

7-20-2004

# Observed Streamflow and Its response to Precipitation and Temperature Changes in Spokane Watershed for Last Century

Fu, Chen

Follow this and additional works at: [http://opensiuc.lib.siu.edu/ucowrconfs\\_2004](http://opensiuc.lib.siu.edu/ucowrconfs_2004)

This is the abstract of a presentation given on Tuesday, 20 July 2004, in the UCOWR conference.

---

## Recommended Citation

Fu, Chen, "Observed Streamflow and Its response to Precipitation and Temperature Changes in Spokane Watershed for Last Century" (2004). 2004. Paper 69.

[http://opensiuc.lib.siu.edu/ucowrconfs\\_2004/69](http://opensiuc.lib.siu.edu/ucowrconfs_2004/69)

This Article is brought to you for free and open access by the Conference Proceedings at OpenSIUC. It has been accepted for inclusion in 2004 by an authorized administrator of OpenSIUC. For more information, please contact [opensiuc@lib.siu.edu](mailto:opensiuc@lib.siu.edu).

# **Observed Streamflow and Its Response to Precipitation and Temperature Changes in Spokane Watershed for Last Century**

Guobin Fu and Shulin Chen

Graduate Student and Professor  
Department of Biological Systems Engineering  
Washington State University  
Pullman, WA 99164-6120  
Email: [guobin\\_fu@wsu.edu](mailto:guobin_fu@wsu.edu), [chens@wsu.edu](mailto:chens@wsu.edu)  
Tel: (509)-335-1100

**Abstracts:** Hundreds, possible thousands, of studies are now available which documents the sensitivity of streamflow to climatic changes for various watersheds all over the world. Most of these studies involve watershed hydrologic models, whose validation still remains a fundamental challenge. Moreover, the Global Circulation Model (GCM) outputs are still uncertain and down-scaling their outputs for hydrologic usage are still questionable. Therefore, the sensitivity of streamflow to changes in climate is perhaps best understood by using historical records of streamflow and climate. This study will focus the observed studies of Spokane watershed annual mean streamflow and its response to precipitation and temperature changes. The streamflow-precipitation-temperature relationship is built and the climate sensitivity of streamflow index is calculated based on actual observed data for last century. The seasonal variation will further analyzed to compare impacts of the annual temperature and seasonal temperature on streamflow. The spatial pattern can be displayed by dividing the watershed into several sub-watersheds. The research results can be compared with outputs of hydrologic models in the watershed if any. The conclusion is useful for regional water resources management to make better decisions.