

# STATE OF COLORADO

## OFFICE OF THE EXECUTIVE DIRECTOR

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COLORADO



DEPARTMENT OF  
NATURAL  
RESOURCES

Senator Mark Udall  
B40E Dirksen Senate Office Building  
Washington DC 20510

Bill Ritter, Jr.  
Governor

Harris D. Sherman  
Executive Director

January 27, 2008

Re: Request to Support NASA

Dear Senator Udall:

I am writing to request your support for funding thermal infrared imagery from the Landsat satellite series. This Program is vital to Colorado. As you may know, Landsat data is used by water managers and water administrators in Colorado in order to measure evapotranspiration, help estimate snowpack runoff, and calculate consumptive water use. At this time I am requesting the inclusion of at least \$35 million for a thermal infrared sensor (TIRS) on Landsat 8 as part of the Landsat Data Continuity Mission (LDCM). The present satellites, Landsat 5 and Landsat 7, have demonstrated the value of TIRS data, for water administration and management purposes; however, these satellites cannot be relied upon in the future. Landsat 7 has already malfunctioned and Landsat 5 has been operating for 25 years -- far beyond its design life of five years. The Administration has yet to request funding to deploy TIRS on Landsat 8, though the Congress has added some money in the past and is expected to do so in the future. A delay in TIRS funding would only increase the cost of deployment. The recent drought conditions in the west has demonstrated the need for western states and federal water agencies to be able to map water consumption parameters in order to adequately manage our water resources and plan for future water resource needs. The LDCM must have a thermal infrared instrumentation on board to help in this effort.

While TIRS funding falls under the National Aeronautics and Space Administration's Earth Sciences Directorate, it is an irreplaceable tool for western water managers, and an indispensable tool for administering many USDA, Interior and other federal water and land management programs. NOAA also has a significant interest in this technology and data. For example, its availability will facilitate implementation of the Administration's selected projects for the Water for America Initiative, the Agricultural Water Enhancement Program, the Climate Change Science Program, the National Land Information Program, and many other federal programs.

It is critical that TIRS be funded and launched on Landsat 8. NASA has extended its projected Landsat 8 launch date to December 2012. This delay provides an opportunity to ensure that TIRS is built and deployed on Landsat 8 -- correcting a serious oversight -- without unduly delaying the mission. LDCM was initiated as a stand-alone mission, after having been considered for inclusion as part of the National Polar-orbiting Operational Environmental Satellite System (NPOESS).

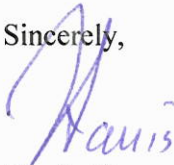
The past failure to include TIRS threatens the ability of water managers to use this valuable tool for measuring and monitoring consumptive water use, administering surface and ground water rights, ensuring compact compliance, facilitating water markets, encouraging more efficient water use, and otherwise improving water management by myriad federal, state and local agencies and private water users.

Colorado, the western states, and the nation face multiple water management challenges related to population growth, food security, environmental protection and restoration, climate change and increasingly intense extreme climatic events (droughts and floods). TIRS offers a unique tool for water managers and administrators to better evaluate and respond to our present and future water challenges.

The FY 2009 House Commerce, Justice and Science Appropriations bill, yet to be reported by the Appropriations Committee, includes \$20 million for TIRS. The Senate Appropriations Committee report supports TIRS and urges NASA to initiate development within available funds "...to maintain continuity of the critical measurements made by this Landsat sensor for scientific research and water management applications." Again, it is vital to Colorado that this Program continues to receive adequate funding.

I appreciate your personal attention to this matter, and I thank you for your consideration of this important request.

Sincerely,



Harris Sherman