosystems, western water resources, social impacts of geologic hazards, and the connection between earth sciences and public health. The nation's decision-makers often have no place to turn for scientific answers to such questions.

An institution is needed to offer a new integrated approach to providing scientific answers to such questions. The Committee for the NIE - a group of scientists, decision-makers, and other citizens have proposed that a National Institute for the Environment (NIE) be associated with the National Science Foundation (NSF). The NIE effort grew simultaneously from the academic community led by Professors Stephen Hubbell at Princeton University and Henry Howe at the University of Illinois at Chicago and U.S. Representative Jim Saxton (R-NJ). The scientists, led by Hubbell and Howe, were frustrated that what they knew as scientists was often not represented in political decisions about the environment. Additionally, in many aspects of the human-environment equation where knowledge was insufficient, no funding agency had a responsibility or interest in funding the necessary science. Rep. Saxton was frustrated because, as a layperson, he had no way of discerning who was giving scientifically defensible answers. He also found that there were no answers to many of the environmental questions of interest in his coastal New Jersey district and there often was no agency interested in funding the research to get the answers. Saxton joined forces with Hubbell and Howe to develop a proposal for an institution that would provide these answers.

The principles of the NIE effort are straightforward:

1. Environmental science will do best when it is not associated with a regulatory or political agency, although such agencies do need to have their own scientific staffs.

2. Involvement of a diverse set of users of scientific information, including professionals and managers, decision makers and average citizens is necessary to work with scientists to frame questions of value to society.

3. There must be an integrated scientific process beginning with assessments of the state of science, followed by new research, provision of science-based but understandable information, and ongoing support for education and training of scientists, engineers and the public.

4. Everything must be done through the strictest principles of merit-based peer review and presented in a way that avoids a political agenda.
Such principles could and ought to be applied to any government science agency. However, there is an additional problem. Most environmental issues cross agency jurisdictions. For example, to deal with the problem of harmful algal blooms such as red and brown tides and recent outbreaks of *Pfiesteria piscida*, five government agencies are pooling resources in a common request for proposals to study the ecology of these blooms. Another two agencies are carrying on related research independently, using their own scientists. These interagency processes are difficult to establish and maintain. They cannot be created for every environmental issue. Each agency has its own mission and purview, which are often incompatible with a comprehensive evaluation of an environmental problem.

We see the need for a non-regulatory science funding organization whose jurisdiction would be the entire environment. It would collaborate with science agencies organized by discipline such as U.S.G.S. and by environmental sector such as the National Oceanographic and Atmospheric Administration (NOAA) and by economic sector (Departments of Energy and Agriculture). It would also work with state, tribal, and local governments as well as the private sector. Its approach would be inherently cross-disciplinary and organized around real-world environmental topics.

For each environmental issue, the institute would begin by convening scientists representing different perspectives to assess the state of the science concerning the topic. This assessment would lead to agreement on the science behind certain aspects of the issue and disagreement about others. It would be followed by open requests for research proposals to address scientific unknowns and uncertainties identified by the assessments. As research results are generated, they would be distributed to decision makers and the lay public in a way that they can understand, without political bias, in addition to the usual publication in academic journals. Development of better information management and distribution systems would be essential (a prototype exists at [http://www.cnie.org](http://www.cnie.org)). At all phases of the discovery process, special attention would be paid to education and training of scientists, engineers, and the public in problem-focused interdisciplinary approaches to the environment. As new research results are generated, assessments would be repeated to present new conclusions and develop new research questions. The strong desire for this new approach to science on environmental issues is shown in the broad support for the NIE with over 440 endorsements ranging from environmental groups to the U.S. Chamber of Commerce, state chambers and individual businesses. NIE's supporters also include government organizations like the National Association of Counties, U.S. Conference of Mayors, three former EPA Administrators, all but one former EPA science administrators, more than 60 scientific societies, nearly 300 colleges and universities and over 150 congressional cosponsors over the past three Congresses.

The challenge has been how to fit an extramural institute into the governmental structure with its hodgepodge of agencies and departments that already have roles in environmental science and management. We have considered four basic options:

- A major consolidation of agencies and programs; however desirable this may be, the political forces and interests preclude this option.
- A new independent institution: after several years of trying, the Committee for the NIE has concluded that this also is not politically feasible.
- Interagency improvement and coordination, or a "virtual NIE": this is the Clinton administration's approach.
- Attachment of NIE to an existing structure; in this case, the National Science Foundation: this is CNIE's preferred approach.

NSF provides the scientific credibility, and the separation from political influence, that are needed for environmental science to be effective and respected. Because NSF already supports disciplinary environmental science, it has a strong base to build upon to create the kind of multi-disciplinary science that is needed for real-world environmental problems. A concern expressed by AIPG representatives in a recent meeting in Washington, DC was that NSF's approach to an NIE might be "too academic" and not include the practitioners' perspective represented by AIPG. This is a valid concern, and is one of the reasons why the Committee for the NIE has been adamant in calling for managers, decision makers, and professionals from all sectors of society to be involved in managing and operating the NIE.

Presently the NIE proposal is before Congress in the form of the Sound Science for the Environment Act (H.R. 2914), introduced by Rep. Saxton and Rep. Neil Abercrombie (D-HI). This legislation has attracted the support of over 90 bipartisan cosponsors. The National Science Foundation, following Congressional interest, has been studying how it can expand its role in environmental research, assessment, education, and information.

The Committee for the NIE encourages professional geologists to become involved in the effort to build a better approach to the scientific basis for environmental decision making. Please contact us with your comments and suggestions.

David E. Blockstein, Ph.D., Senior Scientist, Committee for the National Institute for the Environment, 1725 K Street NW, Washington, DC 20006-1401, 202-530-5810, fax 202-628-4311 David@CNIIE.org.


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CALL FOR NOMINATIONS FOR AIPG OFFICERS

Jonathan G. Price, CPG-7814, Chair of the Nominating Committee

Please help AIPG by identifying Certified Professional Geologists who would be excellent officers. In 1999 we will vote for the following officers: President-Elect, Vice President, Secretary, and Editor. The Vice President's position is for only one year, 1999. The President-Elect will serve as President in 2000; the Secretary will serve two years, 1999 and 2000; and the Editor will be invited to participate in Executive Committee meetings as Editor-Elect in 1999 and 2000, then serve as Editor in 2001 and 2002.

The AIPG Bylaws call for the President to appoint the members of the Nominating Committee, which is to be chaired by the immediate Past President. Members of this year's Nominating Committee have been past Presidents Jon Price, Bob Merrill, and Richard Fountain. Prior to the first meeting of the Executive Committee after January 1 of each year, the Nominating Committee is charged with presenting to the Executive Committee names of at least four candidates who are qualified for each office to be filled in the ensuing year. From the nominations thus received, the Executive Committee designates two primary candidates and at least two alternate candidates, in designated order, for each office. The Nominating Committee then determines which of the primary candidates are willing to serve. In the event that one or more cannot, the alternates are asked, in their designated order, until the slate is filled. The slate is then reported to the Executive Committee. Additional nominations may be submitted to the Secretary by any member of the Executive Committee, or by any AIPG Member if supported by petitions signed by not less than fifty CPGs in good standing and received not less than ninety days before the annual meeting.

