

Implications of Research Policies in the Biology Resources Discipline of USGS: A Fact Sheet

What areas of research are at risk?

Science projects less likely to be funded would include all projects requiring long-term data sets to resolve basic information needs about biological systems. In addition, many science functions are dependent upon support such as laboratory operations, libraries, and museums. Professionals maintaining these latter functions to support science have no option for generating their salary from outside an agency. Thus, such functions must also be supported by the scientists themselves or will become increasingly less available to the conduct of science. When unavailable, the scientists' ability to be successful in both her/his OPM-defined Research Grade position that mandates science productivity and her/his conflicting USGS guidance to attract outside funding is compromised severely.

Requiring scientists to generate salary in support of management compromises all 'types' of science, professional development of all scientists within the agency, and the professional credibility of science within an agency.

One of the degrading realities of the research budget situation as the operation changed from USFWS/NPS to National Biological Survey then to USGS is the transition from large programmatic funding to smaller and smaller increments of funding, whether those are cyclical funds administered from within the agency or reimbursable funds from other agencies. The move to try and force BRD scientists to recover 20% or more of their salary from outside agencies is just another insidious step in this direction.

As the agency moves more and more towards the small increment funding mentality, especially with requirements to incorporate salary in funding requests for other agencies, **BRD is forced to only address the "brush fire" of the day** (specific agency management problems) and spend less time addressing more fundamental, strategic ecological research that would have bigger payoffs in the future. Large programmatic funding allowed BRD to research better ways of thinking about how animals respond to changes in their environment and provide operational needs. The combination of researching new approaches to resource protection and providing operational needs can't be accomplished by university researchers working on shorter funding cycles with an emphasis on peer-reviewed publications. Nor will it likely continue to be done by BRD if its scientists have to recover their salaries from outside entities.

Another consequence of the move to smaller funding increments is that there is actually less money available to fund university research that is tied to USGS-BRD research.

Are there any examples of "orphaned" science as a result of recent management decisions?

In broader terms, 'basic' science about ecosystem function and environmental health will be impossible since funding sources almost always are interested in resolution of political conflicts. Agencies operate to resolve political crises to land management. Industry wants technical solutions to promote economic development. USGS scientists are now being directed to focus on such short-term information fixes at the expense of monitoring the ecological health of ecosystems. It follows that a government scientist who contracts with a private industry group, or another Interior agency subject to private industry vigilance, will be pressured to provide results favorable to that sector's economic progress or risk losing future funding, including his/her own salary.

Why are USGS scientists different from scientists in academia who have to find funding for their projects?

Science influenced by special interests is exactly what government science is supposed to avoid. In fact, it is illegal for a government scientist to be employed by a private sector client with interests in the resource that the scientist was addressing in her/his government position for one year post-government service.

Government science is conducted in two ways: through competitive funding to advance basic knowledge and within respective agencies to meet agency information needs. The former is exemplified by NIH and NSF. There, government funds are awarded competitively and scientific credibility is secured through the peer-review process in journals published by professional societies. In contrast, agency scientists receive direct research funding from Congress to conduct basic research. Government scientists are precluded from competitively applying for funding from NIH and NSF because such would be considered a violation of *congressional intent*.

What USGS is doing is shifting its scientists into consulting professionals to support management. **This shift compromises the "independence-from-influence" of government science.** It is also a direct violation of OPM guidelines for the employees' position descriptions and the agency's research-grade evaluation procedures. Allocating a portion of a scientist's FTE to generating salary is at odds with the Research Grade Evaluation process that rewards only scientific, peer-reviewed productivity. Unlike academic scientists or agency management, government scientists can be demoted if scientific productivity declines. Thus, USGS is currently directing scientists to support management at the expense of the scientist's potential for either maintaining or increasing salary.

Per OPM guidelines, government scientists have a set salary and are monitored for ethical behavior specifically to preclude private-sector influence. Government scientists work totally for the interests of the American public at the direction of Congress and approval of the President. A government scientist operates under ethical scrutiny at levels from

the immediate supervisor through the Ethics Office of her/his agency and the Inspector General's Office of the Department.

