OFFICE OF SCIENCE AND TECHNOLOGY POLICY

# Compilation of E-Mailed Comments for Public Access Policy Forum

## Part 2

Compiled on February 1st 2010

Thank you for the opportunity to comment briefly on this public access policy forum. I wish to echo the comments of my counterpart at the American Anthropological Association, since the American Statistical Association (ASA) was also a part of the NHA study on financing scholarly journal publications (see http://www.nhalliance.org/bm~doc/hssreport.pdf <https://exchange.amstat.org/exchweb/bin/redir.asp?URL=http://www.nhalliance.org/bm~doc/hssreport.pdf> ). While access to research is clearly important, a mandate to federal agencies that fund research to provide free access to journal articles published by scholarly societies like the ASA will have unintended consequences to the authors and readers of these journals, and to the ability of scholarly societies to sustain their publications programs.

Scholarly societies would be set back severely by such a mandate due to loss of the subscription revenue that makes it possible to operate these journals. We already offer these journals to libraries at relatively minimal cost because much of the labor is done by volunteer editors and reviewers. However, there are still basic production costs, and if the revenue to cover these costs is eliminated, we're faced with finding other revenue sources. Good alternatives have yet to be discovered. As the aforementioned study notes, shifting the cost to authors is not feasible, and places a significant obstacle to publication for many authors.

Scholarly societies are not enriching themselves at the expense of providing access to researchers. We ask for caution in rushing to mandate free access. We applaud the spirit of the proposal, but the reality of it may be to put scholarly society publishers out of business, an outcome from which no one benefits.

Ron Wasserstein
Executive Director
American Statistical Association

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The American Association of Physics Teachers (AAPT) supports President Obama's call for an "unprecedented level of openness in government," and we are grateful for the opportunity to submit comments to help guide policy making regarding public access to scholarly publications resulting from research funded by agencies of the United States government.

AAPT is a professional society with about 10,000 members, a vast majority of whom reside in the United States. AAPT publishes two scholarly journals: The American Journal of Physics and The Physics Teacher, both of which a re peer-reviewed archival publications and are broadly considered to be among the leading physics education journals in the world. As with many scholarly organizations engaged in publishing, AAPT holds the position that scholarly publishers add significant value to research manuscripts through by managing the peer-review process, by maintaining in perpetuity the archival version of record, and by leveraging state-of-the-art technology to make journal articles accessible and creatively usable tools for advancing

knowledge. And, like many in the scholarly publishing industry, AAPT has a long-term fiduciary interest in the scholarly and business integrity of its publications, as a service to our members and to the broader society.

With regard to OSTP's interest in developing policies related to public access, AAPT welcomes the January 12, 2010 publication of the "Report and Recommendations from the Scholarly Publishing Roundtable," (the Report) See:
http://www.aau.edu/policy/scholarly_publishing_roundtable.aspx?id=6894

AAPT thanks the Committee on Science and Technology of the United States House of Representatives and OSTP for convening the Scholarly Publishing Roundtable. AAPT endorses the Shared Principles and Recommendations of the Report. AAPT also feels that the Report adequately addresses the nine questions posed in OSTP's Invitation to Comment. Furthermore, AAPT encourages OSTP and the many stakeholders engaged in the public access issue to use the Report as a starting place for carefully and responsibly developing policies that maximize public access and opportunities for creative uses of research publications. Any new policies should also explicitly promote the entrepreneurial role played by scholarly publishers in sustaining the peer-review process, in pushing the state-of-art in access and use technologies, and in stewarding in perpetuity publishers' intellectual property. AAPT would welcome the opportunity and is prepared to work with OSTP to develop public access policies that adhere to the principles in the Report and which are further delineated above.

Philip W. Hammer, PhD
Associate Executive Officer
AAPT -- Physics Education

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I attach BioMed Central's comments in response to the OSTP's request for contributions to its Policy Forum on Public Access to Federally Funded Research. We welcome the opportunity to contribute to this important debate, and we look forward with great interest to future developments in this area.

Yours faithfully,
Matthew Cockerill, Ph.D.
Managing Director
BioMed Central

**BioMed Central's comments in response to the US Office of Science and Technology Policy request for contributions to its Policy Forum on Public Access to Federally Funded Research**

BioMed Central operates a commercially viable business as an open access publisher. Under our publishing model, the costs associated with research publication are covered by open access publication fees rather than by subscription revenue. We now publish over 200 online journals operating on this model. These journals go from strength to strength, and are highly ranked by

journal citation metrics such as Impact Factor. Open access journals such as *Genome Biology*, *Malaria Journal* and *BMC Systems Biology*, to name just a few, are among the most highly-ranked journals in their respective fields.

The success of BioMed Central's open access journals provides important evidence that immediate open access to the official and authoritative version of published research results is not only desirable but is also achievable and sustainable.

The success of the open access model is especially notable given that, until recently, in contrast to the substantial library budgets devoted to subscriptions to serials, there has been little funding explicitly allocated by academic institutions to cover open access publication fees. Authors have therefore had to make direct use of their research grant funding in order to publish in open access journals. The Compact for Open Access Publishing Equity is an important recent initiative, involving Harvard and other leading research universities, which seeks to address this disparity by providing central institutional funding support for open access journals. This can be expected to add to the already considerable momentum driving the growth of the open access publishing model.

BioMed Central supports both the goal of open access and the goal of ensuring that the value added by publishers is properly recompensed. In contrast to some of the contributors, we do not feel there is a need to 'balance' these two goals as we do not feel that they are in opposition.

As noted by other participants in this debate, the benefits resulting to the scientific community from open access to research are substantial. What may be less obvious is that open access need not threaten the role of STM publishers. The open access publishing model, in which publishers are paid directly for the service of publication, is proving in practice to be just as viable a business model than as the traditional model whereby publishers recover the costs associated with publication by taking exclusive rights and then selling access via subscriptions.

Given that there is a viable business model for publishing scholarly research that does not depend on restricting access, we do not feel that the US government needs to arbitrarily limit the extent and reach of its open access deposit requirements attached to its research funding. We therefore recommend that the mandatory Public Access Policy which has operated successfully with respect to National Institutes of Health funding since 2008, be extended to cover all federally funded research. We also recommend that consideration is given, over time, to reducing or eliminating the 12 month embargo period, because this embargo period covers the very period during which the results of research are most timely and valuable. Gradual reduction of the embargo period would provide a natural mechanism to encourage publishers to adopt business models compatible with open access, while avoiding disruptive upheaval.

**About BioMed Central**

BioMed Central (www.biomedcentral.com) is the world's largest open access scientific, technical, and medical (STM) publisher. All research articles published by BioMed Central are peer reviewed and are made freely and permanently accessible online upon acceptance. In 2009, biomedical scientists from across the globe submitted over 29,000 research papers to BioMed Central's 205 journals, a 30% increase over 2008.

Research articles published in BioMed Central's journals are universally and freely accessible via the Internet without charge or any other barrier to access; articles are immediately deposited and permanently archived in multiple international archives (including PubMed Central) and authors retain copyright of their article, which can be freely distributed and reused under a Creative Commons as long as correct attribution is given.

Like many other open access publishers, BioMed Central's business model is based on charging for the service that we provide. An article processing charge, levied at publication, covers the cost of publishing the article, including providing editorial tools, administering the peer review process, preparing the article for publication and developing and maintaining the journal website. As can be seen from the increase of submissions to open access journals year on year, a growing number of researchers are taking advantage of the funds available from funding bodies and institutions which are set aside to pay article processing charges. BioMed Central also operates a waiver policy to ensure that article processing charges are not an obstacle to publication for authors without sufficient funding. BioMed Central is a founding member of OASPA, the Open Access Scholarly Publishers Association, which seeks to represent the growing number of open access publishers, and to encourage best practices amongst open access publishers.

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perpetuity the archival version of record, and by leveraging state-of-the-art technology to make journal articles accessible and creatively usable tools for advancing knowledge. And, like many in the scholarly publishing industry, AAPT has a long-term fiduciary interest in the scholarly and business integrity of its publications, as a service to our members and to the broader society.

With regard to OSTP's interest in developing policies related to public access, AAPT welcomes the January 12, 2010 publication of the "Report and Recommendations from the Scholarly Publishing Roundtable," (the Report)
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adequately addresses the nine questions posed in OSTP's Invitation to Comment. Furthermore, AAPT encourages OSTP and the many stakeholders engaged in the public access issue to use the Report as a starting place for carefully and responsibly developing policies that maximize public access and opportunities for creative uses of research publications. Any new policies should also explicitly promote the entrepreneurial role played by scholarly publishers in sustaining the peer-review process, in pushing the state-of-art in access and use technologies, and in stewarding in perpetuity publishers' intellectual property. AAPT would welcome the opportunity and is prepared to work with OSTP to develop public access policies that adhere to the principles in the Report and which are further delineated above.

Philip W. Hammer, PhD
Associate Executive Officer
AAPT -- Physics Education

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We write in strong support of expanding open access to federally funded research. As library administrators at the University of North Carolina at Chapel Hill, we observe daily the critical role that open transmission of scientific discovery plays in advancing knowledge. We observe, as well, the impediments that subscription barriers and publication embargos place in the path of both researchers and members of the general public. We look to the experience of the NIH Public Access Policy as demonstration that open access to federally funded research can be successful, and as a possible model for an expanded open access program. As of Jan. 19, 2010, PubMed Central has 1,416 manuscripts deposited by NIH-funded UNC-Chapel Hill researchers demonstrating their compliance with the policy and their contribution to this important national resource.

We support the statements of the Association of Research Libraries and the American Library Association/Association of College and Research Libraries with regard to this issue. Like those associations, we strongly recommend that an open access deposit program be mandatory for federally funded research; that it apply to all federal agencies; that the system provide access in the minimum practicable time to, preferably, the final draft of peer-reviewed published results; and that it grant full use rights to researchers. We urge that the deposit system be as easy as possible to access and use, and that it provide permanent archiving of its contents.

Expanding access to federally funded research will stimulate scientific enterprise generally and will further the very particular responsibility of public research institutions and research libraries to advance knowledge and serve the public good. It will also provide an important measure of transparency and accountability to taxpayers, who will be able to benefit more directly from the investment they have made in research. Thank you for this opportunity to comment.

Sincerely,
Sarah C. Michalak Carol Jenkins
University Librarian and Director of the Health Sciences Library
Associate Provost for University Libraries

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We fund basic research publicly for a reason: the knowledge created using our tax dollars is a public good. For that good to be fairly and fruitfully distributed, we need the results to be available to the public. I am a librarian working at a small college where student/faculty research collaboration is important - an important part of learning, but also a contribution to science. The research becomes part of what we know about the world, and many of our students go on to become scientists. PubMedCentral has been a wonderful resource for us, but we also rely on the kindness of bigger (tax-funded) libraries, interlibrary loan, and copyright fees to scrabble together the research our students and faculty need. I understand the concerns of societies who have relied on library subscriptions to fund their operations, but that model is broken. We have to find a new revenue model - researchers, societies, libraries, and university presses working together. But meanwhile, extending the vision that the NIH had to other tax-supported research is an important step toward a better, more fair, and sustainable future.

Thank you for inviting our comments and for making this process so open and transparent.

Barbara Fister
Gustavus Adolphus College

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On behalf of the public and private academic and research libraries of New York assembled in the New York State Higher Education Initiative (NYSHEI), I write to urge you to promote public access to research funding by the public's dollars. Currently the National Institute for the Humanities (NIH) has in place a policy of aggregating research literature accepted for publication in peer-reviewed journals. NYSHEI supports the NIH approach and believes it could serve as a model for all publicly-funded research.

The members of NYSHEI, ranging from nationally preeminent research universities to local community colleges, all believe in maintaining the greatest level of access to knowledge. For two reasons in particular should OSTP promote access to information resources. In the first place, the public has a right to access and examine the research funded by their tax dollars. Though it may be philosophical, this point must be emphasized.

Of nearly equal importance is the fact that we live in an information age. In promoting access to the critical resource of information we spur competition, innovation, discovery and excellence. In the economy of the twenty-first century, access to knowledge will separate success from failure. Our communities and our nation should be denied no requisite tool - particularly one already paid for.

Therefore, NYSHEI urges you to support the following policy goals:
* Articles and other information resources made possible from federal funds should e freely accessible as quickly as possible.
* All federal agencies and departments should be required to grant public access to the finished results of federally funded research.

* Access to such research should be permanent and digital, thus removing the obstacles of time and space.
* Publications should be maintained in commonly used and widely available formats.

Thank you for encouraging input on this important matter.

Respectfully,
Jason Kramer
Executive Director
New York State Higher Education Initiative

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Attached are comments from the Copyright Alliance in response to the Request for Public Comment by the Office of Science and Technology Policy on public access policies for science and technology funding agencies across the federal government. Let me know if you have any questions, and if possible, confirm receipt. Thanks.

Regards,
Patrick Ross

This letter responds to the Request for Public Comment by the Office of Science and Technology Policy on public access policies for science and technology funding agencies across the federal government. The Copyright Alliance supports the goal of ensuring public access to information, such as data and technical reports that result from scientific research supported by the federal government. However, writings such as journal articles that report on government-funded research but are the outputs of publishers do not fall into that category. Copyrighted works resulting from private sector investments and not directly funded by government should not be redistributed by government agencies without the authorization of the copyright owners. The Copyright Alliance believes copyright law has been a strong driver of scientific research through the important role of scientific, technical and medical publishers. The Copyright Alliance also notes that if federal policymakers wish to alter the rights of copyright owners, it is typical to do so by amending the appropriate copyright statutes, not through executive action. Imposing a requirement that scientific, technical and medical publishers surrender works they have peer reviewed and published, so that they then at a certain time can be posted on a government web site at no cost to the general public or reimbursement to the publisher, infringes on the publishers' copyrights, in particular their rights to reproduction and distribution.

OSTP should be aware that this very issue is being examined in the 111th Congress. House Judiciary Committee Chairman John Conyers, Jr., has introduced HR-801, the Fair Copyright in Research Works Act. The legislation would support public access to results of research funded by the federal government, but would respect the rights of copyright owners in their works about such research in which they have invested. The Chairman has eloquently stated how his legislation supports scientific research and information dissemination:

> "This bill will help restore the overall IP policy that was in place since the Bayh-Dole Act, Stevenson-Wydler, and the Copyright Statute were enacted. The congressional debates on these laws back then are equally relevant today. We expressly gave our Nation's scientists broad intellectual property rights in government-funded science to incentivize the advancement and dissemination of science and to allow for public private partnerships."

The Copyright Alliance supports OSTP's mission to promote a more educated and informed public while at the same time promoting continued cutting-edge research in the U.S. scientific community. We feel that these goals are not incompatible with the maintenance of the rights of copyright owners, and that changes to a copyright owner's rights are best pursued through amending copyright law.

Thank you for your attention,
Patrick Ross
Executive Director
Copyright Alliance

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Dear Sir/Madam,

As a scientist working in the field of disease surveillance, I strongly support the efforts to ensure that all federally funded research is available through open access from the day that it is published. That will greatly speed up the development of scientific research. Specifically, it will expand the number of researchers that can follow and participate in fast moving cutting-edge scientific developments, by including those working in small institutions that cannot afford to subscribe to the large number of very expensive scientific journals.

Most Sincerely Yours,
Martin Kulldorff, Associate Professor, Biostatistician
Department of Population Medicine
Harvard Medical School and Harvard Pilgrim Health Care Institute

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Public Knowledge (PK) is pleased that the administration is considering adopting a government-wide policy that will ensure that the public has access to research it funds. As an organization dedicated to promoting a balanced information policy that promotes the public interest, PK has long argued that publicly funded research should be freely available. Such a policy will promote progress by ensuring the wide dissemination of knowledge, and provide for the greatest return on federal research investment. In these brief comments, PK offers its perspective.

**The Public Interest is Paramount**

The Notice asks what characteristics of a public access policy would accommodate the

needs and interests of a variety of stakeholders (Question 2). The administration and agencies will best meet these various goals by ensuring that the policies adopted are in the public interest, and as the comments already filed with this Office demonstrate, the public interest is best served by ensuring that the public has access to the research it pays for. This policy will foster a stronger research ecosystem, and will benefit publishers and other interests by improving the quality and quantity of research published. However, when the administration formulates its policy, it should ensure that the public interest is paramount to any private considerations.
As the National Institutes of Health (NIH) found, public access policies work well when they work in accordance with, rather than preempting, existing copyright law. By requiring that researchers grant the right to distribute their works to the funding agencies that made the work possible, the NIH program follows the model of private licensing arrangements. Public access policies, like copyright laws, are tools that can increase availability of works and strengthen the public sphere if used correctly.

**Public Access Must Be Mandatory**

The Notice asks what features the policy should have to ensure compliance (Question 5). The administration should benefit from the experience of NIH and require public access compliance. NIH discovered that its voluntary program was not as successful as its mandatory program. Researchers may need an incentive to comply with a public access policy, and outside parties may present them with a disincentive to comply. The incentive that will best assure compliance is the receipt of federal funds itself. Because taxpayers deserve to have access to the work they have paid for, no funds should be dispersed to researchers unwilling to comply with public access requirements.

**The Embargo Period Should Be as Short as Possible**

The Notice asks how long the period should be between a work's publication and its being made available via a public access policy (Question 7). While individual funding agencies should be free to make these determinations (subject to review by the administration), the public interest strongly supports adopting "embargo" periods that are as short as possible. Because any benefit from research relates directly to how current and timely it is, allowing too long an embargo would drastically reduce the usefulness of the research made available to the public. In addition, it would merely grant private interests unfair and unbalanced access to a work funded by taxpayers. At the same time, funding agencies must be free to take into account the norms and practices of various research disciplines.
PK thanks the Office of Science and Technology Policy for seeking public comment on this important issue, and encourages OSTP to implement a policy that ensures public access to research funded by all federal agencies.
Respectfully submitted,
/s/
John Bergmayer
Staff Attorney
Public Knowledge

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Please find attached comments from the U.S. Chamber of Commerce on "Public Access

Policies for Science and Technology Funding Agencies Across the Federal Government."

Thank you very much for the opportunity to offer up our comments on this issue, and if you should have any questions or comments, please do not hesitate to reach me directly.

Sincerely,

Chris Merida
Director, Congressional and Public Affairs
US Chamber of Commerce

The U.S. Chamber of Commerce (The Chamber) is pleased to respond to the Office of Science and Technology Policy's (OSTP) request for comments. The U.S. Chamber fully supports the policy that the public should have timely and comprehensive access to government sponsored research, provided extant copyright protections are preserved. The U.S. Chamber of Commerce is the world's largest business federation representing more than three million businesses and organizations of every size, sector, and region. More than 96% of Chamber members are small businesses with 100 employees or fewer.

Many of our members hold intellectual property that are critical assets for their business, including those held by the publishing industry. We understand that detailed technical information and comments pertaining to each of the nine questions cited in the Federal Register notice will be submitted by representatives of that sector. Our comments will focus on some key business and intellectual property (IP) principles that we believe should continue to form the foundation of any future policy regarding public access to federally-funded research. IP, including copyright protection, is essential to the ability of U.S. businesses to compete and thrive in the global economy. IP-intensive industries employ 18 million Americans, account for more than 50% of all U.S. exports and represent 40% of economic growth. IP rights are vital to creating jobs, advancing economic growth, and generating breakthrough solutions to global challenges. The Chamber supports the goal of increasing public access to federally funded research. The Chamber urges that any proposed solutions be practical, feasible and without prejudice to both the U.S. and international copyright framework. Many members of the Chamber are leading businesses and trade associations that support improving public access to cutting-edge information by providing value-added services. These enterprises, which include entities across the spectrum of business activities, including technology enterprises, science-based entrepreneurs and the publishing industry, rely on the protection afforded by copyrights and related rights.

The ever-expanding need for timely and efficient access to the latest advances in science is self-evident. Publishers have successfully produced market-ready versions of scientific research that are responsive to that increasing demand. Where resources are already scarce, however, it is axiomatic that any proposal to, in effect, create new copyright exceptions would further reduce incentives to invest in the production and distribution of information to the public. An incentives-driven approach, instead, provides the impetus for publishers and their licensees to

make such works available in light of sustainable market conditions. Accordingly, the Chamber urges the OSTP to consider these important principles:

- government interference with private-sector business models is inherently risky and should be avoided
- well-established copyright protection embodied in U.S. law, the Berne Convention for the Protection of Literary and Artistic Works, and the Agreement on Trade-Related Aspects of Intellectual Property should be maintained or strengthened, but most certainly not weakened
- a major focus of OSTP's analysis should be the identification and exchange of "best practices" models that have been developed, refined and used by publishers to date
- the views of publishers and other information disseminators and stakeholders should be taken into account in the design of all aspects of future public access policies and implementation strategies.

The Chamber and its members are committed to improving public access to all forms of information, including scientific and technology research. We believe that sustainable incentives driven approaches provide the most effective and efficient path toward the attainment of that goal.
Sincerely,
R. Bruce Josten

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Please find attached as a pdf file STM's submission to the Office of Science and Technology Policy RFI on Public Access.

Michael A Mabe
Chief Executive Officer
International Association of STM Publishers

[**Note**: Please see attachment. The.pdf would not format properly within the Word document.]

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First, let me express my appreciation to the Office of Science and Technology Policy for putting out the Request for Information on this important topic. I am responding from two perspectives. I am a taxpayer and consumer of research. I am also an academic librarian who has published research results and worked with other faculty researchers.

Academics do not typically publish into a vacuum. They hope their research will make an impact for good in the world. The broader the dissemination of their research results, the more likely that aim of having a positive impact will be achieved. The internet facilitates broad dissemination. Without a mandate (similar to that recently enacted legislatively for the National Institutes of Health) to cover all federal agencies , we are not utilizing the capacity of the internet as we should be.
Because I work at a research university, I enjoy access to information resources that the average citizen of this country does not. My employer buys subscriptions to databases which include

much research funded by U.S. government agencies. Recently, I used these databases to locate articles. A pediatric sleep specialist prescribed CPAP therapy for my oldest daughter when other therapies to resolve a sleep disorder proved ineffective. Our insurance company denied the request to pay for CPAP therapy because my daughter did not fit the medical definition for obstructive sleep apnea.
I appealed the denial but was again denied. I used the databases to locate research articles that helped me buttress my arguments in an ultimately successful second and final appeal for coverage of CPAP therapy. If I had not had access to these databases, I seriously question whether my appeal would have been successful. Should I have had to work at a university to have access to this information? No, especially since, as a taxpayer, I helped to fund some of the research behind the articles I used.

Sadly, even though my employer is a reasonably well funded institution, we cannot subscribe to all of the journals or databases we might wish. I don't know of any library that can regardless of how well funded they are. What hope then is there for the smaller institutions, not to mention the average citizen, who could use and benefit from such information if they had access? Access, or rather, the current lack thereof, is the crux of the matter. The internet gives us the means to make research results widely available and at virtually zero marginal costs for additional copies beyond the first. Tradition, stemming from the print-centric dissemination paradigm in which recovery of substantial marginal cost for each additional copy was necessary, now inhibits the use of the internet to insure the broader access that is in the interest of both researchers and potential users. I am of the firm opinion that the productivity of our nation, and therefore the return on our investment, will grow as we expand access to the research results we are funding.

From a purely practical standpoint, consistency in public access requirements only makes sense. Researchers should not have to comply with different requirements depending upon which agency funded their research. The public should not have to search multiple repositories to find relevant material. While separate repositories might be maintained, the repositories would need to be interoperable and a single portal should connect them all for search and retrieval purposes. The format of the documents presented should be standard across agencies and proprietary formats
should be avoided to the extent possible. Such measures will maximize the ability of potential users to actually and fully use what they find.

I acknowledge that publishers provide valuable services such as peer review management and copy editing of author submissions. Therefore, I do not support a requirement that the publisher's final version be deposited into the public access archive. Rather, each publisher should be able to decide which version—the researcher's final manuscript or the final published version--will be deposited into the archive. Currently, the NIH public access mandate permits publishers to withhold public access for up to 12 months after the initial publication. While I would prefer access immediately upon publication, any access embargo that may be deemed necessary should be for 6 months at an absolute maximum.

I sincerely hope that action can be taken to extend the successful NIH public access policy to all federal agencies that fund research. While I support executive action to bring this beneficial result about in the short term, I hope that legislative action, such as the proposed Federal

Research Public Access Act, would be pursued as a follow on. This would insure that a future change in Presidents would not present the possibility of a reversal of an Executive Order. Thank you again for the opportunity to comment on this important issue.

Sincerely,
C. Jeffrey Belliston

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Comments on OSTP Open Access Policy Discussion by SEPM Society for Sedimentary Geology

This comment is a result of discussion by the SEPM Council and its Executive Director.

We think that it is the desire of every author and every publisher that their works be accessible to everyone. How to make this happen without destroying hundreds of years of scholarly publishing infrastructure is the challenge.

First, my personal viewpoint comes from six years as a university researcher and author, 20 years as an industry researcher and author, and nine years as the director of a non-profit scientific society publisher. So I have experience from several perspectives. I am also a US tax payer and am active on the web "researching" many things both personal and job related and have found both open access to some things and restricted access to others. The current members of the SEPM Council represent established researchers from both academic and industrial organizations who volunteer their time to help the Society fulfill its mission of disseminating information about the science of sedimentary geology. The Society publishes two highly ranked technical research journals monthly and also publishes a wide variety of books.

Short Historical Perspective

In a sense, "open access" to full text copies of published science articles has existed for a long time and currently exists today. Scholarly publishing has always made it possible for anyone to have access to individual articles. In the previous print-only media era, authors had reprints of their article and could send them to anyone that requested them. In the current print and online media era, authors have options to have reprints or eprints (usually PDF files) of their articles to freely distribute to any individual that requests them, often posting them on their individual websites.

