

<b>Time Period/ Type / Number of Withheld Records</b>	<b>General Description(s) of Withheld Records:</b>	<b>Reason(s) for Withholding of Documents</b>
<p>1/2/00 – 5/27/02</p> <p>E-mail communication and attachments</p> <p>20</p>	<p>Confidential discussions among colleagues regarding suitability of potential collaborators for contemplated and unpublished research and/or publications; confidential discussions among colleagues regarding suitability of potential graduate students and discussion regarding recommendations of post-doctoral individuals for potential hiring or other work, their experience, attributes and potential limitations; discussions among colleagues regarding potential vacancies in positions and confidential solicitation of responses with regard to potential candidates and suitability of such potential candidates</p>	<p>These records have been withheld because they contain confidential and candid discussions about potential candidates for collaborative work or potentially vacant positions solicited and responded to upon the express or implied condition of confidentiality.</p>
<p>2/25/01 - 5/4/01</p> <p>E-mail communication and attachments</p> <p>36</p>	<p>Criticism and analysis of Broecker article published in Science (February 22, 2001) between Mann, Hughes, Bradley, Briffa, Jones, Crowley and others regarding climate history and other related issues; confidential discussions among colleagues and collaborators regarding potential for co-authored response to Broecker 2001 article; discussions and analysis of drafts and re-drafts of potential co-authored response to Broecker 2001 article</p>	<p>These records contain unpublished data, analysis, research, results, drafts, self-critical analysis, commentary, or other related information or material that are proprietary in nature and have been withheld pursuant to the provisions of A.R.S. §15-1640(A)(1). Disclosure of these records would not be in the best interests of this state. Instead, the best interests of the state are served by promoting scientific collaboration by and between university scientists and third-party scientists. Disclosure of these records may have a chilling effect on the ability of universities to attract and maintain top researchers and/or on the willingness of university scientists to collaborate with third-parties scientists and vice-versa.</p>

<p>9/10/99 - 3/17/05</p> <p>E-mail communication and attachments</p> <p>124</p>	<p>Data analysis and discussions regarding data sets between Hughes, Mann, and Bradley; analysis of potentially new data sets to be incorporated into ongoing research and contemplated unpublished research; discussions with regard the various standards utilized by the parties compiling various new data sets or revised data sets, availability of raw data that was compiled for examination of reliability, and discussions regarding additional sources of data sets potentially available for use in continuing or future research and analysis; discussions and analysis of methodologies with regard to algorithms utilized for analyzing various data sets</p>	<p>These records contain unpublished data, analysis, research, results, drafts, self-critical analysis, commentary, or other related information or material that are proprietary in nature and have been withheld pursuant to the provisions of A.R.S. §15-1640(A)(1). Disclosure of these records would not be in the best interests of this state. Instead, the best interests of the state are served by promoting scientific collaboration by and between university scientists and third-party scientists. Disclosure of these records may have a chilling effect on the ability of universities to attract and maintain top researchers and/or on the willingness of university scientists to collaborate with third-parties scientists and vice-versa.</p>
<p>1/13/00 - 5/5/05</p> <p>E-mail communication and attachments</p> <p>55</p>	<p>Data analysis and discussions regarding potentially available or potentially useful proxy climate data sets between others besides Hughes, Mann, and Bradley including discussions with S. Rutherford, Z. Zhang, Briffa, Jones and others; analysis and discussions of inclusion of various data sets into multiproxy database for use in potential future research and analysis; responses to various inquiries and suggestions from other researchers with regard to new or additional data sets available for potential inclusion into research and collaborative project involving multiproxy database of climate indicators</p>	<p>These records contain unpublished data, analysis, research, results, drafts, self-critical analysis, commentary, or other related information or material that are proprietary in nature and have been withheld pursuant to the provisions of A.R.S. §15-1640(A)(1). Disclosure of these records would not be in the best interests of this state. Instead, the best interests of the state are served by promoting scientific collaboration by and between university scientists and third-party scientists. Disclosure of these records may have a chilling effect on the ability of universities to attract and maintain top researchers and/or on the willingness of university scientists to collaborate with third-parties scientists and vice-versa.</p>

