



## National Oceanic and Atmospheric Administration Hydrometeorology Testbed

### The NOAA Hydrometeorology Testbed (HMT)

#### Accelerating Research and Development & Enhancing the Infusion of Research into Forecasting Operations

The Hydrometeorology Testbed (HMT) is a concept aimed at accelerating the infusion of new technologies, models, and scientific results from the research community into daily forecasting operations of the National Weather Service (NWS) and its River Forecast Centers (RFCs). An overview of the HMT plan is presented in [poster format](#). HMT is a product of NOAA's [CALJET](#) and [PACJET](#) projects from 1997-2003 on the West Coast and it has been identified in the [NWS Hydrology Science and Technology Implementation Plan \(STIP\)](#) as a key new R&D approach for improving flood forecasts. Preliminary, small-scale tests of HMT facilities were conducted in California's Coast Range in 2004 ([HMT-04](#)) and the HMT moved to the western slopes of the Sierra Nevada for the winter of [2004-2005](#). The 2007-2008 season is the third and most comprehensive deployment in the American River Basin.

Unlike typical research field projects, the HMT will operate as a demonstration with forecasters and researchers joining forces in the operational setting. An HMT plan now being formulated within the auspices of NOAA's Weather and Water mission goal, targets California's flood-vulnerable American River Basin for the first full-scale deployment of this highly instrumented facility, starting in the second half of this decade. Following the California demonstration, HMT facilities will be sequentially deployed to other regions of the Nation ([Figure 1](#)) to address additional serious hydrometeorology problems that are unique to those locations.

The project will run for a few years in each regional demonstration to determine its most useful new tools for improving precipitation and runoff forecasting methods. These successful tools will remain in place and will be duplicated as the HMT moves to the next region. Through NOAA funding, HMT will provide a foundation level of effort and infrastructure each year in the test region. It is expected that this foundation will be augmented by occasional ramping-up to more intensive operations that include additional participants and specialized instrumentation ([Figure 2](#)).

Date	Location	Event
October 13-14, 2009	California and Nevada	<a href="#">HMT-West 2010 Case Study Event</a>
December 2009 to March 2010	American River Basin, CA	<a href="#">HMT-West 2010 Field Deployment</a>
June 15-17, 2009	Chapel Hill, NC	HMT-SE Research Planning Workshop
February 3-5,		<a href="#">HMT-SE Operational Needs &amp;</a>

2009	Chapel Hill, NC	<a href="#">Requirements Workshop</a>
December 2008 to March 2009	American River Basin, California	<a href="#">HMT-West 2009 Field Deployment, Building on HMT-West 2008 Deployment</a>
November 13-14, 2008	Boulder, CO	<a href="#">HMT Mini-Workshop on FFMP</a>
May 22-23, 2008	Sacramento, CA	<a href="#">Annual Meeting of the HMT Advisory Panel</a>
May 20-21, 2008	Sacramento, CA	<a href="#">HMT Research to Operations (R2O) Workshop</a>
December 2007 to March 2008	American River Basin, California	<a href="#">HMT-West 2008 Field Deployment, Building on HMT-West 2007 Deployment</a>
June 2007	Sacramento, California	<a href="#">Meeting of HMT Advisory Panel [pdf]</a>
December 2006 to March 2007	American River Basin, California	<a href="#">HMT-West 2007 Field Deployment, Building on HMT-West 2006 Deployment</a>
September 2006	National	<a href="#">Full-time HMT Project Manager Appointed</a>
June 2006	Sacramento, California	<a href="#">Third NOAA HMT Planning Meeting [pdf]</a>
December 2005 to March 2006	American River Basin, California	<a href="#">HMT-West 2006 Field Deployment, First full-scale deployment for HMT-West</a>
March 2005	Washington, D. C.	<a href="#">Second NOAA HMT Planning Meeting</a>
December 2004 to March 2005	American River Basin, California	<a href="#">HMT-West 2005 Field Deployment, Preliminary deployment for HMT-West</a>
December 2003 to March 2004	Russian River Basin, California	<a href="#">HMT-2004 Field Deployment, More Refined HMT Prototype</a>
December 2002 to March 2003	Russian River Basin, California	<a href="#">PACJET-2003 Field Deployment, First HMT Prototype</a>
November 2002	Washington, D. C.	<a href="#">First NOAA HMT Planning Meeting [pdf]</a>
December 2001 to March 2002	Offshore and along the Washington, Oregon and California coastlines--base of operations in Portland, Oregon	<a href="#">PACJET-2002 Field Experiment</a>
October 2001	Monterey, California	<a href="#">Workshop with West Coast operational forecasting and forecast end-user communities [pdf]</a>
December 2000 to March 2001	Offshore and along the California, Oregon and Washington coastlines--base of operations in Monterey, California	<a href="#">PACJET-2001 Field Experiment</a>
September 1999	Monterey, California	<a href="#">Workshop with West Coast operational forecasting communit</a>

December 1997 to March 1998	Offshore and along the California coastline--base of operations in Monterey, California	<a href="#">CALJET Field Experiment</a>
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