A significant difference in the online era is that many more individuals

outside of the group of specialists or students in a particular field can search the web (via Google, Bing, Google Scholar, etc.) and find titles, authors and abstracts of articles ranging from general science to very specialized topics. Almost all scholarly publishers, whether non-profit society or commercial, make the metadata of an article true open access, including titles, keywords, authors and author contacts, and abstracts. If an individual finds the abstract interesting but does not have access to the full text (for subscription based journals) they can contact the authors and obtain a full text copy, either printed or digital. While there may be a small time delay due to author response time, it is also a vital scholarly interaction for an interested individual to actually con-tact an author. This type of contact has always been an important part of the overall research and applied research network.

While the first draft of any scholarly paper is created by the authors, the added value of peer re-view, copy editing, composition and layout, production into digital and/or print media and distribution is both required for top research and of course has a cost. The dominant financial model used today is that publishers recover their costs by selling subscriptions to online access (user pays model). A recent alternative financial model is usually called "open access" and the cost recovery is from the authors themselves (author pays model). There are to date no large scale financially successful "open access" publications that do not rely on significant "donations" or out-side funds rather than from relying solely on author fees. Below is an quote from the PLoS website, which is one of the largest open access set of journals.

PLoS Publication Charges

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To provide open access, PLoS journals use a business model in which our expenses-including those of peer review, journal production, and online hosting and archiving-are recovered in part by charging a publication fee to the authors or research sponsors for each article they publish. For PLoS ONE the pub-location fee is US$1350. Authors who are affiliated with one of our Institutional Members are eligible for a discount on this fee.

We offer a complete or partial fee waiver for authors who do not have funds to cover publication fees. Editors and reviewers have no access to payment information, and hence inability to pay will not influence the decision to publish a paper.

PLoS is one of the best examples of a large scale fully open access journal (author pays) financial model and while they do not charge for

access (unless printed copy is desired), they also rely on "donations" from the public and from institutional partners, that pay bulk fees to PLoS, which allow their employees to publish in the journals without the author charges (or at dies-counted author charges). Whether an institution pays for a subscription for its library or pre-pays authors fees for its employees, the institution still has to pay. However, there is benefit in that the results of their employees published research will be available to the public since it is supporting an open access journal. We have yet to see if their financial model can be sustained. PLoS, which launched in 2002 with are large grant, lost over $1 million dollars in 2008 (2008 Form 990). In the recently released (1/12/2010) Scholarly Roundtable Report from AAU, PLoS has stated that they hope to be financially sound by 2010, eight years after launching.

The subscription based model has allowed a multitude of journals to become online publications as well as to digitized and place huge archives of older print-only publications online al-lowing a tremendous increase in research. Additionally, this model has produced such success-full online multi-journal products as JSTOR, BioOne and GeoScienceWorld which aggregate and interlink large numbers of journal articles. Obviously both models require funding to continue to exist. Where that funding comes from is the challenge. With this short background on scholarly publication, we will comment on the specific questions posed by the OSTP blog.

Specific Input to the Questions.
Phase I - Implementation

Who should enact public access policies?

A general policy should come from the OSTP which does give individual agencies options as to how it can fulfill the policy. These options should include the ability to classify certain research as confidential and essentially not publishable until released and options to allow existing online journal archives to be considered fulfillment of the policy, including allocating funding to publication of the results. These details need be carefully worked out with each agency.

How should a public access policy be designed?

Timing.
Ideally the publication should be available as it is published. This would require the au-thorn to either place it in an open access journal or to be funded to pay the publisher to make it open access. Embargoes, as in use now, would allow some transitional financial stability to existing publishers but would also need to be variable from discipline to discipline.

Version.
There is currently nothing to stop an author from posting a draft of any research results at any time but only the "version of record" should be considered as the version to fulfill the policy for

many reasons, including the added value of peer review, editing and later referencing. Good research is not be possible on in a blog format.

Mandatory v. Voluntary.
If there were funding within each grant that was restricted to use for publishing results in open access then this would encourage authors to do just that without making it man-datary. Making each grant applicant state just how he/she would make their results be open access would clarify the issue and also make it a fulfillment of the grant conditions, with or without a mandatory policy.

Other.
Overall any policy must contain options that will allow the long existing scholarly pub-lashing infrastructure to adapt. The details of how to do this will need some significant planning time and needs to include both non-profit publishers and commercial publishers.
Phase II - Features and Technology
The features and the technology that apply to information on the web are developing at an ever increasing rate. For that reason, we think that trying to require anything too specific would be a waste of time. Countless hours are often used to define data structures, etc. only to be super-seeded by more advanced ideas.

1. In what format should published papers be submitted in order to make them easy to find, retrieve, and search and to make it easy for others to link to them? Either XML or PDF formats are the most widely used today. DOIs should be assigned and registered.

2. Are there existing digital standards for archiving and interoperability to maximize public benefit? Yes, unfortunately, there a many "standards".

3. How are these anticipated to change? No one can really predict. No one predicted the web.

4. Are there formats that would be especially useful to researchers wishing to combine datasets or other published results published from various papers in order to conduct comparative studies or meta-analyses? Data sets, as opposed to published papers present a much more complex issue and should be handled in a separate policy. NSF Informatics efforts have started in this direction but have been moving slowly. Some programs in NSF currently require that you enter a record in a data repository site, e.g., Polar Programs requires that data be deposited in the Antarctic Master Directory and a new proposal cannot be funded until that has been done for the last proposal. AMD is part of NASA's Global Change Master Directory. In Systematics at NSF, one must designate a repository for specimens.

5. What are the best examples of usability in the private sector (both domestic and international) and what makes them exceptional? HighWire Press collections - reference linking, links to other services. BioOne collections. JSTOR collections.

6. Should those who access papers be given the opportunity to comment or provide feedback? For scholarly published papers, the feedback mechanisms already exists.

7. What are the anticipated costs of maintaining publicly accessible libraries of available pa-peers, and how might various public access business models affect these maintenance costs? Most all scholarly publishers today already have a large online archive of journal articles often going back to the initial volume. These archives are constantly updated with the latest articles. They have options to make individual articles open access. One of the beauties of the world wide web is that a file can reside in a single place and be accessed by many. The idea to create duplicate archives is quite frankly a waste of money. However a smaller bibliography of published results with links to the existing version of record as many researchers do from their personal webpages, might be done at less cost but is really unneeded.

8. By what metrics (e.g. number of articles or visitors) should the Federal government measure success of its public access collections? Again I do not think that we should have duplicate cool-lections. If the government does not create its own collections, then there is no real need to spend time trying to analyze if it is cost effective.

Phase III - Management

1. Compliance. What features does a public access policy need to ensure compliance? Should this vary across agencies? Assuming a mandatory policy to publish in open access, then the grant
would not be considered fulfilled until the publication is out. Future grants may be with-held if there is non-compliance. Each agency would need to develop its own detailed process. Many grants are overlapping in time and also have several investigators so tracking non-compliance might become a time consuming chore.

2. Evaluation.

How should an agency determine whether a public access policy is successful? What measures could agencies use to gauge whether there is increased return on federal invest-mint gained by expanded access? This is a difficult metric to come up with. Even now there is a great deal of public skepticism about the types of research that the government funds, especially in the areas of basic research. General public access to research articles might not have any positive impact but perhaps a negative one in that there would be more public opinion on reducing government research funding. Within the research network, it would allow a faster access to some published research but as stated
above, it would reduce the actual contacts made between scientists.

3. Roles. How might a public private partnership promote robust management of a public ac-cuss policy? Are there examples already in use that may serve as models? What is the best role for the Federal government? Any policy about making published results of government sponsored research open access must be a public-private partnership with the existing scholarly pub-lashers. Otherwise, we risk a great loss of existing infrastructure in the US and internationally. If the Federal
Government is to mandate an open access policy then it must fund it through the existing infrastructure, not develop its own or even fund secondary archives, where ever they may exist, as opposed to the primary archives of the publishers. There is a strong chance that forcing open

access upon non-profit society publishers without their input as to how it can be done could cause the loss of many societies. The potential loss of those societies whose main purpose is to ensure the scientific quality and integrity of the researchers and the research and its unbiased dissemination, would result in a large scale decline in research results within the US.

Conclusion

The blog comments cover a large range of opinion from various stake holders on this issue. But we think it has been dominated by those who want to have access to more information for free. There have been many remarks about the excessive cost of subscriptions, the plight of library budgets, the inaccessibility to research results by people not associated with an entity that subscribes and some that have been advocates of open access for all things. Only a few of these have been from actual publishers.

The email input includes several documents prepared by scholarly publishers which include options for moving forward in the US with programs similar to other countries and giving examplest of how these work or might not work. We agree with the basic tenet of these comments that we must go forward using the existing infrastructure of the scholarly publishers, many of which are non-profit society or university organizations. Most of the society publishers' main request was for a longer time frame in which to review and formulate a way to include an open access policy within their publication process that would enhance the process rather than cripple it. We think it is also important to move forward in such as way as to not weaken or destroy scientific societies, as they often publish the highest quality science, based on their rejection rates and their editorial policies. The very recent report from AAU on Scholarly Publishing Roundtable
(http://www.aau.edu/policy/scholarly_publishing_roundtable.aspx?id=6894)
gives a balanced report on a way forward which would make use of the existing infrastructure.

On a final comment, there are also two existing Federal organizations that might be looked at for experience in trying to supply things "freely". Look at one case from our own Federal Government of how free and open access did not work. Our national parks, monuments, forests, campgrounds, and other public lands in the U.S. at one time were free with open access because they were paid for and maintained continually by some of our tax dollars. This "open access" model changed in the mid
1990s, however, as the parks, buildings, personnel, etc. could not be maintained with such a "business model" to the point where personnel, usage hours, and access were reduced to minimal amounts. Today, every person regardless of their age or status must pay to enter a park or monument, pay to park in some cases, and be restricted to camp in designated areas where you have to pay ($7 to $22/night, or higher) per site so that these public lands can "balance" their budgets, or even have a budget in some cases. Things have gotten so bad that even schools and educational groups visiting public lands have limited numbers accessible for free entry (~20 students, including 1 instructor), after which the remainder of students and faculty must pay or they cannot be
allowed in. The second organization is the U.S. Government Bookstore
(http://bookstore.gpo.gov), where you can purchase many printed items. Notice they do" sell"

them and not give them away, although I suspect that everything is funded by the government. Even in the "eproducts"
category, (http://bookstore.gpo.gov/collections/eproducts.jsp), there are subscription prices, like the $4,552 one year subscription to the online Presidential Documents. In both of these cases the Federal
Government recognizes that it must charge additional fees above what taxes pay for in order to deliver useful things.

We look forward to a process in which the scholarly publishers can work with the OSTP to develop the best way to reach the open access goal.

Sincerely,
Howard E Harper, Jr., Executive Director, and the SEPM Council
SEPM Society for Sedimentary Geology

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Attached are comments from the American Institute of Biological Sciences (AIBS) in response to the OSTP request for information on public access to the scientific literature.

Please contact me if you have any difficulty accessing the attached information or if AIBS may be of assistance to OSTP on this matter.

Robert Gropp, Ph.D.
Director of Public Policy
American Institute of Biological Sciences

**RE: Request for comments on public access to scientific publications**
The American Institute of Biological Sciences (AIBS) appreciates the opportunity to provide comments to the Office of Science and Technology Policy (OSTP) on the topic of public access to peer-reviewed scientific literature. Thank you for extending the deadline for comments from January 7, 2010 to January 21, 2010. Among the recommendations offered here, however, is a request that the public comment period be extended by an additional 60 days. This extension would permit stakeholders to carefully consider the recommendations of a recently released report commissioned by the House Science and Technology Committee.
AIBS is a nonprofit 501(c)(3) scientific association dedicated to advancing biological research and education for the welfare of society. Founded in 1947 as a part of the National Academy of Sciences, AIBS became an independent, member-governed organization in the 1950s. Today, with headquarters in Washington, DC, and a staff of approximately 50, AIBS is sustained by a robust membership of individual biologists and nearly 200 professional societies and scientific organizations; the combined individual membership of the latter exceeds 250,000. AIBS advances its mission through coalition activities in research, education, and public policy; publishing the peer-reviewed journal *BioScience* and the education website ActionBioscience.org; providing scientific peer-review and advisory services to government agencies and other clients; convening meetings; and managing scientific programs.

The President's effort to increase government transparency is laudable. It is unwise, however, to artificially link public access policy development to the Administration's transparency initiative. The issues associated with public access to scientific literature are too complex too be interwoven with other policy issues.

On January 15, 2010, the Scholarly Publishing Roundtable released "Report and Recommendations from the Scholarly Publishing Roundtable," a document reviewing and offering principles to include in a public access policy. The scope and significance of these recommendations deserve deliberate and thoughtful consideration by the government and all scholarly publishing stakeholders.

The "Report and Recommendations from the Scholarly Publishing Roundtable" was commissioned by the House Science and Technology Committee with the apparent encouragement of the White House Office of Science and Technology Policy. The effort, according to the roundtable report, was an attempt to use data to help clarify an increasingly contentious debate. The roundtable, importantly, was also charged with developing a consensus statement outlining options for increased public access to the scholarly literature. Although the final report appears to have articulated widely accepted principles, stated the importance of preserving the integrity of the peer-review process, and noted the need for flexible and sustainable business models, the report did fall short of the goal of achieving consensus. Two roundtable members did not endorse the final document.

The roundtable report deserves careful review and could serve as a basis for a continued international dialogue about how to promote increased public access to the scholarly literature. As this report suggests, not all academic communities and publication models are the same. A one-size-fits-all federal policy will disrupt and damage the publication process for many research communities, particularly those with limited access to federal funding, investigators who receive small grants, and research communities that do not attract strong commercial interest. Researchers working in fields with limited commercial interest may produce fewer publications than those in other fields, but such publications may be longer than the average publication of, for example, a medical researcher, and may have taken more time to prepare. Moreover, because some disciplines produce fewer, but longer, articles, the journals that publish these papers may be produced less frequently. Thus, it may be difficult or impossible for the publisher to sell advertisements or secure sponsorships to generate the funds required to replace lost subscription revenue.
If a government-wide policy is pursued, it must be flexible enough to respond appropriately to the needs of different research communities. Not only should each agency be given the latitude to work with its primary research communities, but each agency's policy must recognize the diversity within its research communities. For example, the National Science Foundation (NSF) supports all areas of fundamental scientific inquiry. However, a viable and sustainable public access policy for NSF-funded physics research may be quite different from a viable and sustainable policy for NSF-funded social science or biodiversity research.

Interestingly, a growing area of research involves synthesizing and integrating insights contained in previously published papers. Often, this work can produce significant but long research articles. This work may often be done by researchers who are not currently being funded. Most

discussions of public access publishing policy fail to recognize the costs of producing and publishing this kind of integrative knowledge, and do not address the question of who will provide the funds to publish these peer-reviewed articles.

The free market and the scholarly publishing community are developing and evaluating sustainable business models that achieve the principles identified in the roundtable report. At this time, OSTP should continue to work with the scholarly publishing community to foster this innovation without imposing artificial and potentially damaging mandates.
Thank you for your consideration of these comments. Please contact me or AIBS director of public policy, Dr. Robert Gropp, at 202-628-1500 if we may provide additional information.

Sincerely,
Richard O'Grady, Ph.D.
Executive Director

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Woodhead Publishing Limited, UK, is an independent international publishing company publishing in the areas of Food Science, Technology & Nutrition, Materials Engineering, Welding and Metallurgy, Textile Technology, Environmental Management and Finance, Commodities and Investment. Thank you for the opportunity to comment on the issue of Public Access Policies for
Science and Technology Funding Agencies Across the Federal Government.

It is the considered view of our company that where chapters or articles that we commission are unique to one of our publications then Woodhead Publishing Limited should retain an exclusive right to the print and electronic distribution of that chapter/article while acknowledging that copyright belongs in certain cases to the government agency concerned, if that is their policy.

This is deemed a fair balance which incentivises us as a publisher to take the investment risk involved in publishing high-quality technical reference works covering the state-of-the-art in science and technology, as well as in supporting new product, platform and format development to meet the evolving needs of our customer base. With this, as publisher we remain committed to supporting our author base and are happy to allow contributors to use materials for their own personal and professional ends with appropriate acknowledgement and according to established publishing ethics, i.e. short of widespread distribution or republication without express permission.

In rare cases where chapters/articles are reproduced verbatim from existing articles/reports produced by a government agency and with express permission of that agency, then there would be no issue in the agency concerned offering their existing articles/reports on a public website to promote access to the materials, if that is their policy.

It seems true to say that if all material was freely available then there would be no incentive for any publisher to compile structured and accessible content which reviews specific topics from many different angles. This might in turn limit the sustainability, and in turn the availability,

discoverability and quality of the rich literature resources that currently exist, and might also limit each author's freedom to choose their preferred publication route. The research communities (representing the core of both the author pool and audience within the scholarly communications ecosystem) would therefore suffer as a result.

Woodhead Publishing Limited nevertheless applauds the Administration's goal of improving the accessibility and relevance of science, including research funded by government agencies, and would encourage funding agencies to invest in the preparation and distribution of research reports (and data, if appropriate), including a non-technical summary for each project, and to enhance these offerings
with links promoting the published version of record research/review article(s) relating directly to these research projects.

Further investment into the development of existing public infrastructure - i.e. libraries that serve the purpose of providing the public with access to international literature, in all fields and education progams that encourage the advancement of scientific understanding - would further assist public access and the impact of research funded by federal science and technology agencies.

Submitted on behalf of Woodhead Publishing Limited by Mr Ian Borthwick,
Commissioning Editor, Woodhead Publishing Limited, UK

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On behalf of the American Society of Agronomy, the Crop Science Society of America and the Soil Science Society of America, I am writing to submit the following comments with regard to access to publicly funded research.

1) In order to save Gov't funds, these papers should be linked to the original publication site, which can be held open access after a period (18 months preferred). If the federal agencies prefer a shorter embargo, some smaller open access fee should be allowed.

2) In order to do this, abstracts should be posted using XML so they can be completely searched. Papers should be posted in XML same DTD as NIH requires. That's already in place-it would be simpler and more effective to avoid changing the DTD for each agency.

3) Determining actual usage will be difficult. Other metrics might be used: downloads-etc. But some consideration about these issues should be determined up front.

4) Can the agencies connect patent activity to papers published? The statements made were rather vague, but the need for open access to the information paid for with government funds is understandable. Will this affect the granting of public use (patents, etc) to firms who can develop products and uses for the research? Who will own patents-will gaining a license to this information be unduly complicated?

5) How can the federal agencies involved provide easier to understand information about the public information. USDA does a great job of explaining information about research done in their labs. Often this information is released after ownership has passed to other entities-does this meet the concepts of the current Administration?

Karl M. Glasener

Director of Science Policy
American Society of Agronomy
Crop Science Society of America

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Dear Sir or Madam,

We would like to thank the White House Office of Science and Technology Policy for initiating this
very important consultation on public access to research outputs. Please find enclosed the comments of the Confederation of Open Access Repositories (COAR).
Wigh kind regards,
Birgit Schmidt

[**Note**: Please see attachment. The.pdf would not format properly within the Word document.]

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On behalf of the publishers in membership of The Publishers Association (UK), I respectfully submit the attached response to the Office of Science and Technology Policy's request for information on approaches that would enhance the public's access to scholarly publications resulting from research funded by a Federal agency.

Graham Taylor
Director of Educational, Academic and Professional Publishing
The Publishers Association Limited

The Publishers Association is the leading UK trade body representing academic, scholarly, consumer trade and educational publishers based in the UK. Publishing is our largest media sector, and the biggest creative industry. The PA's members represent approximately £4bn (80%) of the £5bn turnover within these parts of the overall publishing sector. Collectively the creative industries – of which the copyright industries form the dominant part – contribute over 8% to the UK's GDP.

The PA welcomes this opportunity to comment on the OSTP request for public comments on **approaches that would enhance the public's access to scholarly publications** resulting from research funded by a Federal agency. We appreciate the spirit of open consultation which lies behind this request and we are happy for our comments to be shared with other stakeholders.

We have structured our comments in three sections: firstly a short summary, then a 12-point expansion on where we stand on this issue, and finally some responses to the structured questions in the RFI. We hope that our comments may be helpful in this debate.

**Summary**

- This is an international issue. We urge OSTP to take a broad view.
- Publishers support the aspiration that taxpayers should have access to the results of the research they have funded.

- Individual articles are not published in isolation. They part of a concept on which scholarly communication depends: journals.
- Any solution to the public access aspiration should be designed not to undermine the journal system but to complement, even support it. Journals bring benefits [point 4] to researchers that will be hard to replace.
- Taxpayers have not funded the processes that relate to archival quality publication of the outputs from the primary research they have funded.
- Appropriating the scholarly literature without compensation to populate repositories will only undermine whatever model is used to sustain these publication processes.
- Journals are sustained by learned societies, communities of scholars and publishers that manage and invest in them. Collectively these stakeholders support functions [point 8] that add value to the scholarly communications process, for which costs must be recovered.
- For investment to be sustained, societies and publishers need certain market conditions to be in place. [Point 9]
- We would argue strongly that publishers of journals do an excellent job of meeting the needs of their core audience: the global community of researchers.
- Publishers are not opposed to open access. But we are sceptical about unfunded appropriation of value-added material to populate repositories in the name of 'public access'.
- Public access is a separate issue from publication for the research community itself. It needs fresh strategies, and fresh funding.

**Our position**

1) **This is an international issue.** Although project funding might derive from US Federal agencies, the researchers themselves may well be working in international teams that include researchers from other nations and from institutions not based in the US. Both effective communication among scholarly researchers, and effective communication of the knowledge deriving from their work, should be seen as international issues, with implications beyond the remit of the Federal funding agencies. What happens in the US impacts the global system of disseminating research outputs.

2) **Publishers support the aspiration that taxpayers should have access to the results of the research they have funded.** There are however at least two distinct dimensions to this aspiration: the needs of the research community and the benefits to the public.

3) The unit of publication envisaged for public access is the peer-reviewed article (or articles) deriving from the work of federally funded researchers. **But individual articles are not published in isolation**. They are part of an aggregated concept on which the dynamics of scholarly communication depends: the scholarly journal. Journals are owned by learned societies, institutions, and publishers. Journals bring benefits to the community that created them and has sustained them for over 300 years: the global community of scholarly research.

4) Journals fulfil a useful, even vital and irreplaceable role. **So any solution to the public access aspiration should be designed not to undermine the journal system but to complement, even support it.** The benefits they bring to researchers are several:

    a) Journals evolved, and are still evolving, to support specialist communities of researchers. They are signposts to quality and relevance.

b) Journals are the first line filter of quality assurance. Other filtering systems to identify relevance and reduce information overload tend to augment the journal, not replace it.

c) Journals (or their editors and publishers) organise the pre-publication process of peer-review, which is the acknowledged and irreplaceable benchmark for integrity and quality in research outputs[1].

d) Publication in a journal means taking an author's manuscript up to archival quality and making it available for all posterity.

e) A successful journal, that builds and sustains a community of interest, becomes an incentive for investment and further innovation. Positive feedback from the community generates organic improvements that do not require regulation or intervention.

f) Journals have acted as the principal vehicle for registration (of the work undertaken) and dissemination (to the community of mutual interest) since 1665. Despite adverse predictions, the concept has survived and prospered in the Internet age. This must be because the concept is of value to those that support it – the research community itself.

g) As the source for citation of the version of record, journals provide the basis for metrics to assess funding criteria and for mutual recognition and advancement in the scientific community by those who publish in them.

5) Taxpayers have certainly funded a report (from the researchers to the funders) on the research enabled by the research grant, **but they have not funded the processes that relate to archival quality publication of the outputs from that research**. This report is generally not what gets published in the peer-reviewed scholarly literature, if it gets published at all or just remains in the files of the funding agency. There are other processes, separately funded[2], that result in the archive-quality, peer-reviewed contribution to the sum of knowledge that might derive from this research if it is successful. The costs involved in these processes need to be recovered, with a margin on top to sustain investment in system development and innovation.

6) **So, appropriating the scholarly literature without compensation to populate repositories will only undermine whatever model is used to sustain these publication processes** (currently generally a subscription model funded by library budgets). The US Federal agencies fund very large volumes of research. If all the published outputs from this research are appropriated for repositories, the established global system of scholarly publication in journals could be fatally undermined, with unknown and unforeseen consequences.

[1] See for example: Mark Ware, Peer Review: benefits perceptions, and alternatives, Publishing Research Consortium, 2008

[2] Unless the agency has agreed in its research grant that research authors may use project funds towards the cost of publication charges levied by 'Gold' open access journals, that cover the costs of publication from funding on the supply side/ author pays, as opposed to the demand side/ reader pays.

7) Journals are sustained by the learned societies, by the community of scholars (editors, advisers, research authors and reviewers) and by the publishers that manage and invest in them. **Collectively these stakeholders add value, through the following functions:**

   a) Investment in the submissions systems, peer review management systems, and production systems that make up the technology scaffolding of the journal.

   b) Organisation of and support for the network of peer-reviewers associated with the journal.

   c) In-house work on editing the text to publication quality (often from manuscripts produced by non-native speakers) and formatting the final version for functionality and interoperability in a world of rapidly evolving technology.

   d) Disseminating and marketing the journal to a global audience.

   e) Archiving the output of the journal, and linking to databases for search and discovery.

   f) Building a respected brand that commands loyalty and continuity from a global community of scholars. This requires strategic journal development and editorial relationship management.

   g) Experimenting with new journals, nurturing them beyond the loss-making early years, supporting new disciplines and sub-disciplines, and adapting to the publication needs of evolving research communities.

8) For these benefits to the research community to be sustained, and for investment in the journal system to continue, **societies and publishers need certain market conditions to be in place**, or at least to be respected and taken into account by policy makers and fund holders:

   a) A marketplace with sustainable and accessible funding for which to publish.

   b) A marketplace that is not undermined by unfair competition, or where value-added material is appropriated without compensation to populate repositories.

   c) An evolving marketplace, with incentives for innovation and investment.

   d) The prospect of a reasonable return on investment over the medium term, in return for taking on the risk of publication.

   e) An exclusive licence or copyright assignment to publish the IPR in which they choose to invest, in order to have the means to protect their investment and pursue infringement.

   f) A willing culture of peer-review in the research community, to establish the authority of their journals.

   g) Recognition of the importance and value of their role, in enabling a secure and stable system of archive-quality research outputs.