The final salient point is that academic scientists are not *directed* to generate salary and *are rewarded with salary increases* when they do.

Why is science in trouble at BRD?

An institution such as USGS holding all of its directed research funding in management while telling its scientists to generate their own salaries and operational funds constitutes blatant defiance of congressional intent. Ultimately, **the agency is on the path to becoming a bureaucracy with no science capability.**

Biological research supervisors historically were research biologists who moved into management. Now, supervisors are increasingly geologists, hydrologists, mappers, and professional managers who do not understand the biological research process and are only interested in covering salary shortfalls created by burgeoning levels of management at headquarters and throughout the agency. Field research is a creative and passionate career commitment. Field research is managed by securing a creative work environment and enabling scientists to pursue knowledge.

Government research funding is supposed to flow from the top (Congress) through management to the scientific level. Under the current management paradigm at USGS, **Congressionally intended research dollars stop at the management level and scientists are being told to support management from the bottom-up,** resulting in a cash-flow to management down-from-above and up-from-below.

It is the current threat of annual assignment/supervision of research, introduced at several BRD Science Centers, that seems in direct conflict with OPM regulations. Whereas creative scientists often attract outside funding in support of their Position Description to the benefit of management, management instructing scientists to generate their salary (at any level) or be assigned to work as technicians in support of another scientist's program conflicts with OPM-defined guidance for scientists hired within a research position.

Directing scientists to generate salary not only **creates a work environment that can compromise the objectivity of science** but also switches a scientist's creativity from the pursuit of knowledge to the pursuit of economic reward/survival. If a scientist has to generate salary, he/she should be able to set it. Such is the private-sector model that is subject to private interests. This is exactly the model that is precluded as unethical in the founding justification for internal government science.

Science at BRD is threatened by increased power and control exercised by agency officials over all its research and researchers, however funded. Under the guise of security and meeting mission priorities, heavy top-down direction of research really is more meant to preclude research that may lead away from management and

administrative mandates such as less regulated economic development policies. The current administration is adopting a business model: any business can (and for competitive viability, *must*) set its own narrow objectives and require all elements of its organization to advance those objectives. Independent science needs the freedom, not only to objectively conduct and report its research findings, but also to *objectively choose the research topic*. Economic markets, even when operating in the public sector, need the independence to direct research dollars from funders to the scientific research of greatest interest.

Under newly instituted science management in segments of BRD, science managers (branch chiefs) not only allocate base funds according to research topics and researchers that meet their personal or upper-management priorities, but they also have complete discretion as to the level of overhead they will charge on soft money brought in by the scientists in their branch. Worse, managers can divert money, at their discretion, away from the project that attracts the money to any other project or person preferred by the managers. In that way, **important research questions can be modified or screened out if they might lead to answers that do not support the preferred policy objectives** of any manager in the supervisory chain. Money could be taken from one source, and large portions of it diverted to research work different from, or even opposite to, the purpose for which the money was contributed.

The most important question really is not whether USGS researchers can or should recover some of their salary from reimbursable funds from outside agencies. The important question is why has USGS come to such a dire budget situation necessitating researcher to recover their salaries? The principle reason is that USGS has an excessively large, ineffective administrative staff that contributes little to successful initiation and completion of science projects. Even the current acting director of USGS, Patrick Leahy, acknowledged to USGS staff in a July 2005 meeting that the USGS administration and management was probably twice the size it needed to be for the number of scientists actually conducting work.

However, rather than eliminating management and administrative positions to deal with this reality, USGS-BRD would rather try and force their scientists to obtain additional outside funds so that management can continue on their merry way. USGS management seems especially reluctant to ever admit that they've made mistakes or that there is anything wrong with the way they function. But poor management is the number one problem at USGS-BRD these days. And the scientists are supposed to obtain outside funding for their salaries to help support this large, ineffective body of managers who are not expected to fund any of their salary. **Since the primary motivation of USGS management is survival at any cost, they have little concern with the substance of the research conducted by BRD scientists.** Instead, they are only concerned that it generates some revenue to support management. This is a very sad, demoralizing work climate for so many dedicated professional staff at the agency.