



State of Idaho

**DEPARTMENT OF WATER RESOURCES**

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Governor

KARL J. DREHER  
Director

February 27, 2006

Ms. Patricia Dombrowski  
Contracting Officer  
NASA/Goddard Space Flight Center  
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VIA FACSIMILE TO (301) 286-0383 AND FIRST CLASS MAIL

Re: Solicitation No. NNG06147296J – Landsat Data Continuity Mission

Dear Ms. Dombrowski and Ms. Johnson:

The Idaho Department of Water Resources (“IDWR”) fully supports Solicitation No. NNG06147296J – Landsat Data Continuity Mission, and implores NASA to include the option for a thermal instrument. IDWR has been a Landsat end-user continuously since 1975 and has relied upon Landsat thermal data since 2000.

Landsat data are critically important to several business processes at IDWR. No other satellite offers the winning combination of small pixel size, operational status, large data archive, and ease of data-access. Landsat thermal data are the single most important input to the model we have developed to map evapotranspiration. Without the combination of Landsat’s visible and near-infrared bands with contemporaneous thermal data, this model would be useless.

IDWR uses modeled evapotranspiration based on the Landsat thermal band as a fundamental input to groundwater and surface water models that, in turn, are used to make administrative decisions about the distribution of water. Many millions of dollars in economic output are directly dependent on decisions based on Landsat thermal data.

These models are also linked to climate change models developed by the Climate Impacts Group at the University of Washington and are being used to develop alternative operating scenarios for future water management in Idaho. Two weeks ago, I spoke at the Forum on Earth Observations Managing Risk in the 21<sup>st</sup> Century symposium regarding the critical need for continuing Landsat thermal data to adequately model the likely effects of climate change on

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water resources. Ron Birk, the director of NASA's Applied Sciences Division, was in attendance and understands how we depend on Landsat thermal data to adequately calibrate hydrology models linked to climate change models.

In summary, I strongly urge NASA to include a thermal instrument on the Landsat Data Continuity Mission. Thank you for the opportunity to comment on this solicitation.

Sincerely,  
  
Karl J. Dreher  
Director

copies by facsimile to: Senator Larry Craig  
Senator Mike Crapo  
Congressman Butch Otter  
Congressman Mike Simpson