9) Societies and publishers have supported and developed the journals system in order to meet the needs of their core audience: the global community of researchers. **We would argue strongly that publishers do an excellent job here.** Access by researchers to journal articles has increased dramatically over the last ten years: through investment in Internet technology, and through developments in licensing, especially the 'big deal' for library consortia. Surveys continue to show high levels of satisfaction with journal access among researchers, especially in universities and research institutes.

10) **Publishers are not opposed to open access.** Variants of the author/ funder pays 'Gold' OA model are well established and growing. But we are sceptical about the unknown consequences of variants to the unfunded 'Green' OA model, designed to populate institutional and subject repositories with value-added material appropriated from societies and publishers in the name of 'public access'.

11) **Public access is a separate issue from publication for the research community itself**. It needs to be addressed as such. Fresh strategies, and fresh funding, are needed to achieve these aspirations.

**Our response to the RFI**

With these principles in mind, we would respond as follows to the structured questions in the RFI:

**Question 1**. *How do authors, primary and secondary publishers, libraries, universities, and the federal government contribute to the development and dissemination of peer-reviewed papers arising from federal funds now, and how might this change under a public access policy?*

Please refer to points 4 & 7 above. Publishers of journals (both commercial and not-for-profit) bring a neutral and independent means of enabling scholarly communication and the publication of research outputs. Peer-reviewed journals are generally independent of the sources of research funding that sustain the authors that publish in them. This has benefits for research integrity. If peer-reviewed journals cannot derive funding to recover the value that they add, then the filtering, quality assurance, and archival system that they represent will decay (unless rapidly replaced by a fresh paradigm), thus undermining the source of peer-reviewed papers thought desirable to populate public access repositories.

**Question 2.** *What characteristics of a public access policy would best accommodate the needs and interests of authors, primary and secondary publishers, libraries, universities, the federal government, users of scientific literature, and the public?*

Please see point 8 above. A public access policy should not undermine the system that created the literature to which public access is thought desirable. Some form of Gold OA model could work if the funding to pay for publishing services is made available (e.g. as a specific allocation in the research grant or as part of an institutional budget) and the payment process is made simpler. Any system of embargos should not undermine the library subscriptions that benefit the core research community, and should take into account different usage patterns for different disciplines.

**Question 3**. *Who are the users of peer reviewed publications arising from federal research? How do they access and use these papers now, and how might they if these papers were more accessible? Would others use these papers if they were more accessible, and for what purpose?*

Core users are the community of researchers that support the journal in question, please see point 4 above. The overwhelming majority (95% +) of peer-reviewed research articles are published in journals funded by a subscription model. This proportion is shifting as funding (in the main deriving from funding agencies) is made available to support Gold OA, but shifting slowly. The great majority (95% +) of journal articles are available and are accessed in electronic form, through the open Internet (OA) or through library systems. It is arguably more readily achievable to address enhancing access via library systems (for say commercial researchers) than to attempt to engineer a wholesale shift in the means of funding research outputs in order to make them sustainably available on the open Internet.

**Question 4.** *How best could federal agencies enhance public access to the peer reviewed papers that arise from their research funds? What measures could agencies use to gauge whether there is increased return on federal investment gained by expanded access?*

We have no metric to offer for access by the public, but the metric widely used to gauge impact on the research community is onward citation of published articles. It would appear that to date no clear citation advantage for articles published on open access can be identified[3]. This may relate to the satisfaction levels referred to above [point 9] for the research community itself. Research has shown however that there is clear advantage in publishers enabling access by scholarly search engines to aid discovery.

**Question 5**. *What features does a public access policy need to have to ensure compliance?*

Experience so far (by NIH with PubMed Central and the Wellcome Trust with UKPMC) is that deposit rates by authors alone have to date been extremely low (~5%) and that publisher collaboration and cooperation is needed to build up the deposit rate. This will be enhanced of course by the Gold OA model. The PEER project in Europe[4] will (among other objectives) investigate this effect by way of a controlled observatory involving 300 journals.

**Question 6.** *What version of the paper should be made public under a public access policy (e.g., the author's peer reviewed manuscript or the final published version)? What are the relative advantages and disadvantages to different versions of a scientific paper?*

Version control is an extremely important issue. Without discipline, a proliferation of different versions (preprint, submitted manuscript, peer-reviewed manuscript, version of record, to name but four)[5] will appear in repositories, spreading confusion and potentially hazardous

[3] See for example: Craig, Plume, McVeigh, Pringle and Amin, *Do open access articles have greater citation impact?: A critical review of the literature*, Journal of Informetrics, Volume 1, Issue 3, July 2007, Pages 239-248

[4] http://www.peerproject.eu/

[5] There is a NISO Recommended Practice for Journal Article Versions, see: http://www.niso.org/publications/rp/RP-8-2008.pdf

misunderstanding. But there is a dilemma here. Clearly if the published version is used, especially close to publication, for an article published in a journal funded by the subscription model, then the sustainability of that journal will be undermined. Librarians cannot easily justify subscribing (public) funds to material available for free elsewhere. So publishers would argue strongly that the public access version should not involve appropriation of the value added version, or not until the access model for the core community has been fully satisfied. On the other hand, those expecting access without charge will naturally want the best version available, which would be the published version. But in the absence of universal Gold OA, such a policy would undoubtedly impact on the model designed to benefit the core community.

**Question 7.** *At what point in time should peer reviewed papers be made public via a public access policy relative to the date a publisher releases the final version? Are there empirical data to support an optimal length of time? Should the delay period be the same or vary for levels of access (e.g., final peer reviewed manuscript or final published article, access under fair use versus alternative license), for federal agencies and scientific disciplines?*

Research evidence to inform the embargo debate is still sparse. This survey[6] summarises the position. The PEER project[7] is designed to research into these effects. We do know however that the effect of embargos has distinct variations between disciplines.

**Question 8.** *How should peer reviewed papers arising from federal investment be made publicly available? In what format should the data be submitted in order to make it easy to search, find, and retrieve and to make it easy for others to link to it? Are there existing digital standards for archiving and interoperability to maximize public benefit? How are these anticipated to change?*

The formats used by publishers to create the Version of Record are designed to achieve just these ends! They involve adding metadata, meeting platform interoperability requirements, using standard identifiers, constructing workflow specifications that can meet evolving format flexibility requirements, etc. But there are costs associated with these processes that need to be recovered from the marketplace.

**Question 9**. *Access demands not only availability, but also meaningful usability. How can the federal government make its collections of peer reviewed papers more useful to the American public? By what metrics (e.g., number of articles or visitors) should the Federal government measure success of its public access collections? What are the best examples of usability in the private sector (both domestic and international)? And, what makes them exceptional? Should those who access papers be given the opportunity to comment or provide feedback?*

Research articles are, in the main, written for the attention of fellow researchers skilled and experienced in the discipline in question. They are iterative, developmental, evolutionary: written for the attention of a community. They are not written for a general audience, nor an isolated reader, and so do not cover, say, the background needed to understand the conclusions or the implications. So arguably a different kind of literature entirely is needed to inform the American

[6] Beckett and Inger, *Self-archiving and journal subscriptions: co-existence or competition?*, Publishing Research Consortium, 2007

[7] http://www.peerproject.eu/

(and world) public. This will involve more editorial added value being applied to the primary research articles. Such publications exist, e.g. review journals, scientific magazines aimed at the general public, health information websites. Merely working on the supply side, making vast amounts for arcane primary research outputs available on open access, does not necessarily solve the purpose for which the mission of 'public access' began. Publication is about crafting material for an audience, making it fit for purpose, attending to the needs of the demand side of the equation. Successful publishing needs professional methods. We remain open and willing to engage in a dialogue with the public sector institutions to fulfil our mutual purpose – to serve the audiences that will benefit from our publications.

Graham Taylor
Director, Academic and Professional Publishing
The Publishers Association

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Dr Susan Hezlet,
Publisher
London Mathematical Society

Response of the London Mathematical Society to the OSTP Public Consultation on Public Access Policv

Sir,
The London Mathematical Society is the foremost British learned society for mathematics and a major publisher of original research articles in pure mathematics, second only to the American Mathematical Society in the not-forprofit sector of mathematics publishing. We publish more mathematics originating from US institutions than any other country, amounting to some 25o/o of our output. The income we derive from library sales to North American universities is also vital to the health of our journals. As a charity, the proceeds from our publications are fed back into the promotion of mathematics and include substantial awards for overseas travel that give British and
American-based scholars the opportunity to work together to produce world-quality research. The travel grants schemes provide one of the few routes available to pure mathematics scholars who may not easily access the 'big science' funding available to those who produce more commercially viable research.

The timing of your consultation is unfortunate in that our Council will not meet before your new deadline of the 21 January however we wholeheartedly support the submission made by the Assóciation of Learned and Professional Society Publishers (ALPSP). In addition, we would like to bring to your attention the current LMS practices on open access which have been tailor-made to fit the mathematics community and the unique longevity of the value of mathematics research articles. The final published versions of our journal articles are freely available to everyone for the first six months after publication and thereafter they go behind the subscription wall. This enables and encourages people to read the newest research, but provides the journals with the necessary subscription income to sustain their long-term publication' The 'reverse-wall' policy has proved most successful and it is generally well-regarded by the community. If the US government adopts or promotes a 'one-size fits all' approách to public access policy, this may

harm the good work done by Societies such as ours. If you would like further information on our current publishing practices and the relevance of our journals to US based research, we will be happy to provide further details.

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Ellen Paul
Executive Director
The Ornithological Council

The Ornithological Council, a consortium of eleven scientific ornithological societies in the Western Hemisphere, submits these comments in response to the request by the Office of Science and Technology Policy (OSTP) for input on the Administration's interest in enhancing public access to scholarly publications resulting from federally funded research. Seven of our member societies — all not-for-profit — are based in the United States and publish peer-reviewed journals. Much of the literature in those journals reports research funded in whole or in part with federal funding.

We share the Administration's view that increased access to scientific information benefits society. Scientists want to increase the dissemination and impact of the information they generate. As members of the *Washington DC Principles for Free Access to Science* (DC Principles), we support broad access to the scientific and medical literature. However, we are concerned about the impact of free access on scientific societies, and in particular, the idea that one model is appropriate to all scientific publishers, regardless of size, revenue, or current publishing model.

We are grateful to OSTP and the House Committee on Science and Technology for convening the Scholarly Publishing Roundtable. Notwithstanding the diligent efforts of the DC Principles, we have worried that the voices of small, nonprofit scientific societies have been drowned out in what has been an acrimonious debate that seemed destined to produce a single-model result that would be very harmful to many scientific organizations. The Scholarly Publishing Roundtable report acknowledges the differences among scientific societies, but we would like to explain exactly what is at stake. The unintended consequences of an otherwise laudable activity — increasing the dissemination of science — could include the demise of many scientific societies. As these scientific societies serve society in many other ways — such as nurturing the development of new scientists and offering impartial expertise to guide government policy — it is critical that enhanced access to scholarly publications not be achieved by sacrificing these other important benefits to society. We suggest options to prevent those negative outcomes.

*Scientific societies as disseminators of peer reviewed literature*

Among their many important roles, scientific societies provide the most common means of disseminating peer reviewed papers. Commercial publishers offer journals that are not associated with scientific societies and in recent years, some alternative publishing options such as PloS have appeared. However, society-based journals still offer the greater part of publishing opportunities with the assurance of peer review. Currently, almost all society-based journals

provide fee-free archives but limit access to more recent content to subscribers. Journal revenue makes these archives possible. The duration of limited access ranges from a few months to several years. Should a society lack funding to create or maintain a fee-free archive, access to the papers published in that society's journals would be lost.

In some cases, subscriptions fees may be a significant barrier to access to recent content, but that is not always the case. The annual membership fee for one of the member societies of the Ornithological Council is $25, which is the typical cost of a pay-per-view for a single paper for most journals. Full membership in all seven societies based in the United States would cost $368 for print journals and $313 for online journals.

Many society-based journals are now published and distributed by commercial publishers, and that makes it possible to offer pay-per-view options for individual articles.

Many authors now make publications available on their own websites, and search engines make these publications readily accessible. However, websites are not persistent and even those that persist go untended for long periods of time.

*Importance of journal revenue*

For most not-for-profit scientific societies, journal revenue is a necessity. To a greater or lesser extent, it sustains the society. A enhanced access policy could undermine the journal revenue upon which many scientific societies depend upon to nurture the development of scientists and other activities that benefit the public such as independent, credible scientific review and ultimately, for their very survival. If not designed carefully to avoid impacting journal-derived revenue, a public access policy could be detrimental to scientific societies and society at large.

The societies that comprise the Ornithological Council rely almost entirely on revenue generated by their journals. That revenue includes both individual memberships and library subscriptions. Our member societies are among the many that have experienced a significant drop in individual memberships as a result of the development of online library access at most universities and research institutions. Some members viewed the convenience of a personal copy delivered directly to the home or office as the primary benefit of membership. When electronic journals became widely available to students, faculty, and others associated with universities and other research institutions, some, not recognizing the other benefits of society membership, let individual memberships lapse. Others never join. The loss of revenue from individual memberships has been cushioned to some extent by an increase in library subscriptions. Recent budget problems, particularly at public universities, has now jeopardized that revenue source, too, as libraries have been forced to eliminate many journal subscriptions. Mandated public access would further undermine critical revenue, particularly were the embargo period is too short.

Continued revenue declines threaten the continued existence of scientific societies. The loss of a scientific society, in turn, represents the loss of that society's journal. The overall effect would be a reduction in published scientific information in peer-reviewed journals. Other journals might absorb some of this output, but much would surely be published without the benefit of peer

review. The other important functions of that society, such as furthering the development of scientific careers and providing impartial peer review services to government agencies, would be lost.

*Embargo duration*

We join with our colleagues in the DC Principles in calling upon the Administration to allow researchers and scientific societies the freedom and flexibility to increase access to scientific literature in the manner that best suits the circumstances of each society. A similar recommendation was made by Scholarly Publishing Roundtable, an ad hoc working group convened by OSTP and the House Committee on Science and Technology (January 2010). That working group recognized that a twelve-month embargo might not be adequate for some scientific disciplines. Our member societies publish quarterly journals. Most have already established fee-free public access archives and intend to continue to do so. Note that the considerable cost of providing fee-free archives is sustained by the societies and therefore subsidized by revenue derived from the journal. Protecting the revenue associated with access to what is considered current or recent content might require delaying public access for several years. The cited half-life of the journals published by our member societies ranges from 4.6 to 10 years. Nonetheless, all but one society participates in a fee-free archive with the intent to maintain a four-year moving wall. We note that other scientific societies have reduced the length of embargo periods over time. That may prove feasible for our member societies, too. Several publish through for-profit or nonprofit publishing houses or distributors and so can obtain statistical information on the demand for papers as a function of publication date. If they determine that revenue loss associated with access to papers not yet available in their own fee-free archives would be minimal, they may choose to decrease the duration of the embargo. Meanwhile, though, we suggest that the embargo period associated with public archiving vary according to the journal in which the paper is published. Establishing an upper limit or a sliding scale that takes into account the extent to which the society relies on journal revenue may not be unreasonable, if these metrics are established in consultation with scientific societies.

*Potential impact on research and number of publications*

The enhanced public access model used by the NIH, which other agencies are likely to emulate, may erode research funding in three ways. First, journals may need to increase page charges to offset the loss in subscription revenue. Funding page charges from the grant necessitates increasing grant size. Larger grants result in a reduction of the number of grants available. Second, it is impossible to predict page charges accurately as it is not possible to know in advance how many publications might result from the funded work or which journals will accept the papers for publication. The amount estimated in the grant proposal for page charges may prove to be insufficient. Universities may well increase overhead rates to accommodate the need to supplement grant funds to cover page charges. Increased overhead also results the amount of funding that goes to actual research.

These impacts must be offset by a commitment on the part of the Administration and the Congress that additional funding will be made available. Otherwise, the unintended consequence of an enhanced access policy may be a reduction in the number of peer-reviewed publications.

Finally, the cost to create and maintain public archives comes from the same appropriations pools that fund the grantmaking agencies and intramural research agencies. A central public archive is not necessary given the availability of digital object identifiers (DOI) that make it easy to find an item wherever it is published. The journal of record should be the primary repository, supplemented by the fee-free archive of that journal and by the authors' websites so as to assure copyright protection. More to the point, though, is the avoidance of diversion of research dollars for the creation and maintenance of a central public archive. If a paper reports research funded by more than one agency, and each agency maintains its own archive, the paper would have to be submitted to multiple archives. To the extent such archives are warranted, it should contain only the citation, abstract, and the DOI.

In addition, the costs associated with enhanced public access may impact journals directly.

Page charges for the journals published by our members societies are extremely low, ranging from $75-$100 per page; charges are routinely waived if the author is unable to pay. These charges represent a fraction of the actual cost of publication. For instance, PloS Biology charges $2,900 per paper, notwithstanding revenue from many sponsors, advertisers, and foundations. If societies are forced to increase page charges to offset the loss in subscription revenue, there may be more authors unable to pay the full cost of publication and societies will be forced to absorb more of the cost, if they are able to do so. Otherwise, they may be forced to turn away worthy and important papers. A paper that is not published is not accessible to anyone.

We are also concerned about the possibility that publishing costs could result in the erosion of the peer review process. If opportunities to publish in peer-reviewed journals decline, or the costs become prohibitive, more scientists will turn to self-publication, which in turn will erode the quality assurance afforded by the journal peer-review system. That, in turn, may lead to a lack of credibility of scientific literature as a whole.

*Ensuring compliance*

Grant conditions seem adequate to ensure compliance by requiring that each published paper be assigned a digital object identifier (DOI). When applying for further grants, the applicant can certify that all papers published with prior federal grants or contracts have been assigned DOIs and that the full citation, abstract, and DOI for each paper has been recorded in a central archive. With the DOI, the paper can be accessed easily at any publication site after the embargo period has ended.

*Enhancing utility*

If the Administration selects a model involving a central archive, then indexing would be an option that would greatly enhance access and utility for all users, including those who have other avenues of access. Each paper would be accompanied by a list of later papers that cite that paper, much as the paper-based science citators (now Web of Science) allow researchers to find more recent papers. In addition, because of the development of DOIs, a link can be provided to each of

the papers cited in a deposited paper, if those earlier papers are available online with a digital object identifier.

*Conclusion*

Our mission, in part, calls for our organization, working with our member societies, to "ensure that the best ornithological science is incorporated into legislative, regulatory, and management decisions that affect birds." Our organization, its member societies, and the ornithologists who publish in the peer-reviewed journals of our member societies devote extensive time and effort to working with government agencies, conservation organizations, and the private sector to be sure that measures taken to protect wild birds are science-based. We recognize that enhanced public access to the scientific literature is consistent with our purpose, but it is just the starting point. Much more is needed to assure that the published findings pertaining to a particular species, time, place, and set of conditions are applied appropriately to other conditions. We encourage OSTP to develop guidelines for enhanced public access that will help preserve the integrity of the scientific societies that serve society.

We thank OSTP for the opportunity to comment on this subject and hope that our comments prove useful in devising policies that achieve enhanced public access without weakening the scientific societies that publish the peer-reviewed journals in which scientific information is made available.

Sincerely,

Ellen Paul
Executive Director

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Dear sir or madam

I attach the response of the UK's Society of Biology to the public consultation on the proposed Public Access Policy. Please do not hesitate to contact me if there are any problems with the readability of this submission.

Contact details for any future queries on the content of the submission are given in the submission itself.

Steve Byford
(Member of the Journals Committee of the Society of Biology)
Publications Director
Society for Endocrinology & BioScientifica Ltd

**Proposed US Public Access Policy – a response from the Society of Biology (UK)**

*1. About the Society of Biology*

The Society of Biology represents researchers and learned societies across the life sciences. It has both individual members and member societies. Although based in the UK, its member societies own and/or publish journals whose authors and readers span the globe, including a substantial proportion from the USA. Any Public Access Policy adopted in the USA is therefore likely to have a significant effect upon these journals and societies as well. Further details are appended at the end of this submission.

*2. Learned societies and the peer review function*

Any consideration of the optimal cost effectiveness of the scholarly communication system needs to take into account the pivotal role of learned societies. Scholars in most fields say that the peer review carried out by learned societies is crucial in filtering and certifying research outcomes. Any new model for disseminating the papers that have benefited from this process must not undermine its financial sustainability. Learned societies, which are usually not-for-profit and registered charities, provide a public benefit by organizing peer review. They also benefit researchers directly, because most are members of a relevant society, and indirectly, because of the financial and other support they give to academia in the shape of grants, conferences and training courses.

Simply copying content and making it free, without compensation or agreement, from peer reviewed journals, would damage learned societies and the peer review process, by undermining their ability to recoup (by selling access) on the investment they make in this process. Their quality stamps also offer prestige because of competition between the journals and also because of the investment the societies have made and continue to make in developing the subject coverage and editorial policies of their journals, in order to attract the best papers they can. This results in a hierarchy of quality stamps from different journals and societies: some are perceived as carrying higher prestige than others, giving rise to an effective market in where authors can choose to submit and publish their research.

Learned societies and their publishers complete the certification process by rendering the papers they have accepted visible and usable: they invest more resources in the accepted manuscripts by carrying out detailed copy editing, coding, formatting and proof reading. Finally, they need to maintain their own publicly accessible databases of the papers they themselves say they have accepted, in the version they themselves say they have awarded their quality stamp. This is a worthwhile investment that researchers depend upon, and is a *sine qua non* of effective quality certification.

*3. Characteristics of a Public Access Policy that would make it sustainable*

The requirement for sustainability could be made compatible with a Public Access Policy if the means adopted were primarily Open Access publication supported by author-side payments, rather than depositing a copy in a repository without payment to the provider of the peer review service. This would therefore entail a commitment by federal agencies to fund not only the

research itself, but also its dissemination, either in Open Access journals or traditional subscription-based journals offering a 'hybrid' Open Access option. This is consistent with the view expressed by Dr Mark Walport, Director of the Wellcome Trust in the UK, "Medical research is not complete until the results have been communicated".

If the agencies were enabled and required to invest in paid-for Open Access publishing, learned societies and their publishers would be likely to reciprocate by assisting with or actually performing the deposit of the published papers in designated free-to-view repositories, such as PubMed Central.

Such an approach would have budgetary implications in the medium term, as provision would have to be made for the payment of the author-side charges. However, in the longer term, for journals that could move fully to an author-pays model, some savings would result from the fact that there would no longer be a need to pay for subscriptions to them.

4. *Which version of the paper should be made freely available under the paid-for model?*

If the paper's Open Access publication were funded by author-side payments, the published version of record could be made available both on the publisher's own platform and on any other open repositories, such as institutional repositories or PubMed Central. Enabling researchers to have free access to the published version of record, with all the additional functionality that publishers provide, would help researchers to use the literature efficiently.

5. *How soon would a paper be made freely available under the paid-for model?*

Again, if the paper's Open Access publication were funded by author-side payments, public, free release could be immediately upon publication, both on the publisher's own platform and on any other open repositories, such as institutional repositories or PubMed Central.

6. *Are there sustainable models for public free release in the absence of author-side payment?*

In the absence of payment, some societies and publishers might be able to tolerate some other form of free release, subject to certain important conditions. This alternative model is far less satisfactory, however, for the reasons set out below.

Under this model, free release would usually need to be subject to a release date that was later than the final publication date to limit damage to the journal's subscriber base. No one embargo period could be set across all disciplines, and it would have to be by agreement with the societies and publishers concerned, as they are most fully aware of the download patterns over time, and any subscriber attritions they are already experiencing. Many societies in the life sciences currently set such embargoes at one to two years. They might well find they need to vary this in light of any future effect on subscriptions.

In the absence of payment, in addition to the need for possible embargoes, there would also be a need to accommodate restrictions on the version that may be released: in order for societies and

journals to remain sustainable, this might in many cases be an earlier version, such as the author's accepted manuscript (incorporating the changes resulting from peer review but prior to copy editing, coding, formatting and proof reading) or, in some cases, the author's submitted manuscript (prior to any peer review), or even the research report as supplied to the funding body. In any of these cases, the version used would have to carry clear disclaimers indicating that it was not the version of record.

The distinction in what might be sustainably accommodated under the paid-for model compared with the case in the absence of payments is summarized in the following table:

*Comparison of two public access models*

| | **With author-side payment** | **Without payment** |
|---|---|---|
| **Version made freely available on open repositories** | Published version of record | Possibly earlier version, such as research report, submitted or accepted manuscript, depending on journal involved. |
| **Timing of release on open repositories** | Immediately upon publication | Subject to embargo, by agreement with societies and publishers (for any version that takes advantage of the peer review services) |
| **Method of deposit to PubMed Central** | Publisher deposits coded XML automatically, author does nothing | Author deposits manually, uncoded |

7. *Wider considerations: the advantages of the author-pays model*

Budgetary considerations may well make options that do not involve author-side Open Access fees seem attractive, but that is an illusion, because they appropriate the outputs of services for which they do not pay, and so are unsustainable. At the same time they potentially undermine the income that pays for the service. Payment of author-side Open Access fees, on the other hand, would be more sustainable, and might also address some of the underlying problems in the current model.

Over the last few decades, funding for research has grown enormously and, as a result, so has the volume of research outputs in the shape of papers meriting publication [see references 1, 2]. More or bigger journals have therefore been required. Over the same period, funding for the dissemination of research, largely in the form of library budgets, has not grown by nearly as much. Consequently, libraries have needed to cancel current subscriptions in order to afford the newer or bigger journals they have required. This has reduced the subscription bases of some

journals. Since most of the costs of publishing journals are fixed, first-copy costs (peer review, editors' honoraria, copy editing, coding, formatting, proof reading, online hosting etc), publishers' unit costs have increased. Many have therefore needed to increase their subscription prices faster than inflation. This has resulted in a vicious cycle of library cancellations and price increases. Despite creative modification of the subscription model in the shape of multi-site, multi-journal licences, for many journals the subscription model may not be sustainable in the long term, unless library budgets increase in line with research funding, which would be desirable but is presumably unlikely in the current economic climate.