<p>10/27/03 - 2/27/05</p> <p>E-mail communication and attachments</p> <p>337</p>	<p>Discussions and analysis among colleagues regarding McIntyre and McKitrick 2003 article published in Energy and Environment and discussions among original collaborators of 1998 Mann, Bradley, Hughes article published in Nature with regard to the defense of the scientific methodologies utilized, availability of the various data sets in the public domain claimed not to have been made available, examination of claims made in article, and critique of the methodology of research relied upon by McIntyre and McKitrick; discussions between colleagues with regard to potential publication of direct response to McIntyre and McKitrick 2003 article and drafts and comments with regard to potential responses and potential venues for publication of response by Mann, Bradley and Hughes</p>	<p>These records contain unpublished data, analysis, research, results, drafts, self-critical analysis, commentary, or other related information or material that are proprietary in nature and have been withheld pursuant to the provisions of A.R.S. §15-1640(A)(1). Disclosure of these records would not be in the best interests of this state. Instead, the best interests of the state are served by promoting scientific collaboration by and between university scientists and third-party scientists. Disclosure of these records may have a chilling effect on the ability of universities to attract and maintain top researchers and/or on the willingness of university scientists to collaborate with third-parties scientists and vice-versa.</p>
<p>3/9/05 – 6/16/05</p> <p>E-mail communication and attachments</p> <p>5</p>	<p>Discussions and analysis among colleagues regarding McIntyre and McKitrick 2005 article and discussions among original collaborators of 1998 Mann, Bradley, Hughes article published in Nature with regard to continued defense of analysis, methodologies, availability of data sets, and related matters; discussions among colleagues regarding additional comments published by others on McIntyre and McKitrick’s work and discussion with regard to additional potential collaboration regarding further response</p>	<p>These records contain unpublished data, analysis, research, results, drafts, self-critical analysis, commentary, or other related information or material that are proprietary in nature and have been withheld pursuant to the provisions of A.R.S. §15-1640(A)(1). Disclosure of these records would not be in the best interests of this state. Instead, the best interests of the state are served by promoting scientific collaboration by and between university scientists and third-party scientists. Disclosure of these records may have a chilling effect on the ability of universities to attract and maintain top researchers and/or on the willingness of university scientists to collaborate with third-parties scientists and vice-versa.</p>

<p>6/19/04 - 7/8/05</p> <p>E-mail communication and attachments</p> <p>147</p>	<p>Discussions and analysis among colleagues at various institutions regarding extensive cooperative and collaborative research project revising climate proxy network for updated reviews, analysis and potential publication of future research; discussions of analysis, critique, and comment on various new or updated data sets and discussions of inclusion of various data sets into database for use in potential future research and analysis; discussion of criteria for selection of acceptable climate proxy data sets to be included in collaborative proxy network database</p>	<p>These records contain unpublished data, analysis, research, results, drafts, self-critical analysis, commentary, or other related information or material that are proprietary in nature and have been withheld pursuant to the provisions of A.R.S. §15-1640(A)(1). Disclosure of these records would not be in the best interests of this state. Instead, the best interests of the state are served by promoting scientific collaboration by and between university scientists and third-party scientists. Disclosure of these records may have a chilling effect on the ability of universities to attract and maintain top researchers and/or on the willingness of university scientists to collaborate with third-parties scientists and vice-versa.</p>
<p>11/30/99 - 11/22/00</p> <p>E-mail communication and attachments</p> <p>30</p>	<p>Discussions and analysis among collaborators (Mann, Gille, Bradley, Hughes, Overpeck, Keimig, &amp; Gross) and discussion of revisions and self-critique by authors of draft article "Global Temperature Patterns In Past Centuries" later published in Earth Interactions in Volume 4 (2000); discussions of unpublished research and revisions and re-revisions of drafts</p>	<p>These records contain unpublished data, analysis, research, results, drafts, self-critical analysis, commentary, or other related information or material that are proprietary in nature and have been withheld pursuant to the provisions of A.R.S. §15-1640(A)(1). Disclosure of these records would not be in the best interests of this state. Instead, the best interests of the state are served by promoting scientific collaboration by and between university scientists and third-party scientists. Disclosure of these records may have a chilling effect on the ability of universities to attract and maintain top researchers and/or on the willingness of university scientists to collaborate with third-parties scientists and vice-versa.</p>