The Executive Committee consists of the six officers (President, President-Elect, Vice President, Secretary, Treasurer, and Editor), all of whom must be CPGs, plus four Representatives of the Advisory Board, who must be AIPG members but need not be CPGs, and who are elected at the annual meeting by Section Delegates to the Advisory Board. To assure geographic diversity, Advisory Board Representatives to the Executive Committee must be members of Sections other than those of which incoming or continuing Institute officers are members. The Executive Committee typically meets at AIPG Headquarters in the winter and spring, in a virtual meeting by e-mail in the summer, and during the Annual Meeting in the fall. Members of the Executive Committee can be reimbursed for their travel to attend these meetings.

The Executive Committee generally prefers that the nominees for President-Elect and Vice President have past experience as members of the Executive Committee (that is, have served as an Advisory Board Representative or as Secretary, Treasurer, or Editor). Lists of members of recent Executive Committees are in the April issue of The Professional Geologist. You can help the Institute by identifying CPGs who would be fine officers. Please forward your suggestions to the Nominating Committee, in care of AIPG Headquarters, by mail (7828 Vance Drive, Suite 103, Arvada, CO 80003-2125), fax (303-431-1332), or e-mail (aipg@aipg.com). Thank you.
Introduction

In March 1998, AIPG began soliciting volunteers to become Publication Committee members. The purpose of the Publications Committee is to provide assistance and resources to the AIPG Editor, Editor-Elect, and the Publications Manager. This is the first time that AIPG has implemented a volunteer-based committee structure to assist publishing efforts.

The Publication Committee is directed by the Publications Committee Chairman (herein referred to as Chair), whose duties are to manage and coordinate three subcommittees. The Chair works closely with the AIPG Editor and Editor-Elect as well as the Publications Manager to address issues related to publication development, marketing, and revenues from AIPG products. The Publication Committee structure consists of:

- the Marketing and Advertising Subcommittee,
- the Planning and Monitoring Subcommittee, and
- the Technical Review Subcommittee.

Each subcommittee has a leader who is responsible for coordinating activities with the Chair and drawing on the resources of their subcommittee to accomplish objectives. Currently, AIPG has 20 subcommittee volunteers.

Listed below is a breakdown of the subcommittee members.

Marketing and Advertising Subcommittee

Subcommittee Leader: Henry Baker
Members: none

Planning and Monitoring Subcommittee

Subcommittee Leader: Bert Fisher
Members: Charles Dimmick, Michael Harris, Paul Christensen, Robert Stewart, Solomon Isiorho

Technical Review Subcommittee

Subcommittee Leader: Jay Clausen

Publications Committee Development

From May, through July of 1998, a series of communications was initiated among myself, Myrna Killey (Editor-elect) and J. Dale Nations (Editor) on the organization and logistics of the subcommittee. Obviously, our first goal was to bring the Publications Committee on-line and incorporate it efficiently with the existing AIPG structure. The next step was to define and prioritize projects, problems, and goals.

On June 23, 1998, the Publications Committee was organized enough to release a "Welcome Aboard" memo to the subcommittee leaders and begin working on relevant issues (discussed below). Subcommittee leaders also initiated "Welcome Aboard" correspondence with their members.

One of the most important questions that the Publications Committee is addressing is how to increase the sale of AIPG publications (including The Professional Geologist) when these products are primarily marketed to AIPG members through The Professional Geologist (TPG)? What is the most productive method of increasing publications sales to geoscience communities outside of AIPG? What is the cost-benefit of increasing outside-marketing efforts on membership and sales revenue? These are questions that the Publications Committee will be dealing with for a long time.

The philosophy that I am currently using as a guide to manage the Publication Committee's efforts and expenses, is that it is probably more cost effective and beneficial to concentrate on marketing the products that AIPG already has developed or are in-progress, than it is to invest significant efforts into new development.

Current Activities

The three subcommittees are concurrently working on several projects. The Marketing and Advertising Subcommittee is collecting information from other geoscience organizations that may be interested in bulk purchases of TPG, and is investigating advertising costs in GSA Today and other geoscience periodicals. Another idea being explored is marketing TPG to libraries and universities. Increasing subscriptions sales beyond our membership base is a cost-effective method to increase revenue. I have also been informed that in October, AIPG will have a display booth at the Geological Society of
America meeting in Toronto, which will be a good opportunity to sell publications.

The Marketing and Advertising Subcommittee will also be coordinating with the Planning and Monitoring Subcommittee to encourage AIPG Section Presidents to provide regional sales support for publications such as the "Citizen's Guide to Geologic Hazards". Because the Marketing and Advertising Subcommittee does not have the human resources that the other subcommittees have, some members of the Planning and Monitoring Subcommittee may be involved in marketing efforts.

The Planning and Monitoring Subcommittee is following up on a series of "Issues and Answers" publications and lending assistance to AIPG headquarters to assemble topical collections of reprints from TPG theme issues, which will eventually be test marketed.

The Technical Review Subcommittee is also lending assistance to assemble topical collections of reprints for test marketing and is on standby to review articles for TPG and other publications.

Future Activities

Future activities for the Publications Committee include: strengthening the Publications Committee's presence and use in the AIPG framework, integrating the Technical Review Subcommittee with the Associate Editors so that this resource is used more efficiently, and developing the marketing and advertising talent pool.

Publication marketing efforts will be concentrated in geoscience communities outside of AIPG (like the National Association of Geoscience Teachers, the American Geophysical Union, the Geological Society of America, and the American Geological Institute) because that is where I anticipate developing the largest sales volume. Target marketing for some products like the Home Buyer's Guide to Geologic Hazards to real estate associations may work well. One of the national geological societies may be interested in bulk purchases of The Citizen's Guide to Geologic Hazards for resale through their organization. A university might find that one of AIPG's publications supplement classroom exercises. I would also encourage AIPG members to review the publication order form in TPG so that they are aware of the specialized products which are offered through AIPG.

If you are interested in getting involved with the AIPG Publications Committee, or you have that magic idea please contact Chuck Fletcher at Fletcher@geol.sc.edu.

ENVIRONMENTAL PROFESSIONALS NEEDED

American Geosciences, Inc., an environmental consulting company located just outside of Pittsburgh, PA, is seeking geologists with one to ten years of experience. Candidates should have experience in the following areas: site investigations, site remediation, site assessments (Phase Is), underground storage tank projects, etc.

Candidates must have a minimum of a B.S. in Geology, Hydrogeology, Earth Sciences, or Engineering and excellent written and oral communication skills. We offer an attractive benefits package. Please submit your resume to Ms. Lynne Casper, American Geosciences, Inc., 3925 Reed Blvd., Suite 400, Murrysville, PA 15668 or fax it to (724) 733-1003.

AIPG Publications

Issues and Answers Series

Homebuyers' Guide to Geologic Hazards (1996)

AIPG has prepared this booklet to educate potential homeowners about geologic hazards and geologic processes in the hope that an increased awareness of such hazards will help them avoid the misfortune of having their dream house become a financial nightmare. Geologic hazards are natural processes that threaten man and property. When individuals and communities build or develop, ignoring the geologic characteristics of the area, resulting losses can be measured in both lives and dollars. The general public may prevent many of these losses by seeking, and taking advantage of, available geologic knowledge prior to purchasing a home or property.

