

October 28, 2005

Dr. Michael Griffin, Administrator
National Aeronautics and Space Administration

Vice Admiral Conrad C. Lautenbacher, Administrator
National Oceanic and Atmospheric Administration

P. Patrick Leahy, Acting Director
U.S. Geological Survey

Dear _____:

On behalf of the Western States Water Council, representing the governors of eighteen western states, I am writing to raise your awareness of our concern regarding the Landsat Program, which provides U.S. satellite images of the Earth's land surface and surrounding coastal areas. Specifically, we are alarmed by the potential loss of the thermal band which presently provides useful and increasingly critical information for the management of western water resources. The thermal band provides data vitally important to the computation of evapotranspiration. The Idaho Department of Water Resources has been involved with NASA for a number of years in an operational remote sensing application development project. The Surface Energy Balance Algorithm for Land (SEBAL) relies on thermal data from the Landsat satellites to compute evapotranspiration for water management uses.

We understand that current plans under the Landsat Data Continuity Mission call for the Landsat satellites to be replaced with the National Polar-Orbiting Operational Environmental Satellite System. We would strongly urge you to ensure that the appropriate thermal sensors are included to replace the present Landsat capabilities and data, and will work with the Congress to ask for adequate funding.

No other remote sensing capabilities available at this time, nor for the foreseeable future, can provide the high resolution, continuous coverage, workable return time (8-16 days, the shorter the better), consistency of viewing angle and time of day, nor the long history allowing analysis of the evolution and change in evapotranspiration. This is clearly a successful story in matching the value of research and practical applications.

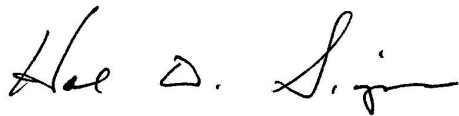
This information is of tremendous value, and is gaining wide-spread use in the West. It has been used in California, Colorado, Idaho, Montana, Nevada, New Mexico, Texas, Utah,

Washington and Wyoming for such diverse purposes as: (1) evaluating interstate river compact and international treaty compliance with respect to depletions from irrigation; (2) measuring ground water recharge and the impacts of pumping ground water on the water table and natural vegetation; (3) evaluating impacts on endangered species; (4) studying the impacts of land use transitions from agricultural to residential use; (5) regulation of surface and ground water use and administration of water rights; (6) determining a multi-basin water balance for planning purposes; (7) better managing irrigation practices to achieve water savings; and (8) evaluating spatial and seasonal trends in agricultural water use.

Such activities have been undertaken over the past five years or have been proposed in the Arkansas, Bear, Boise, Lemhi, Upper and Lower Colorado, Upper and Middle Rio Grande, Milk, North Platte, Russian, Salmon, San Juan, Snake, South Platte and Yakima River Basins, as well as East Texas (using Landsat thermal images from 1985 to the present). This work has involved federal, state and local agencies, and tribal members, as well as academic interests and consulting groups. More and more uses of Landsat data for water management will continue to emerge in the future, due in part to the substantial drop in costs for ETM and TM images since 1998.

We strongly support NASA and NOAA spending to provide for the continued availability of Landsat-comparable thermal data, and oppose any move to delete the thermal band from future satellites. We hope to be able to work with you to ensure the availability of this data for the growing number of applications that will continue into the future as we struggle to balance water uses and demands in the West.

Sincerely,

A handwritten signature in black ink, appearing to read "Hal D. Simpson". The signature is fluid and cursive, with a large initial "H" and "S".

Hal Simpson, Chairman
Western States Water Council

cc. John Cunningham, Systems Program Director, NPOESS
Bill Ochs, Project Manager, Landsat Data Continuity Mission, NASA
John Keys, Commissioner, Bureau of Reclamation
Dr. Gene Whitney, Science Policy Analyst, National Science and Technology Council