<p>9/15/00 - 7/31/03</p> <p>E-mail communication and attachments</p> <p>80</p>	<p>Discussions and analysis among potential collaborators regarding potential grant proposal to NOAA's Office of Global Programs for grant to conduct research regarding global climatic oscillations; numerous discussions regarding paperwork requirements, deadlines, and budgets for grant proposal and other details of creation of grant proposal and grant administration; discussions and analysis among collaborators regarding large scale climate reconstruction work and coordination of research efforts among collaborators pursuant to grant proposal</p>	<p>These records contain unpublished data, analysis, research, results, drafts, self-critical analysis, commentary, or other related information or material that are proprietary in nature and have been withheld pursuant to the provisions of A.R.S. §15-1640(A)(1). Disclosure of these records would not be in the best interests of this state. Instead, the best interests of the state are served by promoting scientific collaboration by and between university scientists and third-party scientists. Disclosure of these records may have a chilling effect on the ability of universities to attract and maintain top researchers and/or on the willingness of university scientists to collaborate with third-parties scientists and vice-versa.</p>
<p>2/18/00 - 11/3/00</p> <p>E-mail communication and attachments</p> <p>30</p>	<p>Discussions and analysis among colleagues regarding Barnett paper "Detection and Attribution of Recent Climate Change, A Status Report" published in <i>Bulletin of the American Meteorological Society</i>, 80 (12), 2631-2659; discussion and analysis between collaborators Mann, Bradley, Hughes of proposed draft comment on published paper; review and discussion regarding Barnett's analysis and methodology; discussion and collaboration regarding drafts and re-drafts of commentary among collaborators with regard to Barnett paper</p>	<p>These records contain unpublished data, analysis, research, results, drafts, self-critical analysis, commentary, or other related information or material that are proprietary in nature and have been withheld pursuant to the provisions of A.R.S. §15-1640(A)(1). Disclosure of these records would not be in the best interests of this state. Instead, the best interests of the state are served by promoting scientific collaboration by and between university scientists and third-party scientists. Disclosure of these records may have a chilling effect on the ability of universities to attract and maintain top researchers and/or on the willingness of university scientists to collaborate with third-parties scientists and vice-versa.</p>