Paperback; 8.5" x 11", 30pp.; Member price- $6.00; Non-member price- $9.00.

Petroleum (1998) NEW!

This book addresses the issue, and points the way to reasonable answers to questions such as: Is there enough oil to maintain our current lifestyle? Will there be oil available in the decades ahead? Will its price be affordable for us to both drive and keep warm in all parts of the country? Who should be blamed for the problem of supply and price? Why do we not just produce more oil in the U.S. and ignore the rest of the world? Is our national security in jeopardy because of the declining domestic production and increasing imports? What is the long-range environmental impact of any position we take? Should we save our oil for the future, or use it all now? In order to explore answers to these questions, this publication puts into perspective the nature and importance of petroleum, the geographical distribution of its reserves, the history of the industry, and an overview of petroleum exploration, production and transportation.

Paperback; 8.5" x 11", 36pp.; Member price- $6.00; Non-member price- $9.00.

Monograph Series

Government Affairs Manual (August 1996)

Geologists are not always involved in public policy decision-making that affects their profession. This may include legislators, lawyers, and real estate-developers dealing with the answering of geologic questions, formulating policies related to geology, and regulating development of resources and land use. Misinformed decision can mean serious harm to the public. AIPG recognizes that the state-based Sections can use some assistance and suggestions for their long-range strategic planning to guide their government affairs activities in their respective states or regions. This publication has been created to provide some guidelines on state government structure, lobbying, actions groups and networking, formulating positions on issues, and all the many communication methods that may be necessary to have a positive experience in becoming involved in governmental policy decisions.

Paperback; 8.5" x 5.5", 27pp.; Member price- $4.00; Non-member price- $6.00.
The Professional Geologist as Expert Witness (April 1994)

More than ever before, geologists are asked to testify in litigation or in hearings involving public safety and convenience, or public funding. This guide is designed to provide the professional geologist with general guidelines needed for preparing and presenting testimony in a competent, professional manner. In addition, this guide is designed to help the testifying geologist cope with some common courtroom situations as well as providing suggestions for the presentation of clear and convincing information and conclusions.

Paperback: 8.5" x 5.5", 20pp.; Member price- $4.00; Non-member price- $6.00.


This guide is designed to set out principles and some techniques used in appraising construction rocks, viz., crushed rock, sand and gravel, and fill material. Reasons for appraisal include: for government, eminent domain (condemnation), taxation, disposal of land assets, planning and mineral conservation.

Paperback: 8.5" x 5.5", 16pp.; Member price- $5.00; Non-member price- $7.00.


This guide outlines an effective organization for common types of geologic reports which are submitted to government agencies, private industry or other employers. The content of the reports, the reasons for the suggested organization and content and the letter of transmittal are described in sufficient detail to serve as models for actual reports.

Paperback: 8.5" x 5.5", 12pp.; Member price- $4.00; Non-member price- $6.00.

Guide to Federal and State Appointive Positions (November 1985)

This guide has been prepared to assist those who feel strongly motivated to do something about the manner in which our State and Federal governments conduct their affairs. It is designed specifically for those who are interested in public service at the administrative and policy levels that, under most circumstances, are high-level positions secured through appointment by a Governor or by the President of the United States.

Paperback: 8.5" x 5.5", 10pp.; Member price- $4.00; Non-member price- $6.00.

Program of Cooperative Evaluation of Geology Departments (November 1985)

Another title might be, "How to bridge the gap between geology education and geology professional practice." This is publication #3 in a Monograph Series by AIPG. The pamphlet provides the guidelines for an evaluation team of professional geologists (representing academics, industry, and government service) to evaluate a college or university department of geology. The evaluation provides the communication of trends in educational practices to potential employers of geol-

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ogists, so that departments can adapt their programs to the skills needed for their student's future professional practice.

Paperback; 8.5" x 5.5"; 13pp.; Member price- $4.00; Non-member price- $6.00.

Education for Professional Practice (July 1991)

The National Screening Committee (NSC) has struggled with the problem of inconsistencies in curricula for many years. Over time, an informal consensus has evolved among its members as to "what every geologist should know." This publication summarizes the deliberations and decisions of an ad hoc committee on curriculum, with input from the experiences of the NSC in reviewing the qualifications of geologists applying for Institute certification, and the extensive review and study on the Committee for Cooperative Evaluation of Geology Departments. The pamphlet provides recommendations to college and university geology departments about the necessary skills and core geology courses that students need to be adequately trained in the field of geology.

Paperback; 8.5" x 5.5"; 16pp.; Member price- $4.00; Non-member price- $6.00.

Special Publications

Citizens' Guide to Geologic Hazards (1993)

If you have wondered about the actual dangers of asbestos, radon, earthquakes, etc., that are mentioned but not explained very well in the news, then this book is certainly for you. The book was commissioned by the AIPG to give readers knowledge that will save lives and dollars. It explains geologic hazards, the risks these hazards pose, and how professional geologists help to mitigate these risks. The book was written for non-scientists, especially planners, contractors, homeowners, elected officials, insurance underwriters, lenders and financiers, realtors, science teachers, and students. Although geologists have the knowledge that can help reduce the risks, the value of this knowledge will increase greatly when the majority of citizens also understand the hazards and can upgrade public policies that will guarantee that available knowledge is used.

Paperback; 8.5" x 11", 134pp., illustrated; Member price-$15.95; Non-member price- $19.95.

Citizens' Guide to Geologic Hazards Slide Set (1993)

Set of fifty, 35 mm slides featuring illustrations from The Citizens' Guide to Geologic Hazards. GREAT FOR TEACHING!

Member price- $65.00; Non-member price- $65.00.

Technical Writing as a Process Within a System (1989)

The book results from short courses that were presented for the 25th Anniversary Meeting of AIPG in autumn of 1988 in Tulsa, Oklahoma, and the Rocky Mountain District of the National Park Service in Spring, 1989. AIPG believes that successful technical writing requires an understanding of both the technical substance of a science and the logic of that science. Technical writing is an interdisciplinary subject that links humanities and the sciences. Unfortunately, it is seldom taught as such. One who masters only the basics of good grammar, organization and mechanics of writing may be a good writer but never a good technical writer. By the same token, mere technical knowledge and research ability are insufficient in themselves to permit one to be a good writer or to convey knowledge and concepts. The latter skills are learned by study and practice of writing, not by acquiring more technical knowledge.

Paperback; 8.5" x 11", 68pp.; Member price- $10.00; Non-member price- $15.00.

The Professional Geologist (12 issue subscription)

Paperback; 8.5" x 11", 26-32pp., published monthly; excludes directory issue; Member price- $20.00; Non-member price- $30.00. Add shipping for Canada- $10.00; All other countries- $18.00.


The ASFE Contract Reference Guide has become one of ASFE's most significant contributions to practicing design and environmental professionals. This, the third edition, provides an incisive review of significant contract issues, followed by discussion of more than 100 contract provisions.

