

**POSITION**  
**of the**  
**WESTERN STATES WATER COUNCIL**  
**regarding**  
**NASA'S APPLIED SCIENCE RESEARCH PROGRAM**  
**San Diego, California**  
**October 29, 2010**

**WHEREAS**, the Western States Water Council is a policy advisory body representing eighteen states, and has long been involved in western water conservation, development, protection, and management issues, and the member states and political subdivisions have long been partners in cooperative federal water and climate data collection and analysis programs; and

**WHEREAS**, in the West, water is a critical, vital resource (much of which originates from mountain snows) and sound decision making demands accurate and timely mapping of, and data on, altimetry, precipitation, temperature, snow water content, groundwater, land use and land cover, water use, water quality parameters, and similar information; and

**WHEREAS**, the demands for water and related climate data continue to increase along with the West's population, and this information is used by federal, state, tribal, and local government agencies, as well as private entities and individuals to: (1) forecast flood and drought occurrence; (2) project future water supplies for agricultural, municipal, and industrial uses; (3) estimate streamflows for hydropower production, recreation, and environmental purposes; (4) facilitate water management and administration of water rights, decrees, interstate compacts, and international water treaties; (5) assist in disaster response; (6) assess impacts of climate variability and change; and

**WHEREAS**, thermal infrared imaging data available from Landsat 5, Landsat 7 and as part of the Landsat Data Continuity Mission (LDCM) is used to measure and monitor agricultural and other outdoor water uses and needs, is increasingly important for present and future management of our scarce water resources, and is an example of the application of basic science pioneered by the National Aeronautics and Space Administration (NASA); and

**WHEREAS**, airborne and spaceborne remote sensing research missions have a potential to provide other information on varied temporal and spatial scales that could with sustained engagement ultimately be useful for water resources planning, management and decision-making; and

**WHEREAS**, NASA identifies "water and energy cycle" and "water resources" as topics to support in the agency's research and applications programs respectively; and

**WHEREAS**, NASA's ARRA demonstration project on California applications for use of remote sensing information has illustrated that potential exists for repurposing data collected from certain present NASA missions for water management applications, and that additional potential exists for research applications with sensors planned in future Decadal Survey missions; and

**WHEREAS**, the successful transfer of technology from the research domain to the applications domain is dependent, in part, on on-going communication between researchers and those responsible for resource management and policy decisions and a long term commitment to maintain such communication;

**NOW THEREFORE BE IT RESOLVED**, that the Western States Water Council urges the Administration and NASA to enhance the agency's focus areas on research for water resources applications, and to promote long term engagement with the council and the state and regional agencies in the western US responsible for water management and water policy to maximize benefits to the public from NASA's existing and future investments in Earth observations, Earth system models and systems engineering.