For federally funded research, a careful transition to author-pays Open Access has the potential to provide one possible sustainable solution. (However, it is noted that this would not work in disciplines dominated by research that has no explicit research grant funding, or for authors who have limited access to funds for other reasons.) Under the author-pays model, journals would have to compete for the best authors, as now, but this would become linked to their pricing, creating for the first time an effective market that would link a journal's pricing to the quality of the service it provides.

The major obstacle to a transition to the author-pays Open Access model has been the availability of funds for authors to pay for it. The present opportunity, therefore, is for funding bodies in the world's wealthier countries to set out a policy that provides such funds, with matching authorization for authors to select author-pays Open Access publishing solutions. This would stimulate movement towards a sustainable model that will provide more widespread dissemination, whilst at the same time protecting the vital certifying role that learned societies and their publishers provide. This was the model adopted by the Wellcome Trust in the UK. If this example were followed, it would be an important step towards a sustainable global Open Access system for scholarly communication.

An unfunded deposit-without-payment policy would provide none of these advantages, and would simultaneously undermine scholarly certification and the societies upon which it largely depends.

**References**

[1] M Ware 2006 Scientific publishing in transition: an overview of current developments (Figures 2 & 3) p7

http://www.stm-assoc.org/2006_09_01_Scientific_Publishing_in_Transition_White_Paper.pdf

[2] M Ware & M Mabe 2009 The stm report: An overview of scientific and scholarly journals publishing p18

http://www.stm-assoc.org/2009_10_13_MWC_STM_Report.pdf

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The American Physiological Society is pleased to submit the attached response to the OSTP Request for Comments on Public Access Policies for Science and Technology Funding Agencies. Please contact us should there be a need for further discussion and/or clarification.

Sincerely,
Martin Frank, Ph.D.
Executive Director, American Physiological Society

The American Physiological Society (APS) is pleased to respond to the Office of Science and Technology Policy's December 9, 2009 request for public comments on Public Access Policies for Science and Technology Funding Agencies Across the Federal Government. The APS supports the principle of providing the public with access to the findings of federally-funded scientific scholarship. Indeed, journals published by scholarly societies have been leaders in moving their content online and developing mechanisms to make that content readily and freely accessible to the scientific community and to the public. Nevertheless, we believe that releasing peer-reviewed research articles in competition with scholarly publishers is the wrong approach because it will undermine the ability of publishers to serve as filters and guardians of the scientific record. One of President Obama's first actions was to issue a Memorandum on Transparency and Open Government on January 21, 2009. This document set forth three principles:
transparency, participation, and collaboration as the cornerstone of an open government. It is worth noting that the third principle, collaboration, argues against causing economic or other damage to private institutions. The APS believes that OSTP should keep the following in mind as it considers how to provide the public with access to the findings of federally-funded scientific scholarship.

• **The Government should establish appropriate materials and channels for information exchange with the public about agency funding expenditures.**
The principle of transparency denoted in President Obama's memorandum requires the Government to provide the public with information about how public funds are spent through contracts, grants and cooperative agreements. Appropriating the scholarly record (i.e., the published manuscript) or a version of it is a back-door way of doing so. Most funding agencies already maintain databases listing the names of award recipients and titles of their proposals and many agencies already receive lay summaries of projects for distribution to the public. Investigators can be directed by funding
agencies to submit lay summaries with their annual progress reports. Both the database and summaries should be provided to the public. The government needs to be clear about who is the 'public,' the lay public who would benefit from purpose-written summaries relating to publicly funded research; the scientific public, who currently has access to the literature; the global public,
whose tax dollars are not involved but who benefit hugely. Publishing information on the projects funded by Federal agencies as suggested above will further enhance the ability of the public to have
an informed dialog with the Government on how its tax dollars are being spent.

• **The government and scholarly publishers share the goal of disseminating scientific findings and should collaborate to achieve it.**
The President's Memorandum on Transparency and Open Government states that "collaboration improves the effectiveness of Government by encouraging partnerships and cooperation within the

Federal Government, across levels of government, and between Government and private institutions." The government should seek genuinely collaborative solutions to the challenge of enhancing access to research findings.

**• Scholarly publishers provide the essential services that ensure the quality of journal content**

It is clear from the Federal Register Request that the Administration is familiar with the roles played by scientific publishers. Publishers facilitate the validation and dissemination of scientific information. In addition to the risk taken in developing new publications in support of new areas of research, publishers provide the unique service of managing the scientific record through filtering and validation of the manuscripts by means of peer review. The majority of manuscripts submitted to a given scientific journal do not make it through to publication because of scientific shortcomings (identified during peer review) that undermines their reliability. Moreover, the majority of those that are ultimately published will first undergo revisions as a result of the peer review process. This means that publishers must organize and coordinate the review of far more manuscripts than they will ever publish. The review process offers the additional benefit of providing valuable feedback to scientists whether their manuscripts are rejected or accepted. By filtering and validating content for its scientific quality and ethical integrity, publishers serve as globally recognized gatekeepers of the scientific record.

**• The current NIH Public Access Policy undermines journals and confuses the scientific record**

The National Institutes of Health has relied upon the authoritative validation provided by scholarly publishers in establishing its PubMed Central (PMC) repository of full-text articles. The NIH mandate is for the upload of manuscripts *after* peer review had been completed and the manuscript had been accepted for publication. This practice jeopardizes the economic viability of the journals on which the NIH depends because it puts the government in the position of competing with private publishers. Once the embargo is lifted, public access to the published article in PMC siphons usage away from journals. Usage is a metric by which research libraries and other sectors of the scholarly community assess the value of articles and the need for journal subscriptions. Because PMC has refused to disclose article usage data to journal publishers, it is impossible to determine the extent to which journal usage is being undermined by PMC. The other problem with a government collection of manuscripts is that it results in multiple versions of the article. Accepted manuscripts typically go through editorial revision so providing access to such manuscripts may confuse readers and, in some cases, corrupt the scientific record.

**• There is a tension between "free" and "expensive" when it comes to high quality information**

As journals moved online in the mid-1990s, Open Access advocates began calling for free and immediate access to the scientific literature. One half of a seminal statement attributed to Stewart Brand from a 1984 Hacker's conference (http://www.rogerclarke.com/II/IWtbF.html) is frequently
quoted by the OA movement: *"Information wants to be free - because it is now so easy to copy and*
*distribute casually."* But Brand also said that *"information wants to be expensive - because in an Information Age, nothing is so valuable as the right information at the right time."* There are costs
associated with not only identifying high quality information but also rendering it accessible and discoverable. Scholarly publishers have invested in the cost of the creation of electronic platforms
for the submission and review of manuscripts, electronic hosting of the content, along with robust
tagging of the metadata, and specialty taxonomies for data-mining. If the government decides there is a compelling need to provide public access to peer reviewed research articles, it must also be prepared to replace lost subscription revenues with article processing fees so that journals can continue to provide peer review and ensure the integrity of the scientific record.

**APS responses to questions raised in OSTP Federal Register Notice**

*1. How do authors, primary and secondary publishers, libraries, universities, and the federal government contribute to the development and dissemination of peer reviewed papers arising from federal funds now, and how might this change under a public access policy?*

Scholarly journals play a critical role in managing the scientific record by coordinating the peer review process, which serves as a filter and quality control mechanism. Each submitted manuscript
is subject to the same procedures, even though many are ultimately rejected. Publishers such as the APS that are serious about their responsibility as gatekeepers for the scientific record also seek to identify and screen out research that fails to observe appropriate ethical standards for human and
animal research as well as scientific integrity. In addition to establishing standards of excellence respected by readers around the globe, peer review also provides valuable criticism that enables authors to refine their work. Publishers provide a number of essential services, ranging from editorial
processes that facilitate communication through enhanced readability to the actual dissemination of scientific information. With respect to the latter, publishers take entrepreneurial risks by developing
new publications that recognize and advance important new areas of research and by exploring new
platforms for the dissemination of research. Prior to 1995, "public access" involved going to the library. Expectations of access changed rapidly once journals developed electronic publishing platforms. The concern today is how to maintain high standards of journal quality. Any move towards public access to the peer reviewed literature must be accompanied by provisions that enable publishers to recover the costs to produce the peer-reviewed literature.

*2. What characteristics of a public access policy would best accommodate the needs and interests of authors, primary and secondary publishers, libraries, universities, the federal government, users of scientific literature, and the public?*

Any government public access policy must preserve the viability of peer review and ensure the integrity of the scientific record. Various journals currently use different strategies to recover the costs of these operations: Some charge subscription or access fees to readers; some charge article processing fees to authors; some are subsidized by a scholarly society, research institution, funding agency or commercial interest; and many utilize a hybrid model combining various funding streams. Even without a government mandate, many not-for profit publishers already provide free access to their journals either immediately upon publication or after some interval. The specifics of the access policy vary according to how the journal recovers costs and the nature of journal usage in a given scientific discipline. The NIH Public Access Policy took into account the notion that one size does not fit all. The government should avoid crafting access policies or mandates that undermine the ability of publishers to continue to recover costs as they currently do unless the government also provides funding to ensure that journals can continue to provide high quality peer review and related services.

*3. Who are the users of peer-reviewed publications arising from federal research? How do they access and use these papers now, and how might they if these papers were more accessible? Would others use these papers if they were more accessible, and for what purpose?*

The APS publishes journals of physiological research, much of which is basic research. The primary audience for basic research is other scientists engaged in similar work. Such research can only be undertaken in institutions that have extensive infrastructure, including laboratory facilities and regulatory compliance offices. Such institutions typically have reference libraries that maintain subscriptions to the relevant scientific literature, including our journals. Researchers typically locate articles online with various search engines such as Google, Google Scholar or PubMed. They can access these articles seamlessly from their own computers thanks to the institution's subscription to the journal. The APS is not aware of any significant unmet demand for access to basic research in physiology. APS published nearly 3,900 articles in 2009 yet receives only 3-4 requests per week from patients or their doctors seeking information about their conditions. The APS gladly provides them with complimentary access to articles with a bearing upon their conditions.

*4. How best could federal agencies enhance public access to the peer-reviewed papers that arise from their research funds? What measures could agencies use to gauge whether there is increased return on federal investment gained by expanded access?*

The best way to facilitate public access to the peer-reviewed literature is for the government to work cooperatively with publishers. That will mean crafting policies that take into account differences in how journals recover their costs and how scientists in various fields utilize the literature. If the government determines that there is a compelling need to provide access before it is economically feasible for publishers to do so, then it must be prepared to provide the funds needed to support the peer-review and related processes that it deems so valuable. In measuring whether there is an increased return on federal investment, the government must include whatever costs are entailed

by establishing information storage and retrieval systems that duplicate those of the private sector. In addition, it should measure the effect on U.S. trade when research institutions and pharmaceutical companies in other countries cancel their journal subscriptions in favor of free access to scholarly articles through U.S. government websites.

*5. What features does a public access policy need to have to ensure compliance?*
Optimal compliance will be achieved when there is a collaborative system that has the broad support from the government, scientific societies, publishers, and scientists themselves.

*6. What version of the paper should be made public under a public access policy (e.g., the author's peer-reviewed manuscript or the final published version)? What are the relative advantages and disadvantages to different versions of a scientific paper?*
The final published version is the article of record. However, making that article available from a government website places it in direct competition with the publisher. During the debate over what form NIH's public access policy should take, the APS and other scholarly societies recommended that NIH obviate this conflict by providing access to the final article on the journal website through a link beside the abstract in PubMed. Providing access to any other version than the final version would serve to confuse the scientific record. The issue of government competition undermining the economic viability of journals must be resolved in order for there to be a successful collaborative public access policy.

*7. At what point in time should peer-reviewed papers be made public via a public access policy relative to the date a publisher releases the final version? Are there empirical data to support an optimal length of time? Should the delay period be the same or vary for levels of access (e.g., final peer reviewed manuscript or final published article, access under fair use versus alternative license), for federal agencies and scientific disciplines?*
It is clear from our experience with the NIH Public Access Policy that "one size does not fit all." While the initial plan called for a 6-month embargo, discussions between society publishers and the NIH leadership resulted in a modification of the plan to allow for a 12-month embargo. The decision was made recognizing the important role journals play in the validation and dissemination of scientific information and that a shorter period might jeopardize the ability of the journals to sustain the all important peer review process should subscription revenues diminish because content was available in 6 months. Different fields of science have different patterns of usage and citation. From our experience, it is clear that there is no uniform optimal embargo period across all scientific disciplines. While a 12 month embargo might work reasonably well for most journals in the research
areas funded by NIH, it is unlikely that the same can be said for research funded by NSF, NASA, USDA, USGS, etc.

Each field of research has its own particular "Cited Half-Life," which provides an indicator as to the long-term value of source items in a single journal publication. Thomson Reuters defines the Cited Half-Life as "the number of years, going back from the current year, that account for 50% of the total citations received by the cited journal in the current year." Some fields such as molecular/genomic research may have a short Cited Half-Life of 1-3 years while physiological research has a longer shelf life and therefore a longer Cited Half-Life of 7-10 years. For investigators working in the physiological sciences and other areas with longer Cited Half-Lives,

rapid public access may compromise the viability of the journal because it will lead to cancellations.
If the government truly believes that peer review is important, it must find a way to sustain peer review either by establishing policies that do not undermine subscriptions or else by paying for peer review through article processing fees. The problem with the latter is that such funding will inevitably (a) reduce the amount of funding available to conduct research and (b) be subject to the vagaries of legislation.

*8. How should peer-reviewed papers arising from federal investment be made publicly available? In what format should the data be submitted in order to make it easy to search, find, and retrieve and to make it easy for others to link to it? Are there existing digital standards for archiving and interoperability to maximize public benefit? How are these anticipated to change?*
For anyone who has followed the development of the web and search engines, especially Google and Google Scholar, there is no need for the government to do anything "…to make it easy to search, find, and retrieve, and to make it easy for others to link to it." Publishers are already working with Google and other search engines to allow crawling of content to enhance search and retrieval. Assuming the article carries proper attribution listing the government funding agency, Google can be used to manage research portfolios to determine which papers are funded by specific research grants or funding initiatives. All this has already been accomplished as a result of the XML tagging of manuscripts to facilitate display in an HTML format. Societies are investing in *robust tagging of the metadata for discoverability and specialty taxonomies for data-mining to accommodate current researcher needs.* Societies are already working to develop archival solutions for digital content,
partnering with Portico and publisher- and library-supported initiatives such as CLOCKSS. It is clear that government funding of these archiving initiatives would speed the process.

*9. Access demands not only availability, but also meaningful usability. How can the federal government make its collections of peer-reviewed papers more useful to the American public? By what metrics (e.g., number of articles or visitors) should the Federal government measure success of its public access collections? What are the best examples of usability in the private sector (both domestic and international)? And, what makes them exceptional? Should those who access papers be given the opportunity to comment or provide feedback?*
Government agencies can provide the public with information about government-funded research through searchable databases of funded research projects with scientific abstracts and lay summaries. In some cases, this can be enhanced by releasing lay summaries of researchers' progress reports, and journal citations as set forth in the America Competes Act. Making this research more useful to the public requires an interpretive layer, and this is an area where federal investment could be useful. The NIH website MedLinePlus is a good example of a consumer-oriented government website.

Often the government funds basic research designed to advance our understanding of physical, chemical, social or biological processes, and the audience consists of other scientists rather than the public at large. NIH has developed a number of linkages between the PMC manuscript collection and its various databases of chemical structures and genetic information, etc. A public access program could provide similar enrichments to other government funded literature, but that would exclude the majority of scientific research. An alternative approach would be for the

government to develop software that publishers could use to tag and link all of their articles to government databases. In terms of providing expanded access to this science, it is preferable for the federal government to work with the journal publishers so that the citations arising from research grants can be accessed through links provided from Progress Reports.

The APS appreciates the opportunity to submit these comments. The APS is a not-for-profit scholarly association founded in 1887 to promote the advancement of physiology. Today the APS has nearly 11,000 members who are scientists involved in physiological research and the teaching of physiology at colleges, universities, and medical schools and in industry, government, and independent research institutions. The APS publishes peer reviewed journals, sponsors scientific meetings and conferences, and provides professional development opportunities for its members as well as educational and mentoring programs to identify, encourage, and train future physiologists. For its efforts in the latter areas, the APS was awarded the 2003 Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring. The APS publishes 14 journals that provide venues where research findings are validated through peer review and disseminated to other scientists. In 2009, 7.393 manuscripts were submitted to the APS journals peer review system, and 3,882 manuscripts were ultimately published. The oldest APS journal is the *American Journal of Physiology*, founded in 1898, and its newest journal is *Physiological Genomics*, founded in 1999. The Society regards itself as responsible for the integrity and accessibility of the research it publishes. Since 1996, the Society has published both print and online versions of its journals.

The journals of the APS include:

• ***American Journal of Physiology (AJP)*** was founded in 1898. Since 1977, the *AJP* has been published in both a consolidated edition and as the following individual journals addressing these focused research areas:

- ***AJP-Cell Physiology***
- ***AJP-Heart and Circulatory Physiology***
- ***AJP-Regulatory, Integrative and Comparative Physiology***
- ***AJP-Renal Physiology***
- ***AJP-Endocrinology and Metabolism***
- ***AJP-Gastrointestinal and Liver Physiology***
- ***AJP-Lung Cellular and Molecular Physiology***
- ***Physiological Reviews*** (Founded 1921)
- ***Journal of Neurophysiology*** (Founded 1938)
- ***Journal of Applied Physiology*** (Founded 1948)
- ***Physiology*** (Founded 1986)
- ***Advances in Physiology Education*** (Founded 1989)
- ***Physiological Genomics*** (Founded 1999)

The APS supports public access to the scholarly literature. In 2000, the APS made online access to the content of its journals freely available 12 months after publication. In 2002, the APS initiated free online access to its journals for its 10,500 Society members. In 2004, the APS scanned and rendered searchable all journals published between 1898 and 1996, which is provided free to members. The APS provides free journal access to scientists in developing countries through the HINARI, AGORA, and OARE programs. Through its website (www.the-

aps.org), the APS provides patients access to articles of interest. Recently, the Society began working with DeepDyve to provide reader access to individual journal articles for $0.99. The implementation of a public access policy across federal agencies would affect APS members as authors, editors, and readers of the APS journals and as beneficiaries of the Society's programs. Publishing peer-reviewed journals is the primary revenue stream of the APS. The health of the APS is dependent on it publications program which enables it to undertake a number of worthwhile activities designed to advance our science and promote the education and training of students interested in the physiological sciences.

The APS believes that in an Open Government it is important to solicit input from the public. For that reason, the Society appreciates the opportunity to submit comments and looks forward to continuing to be part of the dialog on how best to implement public access across the government.
Sincerely yours,
Gary C. Sieck, Ph.D.
President

Martin Frank, Ph.D.
Executive Director

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The Entomological Society of America is pleased to submit the attached response to the OSTP Request for Comments on Public Access Policies for Science and Technology Funding Agencies. Please contact us should there be a need for further discussion and/or clarification.

Sincerely,

Alan Kahan
Director of Communications & Publications
Entomological Society of America

The Entomological Society of America (ESA) appreciates the opportunity to respond to the U.S. Government's open consultation with stakeholders. ESA is a professional membership organization and publisher of scientific, technical, and medical (STM) research and reference information in the field of entomology. We are incorporated in the United States and were founded in 1889.

- We publish 4 quarterly research journals
- In 2009, 574 articles were published by U.S. researchers, of which 190 acknowledged support by various agencies of the US Government
- There are approximately 1,060 U.S. reviewers and 100 U.S. editors engaged in the peer review and editing of our journals
- In 2009, our journals had 1,503 institutional subscribers and 1,994 individual subscribers
- There were 6,420 members of the Society in 2009

In response to the specific questions proposed by OSTP on the "Policy Forum on Public Access to Federally Funded Research: Implementation" posted on the OSTP Blog, the Entomological Society of America offers the following views.

*Which other Federal agencies may be good candidates to adopt public access policies?*
In relation to entomology, research funded by grants from the USDA and NSF are candidates to consider adopting public access policies.
*Are there objective reasons why some should promulgate public access policies and others not?*
No, although there is always the potential for information in publicly accessible papers in any STM field to be misinterpreted by the lay public.
*What criteria are appropriate to consider when an agency weighs the potential costs (including administrative and management burdens) and benefits of increased public access?*
The main criteria should be, 1) to make publicly accessible articles available at the least cost to the American taxpayer, and 2) to make the information publically accessible within existing institutions and processes. Both of these criteria would ensure that public access is done in the most cost-efficient and timely manner.

There are also concerns that government-imposed Public Access Policies would violate fundamental copyright principles**.** For over a century, copyright protection has provided the incentive for publishers to invest in the peer-review of research prior to publication and in the infrastructure necessary to publish and distribute scientific journal articles about the latest government-funded research. Publishers have depended on copyright to protect these works that have aided in the advancement and integrity of science and contributed to substantial gains in biomedical research and other knowledge. In effect the application of government mandates like the NIH public access policy—whether cloaked in the guise of funding, appropriations, or other policy—is indistin-guishable from the imposition of an extraordinary and unprecedented exception to the most fundamental of rights under copyright—namely, the exclusive right to distribute the copyrighted work. While the government may have funded the research, or some of it, it should not claim fundamental rights in the research works that reflect substantial value added by publishers.

ESA, like most scientific society publishers, allows articles from its journals to be either immediately freely accessible on its website (for a fee paid by the author) or to be posted on the author's website or institutional repository two years after publication in our journals. That is, there is an existing process and mechanism for making published articles freely accessible from ESA's own online journal website.

*How should a public access policy be designed?*
*1. Timing. At what point in time should peer-reviewed papers be made public via a public access policy relative to the date a publisher releases the final version? Are there empirical data to support an optimal length of time? Different fields of science advance at different rates—a factor that can influence the short- and long-term value of new findings to scientists, publishers and others. Should the delay period be the same or vary across disciplines? If it should vary, what should be the minimum or maximum length of time between publication and public release for various disciplines? Should the delay period be the same or vary for levels of access (e.g. final*

*peer reviewed manuscript or final published article, access under fair use versus alternative license)?*
Assuming that an author has not paid to have his article made freely accessible at the time of publication, ESA believes that a minimum of 12 months from date of publication in the journal should pass before the article is made publicly accessible, regardless of the discipline. The ability for publishers to charge subscriptions—its largest source of income—would be significantly if not completely compromised if duplicate versions of the content were freely available elsewhere, especially within as short a period as 6 months after publication.

*2. Version. What version of the paper should be made public under a public access policy (e.g., the author's peer-reviewed manuscript or the final published version)? What are the relative advantages and disadvantages of different versions of a scientific paper?*
ESA feels very strongly that final published version of the paper should be the one and only version that is made publicly accessible. It is this version that has the value and authoritativeness as a result of having undergone peer review, scientific editing, and copy editing. We see no advantage in making an earlier draft of a scientific paper available for public access.

*3. Mandatory v. Voluntary. The NIH mandatory policy was enacted after a voluntary policy at the agency failed to generate high levels of participation. Are there other approaches to increasing participation that would have advantages over mandatory participation?*
Yes. Unlike the NIH policy, don't have a separate and time-consuming submission process to make the paper publicly accessible, and especially do not mandate it. Simply let the article be made publicly accessible on the same website where it already exists, namely the publisher's. This would save time on behalf of the author and/or time and money on behalf of the publisher, and could be easily integrated into the publisher's existing workflow. By eliminating all additional time and effort on the author's part, the program could be voluntary and simply ask the author to check a box on the journal's manuscript submission or publishing form noting that the article is to be made publicly accessible (within the embargo period if applicable) as a requirement of its funding. As mentioned earlier, most publishers, including ESA, already allow open-access to articles—either immediately (for a fee), or after 12 months.

*4. Other. What other structural characteristics of a public access policy ought to be taken into account to best accommodate the needs and interests of authors, primary and secondary publishers, libraries, universities, the federal government, users of scientific literature and the public*?
Instead of spending the resources—human and financial—on building and hosting a full blown, full-text, government website such as was done by NIH with PubMed Central, other funding agencies could simply create citation-based website like PubMed whereby the public could link to the relevant publisher's site for a publicly accessible article. The publisher's metadata for each article could easily be sent to this website as is currently done with PubMed. The NIH Public Access Policy is a case study in how not to proceed. It did not properly involve the consultation or participation of stakeholders in its development. The PubMed Central database duplicates and competes with private sector functions, is costly, and diverts funding away from research. Authors' productivity is affected as they are forced to re-submit and check manuscripts to PMC which have already been accepted by publishers, and publisher's staff has to do additional, repetitive work if the publisher does the submitting to PMC. In summary, ESA does not support

mandating public access of federally-funded research, but if the government does proceed to implement policies, it should uphold clear principles, such as being evidence-based, and proceed with extreme caution to ensure long term sustainability and that quality levels are maintained.

Sincerely,
Alan Kahan
Director of Communications and Publications

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Dear Sir/Madam

On behalf of Rhonda Oliver, Group Head of Publishing of the Biochemical Society and Managing Director of Portland Press Limited, please find attached the Biochemical Society response to the OSTP Public Consultation on Public Access Policy.