Paperback; 8.5" x 11", 168pp.; Member price- $50.00 (Members only)


The central focus of this book is, our course, on ethics as a part of geologic professionalism. AIPG has been at the forefront of promoting a concern with professional ethics and of setting ethical standards for its members and for the geologic profession as a whole. Without a high and rigorously enforced code of ethics, the public, whom we try to serve, will have no faith in our technical competence. There are not always easy answers to making ethical decisions. This book provides a thoughtful compendium, not only of the Institute's current positions on ethics but also provides an informed discussion of various viewpoints on the application of ethical principles to real-life situations.

Paperback; 8.5" x 11", 202pp.; Member price- $18.00; Non-member price- $25.00.
Update prepared by David Applegate, MEM-0002 and Kasey Shewey

- Appropriations Process Goes Into Overtime
- Strategic Petroleum Reserve Purchase Dropped
- Eisenhower Science Education Program Under Fire
  Groat Approved by Senate Committee, Awaits Full Senate Vote
- House Science Policy Study Released
- Women in Science Bill Passes Congress
- GAP Advisory Committee Approves Strategic Plan, Calls for Climate Statement
- Tentative Schedule of Upcoming GAP Activities
- New Material on Web Site

Appropriations Process Goes Into Overtime

Fiscal Year 1999 is upon us, and the federal government is operating on a nine-day continuing resolution to ring it in. Only one of the 13 appropriations bills has been signed by the President, although three more have been completed in the past week. Many of the remaining nine bills are expected to be rolled up into an omnibus appropriations bill, but even so, many federal workers are starting to worry about a repeat of the furloughs that took place two years ago. Congress took a much greater share of the blame than they expected for that fiscal stalemate, however, and congressional leaders are not likely to allow a repeat before the November elections. The political oddsmakers are betting on another continuing resolution that may last until after the elections.

Science has fared well overall in the FY 1999 process so far. Among geoscience-related bills, only the Energy & Water bill (which funds most of DOE plus the Army Corps of Engineers) has been sent to the President. In it, DOE science activities are up 8 percent over FY 1998. The House and Senate have completed their conference on the VA/HUD/Independent Agencies bill, which includes NSF, NASA, and EPA. NSF would receive an overall 7 percent increase with the research account receiving nearly a 9 percent increase, and education programs receiving a 5 percent boost. The Interior bill (USGS, DOE Fossil Energy) has yet to even pass the Senate and is already under a veto threat from President Clinton over a range of environmental provisions (known as "riders") attached to the bill. Bills funding the Department of Agriculture, NOAA, and the Department of Education are all awaiting a House-Senate conference and are likely to end up as part of an omnibus package. For final information on appropriations, visit the AGI web site at <http://www.agiweb.org/legis105/apprify99.html>.

Strategic Petroleum Reserve Purchase Dropped

In July, the Senate voted to purchase $420 million worth of oil for the U.S. Strategic Petroleum Reserve in an effort to help out independent producers who have been hard-hit by record low oil prices. The purchase would take advantage of those low prices to replenish a stockpile that has been depleted in recent years due to nearly annual sales to plug holes in the federal budget. The purchase was attached to the Treasury and General Government appropriations bill, S. 2312. The House version did not have a similar provision, and last week a House-Senate conference left the purchase out of the final version of the bill. Proponents of the purchase are now seeking to attach it to the omnibus appropriations package that could be assembled in the next week. Another oil-related provision still under consideration would extend for one year the current moratorium on the Minerals Management Service's proposed oil royalty valuation rule. More information on the oil royalty issue is available on the AGI web site at <http://www.agiweb.org/hearings/rlk797.html>.

Eisenhower Science Education Program Under Fire

On September 18th, the House passed legislation that would consolidate 31 separate federal education programs, including the Eisenhower Professional Development Program for science and math teachers, into a single block grant to the states. H.R. 3248, the Dollars for the Classroom Act, squeaked through by fourteen votes. Under this bill, states could choose to spend money on professional development for science and math teachers, but they would not be required to do so. The Senate counterpart, S. 1589, introduced by Senator Tim Hutchinson (R-AR), remains in the Committee on Labor and Human Resources and will probably not see action this session. The Eisenhower program has survived several elimination attempts in recent years, and if H.R. 3248 does not make it this time, the issue will likely resurface at the start of the 106th Congress, when the Elementary and Secondary Education Act comes up for reauthorization. For more information, visit the AGI web site at <http://www.agiweb.org/legis105/ike98.html>. [Note: Groat was confirmed by the Senate on October 21.]

Groat Approved by Senate Committee, Awaits Full Senate Vote

On September 23rd, the Senate Energy and Natural Resources Committee voted unanimously to confirm Charles G. "Chip" Groat as the next Director of the U.S. Geological Survey. The full Senate has yet to act on the confirmation but is expected to vote under a unanimous consent agreement before they recess in early October. The committee held a confirmation hearing for Groat and two Department of Energy nominees on September 17th. As a former Louisiana State Geologist, Groat was introduced at the hearing by Senator John Breaux (D-LA). Groat was asked few questions by the senators, who spent most of the time grilling DOE Deputy Secretary nominee T.J. Glaubier over his record as Associate Director of the White House Office of Management and Budget. Reflecting the concerns expressed by Committee Chair Frank Murkowski (R-AK) and other Republicans, the Committee has yet to vote on Glaubier's nomination.

House Science Policy Study Released

On September 24th, the House Science Committee unveiled Unlocking Our Future: Toward a New National Science Policy, a report developed by Committee Vice-Chair Rep. Vern Ehlers (R-MI) at the request of House Speaker Newt Gingrich (R-GA). The report addresses the current state of the nation's science and technology enterprise and outlines a framework for an updated national science policy in the post-Cold War era. It concludes that the overall health of science and engineering in this
country is good but makes a number of recommendations for components that need strengthening. The 74-page report is available on the web at: <http://www.house.gov/science/science_policy_study.htm> Proponents of the report hope to have it passed as a resolution by the full House and possibly the Senate, whose Science and Technology Caucus has already lent its endorsement. The Science Committee is seeking input on what to do next as well as feedback on the report itself. An AGI special update on the study can be found at <http://www.agi-web.org/legis105/study98.html>.

**Women in Science Bill Passes Congress**

On October 1st, the Senate unanimously approved H.R. 3007, the Advancement of Women in Science, Engineering, and Technology Development Act. The bill passed the House on September 14th and now goes to President Clinton for his signature, which is expected. Introduced by House Technology Subcommittee Chair Connie Morella (R-MD), the bill would establish a commission to study the barriers that women face in science, engineering, and technology. The commission would identify and examine the number of women in these fields to determine the specific areas in which they are underrepresented. The commission would also research and describe the practices of employers regarding the recruitment, retention, and advancement of women in these areas then determine if these practices are comparable to their male counterparts. Finally, within 18 months of appointment, the commission would issue recommendations to the government, academia, and private industry. Along similar lines, President Clinton on September 10th directed the National Science and Technology Council (NSTC) to develop recommendations within 180 days on how to achieve greater diversity throughout the nation’s scientific and technical work force. [Note: This legislation was enacted into law on October 16.]

