



## ENVIRONMENTAL PROTECTION AGENCY

[FRL-9786-5; Docket ID No. EPA-HQ-ORD-2012-0879]

### **Watershed Modeling to Assess the Sensitivity of Streamflow, Nutrient, and Sediment Loads to Climate Change and Urban Development in 20 U.S. Watersheds**

**AGENCY:** Environmental Protection Agency (EPA)

**ACTION:** Notice of Public Comment Period and Letter Peer-Review

**SUMMARY:** EPA is announcing a 45-day public comment period for the draft document titled *Watershed Modeling to Assess the Sensitivity of Streamflow, Nutrient, and Sediment Loads to Climate Change and Urban Development in 20 U.S. Watersheds* (EPA/600/R-12/058). EPA also is announcing that an EPA contractor for external scientific peer review will select an independent group of experts to conduct a letter peer review of the draft document. The document was prepared by the National Center for Environmental Assessment within EPA's Office of Research and Development and is intended to characterize the sensitivity of streamflow, nutrient (nitrogen and phosphorus), and sediment loading to a range of plausible mid-21st century climate change and urban development scenarios. The study also provides an improved understanding of methodological challenges associated with integrating existing tools

and datasets to assess the potential effects of climate change and urban development on stream flow and water quality.

EPA intends to forward the public comments that are submitted in accordance with this notice to the external peer reviewers for their consideration during the letter review. When finalizing the draft document, EPA intends to consider any public comments received in accordance with this notice. EPA is releasing this draft assessment for the purposes of public comment and peer review. This draft assessment is not final as described in EPA's information quality guidelines and it does not represent and should not be construed to represent Agency policy or views. The draft document is available via the Internet on the NCEA home page under the Recent Additions and the Data and Publications menus at [www.epa.gov/ncea](http://www.epa.gov/ncea).

**DATES:** The 45-day public comment period begins [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER] and ends [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. Technical comments should be in writing and must be received by EPA by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** The draft document, *Watershed Modeling to Assess the Sensitivity of Streamflow, Nutrient, and Sediment Loads to Climate Change and Urban Development in 20 U.S. Watersheds*, is available primarily via the Internet on the National Center for Environmental Assessment's home page under the Recent Additions and the Data and Publications menus at

[www.epa.gov/ncea](http://www.epa.gov/ncea). A limited number of paper copies are available from the Information Management Team, NCEA; telephone: 703-347-8561; facsimile: 703-347-8691. If you are requesting a paper copy, please provide your name, mailing address, and the document title.

Comments may be submitted electronically via [www.regulations.gov](http://www.regulations.gov), by mail, by facsimile, or by hand delivery/courier. Please follow the detailed instructions provided in the **SUPPLEMENTARY INFORMATION** section of this notice.

**FOR FURTHER INFORMATION CONTACT:** For information on the public comment period, contact the Office of Environmental Information Docket; telephone: 202-566-1752; facsimile: 202-566-1753; or e-mail: [ORD.Docket@epa.gov](mailto:ORD.Docket@epa.gov).

For technical information, contact Thomas Johnson, NCEA; telephone: 703-347-8618; facsimile: 703-347-8694; or e-mail: [johnson.thomas@epa.gov](mailto:johnson.thomas@epa.gov).

## **SUPPLEMENTARY INFORMATION:**

### I. Information about the Project/Document

There is growing concern about the potential effects of climate change on water resources.

Watershed modeling was conducted in 20 large, U.S. watersheds to characterize the sensitivity of streamflow, nutrient (nitrogen and phosphorus) loading, and sediment loading to a range of plausible mid-21st century climate change and urban development scenarios. The study also provides an improved understanding of methodological challenges associated with integrating existing tools (e.g., climate models, downscaling approaches, and watershed models) and

datasets to assess the potential effects of climate change and urban development on stream flow and water quality. Study sites were selected to represent a range of geographic, hydrologic, and climatic characteristics throughout the nation. Watershed simulations were conducted using the Soil Water Assessment Tool (SWAT) and Hydrologic Simulation Program- FORTRAN (HSPF) models.

Simulation results illustrate a high degree of variability in the response of different streamflow and water quality attributes to climate change throughout the nation. Results also illustrate sensitivity to methodological choices such as different approaches for downscaling global climate change simulations and use of different watershed models. This understanding may lead to improvements in how existing models and datasets can be used to assess climate change impacts on watersheds.

This report presents a summary of simulation results. The report is technical in nature but results are of broad interest to water and watershed managers, urban or regional planners, government officials, and scientists and engineers interested in the potential implications of climate change on streamflow and water quality in different regions of the nation.

## II. How to Submit Technical Comments to the Docket at [www.regulations.gov](http://www.regulations.gov)

Submit your comments, identified by Docket ID No. **EPA-HQ-ORD 2012-0879**, by one of the following methods:

- [www.regulations.gov](http://www.regulations.gov): Follow the on-line instructions for submitting comments;
- E-mail: [ORD.Docket@epa.gov](mailto:ORD.Docket@epa.gov);
- Fax: 202-566-1753;
- Mail: Office of Environmental Information (OEI) Docket (Mail Code: 2822T), U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, N.W., Washington, DC 20460. The phone number is 202-566-1752. If you provide comments by mail, please submit one unbound original with pages numbered consecutively and three copies of the comments. For attachments, provide an index, number pages consecutively with the comments, and submit an unbound original and three copies; or
- Hand Delivery: The OEI Docket is located in the EPA Headquarters Docket Center, EPA West Building, Room 3334, 1301 Constitution Avenue, N.W., Washington, DC. The EPA Docket Center's Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is 202-566-1744. Deliveries are only accepted during the docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information. If you provide comments by hand delivery, please submit one unbound original with pages

numbered consecutively and three copies of the comments. For attachments, provide an index, number pages consecutively with the comments, and submit an unbound original and three copies.

*Instructions:* Direct your comments to Docket ID No. **EPA-HQ-ORD-2012-0879**.

Please ensure that your comments are submitted within the specified comment period.

Comments received after the closing date will be marked “late,” and may only be considered if time permits. It is EPA's policy to include all comments it receives in the public docket without change and to make the comments available online at [www.regulations.gov](http://www.regulations.gov), including any personal information provided, unless a comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through [www.regulations.gov](http://www.regulations.gov) or e-mail. The [www.regulations.gov](http://www.regulations.gov) Web site is an “anonymous access” system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through [www.regulations.gov](http://www.regulations.gov), your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For

additional information about EPA's public docket visit the EPA Docket Center homepage at [www.epa.gov/epahome/dockets.htm](http://www.epa.gov/epahome/dockets.htm).

*Docket:* Documents in the docket are listed in the [www.regulations.gov](http://www.regulations.gov) index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other materials, such as copyrighted material, are publicly available only in hard copy. Publicly available docket materials are available either electronically at [www.regulations.gov](http://www.regulations.gov) or in hard copy at the OEI Docket in the EPA Headquarters Docket Center.

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Dated: December 3, 2012.

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Debra B. Walsh

Acting Deputy Director, National Center for  
Environmental Assessment

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