Yours sincerely
Pauline Starley

**Biochemical Society Response to Office of Science and Technology Policy Public Consultation on Public Access Policy**

Introduction

The Biochemical Society is an international membership-based learned society which was founded in 1911. The Society is based in London and its mission is to promote the advancement of the molecular biosciences and to represent the interests of all those working in the sector. In addition to being a scientific learned society, the Biochemical Society is also a not-for-profit publisher via its wholly owned subsidiary, Portland Press Limited, and therefore this response to your consultation is made from both perspectives. Portland Press Limited publishes a number of books and journals, including the Society's flagship journal, the *Biochemical Journal*, which was founded in 1906, and has been serving the scholarly scientific community for over 100 years. We also publish on behalf of a number of other learned societies, for example, the International Union of Biochemistry and Molecular Biology, the International Federation for Cell Biology, the Société Francaise des Microscopies and the Société de Biologie Celluliare de France. In 2009, we launched a new open-access journal on behalf of the American Society for Neurochemistry.

The Biochemical Society welcomes this opportunity to respond to the OSTP open consultation, recognizing as it does the vital role scholarly publishers play in the communication of science.

Although based in the UK, our authors and readers are international. Around 25% of submissions to the *Biochemical Journal* come from the USA and the USA accounts for ~50% of our online subscriber usage. Any public access policy adopted by the US Government will therefore have a significant impact.

We are very concerned by the prospect of any move to impose free release of peer-reviewed journal articles with short embargo periods, or no embargo at all, when there are no authoritative data on whether such a move would affect the viability of our journals in the long run.

We welcome the recognition of the importance of peer-review, as we make a significant financial investment to manage the process by which a submitted manuscript becomes part of the "minutes of science" in the shape of the 'version of record'. However, our value-added activities are not paid for by US taxpayer dollars and we do not believe that the US Government should expropriate journal articles in which the Biochemical Society (through Portland Press Limited) has invested and added considerable value.

Publishers are experimenting with a number of journal business models and we believe that we should be allowed to retain control of our own business models, operating in a free market. Peer-reviewing research is a very expensive activity and has to be paid for by somebody. It is therefore extremely important that any policy to mandate access to research outputs funded by the US Government does not de-stabilize the scholarly publishing system that has served the scientific community, and society as a whole, so well.

*Question 1*
*How do authors, primary and secondary publishers, libraries, universities, and the federal government contribute to the development and dissemination of peer-reviewed papers arising from federal funds now, and how might this change under a public access policy?*

Researchers and their organizations provide the facilities and knowledge to conduct scientific research and educate the researchers of the future.

Publishers play a vital role in the validation, certification, dissemination and digital preservation of the outputs of scientific research. We fund and support the peer-review process, which combined with our journal brands, enables the scientific literature to be ranked and sorted, by quality and scientific discipline.

The Biochemical Society accepts the principle that governments, via their taxpayers, fund substantial amounts of research done in the biomedical sciences, and that, therefore, these taxpayers should have access to those outputs. However, governments do not pay for the versions of record that are the end-product of the scientific literature.

It is essential that any policy does not harm or limit the ability of publishers to create the peer-reviewed scholarly literature, for example, by drastically reducing our legitimate right to generate revenues from the value-added publishing services that we provide.

*Question 2*
*What characteristics of a public access policy would best accommodate the needs and interests of authors, primary and secondary publishers, libraries, universities, the federal government, users of scientific literature, and the public?*

As the Federal Government has paid for the data arising from scientific research, the basis of any Federal public access policy should be restricted to the immediate public posting of a research report summarizing the major findings of the research. Such reports would benefit from being tailored for the members of the general public, i.e. by providing context and significance to a non-specialist audience. In this respect, we commend *PatientInform*, a free online service that provides patients and their families access to important research information relating to a number of diseases.

*PatientInform* is a collaborative project, actively managed and funded by STM (of which the Biochemical Society is a member). It is a very good example of publishers working together to enhance the public accessibility to research outputs.

Any public access policy should respect the free market in which publishers operate to allow them to find new ways to expand access in a sustainable fashion.

There is no one optimal embargo period for all scientific disciplines and, in respect of the current NIH public access mandate, we believe that any reduction in the current 12-month embargo period would be very damaging to the Biochemical Society's needs.

*Question 3*
*Who are the users of peer-reviewed publications arising from federal research? How do they access and use these papers now, and how might they if these papers were more accessible? Would others use these papers if they were more accessible, and for what purpose?*

The primary users of the peer-reviewed literature are academics and researchers in universities, research institutions and in industry. There is a shortage of data regarding the real demand from the public for access to the peer-reviewed scientific literature.

There are data to show that ~96% of STM journals are available online and that this is now overwhelmingly how the literature is accessed by users.

There is little evidence that lack of access to the scholarly literature is a problem for users (see RIN Study on Access to Professional and Academic Information in the UK, August 2009) and most academics have access to the literature via subscriptions taken out by their institutions.

In addition, the Biochemical Society makes its journals accessible to users in the developing world through the Research4Life programme (HINARI, AGORA, etc.) – as do many other publishers in both the commercial and not-for-profit sectors.

*Question 4*
*How best could federal agencies enhance public access to the peer-reviewed papers that arise from their research funds? What measures could agencies use to gauge whether there is increased return on federal investment gained by expanded access?*

It is difficult to answer this question when there is a lack of any evidence that there is a real (as opposed to a perceived) demand from the public for access to the peer-reviewed literature. It

would be helpful for government agencies to work with publishers to assess the actual public demand for such access, as this is likely to vary considerably from discipline to discipline.

It is not clear where the remaining gaps in access exist, but we believe most publishers would wish to work with other stakeholders in the scholarly publishing community to identify and find methods of closing such gaps.

It is not clear to us how repositories represent good value for money or whether for the most part they duplicate efforts already being carried out by publishers.

We deplore the wasteful proliferation of different versions of articles posted on institutional repositories, other than the version of record, which we believe may be harmful to the scholarly record.

It would seem most cost-effective if the research reports arising from public investment in research were linked directly to the publisher's own website, where the final version of record is already posted at no additional expense to the public.

However, in the meantime, it would be helpful if repositories such as PubMed Central (PMC) would be more helpful about sharing their usage data.

In 2006, as part of the centenary celebrations of the *Biochemical Journal*, the journal archive back to 1906 was digitized and deposited in PMC. It became immediately apparent that this was shifting usage away from our own website.

It is well known that librarians use usage statistics to inform their cancellation decisions, so this was a matter of great concern to us. This situation was compounded by a refusal by PMC to provide us with the detailed usage information we need to understand and manage the situation.

*Question 5*
*What features does a public access policy need to have to ensure compliance?*

Unsurprisingly, there is evidence that users predominantly wish to access the version of record.

Relying on individual authors to submit their articles resulted in low levels of compliance – even after such compliance was mandated by their grant givers.

We offer authors the choice to pay to make their article freely available online immediately on publication (so-called Gold Open Access), but take-up is low. If authors opt to pay, then we deposit the version of record on their behalf, and there is evidence that compliance rates are higher where this is the case.

However, it is essential that such compliance should be sustainably funded by a clear mechanism that will enable publishers to recover their investment in producing the version of record.

*Question 6:*

*What version of the paper should be made public under a public access policy (e.g., the author's peer-reviewed manuscript or the final published version)? What are the relative advantages and disadvantages to different versions of a scientific paper?*

The only version of a paper that has been paid for by public taxes is the unrefereed manuscript or research report. Therefore this is the only version that the public should be able to access as of right.

Any subsequent version will have benefited from the publisher's investment in peer-review, copy-editing, proof-reading, reference-checking and linking, image formatting and other value-added services – for example, we have recently supported researchers at the University of Manchester to develop a suite of tools (Utopia Documents) to semantically enrich journal article PDFs (see http://www.biochemj.org/bj/semantic_faq.htm). We must be able to continue to recoup the real costs of carrying out these activities, whether from selling subscriptions or charging author-side payments for public access.

Errors in manuscripts are often detected and corrected after the peer-review process; sometimes these are of a serious nature. We are very concerned that versions other than the version of record will confuse readers and undermine the trust and confidence in the scientific record and may cause harm.

*Question 7*
*At what point in time should peer-reviewed papers be made public via a public access policy relative to the date a publisher releases the final version? Are there empirical data to support an optimal length of time? Should the delay period be the same or vary for levels of access (e.g., final peer-reviewed manuscript or final published article, access under fair use versus alternative license), for federal agencies and scientific disciplines?*

There is no "one-size-fits-all" embargo. The pace of research is different from subject discipline to subject discipline as evidenced by the Thomson/ISI metric; "cited half-life". This is an indicator that commercial value is retained well beyond 12 months. For example, in 2009, the cited half-life for the *Biochemical Journal* was 9.5 years.

We do not support efforts to make the embargo period less than 12 months based on our experience of depositing journal articles after 6 months in PMC. This policy led to an increase in cancellations that was only reversed when we moved to delayed access of 12 months on our own website (i.e. no longer depositing in PMC).

However, there is no reliable data on the mid- to long-term effects of large-scale deposit of peer-reviewed articles under different embargo periods on the viability of the journals concerned. Before endangering the future of the scholarly record of peer-reviewed research, we suggest that it would be wise to gather evidence on the effect of public access policies before they are implemented.

To this end, the Biochemical Society is participating in the PEER project. This important EU-funded initiative is investigating the effects of large-scale, systematic depositing of authors' final peer-reviewed manuscripts on reader access, author visibility and journal viability.

PEER is an excellent example of a collaborative, responsible and evidence-based approach that will run until 2011. We suggest a similar evidence-led approach to policy development should considered by the USA.

*Question 8*
*How should peer-reviewed papers arising from federal investment be made publicly available? In what format should the data be submitted in order to make it easy to search, find, and retrieve and to make it easy for others to link to it? Are there existing digital standards for archiving and interoperability to maximize public benefit? How are these anticipated to change?*

Governments should take advantage of the investments and infrastructure already provided by publishers by linking to the version of record online.

Digital standards for archiving and interoperability are still emerging, but there are a number of successful, efficient, industry-led solutions already in existence, for example, the Digital Object Identifier (DOI, managed by the DOI Foundation), CrossRef, Portico.

We believe that the publishing industry, not governments, is best placed to respond to future technological challenges in an innovative and cost-effective fashion. There are a number of initiatives in the pipeline that support this view, for example, CrossCheck, CrossMark and ORCID.

*Question 9*
*Access demands not only availability, but also meaningful usability. How can the federal government make its collections of peer-reviewed papers more useful to the American public? By what metrics (e.g., number of articles or visitors) should the Federal government measure success of its public access collections? What are the best examples of usability in the private sector (both domestic and international)? And, what makes them exceptional? Should those who access papers be given the opportunity to comment or provide feedback?*

The number of articles deposited might be a measure of the success of author compliance in the face of increasingly Draconian funders' mandates, but it is not clear that number of downloads or visitors will provide meaningful measures of success.

Publishers' peer-reviewed articles should only be made accessible to the public if publishers are adequately recompensed for their use by government(s). In this case, the public would have access to existing and future tools and services provided by publishers, including public engagement services, which would enhance their usability and relevance to the public.

Thank you very much for this opportunity to comment on this important issue.

Yours sincerely,
Rhonda Oliver
Group Head of Publishing of the Biochemical Society and Managing Director of Portland Press Limited

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Per indications by Rick Weiss of an extended deadline, the National Breast Cancer Coalition (NBCC) is submitting comments in response to Federal Register Vol 74, No 235. Thank you for your consideration.

Regards,
Mina Suh, MPH.
Science Analyst
National Breast Cancer Coalition

The National Breast Cancer Coalition (NBCC) appreciates this opportunity to comment on enhancing public access to archived publications resulting from research funded by Federal science and technology agencies. NBCC is a grassroots advocacy organization with the mission to eradicate breast cancer by focusing the administration, U.S. Congress, research institutions and consumer advocates on substantive approaches relating to breast cancer. To achieve this mission, NBCC has created and mobilized a powerful, effective and diverse network of trained grassroots activists, giving breast cancer a meaningful voice in Washington, D.C. and state capitals, in laboratories and health care institutions.

NBCC applauds recent efforts by the Executive Office of the President to increase transparency and accountability in the federal government. NBCC would like to make the following comments in response to the points outlined in the December 2009 Federal Register:

*Consistency in public access policy to ensure compliance*: A public access policy must be consistent across institutions and organizations, with an effort made to encourage international cooperation. The policy should be mandatory, albeit with safeguards to ensure copyright protection. Every effort should be made to encourage publication in an open access journal or to have manuscripts deposited in an open access central repository.

*Inclusion of educated consumers in developing public access policy*: NBCC believes the best way to ensure that a public access policy truly reflects the perspective of public – the ultimate stakeholder- is to include them on the decision-making process of policy development. NBCC strongly believes that the enterprise of clinical and scientific research could be vastly improved with greater participation from educated health care consumers and trained advocates who can help to inform all aspects of decision making in developing a public access policy.

*Timely access to peer-reviewed papers:* Ideally, papers should be made public shortly after peer review but mostly certainly within 6 months of publication for any work that has been federally

funded. Currently only a limited number of articles are published in open access journals, and majority are found in journals with subscription fees, which can deter consumer access.
*Easy format in accessing peer-reviewed papers*: Research papers and articles must be available in a format that most people can easily access by computer, without downloading special software. In this day and age, several options can be readily available and a PDF format should be one of them. Of paramount importance is that the submission should be easily searchable and retrievable for the interested public; thus it should have human readability and computer readability.

NBCC urges OSTP to take these comments into consideration and looks forward to working with the agency to achieve those goals. Please contact NBCC staff member Mina Suh at 202-973-0570 or msuh@stopbreastcancer.org with any questions or concerns.

Sincerely,
NBCC Research Accountability Committee

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From: Tom Leonard
Re: comment on public access policy phase two: Features and Technology.

The extension of the deadline for comment allows me, the University Librarian at the University of California, Berkeley, to supplement statements of support I approved earlier this month from experts in my Library and from the head of the 10-campus UC system. I also am pleased to stand with the statement on file from the Association of Research Libraries on Jan. 15, 2010.

Transparency in federal funding is the common ground of all of these efforts and I can imagine no more urgent call for OSTP. One group of researchers that my Library serves, the Lawrence Berkeley National Laboratory, announced on Jan. 19 that it has been awarded $240 million, cumulatively, through the National Recovery and Reinvestment Act. This is surely the right time to lower barriers that prevent other researchers from following this work and to provide simple ways for every citizen to watch these investments of public funds.

In what format should published papers be submitted in order to make them easy to find, retrieve, and search and to make it easy for others to link to them? Authors should be able to submit their research findings in whatever format is easiest for them, or at minimum from a broad range of commonly accepted formats. If complying with the policy is too onerous then authors may be less supportive of the policy. It is the responsibility of the repository to convert the document into an accepted standard such as XML. The repository should convert the documents into a format that is easily searchable and allows linking and text mining.

Are there formats that would be especially useful to researchers wishing to combine datasets or other published results published from various papers in order to conduct comparative studies or meta-analyses? This is an important question that would best be answered by consulting with researchers in the field. Again, maximum flexibility in formats should be encouraged in order to maximize efficiency and value to users. The various formats referenced in other comments here

(such as those associated with arXiv, Protein Data Bank, and ICPSR for social science data) are illustrative.

What are the best examples of usability in the private sector (both domestic and international) and what makes them exceptional? Comments from field experts will be critical here. The key is that most of the valued features identified by private sector providers can be emulated by public access repositories using non-proprietary technologies.

Should those who access papers be given the opportunity to comment or provide feedback?

This does not seem necessary or wise. The overhead of managing reader feedback could prove to be too much of a burden (both for authors and intermediaries). This can be a "nextgen" question, informed by experience.

What are the anticipated costs of maintaining publicly accessible libraries of available papers, and how might various public access business models affect these maintenance costs? The managers of open access repositories can supply useful data here. It is worth noting that some of the most valuable and most frequently used repositories, such as arXiv and JSTOR, were created with the understanding that some costs would exceed expectations. But delay until these costs were fully understood would have been disastrous for fields such as Physics and History.

By what metrics (e.g. number of articles or visitors) should the Federal government measure success of its public access collections? All metrics should be considered to measure the success of the public access collections. At a basic level these should include uploads or deposits (for scale); visits, downloads (for impact); and turnaways, service interruptions, complaints (for efficiency). At a broader level, the success of the collection should be measured in its relationship to enhancing scientific research and technology development. As with NSF grants, the impact on a diverse community of people in need of information is a legitimate metric, though perhaps one not needed at the launch.

Tom Leonard, University Librarian, UC Berkeley and Immediate Past President, Association of Research Libraries.

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From: Tom Leonard
Re: comment on public access policy phase three: Management

The extension of the deadline for comment allows me, the University Librarian at the University of California, Berkeley, to supplement statements of support I approved earlier this month from experts in my Library and from the head of the 10-campus UC system. I also am pleased to stand with the statement on file from the Association of Research Libraries on Jan. 15, 2010.

Transparency in federal funding is the common ground of all of these efforts and I can imagine no more urgent call for OSTP. One group of researchers that my Library serves, the Lawrence Berkeley National Laboratory, announced on Jan. 19 that it has been awarded $240 million,

cumulatively, through the National Recovery and Reinvestment Act. This is surely the right time to lower barriers that prevent other researchers from following this work and to provide simple ways for every citizen to watch these investments of public funds.

Compliance. What features does a public access policy need to ensure compliance? Should this vary across agencies? Compliance should be embedded in normal grant management guidelines (effort reporting, etc.). It is important that this appear seamless and reasonable to researchers and their staff.

Evaluation. How should an agency determine whether a public access policy is successful? What measures could agencies use to gauge whether there is increased return on federal investment gained by expanded access? A variety of ways to measure success can be envisioned. One relatively simple
approach for measuring success would be to report on citation rates for agency funded publications, using pre- and post-public access policy rates as a benchmark. Qualitative accounts, samples of young researchers for example, would be useful in highlighting the strengths and weaknesses of the program. Archives in general are finding that access to primary research material that is timely and "good enough" in format is in great demand, and this may prove true of many fields now burdened by high transaction costs in sharing information.

Roles. How might a public private partnership promote robust management of a public access policy? Are there examples already in use that may serve as models? What is the best role for the Federal government?

Perhaps a useful model here is the longstanding Federal Depository Library Program. Under this program, government agencies distribute their physical publications and documents for public access and support of scientific and civic inquiry through a number of public and private libraries across the country (nearly 1300 at its high point). There is a requirement of at least one depository library per Congressional district. This model allows both private and public libraries to play roles in providing public access. And all publications are considered out-of-copyright, encouraging commercial as well as non-profit reproduction of key content to broaden access and in some cases develop enhanced use features. Libraries today recognize that the tie to print publications is outmoded and badly in need of revision. Refashioning this well-understood and trusted model in the digital realm for Federally-sponsored research should be a relatively straightforward affair. Substitute open access repositories for print depository libraries. Develop a model MOU with roles and responsibilities for the federal government and participating repositories. Establish assessment mechanisms to ensure repository compliance with their responsibilities. The idea itself is robust, even as the outmoded print approach has become a weakling of our research libraries.

Tom Leonard, University Librarian, UC Berkeley and Immediate Past President, Association of Research Libraries.

To whom it may concern,

Please see attached comments from the American Society for Nutrition (ASN) in response to the Dec. 9, 2009 Federal Register notice Vol. 74, Number 235, pages 65173-65175.

We appreciate the opportunity to share our thoughts on public access to science.

Best regards,
Mary Lee Watts, MPH, RD
Director, Science and Public Affairs
American Society for Nutrition

The American Society for Nutrition is the professional scientific society dedicated to bringing together the world's top researchers, clinical nutritionists and industry to advance our knowledge and application of nutrition. Our focus ranges from the most critical details of nutrition research to its dissemination and application. ASN publishes *The American Journal of Clinical Nutrition (AJCN)* and *The Journal of Nutrition (JN),* the two leading, peer-reviewed scientific journals in the areas of nutrition science and dietetics. ASN appreciates this opportunity to provide comment on public access to published scientific manuscripts. ASN supports the principle of public access to science and voluntarily has taken the significant steps to support broad access to content published in the two society journals.
Notwithstanding our commitment to public access, ASN has serious concerns about possible unintended consequences of public access policies; these are outlined below in responses to specific questions in the Federal Register Notice December 9, 2009, Vol. 74, Number 235, pages 65173-65175.

1. How do authors, primary and secondary publishers, libraries, universities, and the federal government contribute to the development and dissemination of peer reviewed papers arising from federal funds now and how might this change under a public access policy?

***How do publishers contribute:*** Publishers contribute to the development of peer reviewed papers by conducting peer review, the process whereby experts in the field evaluate research reports, provide feedback to improve the quality of the report, and ensure that reports based on poorly designed or executed research are not published. In addition, publishers support the editing and formatting of published papers which contributes to the accuracy, clarity, readability and discoverability of published reports. Publishers make published articles available world-wide in print and online versions, which are indexed via multiple search engines and databases to enable the broadest possible access to this content. In 2000, ASN began offering free public access to all published articles 12 months after publication. By 2006, the ASN put its entire journal collection, including over 110 years of archival content, online through Stanford University's High Wire Press. Approximately 98% of online journal content is freely accessible to both subscribers and non-subscribers.

***How could this change under a public access policy:*** there is a danger that mandated public access will interfere with the ability of journals to recover costs for the peer review and distribution of published research. This could lead to fewer journals, if journals are not able to sustain operations, and/or a loss in the rigor of peer review. Consideration should be given

to the potential economic impacts of any public access initiative on publishers and the fundamental roles and services scientific societies provide to their membership and the scientific community at-large. These impacts may be especially severe for scholarly societies and not-for-profit publishers. As ASN has implemented policies to improve public access to the research it publishes, the economic impact of these new policies was carefully considered. Certain considerations influence how soon free public access is economically feasible for a particular journal. These include revenue sources, production costs, utilization patterns, time needed for cost recovery, and frequency of publication.
For example, on average, the cost to publish an article in *AJCN* or *JN* is $3,500. Publishing costs include, but are not limited to:

- Administrative support for authors, editors and reviewers who submit and review articles;
- Development and ongoing maintenance of manuscript submission and journal content hosting sites;
- Continued enhancements to sites and programs and investments in new technologies to improve functionalities for authors and readers, and to increase the discoverability of content;
- Support for editor and publisher offices, including rent, telephone, internet, equipment, supplies, audit and legal fees; (e) copyediting and composition services; (f) production of electronic deliverables for print and online versions of journal; and (g) press, paper and distribution costs for print issues.

Any agency implementing a public access policy should have the same consideration for these factors. Ironically, it is possible that public access policies could have the greatest deleterious impact on not-for-profit publishers who already provide some form of free access.

2. What characteristics of a public access policy would best accommodate the needs and interests of authors, primary and secondary publishers, libraries, universities, the federal government, users of scientific literature and the public? As noted above, the public access policy should not undermine the business models of publishers. Most publishers rely heavily on subscription revenue to support publishing operations. If a public access policy includes a very short embargo period, the impact will be to devalue journal subscriptions. Two studies completed in 2006, “Self-Archiving and Journal Subscriptions: Co-existence or Competition?” (Publishing Research Consortium, http://www.publishingresearch.net/self_archiving2.htm) “ALPSP Survey of Librarians on Factors in Journal Cancellation” (ALSPS, www.alpsp.org), demonstrated that an embargo period of 6 months or less would increase the likelihood of librarians making decisions to cancel a journal subscription. The current NIH policy stipulates public access 12 months after publication; it is recommended that the embargo period for a broader federal pubic access policy be consistent with the NIH policy, and not less than 12 months after publication.

6. What version of the paper should be made public under a public access policy? ASN strongly supports access to the final, published version of the article, as the single version of record, to reduce the incidence of errors and ambiguity in the scientific literature.

7. At what point in time should peer-reviewed papers be made public via a public access policy relative to the date a publisher releases the final version? As noted above, in the response to question 2, ASN recommends that papers be publicly accessible no sooner than 12 months after publication.
8. How should peer-reviewed papers arising from federal investment be made publicly available? To minimize administrative tasks for authors, publishers and the government, papers should be posted to and made publicly available via a single site, rather than multiple repositories for different agencies or disciplines. In addition, to avoid unnecessary costs for the government and the publisher, the federal repository should link to the published version on publisher's site rather than post a duplicate copy of the paper.

**Conclusion**

We respectfully request that the Office of Science and Technology Policy consider the concerns as outlined above, and we urge you to fully involve publishers in the implementation of any public access policy. We look forward to continued dialogue on this important issue.

Sincerely,
Robert M. Russell, MD
President

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On behalf of the Professional and Scholarly Publishing Division of the Association of American Publishers and the DC Principles Coalition for Free Access to Science, I am submitting these comments in response to OSTP's December 9, 2009 Federal Register notice regarding enhancing public access to archived publications resulting from research funded by Federal science and technology agencies.

Sincerely yours,
John Tagler
Vice President & Executive Director
Professional & Scholarly Publishing

Association of American Publishers, Inc.

[**Note**: Please see attachment. The.pdf would not format properly within the Word document.]

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Please find attached our response to "Open Government Recommendations (Fed. Reg. 74-235, 9 Dec. 2009)."

I would appreciate it if you would confirm receipt of this letter. Please contact me if you have any questions.

All the best,
Kathryn Holmes
Director, Government Relations
ASME

The American Society of Mechanical Engineers (ASME) with over 127,000, members is the largest mechanical engineering professional organization in the world. Since its founding in 1880, ASME has worked to advance public safety and quality of life throughout the world. ASME's reputation as an "honest broker" has been earned over these many decades by its deliberate embrace of all stakeholders in the consensus process and in facilitating a robust technical peer review process built on integrity and honesty. ASME has balanced its mission with reasonable economic models in order to become an essential resource for mechanical engineers and other technical professionals throughout the world for solutions that benefit mankind. Throughout its long history, ASME has deliberately maintained affordable publications, conferences, standards, workshops and seminars.

ASME endorses the principle of providing public access and enhancing dissemination of federally funded research results in ways that advance public safety and welfare, and improve the quality of life throughout the world. In so doing, ASME is resolute that it is critical to preserve the peer reviewed version of record as such, fixed at its time of presentation without any possibility of historical rewriting, that the original work cannot be altered by the author or anyone else, and ensuring that post-publication commentators are properly named and identified; and that the value added work by commercial publishers and professional, learned societies is reimbursed for the investments they make in managing the peer review process, editing, dissemination, publishing, and maintaining growing archives.