**GAP Advisory Committee Approves Strategic Plan, Calls for Climate Statement**

The AGI Government Affairs Advisory Committee met on the afternoon of September 17th after many committee members spent the morning at the G oat confirmation hearing. The committee approved the GAP Strategic Plan, which will be considered by the AGI Executive Committee and Member Society Council at their meetings in late October. The draft plan is available on the AGI web site at: <http://www.agi-web.org/gapac/plan98.html>. The committee discussed a number of issues including ways to involve member society membership in grassroots efforts to influence public policy. The committee also discussed the highly contentious climate change issue and is developing a draft consensus statement that could be adopted by AGI and its Member Societies. Such a statement would focus on the nature of science and areas of geoscience research that can contribute to an improved understanding of the problem.

**New Material on Web Site**

The following updates and reports were added to the Government Affairs portion of AGI’s web site <www.agi-web.org> since the last monthly update:

- Women In Science Legislative Update (10-2-98)
- Special Update: House Science Policy Study Released (Posted: 9-29-98)

- Education Policy Update (9-22-98)
- FY 1999 Science Appropriations and Budget Process Update (9-21-98)
- Year of the Ocean Update (9-21-98)
- Global Climate Change Update (9-15-98)
- Strategic Petroleum Reserve Update (9-10-98)
- DOE Comprehensive Energy Strategy (9-9-98)
- Caspian Sea-Oil and Gas Exploration Hearing Summary (9-8-98)
- Low-Level Nuclear Waste Disposal Update and Hearing Summary (9-8-98)
- Oil and Gas Royalty-In-Kind Update and Hearing Summary (9-4-98)
- Geotimes Political Scene: Lobbying and the Geoscience Community (9/98)
- Geotimes News Note: Disaster Warnings in Real Time (9/98)
- The Professional Practice Standards Affair (reprinted from The Professional Geologist 8/98)

This monthly update goes out to members of the AGI Government Affairs Program (GAP) Advisory Committee as well as the leadership of AGI’s member societies and other interested geoscientists as part of a continuing effort to improve communications between GAP and the geoscience community that it serves. Prior updates can be found on the AGI web site under “Government Affairs” <http://www.agi-web.org>. For additional information on specific policy issues, please visit the web site or contact us directly at <govt@agi-web.org> or (703) 379-2480.

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*We hope to hear from you soon.*
Standard 4.2 to the Code of Ethics
(column 34)

Standard 4.2 and Rule 4.2.1 were added to the Code of Ethics at the Annual Meeting in Baton Rouge. Prior to submission of the proposed Standard and Rule for adoption, they were reviewed by AIPG's counsel to determine whether the language presented any legal problems (this is a routine procedure). Counsel's reply noted that if these provisions were used for what could be construed as anticompetitive purposes, then problems might arise. The Federal Trade Commission's Advisory Opinion No. 457, 78 FTC 1628 (1971), notes that standards or codes which "inhibit innovation" or "limit the ability of industry members to compete" are among the practices to which the FTC will object. There is also the right to free speech. I bring these issues to your attention because Standard 4.2 and Rule 4.2.1 should not be used to limit anyone's opinions per se. As Rule 4.2.1 states, "Differences of opinion occur..." The Standard and Rule are intended to require that statements made as geoscientists be based on good scientific evidence and/or logical reasoning and that they be presented in a professional way. You may disagree with a position of mine. Fine. We can debate the point in a professional manner. And at the end we may continue to disagree. Still fine. The situation does not make you a dunce or me a nincompoop.

Counsel also noted that enforcement of the Code of Ethics must be fair, reasonable, and consistent. I agree. The difficulty is what to do when faced with actual facts that differ from each other in perhaps subtle but significant ways. Good judgment and records of past actions are the best guides for action. Part of my reason for compiling this column is generation of a written record of ideas regarding various actions. These then help form a basis for guiding future actions.

PROFESSIONAL STANDARDS: the Coming "Hot" Topic
(column 35)

Monica E. Gowan, CPGE-9958, responded to my prediction about the coming calls for professional standards in last month's column. She wrote "While questions of competence from stakeholders will undoubtedly increase, and adopting and enforcing strict professional standards are one way to respond, I think it will be equally (if not more) important to assist the non-geoscientist with discerning the quality of an expert's work. Although it may mean giving up some business for the consulting geoscientist, I don't think it is in the best interest of society or the profession to increasingly rely on 'expertism' to resolve debates. I believe we need to help society ask the right questions to determine if the science advanced is relevant to the question at hand. The payoff is a decision-making process where stakeholder confidence in the outcome can be increased through employing their own intellect, in contrast to relying solely on blind trust (of an external authority's credentials)."

Interestingly, at the September Colorado Section meeting the point was raised that the first requirement in expert quality control is requiring the name of the expert offering the expertise. Government agencies that do not identify the authors of their reports and provide access to data on which conclusions are based could be viewed as the worst of the 'expertism' proponents. Part of our public education program could be to demand specificity concerning authors and sources. And to reach Gowan's preferred outcome, one will have to work towards convincing the public to do the hard work of thinking for itself. But perhaps there is hope. I'm writing this less than a week after the release of Independent Counsel Kenneth Starr's report to Congress on the internet. I was interested to see the number of commentary stories concerning the fact that the public had unprecedented access to the source information and did not have to depend on the filtering of the news media to form their views. More views on the topic of data access and expertism are welcome.

CONFLICTS OF INTEREST: Data Ownership and Personal Files
(column 33, Aug. '98)

Peter K.M. Megaw, CPGE-10227, responded to Ted Wilton's earlier comments on this topic, "It seems to me patently obvious that we not only have the right to keep a copy of everything we generate, but we have an obligation to ourselves to do so. Only by keeping a copy of what we produce can we protect ourselves from someone lifting items out of context, deleting data that don't fit the client's objectives, or outright rewriting of our work (easier to do with sophisticated computer gear than we'd like to believe). Knowing that you have an original copy often obviates this problem as potential "editors" know the true version is out there."

"Fundamentally, geologic exploration is a data-based enterprise, with properties attracting attention for different reasons at different times, often decades apart and with the property in varying conditions. Historic data can be tremendously useful and may even save lives if now-concealed hazards exist. It seems extreme to suggest that one eschew use of 'personal-file' data generated 50 years ago when a now-inaccessible mine was last in production—but what about 25 years ago, 10, or 5?—where do we draw the line? Is there a legal statute of limitations that can be applied? It is of course best to establish 'use of data' questions before commencing work. Clients frequently present Work Service Contracts with nebulous Confidentiality language, and it is in our best interests to clarify this as much as possible, in order to limit our liabilities."

AIPG's Policy on the Exercise of Professional Judgment relates to one type of limitation of innovation. New techniques are continually developed and particular situations can render standard ways of doing things inappropriate. However, when a new technique or uncommon way of doing something is used, one's report of such activity should so note along with an explanation of why older methods or common approaches were inapplicable.
bility over time. Data inevitably will leak out, and it is often tempting for the client to believe the worst of an outsider rather than a former employee now working for another company. It also protects us somewhat should one of our own employees depart, illegally taking copies of files with him/her. It thus makes sense to establish a specific time limit. But even when this has elapsed, it is courteous to ask the former client's permission to use the data—if they still exist.

"The question of whether data developed for a particular client is reusable if the client company has disappeared is likely to become an issue for many as the latest downturn in exploration and mining takes its inevitable toll. If there truly is no successor in interest, I would argue that one is free to use the data as one sees fit—although allowing a suitable 'mourning' period might be proper. Unfortunately, this still leaves open the question of how you prove that no successor in interest exists.