<p>3/11/03 - 1/26/04</p> <p>E-mail communication and attachments</p> <p>83</p>	<p>Discussions and analysis among colleagues regarding Soon and Baliunas 2003 articles published in <i>Climate Research (Proxy Climatic and Environmental Changes of the Past 1000 Years</i>, vol. 23, 89-110, 2003) and the journal of Energy and Environment (<i>Reconstructing Climatic and Environmental Changes of the Past 1000 Years: A Reappraisal</i>, pre-print, published 11 April 2003); discussions and analysis of proposed response as collaboration among several potential contributing authors to potential comment; discussions and analysis of drafts among contributing co-authors to comment and reply comment ultimately published by collaborating authors in <i>Eos</i></p>	<p>These records contain unpublished data, analysis, research, results, drafts, self-critical analysis, commentary, or other related information or material that are proprietary in nature and have been withheld pursuant to the provisions of A.R.S. §15-1640(A)(1). Disclosure of these records would not be in the best interests of this state. Instead, the best interests of the state are served by promoting scientific collaboration by and between university scientists and third-party scientists. Disclosure of these records may have a chilling effect on the ability of universities to attract and maintain top researchers and/or on the willingness of university scientists to collaborate with third-parties scientists and vice-versa.</p>
<p>9/5/01 - 9/27/02</p> <p>E-mail communication and attachments</p> <p>70</p>	<p>Discussions and analysis among and between colleagues with regard to article published by J. Esper, E.R. Cook, F. H. Schweingruber, <i>Science</i>, 295, 225 (2002); discussions among and between colleagues with regard to the discussion, methodologies, and criticism employed by Esper et. al. and discussion of potential collaboration of conducting review and preparation of a responsive comment; discussion between collaborators with regard to analysis and research conducted in review and with regard to drafts of responsive comment to Esper et. al.</p>	<p>These records contain unpublished data, analysis, research, results, drafts, self-critical analysis, commentary, or other related information or material that are proprietary in nature and have been withheld pursuant to the provisions of A.R.S. §15-1640(A)(1). Disclosure of these records would not be in the best interests of this state. Instead, the best interests of the state are served by promoting scientific collaboration by and between university scientists and third-party scientists. Disclosure of these records may have a chilling effect on the ability of universities to attract and maintain top researchers and/or on the willingness of university scientists to collaborate with third-parties scientists and vice-versa.</p>

<p>7/14/00 - 9/16/04</p> <p>E-mail communication and attachments</p> <p>177</p>	<p>Discussions, analysis, and self-criticism with regard to research, further potential collaborative research, and potential collaborative article regarding borehole data sets as proxy indicators for surface temperature reconstructions and methodologies for conducting analysis of such data sets; discussions among and between collaborators (Mann, Bradley, Hughes, and Keimig) with regard to research and approaches to conducting collaborative research on topic; discussion and comments regarding multiple rounds of revisions to draft article ultimately entitled "Optimal Surface Temperature Reconstructions Using Terrestrial Borehole Data" Journal of Geophysical Research: Atmospheres, Vol. 108 Issue D7.</p>	<p>These records contain unpublished data, analysis, research, results, drafts, self-critical analysis, commentary, or other related information or material that are proprietary in nature and have been withheld pursuant to the provisions of A.R.S. §15-1640(A)(1). Disclosure of these records would not be in the best interests of this state. Instead, the best interests of the state are served by promoting scientific collaboration by and between university scientists and third-party scientists. Disclosure of these records may have a chilling effect on the ability of universities to attract and maintain top researchers and/or on the willingness of university scientists to collaborate with third-parties scientists and vice-versa.</p>
<p>11/14/02 - 3/9/05</p> <p>E-mail communication and attachments</p> <p>38</p>	<p>Discussions, collaboration, and analysis among potential collaborators with regard to potential research and preparation of journal article on intercomparison of proxy-based surface temperature reconstructions; discussions among and between collaborators regarding research, analysis, and drafts of collaborative effort ultimately published as Mann, Michael E., Scott Rutherford, Eugene Wahl, Caspar Ammann, 2005 (<i>Testing the Fidelity of Methods Used in Proxy-Based Reconstructions of Past Climate. J. Climate</i>, 18, 4097–4107.</p>	<p>These records contain unpublished data, analysis, research, results, drafts, self-critical analysis, commentary, or other related information or material that are proprietary in nature and have been withheld pursuant to the provisions of A.R.S. §15-1640(A)(1). Disclosure of these records would not be in the best interests of this state. Instead, the best interests of the state are served by promoting scientific collaboration by and between university scientists and third-party scientists. Disclosure of these records may have a chilling effect on the ability of universities to attract and maintain top researchers and/or on the willingness of university scientists to collaborate with third-parties scientists and vice-versa.</p>