ASME believes that it is too early to understand the results or gage success of the National Institutes of Health (NIH) public access model. Although we understand the public health and safety intentions of the NIH model, we recommend that OSTP carefully review all approaches to public access and carefully consider the economic implications of various public access models, including the impact on the federal budget. ASME is prepared to work with OSTP and other federal agencies to improve the dissemination of federally funded research and to support the development of an effective public access policy. We urge the Administration to convene the major stakeholders, in a comprehensive evaluation and understanding of the various public access models, economic impact and public benefit.

Sincerely,
Amos E. Holt, Ph.D.
President

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I would like to begin my comments by thanking the White House OSTP for inviting comments from everyone with a vested interest in this important topic. The openness and transparent manner in which stakeholder input is being solicited is much appreciated. As someone who applauds the NIH method of providing public access to government funded research, i.e. requiring researchers who receive that funding to deposit their work when it has been accepted for publication, I would encourage this principle to be applied to government funded research in all science and technology
agencies.

As a taxpayer I am interested in this issue because each year the federal government spends billions of dollars to fund this research and that, I believe, should ensure the public's right to have access to the results of that research. The ultimate end of this research should be to promote and facilitate discovery which in turn helps the human condition. It is in the public interest to disseminate this research as widely and effectively as possible so as to maximize our investment. It is a matter of good stewardship. As a university librarian I am interested in this issue because each year our university spends millions of dollars to gain access to information that our faculty created and our government funded. The current system is broken and expanding access would go a long way to rectify this imbalance.

I agree with SPARC and other groups that support public access to federally funded research when they describe what a "successful national public access policy should look like":

* Public access to the published results of federally funded research should be a requirement across all agencies
* Articles that result from federal funding should be made freely accessible within zero to six months of publication
* Articles should be housed in permanent, interoperable digital archives
* Access may be either to the author's final manuscript or to the final published version
* Articles should be presented to the public in a standard digital format that allows them to be fully read and sued. XML is the current preferred standard. PDF is not sufficient as it is proprietary and does not support granular-level linking, etc.
* The archives must ensure permanent public search, retrieval, and full use rights-such as the rights to data and text mining, etc.
* Implementation should be closely coordinated across all agencies to ensure seamless compliance. Multiple policies would introduce unnecessary overhead and costs

In my estimation, the benefits resulting from an expanded public access policy would far outweigh the possible negative effects of such a policy. In my local situation it would lower the costs we now pay to access expensive online journals, provide easier and better faculty access to the research, and make the research conducted by our faculty available to researchers conducting similar research across the globe. The positive impact would be inestimable.

In conclusion, I wish to again thank you for the invitation and opportunity to comment on this important topic. It is my hope and desire to see the NIH public access policy expanded to include all other federal science/technology agencies.

Respectfully submitted,

Bill Hair
Director of University Libraries
Baylor University

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Attached, please find the NCAR Library's response to the Office of Science and Technology Policy's Request For Information (RFI) regarding public access to federally funded research. Thank you for your consideration of this important issue, and for providing the opportunity to comment.

Respectfully,
Jamaica Jones
Special Projects Librarian, NCAR Library

Over the past several months, the University Corporation for Atmospheric Research (UCAR), the
American Meteorological Society (AMS), and the American Geophysical Union (AGU) have been
working together to address the question of public access to federally funded research, as well as the
challenges faced by scholarly publishers amidst a rapidly changing publishing landscape. Prompted by the passing of an Open Access mandate at UCAR, the first such policy to be implemented by a National Science Foundation (NSF) Federally Funded Research and Development Center (FFRDC), we recognized immediately the need to ensure that such progress did not undermine the sustainability or fiscal health of the academic societies that have for so long served as the stewards of atmospheric and geosciences research.

UCAR, AMS, and AGU enjoy very strong relationships with one another and have a history of mutual support dating back half a century. Between them, AMS and AGU publish nearly half of the scholarly articles authored by UCAR researchers. Citation rates reveal this body of work to be among the most important and influential in a timely and vital discipline. We appreciate the opportunity to comment on the important questions regarding enhancing public access to federally funded research. The following responses reflect the opinions of the staff of the NCAR Library.

**How do authors, primary and secondary publishers, libraries, universities, and the federal government contribute to the development and dissemination of peer reviewed papers arising from federal funds now, and how might this change under a public access policy?**
The current scholarly publishing system, its stakeholders, and its outcomes are well understood. However, in considering the specific case of federally funded research, this question has overlooked perhaps the most important stakeholder – the taxpayer. Federally funded research begins with taxpayers, who rely on the government to allocate funds to research that will advance science, contribute to the intellectual commons, and stimulate the economy. Funded research is carried out by teams of scientists that often now span the globe. This exchange is essential to the quality of research, global by nature, and is most productive when it can proceed unimpeded. The atmospheric and geosciences have traditionally been among the most collaborative of the scientific disciplines, as the science relies on shared community models, tools, and networks that allow for the study and communication of global phenomena. Once the research is complete, results are most often formally shared in scholarly journals. Part tradition and part requirement, publication is also a luxury, as it often comes at a price in the form of page fees associated with publishing in scholarly journals.

Publishers and scientific societies, in turn, contribute to the lifecycle of federally funded research not only by disseminating and (in the best of circumstances) preserving the works they publish, but also by providing a forum for one of the most vital components of the scientific communication and scholarly publishing lifecycle - peer review. Peer review again reinforces the standards of the community and provides essential validation that the science is sound. It is largely libraries that provide access, and it is they who shoulder the heavy costs of journal subscriptions. Thus, universities and scientific institutions receive federal funding to conduct the research, funding contributed by American taxpayers, and yet pay significant amounts to disseminate it and to
provide access to the journals that contextualize and support it.

Considering this landscape, one can see several inherent issues. First, federal dollars are not only utilized to conduct science but also to share and then access its results. Second, the publishers and scholarly societies which disseminate research results and provide for peer review are struggling to develop new, innovative, and sustainable business models as they simultaneously work to maintain the traditional services their constituents have come to expect. Third, the taxpayer, the original sponsor of this research, often cannot access or learn from it either in a timely manner or at an affordable cost.

**What characteristics of a public access policy would best accommodate the needs and interests of authors, primary and secondary publishers, libraries, universities, the federal government, users of scientific literature, and the public?**
The ideal system, one that would benefit authors, libraries, universities, the federal government, users of scientific literature and the public alike, is one in which publishers make freely and openly available all published articles that arise as a result of federal funding. These would be released as soon after publication as is possible and would ideally utilize Creative Commons licenses to ensure the widest possible use and reuse, as well as the proper citation of the works themselves. Such an approach would require little oversight, compliance verification, or provisions for long-term preservation on the part of the federal government.

We also recommend that the federal government invest in the research and development of standards that will facilitate greater collaboration, exchange, and interoperability between databases and disciplines. Once identified, these standards should be applied to all electronic resources generated as a result of federal funding, allowing institutions and agencies to aggregate them as they might wish. Standards have long been a challenge for those working with institutional repositories and within multidisciplinary worlds. Were the federal government to invest in the research and development of standards rather than a central repository, it would in the long run be more cost effective.

**Who are the users of peer-reviewed publications arising from federal research? How do they access and use these papers now, and how might they if these papers were more accessible? Would others use these papers if they were more accessible, and for what purpose?**
The users of the scholarly articles generated as a result of federally funded research are typically affiliated with research and academic institutions that have the resources to maintain the

necessary journal subscriptions or obtain access through other means such as interlibrary loan and document delivery services. The scientists, researchers, students, and educators from these institutions represent a relatively small subset of the population and one that is typically lacking in diversity. Increasing diversity in the scientific disciplines is critical to our country's competitiveness and providing access to scientific scholarship is essential to the hundreds of smaller institutions (many minority serving) that lack the resources to obtain these scholarly publications. Related to the unfortunate financial and racial bias in access to these scholarly works is a geographical bias; scientists, researchers, students, and educators from developing countries are often at a distinct disadvantage when it comes to staying abreast of the current discourse in their respective fields.

**How best could Federal agencies enhance public access to the peer-reviewed papers that arise from their research funds? What measures could agencies use to gauge whether there is increased return on federal investment gained by expanded access?**

It is our perspective that federal agencies might best support public access to the scholarly works generated as a result of federal funding by mandating that all such works be made freely and openly available through publishers' websites. These resources would be released after the shortest possible embargo period (ideally none at all), licensed under Creative Commons licenses, and, along with their associated references, described using standardized metadata. To gauge increased return on federally funded research as a result of providing open access to a greater diversity of users, we recommend that federal funding agencies continue to invest in the exploration of more meaningful metrics than have traditionally been used. While citation rates are of undeniable importance in determining value and influence within a particular discourse or community and are highly likely to rise as a result of greater access and use, there are many other factors that, if measured and analyzed creatively, could illuminate more meaningful returns on federal investments. Among the most easily identifiable of these are social impact factors, such as the tracking of increased health benefits, the use of network analysis to map patterns within scholarly communication, and the monitoring of impact as an evolutionary process rather than a binary exchange between use and citation.

**What features does a public access policy need to have to ensure compliance?**

Should the above prescriptions be followed, for publishers to make research articles openly available through their websites, compliance would be of little concern for federal funding agencies. There would be no deposit verification necessary, as publishers would simply make resources available as quickly following publication as is appropriate, given the discipline or nature of the work. Embargo periods should not extend beyond 6 months and should be eliminated altogether whenever possible. In preparation for the implementation of this new model, representatives from the federal government would work with publishers as necessary to amend their copyright transfer and publishing policies to better reflect the provisions of a public access policy. It may also be prudent to include representatives from the Creative Commons in this process, should their licenses be endorsed. If another approach is adopted, particularly that of developing a central repository for scholarly articles arising from federal research funds, we recommend that the attending compliance process be streamlined to every extent possible. Any system that is burdened with a complicated patchwork of logins, IDs, protocols, and procedures will discourage use and increase the need for monitoring and administration. A single website

should be used for all grant reporting requirements, including submission of published works, and should include in clear and easy-to-understand language all attending policies.

While a step in the right direction, the NIH Manuscript Submission system (NIHMS) is dishearteningly complicated and its corresponding policies are obfuscated by multiple workflows and possible means of submission. To guard against this, submission to a centralized federal repository should be a privilege limited to authors or their agents; although publishers now provide submission to PubMed Central as a service to their NIH-funded authors, this serves in the long run to complicate the system. An alternate model of direct import from publishers' sites to a central repository is also possible, but this solution would rely heavily on the metadata standards created to ensure interoperability of resources.

**What version of the paper should be made public under a public access policy (e.g., the author's peer reviewed manuscript or the final published version)? What are the relative advantages and disadvantages to different versions of a scientific paper?**
The final published version is the one that will enter the historic and academic record and thus is the
version that should be submitted under a public access policy. This version should be posted imme-diately upon publication, and should be preceded by a copy of the article's pre-print. This should be posted at the time of acceptance for publication, creating greater transparency and inviting more participants into the lifecycle of scientific communication.

**At what point in time should peer-reviewed papers be made public via a public access policy relative to the date a publisher releases the final version? Are there empirical data to support an optimal length of time? Should the delay period be the same or vary for levels of access (e.g. final peer reviewed manuscript or final published article, access under fair use versus alternative license), for federal agencies and scientific disciplines?**
Ideally, no embargos would be levied against any scientific literature generated as a result of federal funding. Should a given discipline require an embargo, or should the science itself be better served by a period of restricted access, it should be minimized to every possible extent.

**Access demands not only availability, but also meaningful usability. How can the Federal government make its collections of peer-reviewed papers more useful to the American public? By what metrics (e.g. number of articles or visitors) should the Federal government measure success of its public access collections? What are the best examples of usability in the private sector (both domestic and international)? And, what makes them exceptional? Should those who access papers be given the opportunity to comment or provide feedback?**
Fifty years ago, NCAR was founded on the premise that science should serve society. This philosophy still guides our work today. The distinction between basic and applied science has become less clear; our science today focuses on the grand challenges of the 21st century, challenges that rely upon an interdisciplinary, global, collaborative approach. The practical applications of this science are many; how we respond to natural disasters, how we make our skies safer, and how to live sustainably upon the Earth. As an institution, we are dedicated to the public understanding of science and its various applications, and have a long-standing commitment to Open Data. We applaud such efforts as Apps for Democracy, which has empowered citizen scientists to use public data for the betterment of their communities. We are

optimistic that public access will ultimately result in a better informed and more engaged citizenry, allowing science to serve society and society, in turn, to serve science.

In *The Invention of Air*, Steven Johnson celebrates the many contributions made by Joseph Priestly to science, faith, and American democracy. Near the book's close, Johnson reflects that The necessity of open information networks…. has become a defining creed of the Internet age. That is in part because the flow of information differs from the flow of energy in one crucial respect: there is a finite supply of energy, which means that tapping it is invariably a zero-sum game…. But the spread of information does not come with the same cost, particularly in the age of global networks. An idea that flows through society does not grow less useful as it circulates; most of the time, the opposite occurs: the idea improves, as its circulation attracts the "attention of the Ingenious," as Franklin put it. Jefferson saw the same phenomenon, and interpreted it as yet another part of nature's rational system: "That ideas should freely spread from one to another over the globe… for the moral and mutual instruction of man, and improvement of his condition, seems to have been peculiarly and
benevolently designed by nature, when she made them, like fire, expansible over all space, without lessening their density at any point, and like the air in which we breathe, move, and have our physical being, incapable of confinement or exclusive appropriation."

Scientific communication was founded on and continues to rely upon just such an exchange, betraying an underlying faith in the wisdom of communities. This is the great potential inherent in a policy that would ensure public access to federally funded research. Should the literature and data be opened up to a global community, opportunities for collaboration, innovation, and the advancement of the public good are limitless.

Respectfully,
Mary R. Marlino Jamaica Jones
Director, NCAR Library Special Projects Librarian, NCAR Library

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Please see attached. Thank you!

Adrienne Sponberg
ASLO Director of Public Affairs

To members of the OSTP "Open Government Initiative",
The American Society of Limnology and Oceanography (ASLO) would like to offer some comments regarding open access to scholarly publications. For more than 50 years, ASLO has been a leading professional organization for researchers and educators in the field of aquatic science, working to provide for their needs at all phases of professional development. ASLO is well known for its highly rated research journals, *Limnology and Oceanography* and *Limnology and Oceanography: Methods*.
A notable feature of our society is our international membership. Approximately 40% of our members reside outside of North America, with nearly one-third residing in European Union member nations. As you are probably aware, several European funding agencies

(e.g., the European Research Council, France, Germany, and the UK) already require government-funded research to be published in open access journals. Since many of our members are already mandated to have their articles available for free, this issue has been a topic of much discussion within our society already.

We strive to have our publications as open as possible as long as it is compatible with a sustainable financial model. We constantly re-evaluate our business model so as to balance our desire for open access with the need to maintain a revenue stream sufficient to fund the editorial and publishing processes necessary to maintain quality and excellence in our journals. In 2007, the ASLO Board officially adopted a policy on open access, copied at the end of this letter. ASLO's position is that of Green Open Access, whereby authors can opt to have their work open access (on the journal's website) by paying a modest additional charge ($350), which is well below the publication charge applied in Gold Open Access journals. All authors may post their articles on their individual or institutional website repository. In addition, all archived papers are moved to open access 3 years after publication. ASLO's policy is fully compliant with both the Budapest Open Access Initiative (http://www.soros.org/openaccess/read.shtml) and the Berlin declaration (http://oa.mpg.de/openaccess-berlin/berlindeclaration.html).

We have been very open with our membership and authors about changes in the publishing landscape, reporting to them regularly about open access-related changes (e.g., page charges and the free access publication (FAP) option) at our meetings, on our website, and through the *L&O Bulletin*. Our board has tracked the issue carefully and regularly discusses the implications of possible mandates for open access in the U.S. In order for the current quality and diversity of publications to be maintained, we believe the government should carefully consider both the embargo period and the financial consequences of publishers shifting to an author-pays model. Below are our recommendations on these points.

1. **Funding agencies should adopt an embargo period suitable to the discipline in question**. The embargo period adopted for the biomedical related fields may not be appropriate for environmental science fields such as ours. The half-life of citations in our field is much longer. As Pete Jumars wrote in an article on Open Access in the *L&O Bulletin*: "The half-life of journal citation varies widely among fields, from the order of six months in some fields of biomedicine to over a decade in limnology and oceanography. A moving wall of six months or one year in biomedicine therefore endangers journal profitability less than it would in aquatic sciences." ASLO currently has an embargo period of 3 years after publication (with the exception of papers by authors who have purchased the FAP option which are available immediately). We believe this 3 year period is consistent with the citation lifetime in the environmental sciences as opposed to the much shorter turnover in the biomedical sciences.

2. **Funding agencies should be aware of, and prepared for, an increase in publishing costs for their grantees**. Regardless of the details of a publisher's business model, the reality is that funds are necessary for the editing, reviewing, and publishing of scientific research. For most society publishers, funds for those processes currently come from subscriptions. In fields such as ours that are funded primarily through government agencies, an open access mandate could result in nearly all content being available free.

Assuming a resulting significant drop in subscriptions, publishers will have to fund those processes in another way. In the absence of grants or foundation funding (e.g., PLoS journals), many publishers will increase page charges to authors. Funding agencies – and appropriators – should be aware that the costs of research will increase as a result of open access mandates. Currently, the costs of open access to the authors range from $1,200 to $3,000 per paper among publishers. We note, however, that a discipline-appropriate embargo period may allow publishers to maintain some subscription revenue thereby reducing the costs to authors.

Thank you for considering our comments on this issue. Should you find it useful, we would be happy to share information we have regarding citation rates of free-access publication (FAP) papers vs. non-FAP articles in our journals, as well as trends in subscriptions and FAP articles. Such data may provide some insight into the consequences of mandated open access on small society publishers. Please contact our Director of Public Affairs, Dr. Adrienne Sponberg, for any further information.

Sincerely,
Carlos M. Duarte
President, American Society of Limnology and Oceanography

ASLO Policy on Open Access (http://aslo.org/openaccess.html)
"As part of ASLO's mission to disseminate and communicate knowledge in the aquatic sciences, ASLO strongly supports open access to its journal content and continues to seek ways to make that content available while maintaining the quality of the journals. Any article published in any of the three ASLO journals can be in open access, and approximately 90% of all articles are freely available to the public through our website. ASLO's philosophy is to make all articles older than 3 years freely available to the public via the ASLO website, and to use the additional value in the more recent articles to generate the revenue needed to sustain the publishing operation. For articles younger than 3 years, authors can choose to make their articles open access immediately upon posting, through the purchase of FAP (freely accessible publication). About 40% of papers published within the past 3 years are freely accessible through author-purchased FAP. Individual authors are also free to post PDF copies of their work published in ASLO journals on their individual or institutional websites. It is not necessary to request permission from ASLO so long as such postings are not used for commercial purposes."

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We have attached a comment in response to the Office of Science and Technology's request concerning Public Access Policies for Science and Technology Funding Agencies Across the Federal Government. A paper copy of this comment will follow by USPS. This comment WAS NOT posted to the Public Access Policy Forum. We understand it will be posted by OSTP.

Carol J. Blum
Director
Research Compliance and Adminstration

Council on Governmental Relations (COGR)

The Council on Governmental Relations (COGR) is an association of 182 research universities and their affiliated academic medical centers and research institutes. COGR concerns itself with the influence of federal regulations, policies, and practices on the performance of research and other sponsored activities conducted at its member institutions. Our goal is to ensure that federal policy goals can be met in an effective and efficient manner without creating administrative structures that may hinder compliance.

COGR offered written and testimonial comment to the National Institutes of Health (NIH) as it developed its policy to enable public access to NIH-funded research. Throughout this process, COGR noted the institutions' responsibilities to assist our investigators to meet our shared obligation to provide access to the results of sponsored research. The principal challenge that authors and institutions have confronted throughout this process is the competing concerns within the publishing communities and between the publishing communities and NIH, in this instance. The resolution of these competing concerns remains beyond the ability of authors and their institutions to solve.

We support the goal of providing timely, easier and less costly access to publications that result from federally funded research. We are aware that there are many individuals who seek access and their access is governed by their very specific situation. The public has access to scholarly publications resulting from federally funded research through various material depositories including traditional libraries and, increasingly, through electronic sources. As traditionally structured, access requires using a library or purchasing access (electronically or in paper format) by subscription to publications. Increasingly, some publications are providing free electronic access to the public either as a basic business model (online publications) or within varying time frames, again, dependent on their business models.

As OSTP and the federal agencies consider a government-wide policy on public access, we urge you to bear in mind the following challenges and issues.

Author and Institution Obligations

Our concern remains grounded in the nature of the institution's relationship – or lack thereof – to the process of publication. Normally, institutions do not join in the relationship between authors and journals. However, as the recipient on federal awards, a research institution is obligated to meet the terms and conditions of all its agreements. As such, institutions must act to ensure compliance with any government-wide requirement directed at achieving public access. We can remind our investigators to maintain their rights individually to provide a copy of the final peer-reviewed manuscript that has been accepted for publication or a published article to a government-wide or agency specific database or website under current copyright law provisions. We can provide them with proposed language to insert in

copyright agreements to enable access. With respect to our subrecipients, we can include the requirements in our subagreements.

Nonetheless, the responsibility falls to the investigators/authors of the publication. It is very difficult for institutions to effectively track compliance with these obligations. Publications that result in whole or in part from a federally sponsored award may appear several years after the completion of the funded research. The investigator/author may have moved to a new institution in the intervening period. Tracking publications from collaborative research with investigators/authors from more than one institution is a monumental task. Over time, one could anticipate that compliance with a government-wide policy will become a usual and customary practice in the research community and, as a result, investigators/authors will meet this obligation as a regular part of the publication process.

Cost of Compliance

As NIH has moved forward with this policy, investigators have discovered, however, the significant costs of providing public access. Journal charges for public access for a single article have reached, in some cases, $3,000. NIH has reminded the community that publication charges are an allowable expense against a grant. However, in many cases publications will be accepted after a grant has closed. As a result, research institutions will be expected to assist investigators in meeting these unexpected costs, putting greater strain on institutions that already provide more than 20 percent of the funds to conduct research in the US. Charging these publication costs to a grant, if possible, will result in a real reduction in funds available to conduct biomedical research. We remain concerned for investigators – particularly junior investigators – whose career advancement may be jeopardized if some journals refuse to accept the reservation of rights or the investigator lacks access to sufficient resources to pay the price for public access.

Government-wide Policy

A key element in easing the burden and assisting the research community in effective compliance will be the establishment of a truly government-wide policy. We appreciate the goal of making policy implementation flexible to meet the needs of the full range of government-funded research results. However, the depositing of materials must be streamlined to make compliance simpler for investigators/authors. Some investigators receive grants and contracts from multiple agencies to support their research. If requirements for depositing materials are different agency-by-agency or funding mechanism – grants vs. contracts vs. cooperative agreements – the research community's ability to meet its obligations will be undermined.

Publishing Community Response

We know that much of the burden of meeting this type of requirement would be eased if scientific and scholarly journals would collaborate with the research

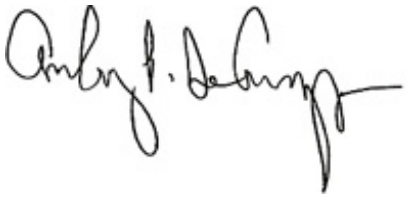
community and federal government in meeting these obligations. We hope that the publishing community would agree to deposit the final published article in a designated government database. If that were to happen, a significant portion of the burden on the grantee institution and its investigators is relieved and the public has timely access to the results of federally supported research. We recognize that the business models for many of the professional society-based journals do not anticipate this approach. Nonetheless, the society members are the very investigators that will be unable to meet their grant obligations and, as a consequence, jeopardize future federal funding.

With this approach, investigators/authors will continue to be responsible for depositing, as appropriate, data sets, technical reports, etc., but the bulk of the scientific and scholarly information that may be most useful to the public will be made available in a manner and on a schedule determined by the publisher in negotiations with the Federal government. The publishers are, in general, the holders of the copyrights to the published article and, as such, are the party responsible for providing public access.

An alternative way to enable investigators/authors to meet this obligation would be if publishers modify standard copyright agreements to include a provision that acknowledges that the author retains the right to provide a copy of the final peer-reviewed manuscript to the sponsoring federal agency and to make the article available in the government database no later than 12 months after publication by the journal.

We appreciate the opportunity to offer these observations including the ability to provide them in a more conventional manner.

Sincerely,



Anthony P. DeCrappeo

President

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The issue of broad access to taxpayer funded research is a critical issue and I want to thank the OSTP for your interest and for giving so many stakeholders the opportunity to express our opinions. The NIH approach to ensuring public access through a policy that requires researchers

to deposit articles accepted for publication was a major step forward in providing broad access to taxpayer funded research and is one that I fully support. Because the government spends large sums of money
to fund research which university faculty members conduct and then report the results, it is imperative that we continue to ensure and even expand the access that is now available.

As a librarian at a research university I have struggled with the ability to provide for my faculty and students adequate access to the ever expanding body of research literature. This access is imperative for researchers in order that they not miss important information. We subscribe to many journals but in these difficult economic times, we find it necessary to reduce the number to which we can subscribe. In the last two years the university has not been able to provide any inflationary increases to the library's budget, thereby reducing our buying power significantly. The journal publishers, most of whom are for-profit, continue to raise prices creating an even larger gap in our ability to buy materials.

I believe that public access to the published results of federally funded research should be a requirement across all agencies. The articles that result from federally funded research should be made freely available with a short (three to six month) embargo period. The archives must ensure
permanent public search, retrieval and full use rights.

Please help all citizens gain access to this very important material, and especially help researchers at our nation's top research universities gain access so that they are able to move this county ahead in technical, medical and environmental research. Thank you very much for soliciting input and for listening to us.