"Corollary questions:

1) Do you have the right to use data if the client left you partially unpaid for a job, prior to disappearing or being absorbed into a new company that refuses to acknowledge your invoice?

2) Is it ethical to use data generated for an existing mining company that has been made public by donation of personal files to a manuscript library—if the company involved was not consulted regarding the donation? The question boils down to inheritance of Confidentiality—are we required to have our heirs return our personal files to the companies that paid for them? This would seem both impractical and unlikely to happen—perhaps another reason to back a 'statute of limitations'?

3) What about data in personal files reflecting potentially serious environmental hazards that may have significant public health implications? At what point do these pass from recognition and recommendations made to the client, to matters of public concern if the client has ceased to exist or has clearly chosen not to address the problem?"

Megaw makes some very good points. As the generators of the information in a report, that is the conversion of data into an interpretation, we acquire an ownership interest. Peter H. Dohns, CPG-7141, addressed this issue and made reference to the ASFE Contract Reference Guide, 3rd ed., in column 23 (Oct. '97). Dohns even included a suggested contract paragraph. As for a "legal" statute of limitations when specific contract provisions do not exist, this is a good question for a lawyer. As with most legal questions, the answer probably depends on a number of things, like your legal address and your client's.

I'm struck by Megaw's advocating keeping copies and then his remarks about one's own employees departing with "illegal" copies. If the employee was responsible for part of the work, why shouldn't the employee keep a copy just as the company does? While the specific answer may depend on specific employment contract provisions, the general principle seems to contradict the main position Megaw advocates. Any further thoughts on this issue?

Please contribute your thoughts on Megaw's very good corollary questions. Regarding question 2, suppose that the company makes the donation making the information public and the released information includes a description of a proprietary process you own. What do you do?

As for question 3, the issue of when does one blow the whistle is a sticky one. The AIPG Code of Ethics obligates us to put concern for the public health, safety, and welfare first. This provides an excellent (and unexpected since they were written first) introduction to the next two topics.

What is covered by "Public Welfare"

Canon 2 of the AIPG Code of Ethics states, "Members should uphold the public health, safety, and welfare in the performance of professional services..." The phrase "protection of the public health, safety, and welfare" is part of the justification for licensing laws. Identification of public health and safety issues is easy and the general topic was addressed in "What is covered by Public Health, Safety, and Welfare" in columns 30 (May '98) and 33 (Aug '98). This column specifically asks what is covered by "public welfare"?

The question was prompted by one of the recommendations of the Toronto Stock Exchange/Ontario Securities Commission Mining Standards Task Force in its Interim Report (June 1998). Part 2.3 of the report notes that "welfare" has a broader meaning than either "health" or "safety" although health and safety are included within "welfare." The Task Force specifically recommends, "...that discipline by the recognized professional associations recognize the responsibility of the [professional] by interpreting the term 'public welfare' in the definition of professional misconduct to include financial welfare, so that a member may be disciplined for failure to report a situation that may endanger the financial welfare of the public." Ted Wilton, CPG-7659, made the same point his letter quoted in column 30.

The relevant definition of welfare in The New Shorter Oxford English Dictionary is "Happiness, well-being, good health or fortune (of a person, community, etc.)." Clearly financial welfare is covered by this definition. What other aspects of public welfare can geoscientists in their professional capacity affect (aside from health and safety, which are already covered)? Obviously there are various things we can do as individuals, but the question relates to those things which we can provide because we are geoscientists. Providing the natural resources society needs to function and to make people happy (like the minerals in fireworks, which most people enjoy) occurs to me. What other things can we as professional geoscientists do to promote the public welfare?

Whistle Blowing

"FBI Lab Trumpets Accrediting of its Lab Work" ran the headline in a local paper announcing that the American Society of Crime Lab Directors (ASCLD) has accredited the FBI labs. I mention this news release because column 19 (June '97) featured a topic, "(In)Adequacy of "Government Standards": the FBI Lab as an Example." The FBI Lab hopes that ASCLD accreditation will help erase the reputation for incompetence caused when whistle-blowing scientist Frederick Whitehurst exposed shoddy and deficient work. The ASCLD is described as a national standards board whose membership includes more than 180 state, local, and specialty labs in the U.S. and other countries. I sincerely hope that the

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2. AIPG contributed towards the printing of this edition. Copies may be ordered from Headquarters.
3. The Rocky Mountain News, 9/23/98, p. 41A
FBI Lab has indeed learned from its experience and is again doing good work. I hope ASCLD accreditation really means something. But the pessimist in me, prompted by experience, wonders.

While I believe that organizations like AIPG can be more effective accreditation organizations than most government-sponsored ones, I know from personal experience that both private and government accreditation organizations can fail to deliver on their promises. My involvement with AIPG’s Ethics Committee over the years stems from my belief that professional ethics ought to mean something and that those who fail to practice ethically should be subject to appropriate discipline. Many AIPG members share these views and are willing to devote personal time, effort, unpleasantness, and potential personal risk by bringing complaints or helping to investigate them.

I also wonder what has become of Frederick Whitehurst. Whistle blowing is a risky proposition. It does not make one popular. I’m personally aware of situations in which the individual attempting to blow the whistle was doing so to deflect attention from his own deficiencies rather than to expose a real problem. But there are also times when whistle blowing is indeed needed. More discussion of what those times are have been among the questions asked in this column in the past and in the future. Contribute your thoughts and experiences.

Membership in the 1999 Ethics Committee

It is the time of year when the Institute identifies those who will actively participate in its activities for the coming year. My specific responsibility is the Ethics Committee. Because of various changes in how committees have been organized over the years, various comments received during the past year about the 1998 Ethics Committee, and my experiences in the Committee’s operations, I believe some discussion of the Committee’s organization and operation is needed.

In 1983 when I first served on the Ethics Committee, the President made all the committee assignments personally. I remember calling Larry Woodfork and asking if he would appoint me. Terms were for 3-year periods and were staggered. Now, the President selects committee chairmen, who form their committees and report back to the President for confirmation. There are no fixed terms and no limit to committee size beyond what a committee chairman wants. The 1998 Ethics Committee was both the largest Ethics Committee ever and the largest AIPG committee with 27 members. It was that size because each member asked to join or stay on the committee. If someone is interested in joining the committee, I was happy to have them.

The primary tasks of the ethics committee members are to think about ethics themselves and to contribute their thoughts to their Sections and to AIPG. I’d like them to be regular contributors to this column and several are. Also, as ideas for changes in the Code of Ethics or Disciplinary Procedures are identified and/or initially drafted, committee members are asked to contribute their ideas and comments. After developing a final draft, the ideas are presented to the membership and/or the Executive Committee for action as necessary.

The Ethics Committee as a whole is not involved in individual disciplinary proceedings although individual members of the Ethics Committee may be. This is in keeping with the confidentiality provisions of the Disciplinary Procedures, Section 6.6.

During 1998, I have actively participated in several committees that conducted their business via e-mail. Use of e-mail is a fast, cheap, and easy way for people located all over the world to keep in touch and exchange ideas. Compared with generating lots of copies, printing envelope labels, figuring out the postage, etc. e-mail is much preferable—particularly for those, like me, who have no secretary. E-mail also beats fax machines in cost and convenience. Those of you who do not have automatically answering fax reception can be a real pain to reach. The National Executive Committee has found e-mail an extremely useful means of communicating and conducting business. In short, in the future, I want to use e-mail as the primary means of communication within the Ethics Committee.