<p>3/19/04 - 5/6/05</p> <p>E-mail communication and attachments</p> <p>49</p>	<p>Discussions, review, and analysis of potential corrigendum to 1998 Mann, Bradley, Hughes article published in Nature; discussions and analysis among and between authors of original article with regard to need to provide additional information and citations with regard to MBH 1998 as Supplementary Information in form of corrigendum; discussion among and between collaborators regarding need and potential form for a corrigendum to MBH 1998; discussion regarding drafts and redrafts of corrigendum to MBH 1998</p>	<p>These records contain unpublished data, analysis, research, results, drafts, self-critical analysis, commentary, or other related information or material that are proprietary in nature and have been withheld pursuant to the provisions of A.R.S. §15-1640(A)(1). Disclosure of these records would not be in the best interests of this state. Instead, the best interests of the state are served by promoting scientific collaboration by and between university scientists and third-party scientists. Disclosure of these records may have a chilling effect on the ability of universities to attract and maintain top researchers and/or on the willingness of university scientists to collaborate with third-parties scientists and vice-versa.</p>
<p>5/23/01 – 6/29/05</p> <p>E-mail communication and attachments</p> <p>9</p>	<p>Miscellaneous commentary and discussions between colleagues as to articles and papers published by others with regard to climate science topics; miscellaneous discussions and analysis of other parties published material among colleagues and potential collaborators not able to be categorized within another topic or matter</p>	<p>These records contain unpublished data, analysis, research, results, drafts, self-critical analysis, commentary, or other related information or material that are proprietary in nature and have been withheld pursuant to the provisions of A.R.S. §15-1640(A)(1). Disclosure of these records would not be in the best interests of this state. Instead, the best interests of the state are served by promoting scientific collaboration by and between university scientists and third-party scientists. Disclosure of these records may have a chilling effect on the ability of universities to attract and maintain top researchers and/or on the willingness of university scientists to collaborate with third-parties scientists and vice-versa.</p>

<p>11/17/99 - 4/19/04</p> <p>E-mail communication and attachments</p> <p>26</p>	<p>Discussion regarding topics to be presented at symposia or talks; discussions among colleagues and potential collaborators regarding potential presentation to be given at symposia; self-critiques by and between collaborators and co-presenters at various symposia with regard to draft presentations and potential topics to be presented</p>	<p>These records contain unpublished data, analysis, research, results, drafts, self-critical analysis, commentary, or other related information or material that are proprietary in nature and have been withheld pursuant to the provisions of A.R.S. §15-1640(A)(1). Disclosure of these records would not be in the best interests of this state. Instead, the best interests of the state are served by promoting scientific collaboration by and between university scientists and third-party scientists. Disclosure of these records may have a chilling effect on the ability of universities to attract and maintain top researchers and/or on the willingness of university scientists to collaborate with third-parties scientists and vice-versa.</p>
<p>11/10/00 - 2/2/05</p> <p>E-mail communication and attachments</p> <p>74</p>	<p>Discussions and comments between co-applicants for various potential grants; discussions of unpublished research topics to be provided in grant proposals to various grant providing and funding agencies; discussions regarding preparation of grant proposals, strategies in presentations of grant proposals, and presentation of potential areas or topics of research in preparation of preparing grant proposals; drafts and revisions regarding potential grants, budget matters, subjects of grants, and form of narrative grant proposals to various grant providing and funding agencies</p>	<p>These records contain unpublished data, analysis, research, results, drafts, self-critical analysis, commentary, or other related information or material that are proprietary in nature and have been withheld pursuant to the provisions of A.R.S. §15-1640(A)(1). Disclosure of these records would not be in the best interests of this state. Instead, the best interests of the state are served by promoting scientific collaboration by and between university scientists and third-party scientists. Disclosure of these records may have a chilling effect on the ability of universities to attract and maintain top researchers and/or on the willingness of university scientists to collaborate with third-parties scientists and vice-versa.</p>