Sincerely,
Sandra G. Yee
Dean, University Library System
Wayne State University

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Attached please find the University of Minnesota Libraries response to the OSTP's request for input on public access policies.

Wendy Pradt Lougee
University of Minnesota
University Librarian, McKnight Presidential Professor

The University of Minnesota Libraries write in response to the request for information issued December 9, 2009, by the Office of Science and Technology Policy regarding public access policies for science and technology funding agencies across the federal government. We fully support the government’s move to enable public access to journal articles reporting on research funded by these agencies. The proposed policy is consistent with the University of Minnesota’s land grant mission, and the policy’s implicit principles are captured in the University’s Board of

Regents Policy on Copyright: *"[T]he University encourages faculty and students to exercise their interests in ownership and use of their copyrighted works in a manner that provides the greatest possible scholarly and public access to their work."*

**RATIONALE**

The history of scientific discovery is rich with examples of breakthroughs made possible by building on previous research, and a more robust and enabling information infrastructure – content and associated access and preservation systems – will be required to ensure contemporary advances in health, technology, agriculture, and a host of science and technology domains. Currently, access to the record of research, a critical element of information infrastructure, is a very real problem. Despite the size and breadth of academic programs supported at the University of Minnesota, researchers and students do not have direct access to all of the scholarly literature they need. Further, the subset of journals that is accessible via library subscriptions varies widely from institution to institution, creating inequities and also barriers for collaboration in the context of global research communities.

Economic models and costs for the scientific literature are also consistent barriers. *Library Journal*, in its annual Periodicals Price Survey, predicted that in 2010 journal prices would increase by an average of 7.6%. Cost increases of this magnitude (and often much higher) have challenged institutional and library budgets for decades, and the rise of electronic formats and associated licenses have not diminished these cumulative increases. In the context of flat or declining resources to support library subscriptions, access to research literature will be further constrained.

Scientific publishers cite the legal provisions and well established protocols for interlibrary loan as alternatives to open access. However, as libraries move to electronic journal subscriptions, licenses often prohibit the use of the electronic source for interlibrary loan services. Another option offered by some commercial publishers (e.g., Springer Open Choice), allows individual authors to pay for their individual articles to be made freely available. In these cases, the individual author pays and the library likely also pays for a complete subscription to the journal. While the individual articles may be "open," they are embedded in the context of the journal's licensed system, a less than optimal context for access.

**USER BASE**

Currently users of research journals are primarily researchers at institutions that can afford the costs of these publications, typically provided by the library's institution-wide license. But there are many more individuals and groups, who could make productive uses of this research, that do not now have access. These include populations that have rarely had access – smaller colleges and universities, research centers, and public libraries and their users.

Some in the publishing industry claim that the general public would be confused by freely available peer-reviewed literature on the web. Biomed Central has refuted this argument, using the medical literature as its example: *"Can it really be beneficial for society as a whole that patients should have access to all the dubious medical information on the web, but should be denied access to the scientifically sound, peer-reviewed research articles? […] [P]atients suffering from diseases are understandably motivated to put in the effort to learn more about their conditions, as the success of patient advocacy groups in the USA has shown. Patients absolutely should have the right to see the results of the medical research that their taxes have paid for."*

## ROLES OF AUTHORS, LIBRARIES, UNIVERSITIES

Most scholarly content is produced and peer reviewed by individual researchers within academic institutions, and the majority of journals are also edited by faculty. In most cases these individuals receive no compensation for these substantial contributions. A recent study conducted at the University of Minnesota-Twin Cities campus identified over 550 faculty with editorial roles for over 750 publications. Above and beyond the creation of the research articles, these review and editorial functions represent significant contributions to the ecosystem of publishing.

In addition to acquiring subscriptions and licenses to the research literature, many academic libraries also maintain institutional open-access repositories to preserve and make available the scholarly output of the institution's researchers. Libraries are champions of broad access to the scholarly literature as a public good, not only preserving such resources for the long term but also teaching researchers and their students how to find research by others. Further, research librarians play a vital role in assisting faculty in depositing works in institutional, domain, or federal repositories. There is also growing investment from the library community in the development of domain repositories and virtual communities. At the University of Minnesota, our decade-old repository for applied and agricultural research, *AgEcon Search*¸ represents a longstanding institutional commitment to providing access to this global research literature base. Notably, *AgEcon Search* also represents publisher partnership, including publications deposited by society/association publishers within the field.

One of NSF's cyberinfrastructure priorities has been the development of virtual communities, fully functional online environments that comprise the content, tools, and services to facilitate research within global research communities. Libraries are also beginning to play a role in this arena as well. The University of Minnesota, for example, has taken the lead in launching *EthicShare*, a virtual community for Bioethicists. *EthicShare* provides an online service that harvests distributed content and enables collaboration with discipline-sensitive tools. Created as partnership between the Libraries and the scholarly community, it offers an example of emerging new models to support research communities that span institutional boundaries.

## IMPLEMENTATION CHOICES: VERSIONS AND EMBARGO PERIODS

Current models for open access employ varying standards for what version of the article is deposited in an open access venue. Such variation introduces confusion in the scholarly record with respect to versions of each paper. Standardizing on the final published version of an article for open access deposit is preferable and will ensure that users are reading and citing the same version, one that includes all tables, graphics, and data sources.

Currently, embargo periods between the time of publication and the time of open access deposit also vary. While immediate free access upon publication is ideal, there is justifiable concern within the publisher community that such ready open access would have a negative financial impact and reduce their subscriber base. To address this concern, public access policies can allow for an embargo period before making articles publicly available. The embargo period should be consistent across agencies, to reduce author and user confusion. A six month embargo would harmonize U.S. policy with those already in place in Canada, the United Kingdom, and the European Union while better serving the needs of scholars and the public. There is now evidence that shorter embargo periods – even as short as two or three months – do not prompt

libraries to cancel journals. The length of the maximum embargo period could be revisited over time as more evidence becomes available, with the goal of providing more immediate access to research information while taking into account true financial implications for publishers.

To ease the burden of compliance by grantees and to reduce costs, a central consolidated repository using open standards and designed for interoperability with other repositories would be ideal. Agency-specific repositories would introduce confounding complexity, particularly given the model of multiple funding sources that is not uncommon for research. Less ideal, would be to rely upon existing repositories (institutional, consortial, or disciplinary). Experience has shown that interoperability among repository systems can be difficult, and consolidation would ensure interoperability, consistency of deposit processes, and uniform preservation practices. The latter is imperative to ensure long term access.

**ENHANCING USABILITY**

A number of document and system requirements would further access and preservation to the scholarly record. Standard document formats and metadata tagging using standard schemas and controlled vocabularies will ensure that articles will be easily discoverable by web search engines and searchable across repositories. Persistent URLs will ensure that readers in the future will still be able to retrieve articles that are cited now. Publicly available statistics on article downloads would provide useful data for assessment. Making the Applications Programming Interface (API) available would spur further valuable development within the Internet community.

Two years of experience with the National Institutes of Health mandate has shown that requiring deposit is more successful than making it optional. With an optional deposit system, NIH averaged about 1000 submissions a month in the year before the NIH mandate went into effect in April 2008; now deposit hovers at about 5000. We strongly encourage adoption of a mandatory model across federal agencies, creating consistency in requirements for researchers and predictability of access for the research and the general user communities. Thank you for the opportunity to provide input into this important process. The benefits of open access and associated infrastructure offer significant promise for the future of discovery and advancement in science and technology.

Wendy Pradt Lougee
University Librarian
McKnight Presidential Professor

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Please find attached The Endocrine Society's response to the December 9, 2009 request for comment on public access policies for science and technology funding agencies across the federal government.

Sincerely,
Stephanie B. Kutler
Director, Government Affairs

The Endocrine Society

**PUBLIC ACCESS POLICIES FOR SCIENCE AND TECHNOLOGY FUNDING AGENCIES ACROSS THE FEDERAL GOVERNMENT**

**The Endocrine Society Response to the Office of Science and Technology Policy in the Executive Office of the White House**

**January 19, 2010**

The Endocrine Society appreciates the opportunity to provide input to the Office of Science and Technology Policy regarding enhancing public access to archived publications resulting from research funded by federal science and technology agencies. Under The Endocrine Society's current policy, articles containing research sponsored by federal funding are deposited in PubMed Central for authors in accordance with the guidelines outlined by the National Institutes of Health. These articles – as well as all other articles - are opened to the public 12 months after the date of publication. The Endocrine Society, in general, is supportive of other organizations who have articulated the value that a scholarly publisher contributes to the peer review and dissemination of scientific information and echoes the need for the publisher to exercise control over the business aspects of their publishing activities. We provide the following responses to your December 9, 2009 request for comments.

**What characteristics of a public access policy would best accommodate the needs and interests of authors, primary and secondary publishers, libraries, universities, the federal government, users of scientific literature, and the public?**

A successful public access policy would recognize the value added by both publisher-driven peer-review and manuscript production.

The authority added by peer-review benefits all parties by ensuring that only the most reliable information is disseminated. Without peer-review, users of scientific literature would have to determine the reliability of the material individually.

Also, the best public access policy would recognize the primacy of the final published version of a manuscript and the publisher's prerogative to determine when that version is available to the public.

**Who are the users of peer-reviewed publications arising from federal research? How do they access and use these papers now, and how might they if these papers were more accessible? Would others use these papers if they were more accessible and for what purpose?**

Users of peer-reviewed publications that are produced by The Endocrine Society are primarily researchers. Most researchers gain access through Society memberships or institutional subscriptions; very little content is of general public interest. The Society's current policy adheres to the 12-month model established by the National Institutes of Health.

**How best could federal agencies enhance public access to the peer-reviewed papers that arise from their research funds? What measures could agencies use to gauge whether there is increased return on federal investment gained by expanded access?**

Federal agencies should consider how the materials that are produced from their research funds are currently used, as well as how the publishers of the manuscripts containing that research support the entire field. Since information is evaluated, distributed, absorbed, and archived differently for each field, this individual approach is most important if the introduction of a public access policy is to act as an enhancement to the field instead of a burden.

**What features does a public access policy need to have to ensure compliance?**
To ensure compliance, it is vital that a public access policy allow the publisher some control over access so they can adopt a business model that will enable them to continue to provide the benefits essential to publication of high-quality content.

**What version of the paper should be made public under a public access policy (e.g., the author's peer reviewed manuscript or the final published version)? What are the relative advantages and disadvantages to different versions of a scientific paper?**
It is of vitally importance in the clinical sciences that only the final published version of a manuscript be made available. The author's accepted-but-unedited version could contain errors that are catastrophic for patient care. Considering the importance of published information to the immediate welfare of patients, the publisher's ability to retract a paper is important to ensure the validity of the literature. Even in a basic science field, manuscripts are subjected to copyediting and editorial review that enhances the quality and value of the content. Making available unedited, unformatted versions of the original manuscripts also erodes version control and leads to confusion in the literature. If several versions of a manuscript are distributed among a multitude of repositories, then it will be impossible to correct the literature.
In the biosciences, there is no advantage to publishing anything but the final published version of a manuscript.

**At what point in time should peer-reviewed papers be made public via a public access policy relative to the date a publisher releases the final version? Are there empirical data to support an optimal length of time? Should the delay period be the same or vary for levels of access (e.g., final peer reviewed manuscript or final published article, access under fair use versus alternative license), for federal agencies and scientific disciplines?**
Peer-reviewed papers should be made available to the public in the form of the final version of record (the published version) at a time that is consistent with the needs of the publisher / professional organization that created the content.

**How should peer-reviewed papers arising from federal investment be made publicly available? In what format should the data be submitted in order to make it easy to search, find, and retrieve and to make it easy for others to link to it? Are there existing digital standards for archiving and interoperability to maximize public benefit? How are these anticipated to change?**
The peer-reviewed papers arising from federal investment should be made publicly available in the formats provided by the publisher. One important contribution made by publishers is that they push the boundaries of current digital standards to find technologies that are efficient, cost-effective, and robust. These features enhance archiving and migration capabilities.

**Access demands not only availability, but also meaningful usability. How can the federal government make its collections of peer-reviewed papers more useful to the American public? By what metrics (e.g., number of articles or visitors) should the federal government measure success of its public access collections? What are the best examples of usability in the private sector (both domestic and international)? And, what makes them exceptional? Should those who access papers be given the opportunity to comment or provide feedback?**
In the biomedical sciences, the federal government can track a peer-reviewed paper's citation rate through Thomson Reuter's Web of Science. Also, PubMed Central can provide usage data. The Endocrine Society, a not-for-profit professional organization, provides an excellent example of usability with its four journals, currently housed on the HighWire Press platform. The Society's current policy is that all articles are made available to the public at 12 months; all

articles receiving federal funding are deposited with PubMed Central on behalf of the authors; and patients who request articles are provided with free PDFs of manuscripts even if they are not yet open to the public.
*Founded in 1916, The Endocrine Society is the world's oldest, largest, and most active organization devoted to research on hormones and the clinical practice of endocrinology. Today, The Endocrine Society's membership consists of over 14,000 scientists, physicians, educators, nurses and students in more than 80 countries. Together, these members represent all basic, applied, and clinical interests in endocrinology.*

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The Genetics Society of America hereby submits the attached response to the Office of Science and Technology Policy Request for Comments on Public Access Policies for Science and Technology Funding Agencies. Please contact me if you would like further information.

Sincerely,

Sherry A. Marts, Ph.D.
Executive Director
Genetics Society of America

**Introduction**
Founded in 1931, the Genetics Society of America (GSA) is the professional membership organization for geneticists and science educators. Its more than 4,000 members work to advance knowledge in the basic mechanisms of inheritance, from the molecular to the population level. The GSA is dedicated to promoting research in genetics and to facilitating communication among geneticists \. The GSA seeks to foster a unified science of genetics and to maximize its intellectual and practical impact.
*GENETICS* (http://www.genetics.org), the peer-edited journal of the GSA, has, since 1916 ,published high quality, original research on a range of topics, including classical transmission genetics, molecular genetics, theoretical and applied population genetics, developmental and behavioral genetics, cellular genetics, gene expression, and genome and systems biology. *GENETICS* is one of the world's most cited journals in genetics.
The GSA welcomes the chance to present its comments to the OSTP. All comments contained herein represent the views of the Genetics Society of America leadership and the responses to OSTP's questions relate primarily to the needs of the GSA membership and communities we serve.
The GSA supports the commitment of the Obama administration to, as stated by the President in his Open Government Directive memorandum, "[provide] information for citizens about what their Government is doing." The principle of transparency and open government requires that citizens have open and ready access to information about the expenditure of public funds, including research grants, contracts, and cooperative agreements. The contents of scholarly publications (either the final version of record or the manuscript version of that record) are, in fact, several steps (and sometimes several years) removed from the original action of the Government, i.e. the awarding of the grant, contract, or agreement. We recognize that there are may be compelling reasons why public access to the scientific record may be a desirable public

good, but we do not believe that this access fulfills the spirit or the letter of President Obama's memorandum.

Whatever the rationale for doing so, the development of a responsive and responsible policy on public access to the scientific record requires a deliberate approach rooted in empirical data and facts. It must be developed in collaboration with scholarly publishers and scientific societies, and must address the varying degrees of formality and process for information sharing found in the different disciplines. For example, computer scientists regularly share conference papers and proceedings with one other, and researchers in physics have developed their own widely-used repository, arXiv, for sharing conference papers. On the other hand, researchers in the biological sciences publish almost exclusively in peer-reviewed and edited scholarly journals and have had low rates of compliance with voluntary publication repositories.

The careful development of a public access policy requires determining the true extent of the problem – what is the level of public demand for access to the scientific literature, and in what ways is that demand not currently being met? If the problem is such that a broad-based federal policy is needed to address it, care must then be taken to craft a policy that will meet public demand while ensuring that scientific publishing will not only survive, but will thrive in a way that allows continued innovation in publishing.

**Responses to numbered questions posed by the OSTP for discussion**

1. How do authors, primary and secondary publishers, libraries, universities, and the federal government contribute to the development and dissemination of peer reviewed papers arising from federal funds now, and how might this change under a public access policy?

   Each of these parties plays a specific and important role in the creation, evaluation, and distribution of scientific research. Authors conduct the research, often with funding from federal government agencies, review and interpret the resulting data, write up their results and interpretation the select a journal to which to submit their work. Researchers choose the journals to which they send their work on the basis of several factors, including journal reputation, niche, editors, impact, reach, and other aspects.

   Scholarly publishers (in particular, nonprofit society publishers such as the GSA) add value by adding quality.1 Publishers provide the infrastructure, staff support, and financial support for peer review of manuscripts; professional editing of the final version; and the distribution, archiving and promotion of published research findings. Publishers appoint editors and select reviewers who have the appropriate expertise for evaluating submitted manuscripts. Final presentation, including graphic design and content presentation that maximizes search, retrieval, and usability, is also handled by the publisher.

   **Scholarly publishers drive the development of new technologies for delivering content and reaching readers.** These technological developments have transformed the traditional research "paper" into a multi-media product that may include significant supplemental material containing information on methods and additional data, video clips, figures that can be downloaded as PowerPoint slides for teaching, and links to external sources. In one recent example of how journals add value to publications through technology *GENETICS* has developed a way to seamlessly link research articles with annotated and curate data contained

in model organism databases. This allows the reader to click on a hyperlink in the article (e.g., a gene name) and land, on the information about the corresponding gene in a database. The development of this technological innovation involved many hours of work on the part of *GENETICS* staff and editors, the staff at the model organism databases, and Highwire Press, the online host for *GENETICS*. This kind of significant investment of time and financial support is illustrative of the value of scholarly publishers to the research enterprise, and is done without government support.

Scholarly publishers work closely with libraries and universities to ensure that the results of research are accessible and properly archived. Society publishers such as GSA are sensitive to the needs of libraries and research institutions, as evidenced by our recent decision to freeze subscription prices in the wake of the economic crisis facing universities.

**Federal funding for research projects contributes to the production and analysis of research data, but this funding does not pay for the materials, work, or technology that make up the current state-of-the-art in scholarly publishing. To claim that federal funding "pays for" the content of *GENETICS* ignores the cost and added value of the publishing process.**

A public access policy has the potential to limit the ability of publishers to recoup the costs of publication and to have sufficient net revenue to drive further innovation in the field of scholarly publishing. For this reason, the development and implementation of such a policy must be done with care, based on sound empirical evidence that such a policy is truly needed or desired by taxpayers.

Indeed, such a policy may be quickly superseded by the marketplace. For example, DeepDyve (www.deepdyve.com) is now offering the content of scholarly journals (including *GENETICS*) on a rental basis. Right now, anyone who doesn't want to wait six months for an article in *GENETICS* to become accessible for free can pay $.99 to view the full article from the journal for 24 hours. Other rental options are available.

1. What characteristics of a public access policy would best accommodate the needs and interests of authors, primary and secondary publishers, libraries, universities, the federal government, users of scientific literature, and the public?

   This question presumes that each of these interest groups needs or is interested in a public access policy. The truth of that assumption is not known, and research is needed to determine exactly what are the needs and interest of these stakeholders, particularly the public, which a "public access policy" would address). Does a problem exists (i. e., is there a public demand for this content?) and, if so, how is it best addressed? In the biomedical sciences, where data on demand for and usage of the content available in PubMed Central presumably exist, these data have not, as far as we know, been made available to anyone (including the taxpayers who have paid for PubMed Central) for analysis.

2. Who are the users of peer-reviewed publications arising from federal research? How do they access and use these papers now, and how might they if these papers were more accessible? Would others use these papers if they were more accessible, and for what purpose? Researchers and teachers are the primary users of *GENETICS*. Our readers access the journal's issues from 1916 until December 2009 as print copies in university and institutional libraries or as individual subscribers, or in electronic form online through university and

institutional or individual subscriptions. Beginning in January 2010 *GENETICS* is available only online. As mentioned above, articles are available to anyone on a rental basis for six months after the date of publication. Access to the content of *GENETICS* online becomes available to anyone free of charge six months after the date of publication.

3. How best could Federal agencies enhance public access to the peer-reviewed papers that arise from their research funds? What measures could agencies use to gauge whether there is increased return on federal investment gained by expanded access?
   **As noted above, in the US federal funding for research projects contributes to the production and analysis of research data but this funding does not pay for the materials, work, or technology that make up the current state-of-the-art in scholarly publishing.** To claim that peer-reviewed publications "arise from" research funds ignores the cost and added value of the peer review process.
   It is not clear what kind of "increased return" is expected from "expanded access" that will come at a cost to scholarly publishers. Therefore, it is difficult to suggest ways to measure this return. As mentioned above, the government has a current investment in PubMed Central, and the return on that investment has not yet been determined or measured. We suggest that efforts to calculate the increased return on the government's investment in public access begin with an analysis of the usage statistics for PubMed Central.

4. What features does a public access policy need to have to ensure compliance?
   A successful public access policy must be grounded in empirical evidence for need and demand, and must be the result of careful, deliberate, and cooperative efforts to earn the full support of funding agencies, the scientists whose work is to be disseminated, publishers, and scientific societies. It is crucial than a public access policy be structured so that it does not undermine the quality of the scientific record (by providing access only to the final version of record) or the survival of scientific publishers.

5. What version of the paper should be made public under a public access policy (e.g., the author's peer reviewed manuscript or the final published version)? What are the relative advantages and disadvantages to different versions of a scientific paper?

   The GSA believes that the version of record should be the final published version, without exception. The final published version has had value-added by the publisher, including editing, copy-editing, layout, table and figure work, the addition of technological features such as the database links described above. The simplest means of providing this access would be to provide a link to the final version of record, rather than establishing a separate repository of manuscripts.

6. At what point in time should peer-reviewed papers be made public via a public access policy relative to the date a publisher releases the final version? Are there empirical data to support an optimal length of time? Should the delay period be the same or vary for levels of access (e.g. final peer reviewed manuscript or final published article, access under fair use versus alternative license), for federal agencies and scientific disciplines?

To our knowledge, there are no data to support an optimal subscription embargo period. Delay periods should be determined by each publisher, because the optimal delay likely varies by discipline and publishers themselves are best equipped to decide how best to provide access to the articles submitted to the journals they publish and whose value they have helped to create.

*GENETICS* recently participated in a randomized, controlled study that measured the impact of immediate, free access to randomly selected articles in the journal on the rate of citation of those articles in subsequent publications. The study found that immediate free access did not confer a citation advantage.2 In other words, the articles in *GENETICS* were read, accessed, or cited at a similar rate regardless of free access or subscription control. This was true for all of the 36 participating journals and over 3000 articles in the study.

7. How should peer-reviewed papers arising from federal investment be made publicly available? In what format should the data be submitted in order to make it easy to search, find, and retrieve and to make it easy for others to link to it? Are there existing digital standards for archiving and interoperability to maximize public benefit? How are these anticipated to change?
   This question implies that it is currently not "easy to search, find, and retrieve and . . . link to" peer-reviewed papers that report on federally funded research. Search engines such as Google, Google Scholar, and DeepDyve have worked with publishers to allow crawling of content for rapid and easy search and retrieval. These search engine technologies are currently capable of locating and listing articles that carry the proper attribution of funding by the federal government. Data formats and metadata specifications for interoperability and preservation change rapidly, as illustrated by the changes over the past 10 years. Successful publishing industry-led initiatives like CrossRef, Portico, and LOCKSS are examples of effective collaboration that fosters innovative advances in archiving and retrieval. Similar efforts continue to improve discoverability and the ability of researchers to "mine" published data.

8. Access demands not only availability, but also meaningful usability. How can the Federal government make its collections of peer-reviewed papers more useful to the American public? By what metrics (e.g. number of articles or visitors) should the Federal government measure success of its public access collections? What are the best examples of usability in the private sector (both domestic and international)? And, what makes them exceptional? Should those who access papers be given the opportunity to comment or provide feedback?

   The results of government funding of research can be made meaningful to the American public independent of access to peer-reviewed papers. Access to databases containing data on funded grants, contracts, and agreements such as abstracts, funding levels, award dates, and progress reports in lay language would serve the purposes of transparency and openness better than would access to peer-reviewed publications.
   Scientific societies and publishers have been and are, appropriately, focused on developing and improving usability of publication archives, databases, and other private-sector

repositories for their primary users – scientists – whose needs are readily determined and addressed.

A constructive government policy would direct funding and efforts to determine the wants and needs of the American public for scientific research results – in other words, what is are the uses to which they will put this information. From this, it will be possible to define "usability" and then determine how to achieve it.

One of the best examples of public demand driving usability is the development and growth ifiTunes.

iTunes has, with some measure of success, addressed the consumer's desire to sample and share published content while protecting the financial interests of music publishers and recording artists.

iTunes' (and other Apple products') exceptional quality and usability is the result of significant investment in software development, architecture and design, human factors and usability research,

documentation and customer support.

The Genetics Society of America appreciates the opportunity to submit these comments.
Sincerely yours,
R. Scott Hawley, Ph.D.
President

Sherry A. Marts, Ph.D.
Executive Director

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These comments are submitted on behalf of American Business Media (ABM), an association representing more than 200 business-to-business information providers such as publishers, producers of print and other publications and websites, and organizers of trade shows and similar events. ABM's members produce more than 2,000 high quality, business-to-business publications. From *Oil and Gas Journal* to *Advertising Age* to *Insect & Disease Control Guide*, ABM publications form an essential role in assembling and disseminating the industry-specific news and information needed by businesses in thousands of different fields. Many American Business Media members publish journals and periodicals about government funded activities or containing Scientific, Technical, and Medical (STM) research and reference information created by or on behalf of government agencies. Indeed, the United States has a long tradition of encouraging the dissemination through various channels of information created by the government or about government activities, including through publishers that report on the results of government-funded activities.

**Response to Question 1 (concerning publishers' contributions and how they might change under a public access policy) Distinction between research and value-added copyrighted content.** It is critical to distinguish between (a) government-funded research and (b) the value-added articles and other content for which the publishers have copyright and other rights.