In summary, if you are interested in participating in the 1999 Ethics Committee send me an e-mail at DMAgeol@aol.com. As noted above, I’m looking for those who want to contribute to their own and the Institute’s professional ethics education.

IN MEMORY

Richard M. Berry, CPG-00616,
Downers Grove, Illinois
Keith Frye, CPG-09341,
Tyro, Virginia
Robert T. Parks, CPG-04730,
Toronto, Ontario, Canada
James L. Williamson, CPG-07964,
Norman, Oklahoma
Bisby H. Wierick, Jr., CPG-03063,
Huntsville, Texas

Keith Frye, CPG-09341 died quietly at 5:30 PM on August 4, 1998, at his home in Tyro, Virginia. Keith was well-known as the author of Roadside Geology of Virginia; he had a unique ability to relate geologic ideas to the professional geologist as well as the general public as he demonstrated in that book. He was a well-respected and popular professor of geology at Old Dominion University (ODU) teaching structural geology. When I started graduate school at ODU, Keith had just retired from teaching so I did not have the opportunity to take any classes from him. I do, however, remember the high regard in which he was held by all his former students. Colorful stories were frequently told about his frenzied and enlightening field trips into the mountains of Virginia, including the obligatory late night talks around the campfire. I got to know Keith over the last few years at the Section meetings that he attended. In many ways he lived up to all the stories I had heard.

Mike Lawless, CPG-09224
We live in an amazing country. It is not only a healthy democracy, but also a place where we can practice the true sharing of technology in both the professional and community arenas. We, as professional geologists, are privileged to have earned our education and expertise in natural resources management, and we continue to grow in knowledge and experience the more we apply what we know. Many of us have depth and breadth of perspectives that assist our customers, clients, and professional teams in our careers. What we also must remember is that we have a responsibility to share what we know, not only with paying customers, but also with our community at large, the place where we live.

Community is defined as a group of people living together as a smaller social unit within a larger one. It can be as large as the earth itself, or as small as our own kitchen table. As responsible participants in our America, we need to actively participate in our community by offering our knowledge to assist in wise resources management. We may be asked to provide volunteer services without monetary compensation, but the rewards can be immense and the value of our input may be appreciated for years to come. The benefits to our neighbors may be priceless if it helps to keep or improve the quality of life for the present and long into the future.

Many wise stewards came before us, and hopefully, many will continue to serve the public for centuries. Two of my favorite community participants were John Muir who helped in the formation of Yosemite National Park, and John D. Rockefeller, Jr., who assisted in founding Yellowstone National Park. Both men recognized that open space must be captured for all time, for all people to share. Our actions need not be so grand as theirs, for we can participate as much as we can arrange in our busy lives, and as close to home as we need our activities to be. I spoke with several geologists here in the Anchorage area. Some examples of stewardship activities in which our local geologists are participants are these:

They provide local community councils with technical advice for evaluating zoning, platting, water, sewer, seismic risk evaluations and land use planning.

They act as advisors for technical matters and for the economic feasibility review for the Municipality of Anchorage on geotechnical standards and policies for infrastructure and facilities maintenance.

They volunteer to write and evaluate regulations for protection of the environment as members of technical work groups.

They provide technical input for long range planning for city, as well as neighborhood master planning.

They participate in citizen groups for monitoring the health of our natural environment. An example is the organization of the Cook Inlet Keepers. Professional geologists and water resources managers organize volunteer groups of students and adults to collect water quality samples to monitor the health of the tributaries and the receiving waters of Cook Inlet in the vicinity of Homer, Alaska.

They present technical and informative seminars in our local, State and National Parks. This can be fun along a hike or out-of doors where you can see and experience your topics of interest.

They conduct career counseling to students who are pursuing related careers in geology and engineering.

They serve as science fair judges for exhibits prepared by all age groups of school children. This encourages young minds to be inquisitive about their roles as community stewards and science professionals.

They teach classes in their fields of expertise to children in schools, seminars, Girl Scout and Boy Scout meetings, and 4-H clubs. Teaching is also presented to adults needing technical perspectives which apply to their careers and to land use practices.

They author articles used in community newsletters which present technical information in language that a layperson can understand.

They actively support local businesses that provide services in recycling and re-use of products, and

They serve as local government leaders and incorporate their expertise into the knowledge base of decision makers for their community.

The Alaska Section is hosting the AIPG Annual Meeting in October, 1999. As part of the activities, we plan to conduct an awareness seminar to discuss geologic hazards as it relates to wise land use. We intend to offer the seminar to persons who work in real estate, banking, insurance, development and government. We will incorporate the AIPG publication "The Citizens' Guide to Geological Hazards", and will provide technical interpretations for wise land use planning. The Anchorage area is known for its seismic and earthquake risks, and the terrain and relief many times requires use of slope stability evaluations and special foundation considerations. Many areas throughout the State of Alaska also require special geologic assessment in order to support human population development. You are welcome to join us in Anchorage for a rich program in technical information sharing and related field adventures in the greater Anchorage area for the week of October 4 – 8, 1999!

Our American democracy allows us to live in a world of many choices. Let us hope that you also choose to live up to your responsibility as natural resource stewards, and that you share what you know to your community. You may be surprised that you not only help in the world of the present, but that you will also most definitely touch the future, a future of which you can be very proud.
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Dec. 13-16, NGWA 50th National Convention and Exposition, Las Vegas, NV. Contact: NGWA, 601 Dempsey Rd., Westerville, OH 43081, Ph.: (614) 886-7791, e-mail: ngwa@ngwa.org, www.ngwa.org

1999

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Feb. 4-7. The Petroleum Landman's Association of New Orleans (PLANO), Tenth Annual Oil and Gas Seminar, Beaver Creek, CO. Contact: David W. Rusch, Suite 203, 1725 West Causeway Approach, Mandeville, LA 70471, Ph.: (504) 626-6494.

Feb. 22-26, 1999 IECA Annual Conference and Trade Exposition will Highlight Payoffs from Investing in Erosion Control. Nashville, TN. Contact: IECA, P.O. Box 774904, Steamboat Springs, CO 80477-4904, Ph.: (970) 719-8563, ecinfo@ieca.org, http://www.ieca.org

Feb. 7-10, International Society of Explosives Engineers 25th Annual Conference, Nashville, TN. Contact: ISEE, 29100 Aurora Road, Cleveland, OH 44139, Ph.: (440) 349-4004, http://www.isee.org


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October 11-15, 2000 Milwaukee, Wisconsin

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| EDUCATION: | 36 semester or 54 quarter hours in geological sciences* with a baccalaureate or higher degree; certified copy of official transcripts must be sent by each college or university |
| EXPIENCE: | 8 years beyond bachelor’s degree, or 7 years beyond master’s degree, or 5 years beyond doctorate |
| SPONSORS: | 3 required from professional geologists, 2 of whom must be CPG’s (see Section 2.2.1.4 of the Bylaws for exceptions) |
| CERTIFICATION/REGISTRATION: | None required |
| SCREENING: | Section and National |
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| ANNUAL DUES: | $110 plus Section dues; both pro-rated for remainder of year when accepted |