**Research**. The federal government, through various agencies, funds various research enterprises which generate outputs such as experimental data, technical reports, grant reports, and conference papers. Thus, if the agencies or the researchers so choose, they already have full rights to make available to the public the outputs of taxpayer funded research, such as through electronic posting of technical reports.

**Value-added content from the publishing process**. The publication of STM research (unlike the research itself) is not funded by the government. Accepted author manuscripts and published journal articles contain substantial added value through the actions of publishers, as explained in further detail below.

**Crucial role of publishers.** While STM research or information would often not be produced without the support of federal agencies, publication and wider dissemination of peer-reviewed journal articles about the research to the public would not occur without the millions of dollars publishers spend each year on gathering, peer reviewing, editing, publishing, disseminating, and archiving their copyrighted works. Among other things, STM publishers play a critical role in scientific and medical discovery and knowledge by establishing and promoting journals, editing the journals or managing the appointment of journal editors and the ongoing development of journal editorial boards, establishing and maintaining editorial standards and procedures, editing and preparing articles for publication, and publishing and distributing the publications.

Put simply, the initial funding and conducting of government-funded research is only part of the process; the value added by STM publishers is critical to identifying, classifying, refining, evaluating, and disseminating useful results of such research.

**Adverse effects of mandated public access.** Various government agencies have recently sought to override publishers' copyrights in instances where they deem the information contained in copyrighted works important to the public. Such government attempts to mandate public dissemination of copyrighted works of STM materials nature is a growing threat to all information content providers and the millions of readers and users who rely on their work and publications. Publishers, not the government, bear the costs and risks involved in the value-added editorial
process. Moreover, STM publishers have invested in new electronic technologies which allow them to make their publications and the STM information they contain more widely and timely available at reasonable expense to interested persons, including leaders and decision makers in the industries that will put that the research results to practical and productive use.

Publishers must recoup their investments through traditional subscription, sponsorship, advertising, and 'pay-per-view' fees. Copyright protections have maintained the incentives for publishers to continue to invest in STM journals and periodicals and have permitted such publishers to realize a reasonable return on their investments. These incentives are necessary to encourage the continuing traditional value-added efforts of publishers, and to allow publishers to expand and improve their electronic dissemination options. Publishers' revenue sources will be imperiled if the value-added products of publishers' activities will be made freely available to the public by the government. Such mandated access would directly negate the exclusive publication

rights which the publishers have under copyright law, and those exclusive publication rights are in turn essential to publishers' ability
to earn subscription, sponsorship, and advertising revenue.

**Response to Question 2 (concerning characteristics of a public access policy that would best accommodate all interests)**
ABM believes that any new public access policy for government-funded research should consider the interests of all participants in the research process, including government, researchers and publishers. Each of these participants contributes to the process: the government by contributing funds, researchers and their institutions by providing facilities and knowledge, and publishers by managing the value-added publication system which puts research into context and assists in its validation. Any changes in the current system should be made carefully, so that the incentives and quality of the current system are not disrupted.

**Response to Question 7 (concerning at what point after original publication peer-reviewed papers should be made public via a public access policy)**
Some agencies appear to believe that they can balance publishers' needs for exclusive initial publication against the agency's perceived need for mandated public access by requiring that the mandated public access not occur until a certain time period after initial publication. ABM believes, however, that even with such a delay, a program of mandated public access for publishers' copyrighted works would significantly decrease publishers' incentives for creating value-added content and threaten the traditional balance between government activities in disseminating information and the important role that non-government organizations play in furthering knowledge about that information. For example, considering that the Copyright Act generally grants publishers exclusive rights to control their copyrighted material for a period of 95 years, it is obvious that restricting publishers to an exclusivity period of only six months or a year would represent a drastic curtailment of their normal incentives, and would present them with an unnaturally short period in which to recoup their investment.

**Conclusion**
ABM believes that OSTP should not recommend that outputs of the publishing process, such as accepted author manuscripts and published journal articles, be made freely available. Any such policy that mandates free access to the outputs of the publishing process will likely remove the essential financial incentives for such publishing activities. It could also deprive citizens of a choice of sources from which to gain knowledge of government activities – an important aspect of our democracy since its inception. From either perspective, there is a good likelihood that mandating deposit of publishers' materials will destabilize the STM publishing system upon which researchers and the public have long depended. Thank you for your consideration of these comments.
Very truly yours,
THOMPSON COBURN LLP
By
Mark Sableman
MS/ss
cc: Mr. Gordon T. Hughes II

Please find attached the response from JISC in the UK to the current US White House consultation on public access to research.

Many thanks
Alice Colban
Head of Finance and Corporate Services
JISC Executive

**RESPONSE FROM THE UK JOINT INFORMATION SYSTEMS COMMITTEE (JISC) TO THE US ADMINISTRATION REQUEST FOR INFORMATION ON "PUBLIC ACCESS POLICIES FOR SCIENCE AND TECHNOLOGY FUNDING AGENCIES"**

*The Joint Information Systems Committee (JISC) is a committee of the Higher Education Funding Council for England and the higher and further education funding councils in Scotland, Wales and Northern Ireland[8]. The JISC's activities support education and research in the UK by promoting innovation in new technologies and by the central support of ICT services.*

*The JISC welcomes the US Administration's initiative in issuing the Request for Information (RFI) on "Public Access Policies for Science and Technology Funding Agencies" and the JISC response to the RFI follows the list of questions in the Notice in the "Federal Register" of 9 December 2009.The responses below are based upon the experience of the JISC and other UK agencies in promoting access to publicly-funded research papers.*

1. All stakeholders in the dissemination of publicly-funded research make some contribution to the process. The primary financial and intellectual contributions are made by publicly-funded bodies and individuals, with a lesser organizational contribution by commercial and not-for-profit publishers. The peer-review process illustrates the balance of contributions, with publishers organizing the process but the intellectual and time commitment to peer-review made by members of the academic community. Under a public access policy the cost/benefit ratio of the contributions made by the various stakeholders will be more transparent and more favourable to the public interest.[9]

2. Full access to publicly-funded research papers immediately upon publication best meets the needs of authors, researchers, universities, government, the public and all users of scientific literature. The need of the research community to re-use content for purposes

[8] The JISC web-site is at www.jisc.ac.uk .
[9] For evidence on the costs and benefits of three publishing models see "Economic Implications of Alternative Scholarly Publishing Models" by Professor John Houghton and others
http://www.jisc.ac.uk/publications/documents/economicpublishingmodelsfinalreport.aspx

such as text-mining requires user-friendly licensing terms, for example under a Creative Commons or similar licence[10].

3. The primary users of peer-reviewed papers resulting from US federal research are researchers in every country, particularly those countries such as the UK where there is a long tradition of collaborative research. The close co-operation between funding bodies is illustrated by the sharing of content between PubMed Central and the UK PubMed Central database[11]. Researchers are often hindered in their work by difficulties in accessing papers not available through such open access databases. Users who are not researchers also benefit from such databases, which give them access to research findings their taxes have funded.

4. There are two types of policy federal agencies could adopt to ensure open access to research papers. The first policy would be to require all institutions and researchers in receipt of federal funds to deposit copies of peer-reviewed papers in an institutional repository or in a subject repository such as PubMed Central. In order to ensure the maximum return upon the investment in research, deposit should be on or very close to the date of publication of the research paper. The second policy would be to require authors to publish in open access journals, if necessary using a small part of their research grant to pay for the legitimate costs incurred by a publisher in publishing a paper. Research agencies could measure the return upon investment provided by either policy by using the economic model developed by Professor John Houghton and others[12].

5. Whichever type of open access policy is adopted, maximum return upon taxpayer investment in research will only be achieved if the policy is mandatory upon all institutions and authors in receipt of public funds. The experience of funding agencies is that authors do not pay attention to policies which only recommend and do not mandate.[13] In order to achieve a high level of compliance the deposit process should be user-friendly, requiring as small a commitment of time as possible from the depositors.

6. So that readers may have trust in the paper, the version deposited in a repository should be peer-reviewed, although new forms of post-publication peer review are used in some journals. The final published version has the advantage of conforming to the recognized style of a journal, although the author's peer-reviewed manuscript will meet the needs of most readers. The formats of the deposited version should allow both searching of the text to facilitate text-mining and data-mining (eg, XML), and clear legibility for readers

[10] The Welcome Trust has reached agreement with a number of publishers on the re-use of articles by Wellcome Trust grant-holders. See the press release at http://www.wellcome.ac.uk/News/Media-office/Press-releases/2007/WTX041377.htm .

[11] For information about UK PubMed Central, including its relationship to PMC, see http://ukpmc.ac.uk/ppmc-localhtml/about.html .

[12] See "Economic Implications of Alternative Scholarly Publishing Models" by Professor John Houghton and others http://www.jisc.ac.uk/publications/documents/economicpublishingmodelsfinalreport.aspx .

[13] For evidence on the effectiveness of open access mandates see "On the effectiveness and time-course of open access mandates" by Professor Arthur Sale, available at http://openaccess.eprints.org/index.php?/archives/149-guid.html.

(eg, PDF). The version deposited should also contain or provide links to the scientific data upon which the text is based.

7. For most scientific and medical papers the heaviest use comes in the first few months after publication and usage patterns are related to availability[14]. As the academic and economic benefits from access to research papers increase with use it follows that any embargo period will not enable the full benefits to be achieved. Any system which varies an embargo period according to the version deposited will be complicated for readers to understand and will deter use.

8. Systems and standards already exist for making open access research papers accessible and useable, as for example in institutional repositories and PubMed Central. As far as possible any extension of public access to further batches of content should conform with existing standards, allowing for variations in the needs of different subject disciplines. Without doubt changes in format will occur over time and if they are supported internationally will enhance the use and re-use of research papers.

9. Meaningful usability depends upon the suitability of the content, its format and access conditions. Considerable developments are taking place in the measurement of use, for example through the Mellon-funded MESUR Project[15] and through the international COUNTER Project[16]. Should the US Government extend its public access policy, it will be important that use of new sources of content is measurable according to standards being developed in MESUR, COUNTER and other projects.

**JISC Executive**
**January 2010**

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Please see the attached from SAGE Publications regarding:

Response to the OSTP Request for Public Comments (RFI, FR Doc. E9-29322) on Public Access Policies for Science and Technology Funding Agencies Across the Federal Government.

Best regards,
Carol Richman
Director of Licensing
SAGE Publications Inc.

**Introduction**

[14] See the paper by Ming-Yueh Tsay "Library journal use and citation half-life in medical science" available at http://dewey.yonsei.ac.kr/imet/data/tsay1283.pdf.
[15] The MESUR web-site is at http://www.mesur.org/MESUR.html .
[16] The Project COUNTER web-site is at http://www.projectcounter.org/ .

**SAGE Publications (SAGE)** is a leading international publisher of journals, books, and electronic media for academic, educational, and professional markets. Known for our commitment to quality and innovation, we are a world leader in our chosen scholarly, educational, and professional markets. Since 1965, SAGE has helped inform and educate a global community of scholars, practitioners, researchers, and students spanning a wide range of subject areas including business, humanities, social sciences, and science, technology, and medicine. An independent company, SAGE has principal offices in Los Angeles, London, New Delhi, Singapore and Washington DC.

SAGE has almost 500 employees in the US. In 2010, SAGE will publish over 500 journals; half of the journals are published on behalf of associations and societies within the scholarly community. SAGE will publish approximately 35,000 journal articles during 2010 in varying disciplines, which reach approximately 20,225 unique libraries.

SAGE welcomes this opportunity to respond to the questions set out in the OSTP RFI.

## General Comments

Publishers throughout their history have played a critical role with regard to the development and dissemination of content. This encompasses the validation (peer-review process), high-quality production to improve readability, the addition of online access with innovative tools, thus leading to the end-product of the published version (the Version of Record). SAGE believes it is of primary importance that this version is the version that is read, reviewed, and studied by experts, scholars, and students and endorsed by the journal in which it is published.

Publishers also invest money in the peer-review process and in maintaining the ethical standards and practices which underpin the development and maintenance of the scholarly record for current scholars and future generations. It is not clear how these crucial aspects of the communication and record of scholarly activity would be paid for by a public access policy.

SAGE encourages the formation of an advisory committee to fully study a public access policy that answers the needs of all federal government agencies while at the same time considering the supported publishing endeavours by commercial and society publishers.

***Question 1:*** *How do authors, primary and secondary publishers, libraries, universities, and the federal government contribute to the development and dissemination of peer-reviewed papers arising from federal funds now, and how might this change under a public access policy?*

Publishers invest time, effort and money in the development and dissemination of peer-reviewed papers. The types of systems employed have been in place for many years and include: provision of online systems for the submission of papers; selection of appropriate academic editors; provision of funds to cover their services and payment for staff to support the process; and systems and support to check for plagiarism and quality control of illustrations. For many journals, the cost of supporting the peer-review service is a significant part of the cost of the

journal. Publishers have also invested in the future: creating access platforms for electronic distribution, adding value-added services such as reference linking, and ensuring that the archive of the published content will not be lost. Under a public access policy, it is not clear how the core content from respected publishers will be protected and what the long-term plans are to support such an access system. It is also not clearly defined what new role publishers might play under a public access policy, for example, if the revenue decreases significantly the cost of supporting the academic peer-review process will be jeopardized.

***Question 2:*** *What characteristics of a public access policy would best accommodate the needs and interests of authors, primary and secondary publishers, libraries, universities, the federal government, users of scientific literature, and the public?*

SAGE supports the premise that federally funded research should be made available. However, to that end, it is important to remember that not all research is federally funded by US government agencies and that many funders stem from private industry or the non-profit sector. Given this, it would be best to study how public access repositories could best work in order to support the deposits of federally funded research and how access would then be made available to the public. We endorse the public access policy approach stemming from the America COMPETES Act:

America COMPETES Act model: each federal agency that provides funds for the performance of experimental, developmental, or research activities should provide, in addition to providing a database of summaries of funded projects, the following information to the public, in a timely manner and in electronic form through an agency Web site:

(A) final project reports;

(B) citations of published research documents resulting from research funded by the agency;

(C) readily accessible summaries of the outcomes of agency-funded research projects.

Additionally, SAGE supports a system that would provide an avenue for url links to be deposited in a central repository in order to enable the public to access the version of record after an agreed upon embargo period.

Ironically, making material that is funded by US federal agencies openly available would actually remove any competitive advantage in the USA, as it would be equally accessible to researchers in competing countries.

A key point is whether an access gap exists, which needs addressing: does the public want or need this content? Can they actually already get it? Without determining what access gaps exist, how can policy be put in place to address them?

***Question 3:*** *Who are the users of peer-reviewed publications arising from federal research? How do they access and use these papers now, and how might they if these papers were more accessible? Would others use these papers if they were more accessible, and for what purpose?*

In SAGE's case, the majority of users are researchers, professors, and students, each specialists in a chosen field. Most of our audience accesses content online. Usage for content is high and has been growing consistently over time and it is not clear how a public access policy would increase this usage and would reach the intended and wider audiences. It would be best to study and analyze how such an approach would function.

***Question 4:*** *How best could federal agencies enhance public access to the peer-reviewed papers that arise from their research funds? What measures could agencies use to gauge whether there is increased return on federal investment gained by expanded access?*

SAGE supports the need for further study in order to assess the demand for public access to peer-reviewed content.. The results, we believe, will vary greatly by discipline. Access and use alone do not preclude a positive return on investment. Studies, research and results which leads to further research by scholars in the form of new policies or procedures (medical or other) might be viewed as a return on investment if the new policies or procedures clearly make a positive impact on the public on a global level.

***Question 5:*** *What features does a public access policy need to have to ensure compliance?*

Compliance will come from there being a demand that needs filling - researchers would be happy to deposit their articles if there was a demand on them to do so from people wanting to read them.

An administrative system that can handle the needs of content deposits, complete with state of the art searching capabilities are absolute requirements. Alternatively, a system that allows the deposits of url's allowing the public to access content after an agreed upon embargo would in SAGE's view work best. This would ensure that users accessing the content would reach the Version of Record.

***Question 6:*** *What version of the paper should be made public under a public access policy (e.g., the author's peer-reviewed manuscript or the final published version)? What are the relative advantages and disadvantages to different versions of a scientific paper?*

SAGE has the ability to make the peer-reviewed manuscript available, but this is not our current policy. The peer-reviewed version is only made available after an embargo period in order to protect the investment we have made in the peer-review process. We are happy for the submitted version, in which we have made no investment, to be made freely available at any time. It is also our opinion that it is not in anyone's interest to have multiple versions in different repositories. For this reason, we emphasize again the need for a URL Linking Repository in order to access articles at the copyright owner's site (publisher or society).

The PEER project (http://www.peerproject.eu/) includes the study of embargo periods, though the timescale of the Project precludes it producing any definitive conclusions of these.

***Question 7:*** *At what point in time should peer-reviewed papers be made public via a public access policy relative to the date a publisher releases the final version? Are there empirical data to support an optimal length of time? Should the delay period be the same or vary for levels of*

*access (e.g., final peer-reviewed manuscript or final published article, access under fair use versus alternative license), for federal agencies and scientific disciplines?*

Publishers should determine when articles should be made open to the public; this largely depends upon disciplines and the demands for access to the content. This should be studied and analyzed. In the EU, a wide ranging study is being undertake, federally funded to understand exactly what the implications of different deposit policies might be. The PEER Project (http://www.peerproject.eu/) is a possible model to be followed in the US.

***Question 8:*** *How should peer-reviewed papers arising from federal investment be made publicly available? In what format should the data be submitted in order to make it easy to search, find, and retrieve and to make it easy for others to link to it? Are there existing digital standards for archiving and interoperability to maximize public benefit? How are these anticipated to change?*

Access to peer-reviewed papers should be made available after a specific and agreed upon embargo period. Again, access should be via a central URL Linking Repository. Each publisher should be able to determine the appropriate time of access. These embargoes should be negotiated and agreed by the various funding agencies that support the research for such content but do not invest in the end result: the Version of Record.

***Question 9:*** *Access demands not only availability, but also meaningful usability. How can the federal government make its collections of peer- reviewed papers more useful to the American public? By what metrics (e.g., number of articles or visitors) should the Federal government measure success of its public access collections? What are the best examples of usability in the private sector (both domestic and international)? And, what makes them exceptional? Should those who access papers be given the opportunity to comment or provide feedback?*

SAGE firmly believes that the first step in this process is to determine a need for public access from the community at large. Publishers have built, sustained, and enhanced a system that has developed trust and confidence in the creation of articles stemming from research. Publishers support and help sustain brands and recognition amongst scholars, researchers, and students. While we measure part of our success by users accessing content, we understand the importance of scholarly research that leads to high quality papers. As stated, the number of articles or users doesn't equate success. Only further research that motivates further learning that leads to publication in which ideas are adopted on a global level can be deemed a success. SAGE endeavours to live up to this challenge in scholarly publishing, which we have successfully accomplished over the last forty-five years.

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Comments of the NCSU Libraries Concerning "Public Access Policies for Science and Technology Funding Agencies Across the Federal Government"

Submitted to the Office of Science and Technology Policy, January 21, 2010.

The NCSU Libraries strongly supports efforts to expand access to federally funded research. Although the Office of Science and Technology Policy's request for comments specifically addresses the need for a public access policy for scientific and technological research, we would support a public access mandate that applies to all federally-funded research, across all agencies and subject areas.

As an academic institution we are keenly aware of the importance of this endeavor. Access to research is a core issue for academic libraries. Over the last twenty years, we have struggled to maintain costly research subscriptions in the face of shrinking acquisition budgets and skyrocketing journal prices. A broadly applied federal public access policy will ensure access to the latest research for all citizens, regardless of their institutional affiliation or financial limitations.

The NIH's Public Access Policy and PubMedCentral (PMC) have provided a successful proof-of-concept that can be used as a model for other agencies. Although the government spends billions of taxpayer dollars to fund research, prior to PMC most Americans were able to access only a
small portion of that research. The mandatory NIH policy and the establishment of PMC ensures that vital medical research is collected and curated in a centralized, permanent, publicly accessible archive. The dramatic growth in the number of searches conducted on PMC (close to two million daily) demonstrates the high value of this literature to the public. The minimal operating costs associated with PMC are vastly outweighed by the societal benefit of expanding access to research.

The terms of the Public Access policy should be consistent across agencies and follow the standards set out by the NIH and other international agencies. The policy should require that the final peer-reviewed or the final published version of article or manuscript be deposited. Compliance with the policy must be mandatory, as the NIH experiment with voluntary deposit proved unsuccessful. There should be no restrictions on the use of the article once it has been deposited.

For journal articles and other published research papers, the maximum length of time between publication and deposit in the repository should be as short as possible, and in no case longer than 12 months. Many publishers already allow journal articles to the deposited as early as six months after publication. Although some have argued that immediate deposit upon acceptance by the publisher would be ideal, a 12-month embargo period is consistent with the terms of the existing NIH policy.
Consistency across agency policies is a key issue for academic institutions, who will be charged with monitoring compliance.

In addition to requiring the deposit of scholarly journal articles, reports and published papers, the expanded Public Access policy should require that datasets and other research results be deposited in the repository. In determining an appropriate timeline for deposit of these materials, consideration should be given to issues such as quality control and the broad applicability of the research data.

Formatting standards may change over time. Ideally, the research repositories should support a variety of file types, especially non-proprietary formats such as XML that allow searching, text mining, and linking. Today's scholars are accustomed to conducting research digitally. The public access policy should mandate a technological environment that meets the modern researcher's need to research, collaborate and communicate online.

In summary, we believe that the public access policy should apply to all federal agencies that sponsor research. The establishment of additional research repositories will ensure that all Americans will
have continuous long-term access to one of our nation's greatest assets—its research—and help to further advance our country's research and learning environments. Thank you for this opportunity to provide comments.

NCSU Libraries

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Intl. Society for Computational Biology (ISCB): OSTP Public Access Commentary

The International Society for Computational Biology (ISCB) is dedicated to advancing human knowledge at the intersection of computation and life sciences. ISCB serves over 2500 members from nearly 70 countries by addressing scientific policies, providing access to high quality publications, organizing meetings, and serving as a portal to information about training, education, employment, and news from related fields. ISCB was founded in 1997, is incorporated in the United States as a 501(c)(3) non-profit corporation, and is registered in the state of California as a Charitable Trust.

ISCB welcomes this opportunity to comment on the issue of public access to publicly-funded research results, as detailed in the OSTP RFI that opened on December 10, 2009. ISCB requires membership review of its policy statements, which is not possible within the allotted dates, so this commentary is not an official ISCB policy statement. Instead, it has been approved unanimously by both the ISCB Public Affairs & Policies Committee and the ISCB Executive Committee, and should be taken as coming from those individuals and not the entire Society. ISCB members have also been encouraged to submit responses individually.

Knowledge is the fruit of the scientific research endeavor, and the archival scientific literature is its tangible expression and means of communication. Shared knowledge multiplies its utility because every new scientific discovery is built upon previous scientific knowledge. Knowledge is power, and access to knowledge is the power to solve new problems and make informed decisions. Open public access to archival scientific and technical knowledge will empower more citizens and more

scientists to solve more problems and make more informed decisions.

We recommend:

(1) There should be free, open, online, public access to publicly-funded research results, with all their existing content including supplementary material and data.

(2) Existing models show high impact, scientific benefit, feasibility, and acceptability:

a. The public benefit from open access to the world's online information via the publicly-funded Internet provides a good model of expected impact.

b. The scientific fertilization from open access to genomic information via the publicly-funded Human Genome Project provides a good model of expected scientific benefit.

c. Open access policies by the National Institutes of Health, the Howard Hughes Medical Institute, and the Burroughs Wellcome Fund provide good models of feasibility, acceptability, and implementation.

(3) Open literature access will enable a whole new generation of innovative tools and mechanisms that will endow the literature with enriched commentary and usability. These tools are already being built by publishers, researchers, and others.

(4) Policy details -- which version, where stored, how annotated and organized, what incentives -- must be considered carefully, but are less important than is a broad federal policy mandate for public access to publicly-funded research knowledge.

(5) Publishing high-quality peer-reviewed scientific literature incurs costs. Details on how costs are recovered are less important than is a federally mandated open access policy.

(6) The funding policy must:

a. Fund activities of peer review, copy editing, and publishing.

b. Provide fair compensation, if and where needed, to facilitate transitions and adaptations to new models for publishing and sustaining essential revenue.

c. Be consistent with the Bayh-Dole act, other existing legislation, and research dissemination through viable commercial mechanisms.

(7) It is undesirable to take funding from current research and thereby risk underfunding basic science, so new funding should be made available for policy implementation. However, the expected total cost for complete open literature access is only a very small percentage of the total cost for the entire national research endeavor.

Consequently, we recommend that the current administration seize this historic opportunity to stimulate and realize dramatic public benefit from open access to the archival scientific and technical literature in return for a very small percentage increment in new funding.

An official ISCB policy statement on the closely related topic of sharing software provides very clear support for Open Source/Open Access (http://www.iscb.org/iscb-policy-statements-/187). ISCB supports the recommendations of the National Academies of Sciences report, "Sharing Publication-Related Data and Materials: Responsibilities of Authorship in the Life Sciences."

Scientific literature represents a substantial investment by governments, foundations, and others. One of our primary missions is the assembly of individual pieces of knowledge from this literature in ways that provide powerful new insights and ideas for next-stage research by the entire scientific community. We in the ISCB are committed to the continuous enhancement and leveraging of mankind's knowledge resources. To achieve this goal, investment in open access to the research
literature must be made.

For the ISCB Public Affairs & Policies Committee:

Chair: Richard Lathrop
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Dear OSTP,

I support expanded public access to research undertaken with public funds. I believe that posting of final versions of record in a subject repository after a minimal (6 month or so) embargo period would best accomplish this goal, while still allowing publishers and scholarly societies to make an initial profit from the products of research. I hope that the current administration will pursue further expansion of the NIH policy to apply to other agencies.

Sincerely,
Brian Boling.

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