#### MEMBERS

| EDUCATION: | 30 semester or 45 quarter hours in geological sciences* with a baccalaureate or higher degree; certified copy of official transcripts must be sent by each college or university |
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| CERTIFICATION/REGISTRATION: | None required |
| SCREENING: | Section and National |
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| ANNUAL DUES: | $60 plus Section dues; both pro-rated for remainder of year when accepted |

#### REGISTERED MEMBER

| EDUCATION: | 30 semester or 45 quarter hours in geological sciences* with a baccalaureate or higher degree; certified copy of official transcripts are required for this application if they are not required by the state for registration/certification/licensure |
| EXPERIENCE: | No proof required |
| SPONSORS: | 2 required from professional geologists, one of whom must be a CPG, Registered Member or Member; sponsor letters in state registration application may serve as sponsor statements if approved by Executive Committee |
| CERTIFICATION/REGISTRATION: | Proof of current registration/licensure/certification must be submitted with application and with annual renewals and must include expiration date |
| SCREENING: | National |
| APPLICATION FEE: | $30 |
| ANNUAL DUES: | $60 plus Section dues; both pro-rated for remainder of year when accepted |

#### STUDENT

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| EXPERIENCE: | None required |
| SPONSOR: | 1 letter from geological science faculty member |
| CERTIFICATION/REGISTRATION: | None required |
| SCREENING: | Headquarters can approve |
| APPLICATION FEE: | $5 |
| ANNUAL DUES: | $15 |

#### ASSOCIATE

| EDUCATION: | None required |
| EXPERIENCE: | None required |
| SPONSORS: | 1 CPG, Registered Member or Member |
| CERTIFICATION/REGISTRATION: | None required |
| SCREENING: | Headquarters can approve |
| APPLICATION FEE: | $5 |
| ANNUAL DUES: | $50 plus Section dues; both pro-rated for remainder of year when accepted |

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*As defined by the American Geological Institute, a geological science is any of the subdisciplinary specialties that are part of the science of geology, e.g., geophysics, geochemistry, paleontology, petrology, etc.

Note to those who received their degrees from non-U.S./Canadian universities. If you received a degree from a university or college outside the U.S. or Canada, and the school is unable to provide an acceptable transcript, you must submit a copy of your diploma and a list of courses taken. The Screening Committee may ask you to provide additional information or an equivalency evaluation, at your expense.
Applicants for certification must meet AIPG's standards as set forth in its Bylaws on education, experience, competence, and personal integrity. If any Member or board has any factual information as to any applicant's qualifications in regard to these standards, whether that information might be positive or negative, please mail that information to Headquarters within thirty (30) days. This information will be circulated only so far as necessary to process and make decisions on the applications. Negative information regarding an applicant's qualifications must be specific and supportable, persons who provide information that leads to an application's rejection may be called as a witness in any resulting appeal action.

Applicants for Certified Professional Geologist

NV-Koutz, Fleetwood R.
4751 Amber Hill Ln., Reno NV 89503-9401.

OH-Mullen, Kimberly A.
6168 Silverdale Dr., Columbus, OH 43230.

TX-Swingholm, Susan S.
4807 Wedgewood Dr., Bellaire TX 77401.
Sponsors: Lynn Tatsis, P. Steve Peterson, Mark Mitranga.

NM-Walker, Jeffrey L.
11105 Kielch Ave, NE, Albuquerque NM 87111.
Sponsors: C. Tyler Irwin, Patricia Dentler, Baird Swanson.

Applicants for Registered Member

LA-Coleman, Alecia A.
P.O. Box 12719, Lake Charles, LA 70612-2719.

Sponsors: Sue Tituskin, Michael Allen.

Member

NJ-Futternecht, Peter M.
2014 Ingalls Ave., Linden NJ 07036.

AZ-Grivovis, Michael R.
3027 S. Easthaven Ave., Mesa AZ 85210.
Sponsors: Robert Oldfield, Ray Grant.

MI-Kesi, Amanda J.
31380 Tamarack #310, Wixom MI 48393.

LA-Rougon, Teresa H.
7844 Barbara Cohn PI., Baton Rouge LA 70811.
Sponsors: Steven Whitting, Mike Kline.

MO-Taylor, Kara M.
10551 Lake Dr., Independence MO 64053.
Sponsors: Phil Dula, Bob Overfelt.

New Certified Professional Geologists

FL-Clem, K.V.
CPG-10343
5408 Highlands Vista Circle, Lakeland FL 33813.
(813) 886-9071.

NY-Hilton, John P.
CPG-10357
Malcolm Pirnie, Inc., 40 Centre Dr., Buffalo NY 14218.
(716) 667-0000.

PA-Kert, Steven B.
CPG-10352
110 Paula Dr., Aliquippa PA 15001.
(412) 552-1770.

CT-Lewis, Ralph S.
CPG-10353
P.O. Box 147, Hadley CT 06433-0147.
(860) 424-3540.

OH-Muller, Albert J.
CPG-10344
11799 Gridled Rd., Concord OH 44077.
(216) 606-5442.

NJ-Trione, Charles W.
CPG-10355
26 Vredeland Ave., Boonton NJ 07003.
(973) 320-4700.

NY-Weaechter, John W.
CPG-10346
41 Homestead Ave., Albany NY 12203.
(518) 370-5631.

New Members

CO-Chaple, Thomas A.
MEM-0008
375 E. Horsetooth Rd., Bldg. 3 #201, Fort Collins CO 80525.
(970) 239-2023.

CO-Ken, Gustav J.
MEM-0009
4700 W. 30th Ave., Denver CO 80212.
(303) 930-4022.

CO-Mock, Stuart R.
MEM-0010
2280 1st Ave, #71, Greeley CO 80831.
(303) 759-9733.

New Student Adjuncts

NJ-Malaniak, Charles E.
SA-0120
5 Shippin Ridge, Oxford NJ 07863.
(908) 852-4865.

MN-Pellowski, Christopher J.
SA-0119
516 Elmstead St., Winona MN 55967.

What AIPG does.....

Professional Certification

Certifies geologists based on their competence, integrity, ethics, academic training and work experience.

Lobbying

Presents testimony and position papers to federal and state legislators and agencies on matters affecting geologists, the importance of geology and geologists' employment opportunities.

Ombudsman

Intervenes with regulatory boards and agencies on behalf of individual geologists, at the geologist's request.

Publications


Insurance

Provides access to liability insurance for errors and omissions, designed specifically for geologists, and a full line of health, life and accident insurance.

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Through agreements with professional geologic societies in other countries (The Geological Society of London, European Federal of Geologists, and Irish Association for Economic Geology), provides access for its Members to professional registration, certification, or chartered status in those countries.
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Near Anchorage, Alaska
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www.aipgak.org

For more information contact:
AIPG Section President
Marilyn Piltnik, C.P.G.
Voice message: 907-349-5531
Phone: 907-563-2890

Cruise to Alaska
(Pending)

The meeting will be held at the
Alyeska Prince Hotel
a world class mountain resort about
40 miles south of Anchorage near
Portage Glacier.