

9840 **Glossary and Acronyms**

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9842 **GLOSSARY**

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9844 **Adaptive capacity**

9845 The ability of people to mitigate or reduce the potential for harm, or their vulnerability to
9846 various hazards that can cause them harm, by taking action to reduce exposure or
9847 sensitivity, both before and after the hazardous event.

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9849 **Adaptive management**

9850 Approach to water resource management that emphasizes stakeholder participation in
9851 decisions; commitment to environmentally-sound, socially just outcomes; reliance upon
9852 drainage basins as planning units; program management via spatial and managerial
9853 flexibility, collaboration, participation, and sound, peer-reviewed science; and, embracing
9854 ecological, economic, and equity considerations.

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9856 **Boundary organizations**

9857 Entities that perform translation and mediation functions between producers (*i.e.*,
9858 scientists) and users (*i.e.*, policy makers) of information. These functions include
9859 convening forums to discuss information needs, provide training, assess problems in
9860 communication, and tailoring information for specific applications. Individuals within
9861 these organizations who lead these activities are often terms “integrators.”

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9863 **Conjunctive use**

9864 The conjoint use of surface and groundwater supplies within a region to supply various
9865 uses and permit comprehensive management of both sources. This requires co-
9866 management of a stream or system of streams and an aquifer system to meet several
9867 objectives such as conserving water supplies, preventing saltwater intrusion into aquifers,
9868 and preventing contamination of one supply source through polluting the other.

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9870 **Decision maker**

9871 In water resources, the term embraces a vast assortment of elected and appointed local,
9872 state, and national agency officials, as well as public and private sector managers with
9873 policy-making responsibilities in various water management areas.

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9875 **Decision-support experiments**

9876 Practical exercises where scientists and decision-makers explicitly set out to use decision-
9877 support tools – such as climate forecasts, hydrological forecasts and other – to aid in
9878 making decisions in order to address the impacts of climate variability and change upon
9879 various water issues.

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9881 **Disaggregation**

9882 Similar to downscaling, but in the temporal dimension – *e.g.*, seasonal climate forecasts
9883 may need to be translated into daily or subdaily temperature and precipitation inputs for a
9884 given application (as described in Kumar, 2008).

9885

9886 Downscaling

9887 The process of bridging the spatial scale gap between the climate forecast resolution and
9888 the application's climate input resolution, if they are not the same. If the climate
9889 forecasts are from climate models, for instance, they are likely to be at a grid resolution
9890 of several 100 km, whereas the application may require climate information at a point
9891 (*e.g.*, station location).

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9893 Dynamical forecasts

9894 Physics based forecasts that are developed from conservation equations.

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9896 Ensemble streamflow prediction (ESP)

9897 Uses an ensemble of historical meteorological sequences as model inputs (*e.g.*,
9898 temperature and precipitation) to simulate hydrology in the future (or forecast) period.

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9900 Hindcasts

9901 Simulated forecasts for periods in the past using present day tools and monitoring
9902 systems; hindcasts are often used to evaluate the potential skill of present day forecast
9903 systems.

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9905 Integrated Water Resource Planning

9906 Efforts to manage water by balancing supply and demand considerations through
9907 identifying feasible alternatives that meet the test of least cost without sacrificing other

9908 policy goals – such as depleted aquifer recharge, seasonal groundwater recharge,
9909 conservation, growth management strategies, and wastewater reuse.

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9911 **Knowledge-to-action networks**

9912 The interaction among scientists and decision-makers that results in decision-support
9913 system development. It begins with basic research, continues through development of
9914 information products, and concludes with end use application of information products.

9915 What makes this process a “system” is that scientists and users discuss what’s needed as
9916 well as what can be provided; learn from one another’s perspectives; and try to
9917 understand one another’s roles and professional constraints.

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9919 **Objective hybrid forecasts**

9920 Forecasts that objectively use some combination of objective forecast tools (typically a
9921 combination of dynamical and statistical approaches).

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9923 **Physical vulnerability**

9924 The hazard posed to, *e.g.*, water resources and water resource systems by exposure to
9925 harmful, natural or technological events such as pollution, flooding, sea level rise, or
9926 temperature change.

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9928 **Sensitivity**

9929 The degree to which people and the things they value can be harmed by exposure. Some
9930 water resource systems, for example, are more sensitive than others when exposed to the

9931 same hazardous event. All other factors being equal, a water system with old
9932 infrastructure will be more sensitive to a flood or drought than one with new state-of-the-
9933 art infrastructure.

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9935 **Social vulnerability**

9936 The social factors (*e.g.*, level of income, knowledge, institutional capacity, disaster
9937 experience) that affect a system's sensitivity to exposure, and that also influences its
9938 capacity to respond and adapt in order to reduce the effects of exposure.

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9940 **Statistical Forecasts**

9941 Objective forecasts based on empirically determined relationships between observed
9942 predictors and predictands.

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9944 **Subjective consensus forecasts**

9945 Forecasts in which expert judgement is subjectively applied to modify or combine outputs
9946 from other forecast approaches.

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9948 **Water year** or hydrologic year

9949 October 1st through September 30th. This reflects the natural cycle in many hydrologic
9950 parameters such as the seasonal cycle of evaporative demand, and of the snow
9951 accumulation, melt, and runoff periods in many parts of the US.

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9958 **ACRONYMS**

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9960 **ACCAP** Alaska Center for Climate Assessment and Policy9961 **ACF** Apalachicola-Chattahoochee-Flint river basin compact9962 **AHPS** Advanced Hydrologic Prediction System9963 **AMO** Atlantic Multidecadal Oscillation9964 **CALFED** California Bay-Delta Program9965 **CDWR** California Department of Water Resources9966 **CEFA** Center for Ecological and Fire Applications9967 **CFS** Climate Forecast System (see NCEP)9968 **CLIMAS** Climate Assessment for the Southwest Project9969 **CVP** Central Valley (California) Project9970 **DO** dissolved oxygen9971 **DOE** U.S. Department of Energy9972 **DOI** U.S. Department of the Interior9973 **DRBC** Delaware River Basin Commission9974 **DSS** decision support system9975 **ENSO** El Nino Southern Oscillation9976 **ESA** Endangered Species Act9977 **ESP** Ensemble Streamflow Prediction9978 **FEMA** Federal Emergency Management Agency9979 **FERC** Federal Energy Regulatory Commission9980 **GCM** General Circulation Model9981 **ICLEI** International Council of Local Environmental Initiatives

9982	ICPRB	Interstate Commission on the Potomac River Basin
9983	INFORM	Integrated Forecast and Reservoir Management project
9984	IJC	International Joint Commission
9985	IPCC	United Nations' Intergovernmental Panel on Climate Change
9986	IWRP	integrated water resource planning
9987	NCEP	National Center for Environmental Predictions
9988	GFS	Global Forecast System (see NCEP)
9989	MDBA	Murray-Darling Basin Agreement
9990	MLR	Multiple Linear Regression
9991	MOS	Model Output Statistics
9992	NCRFC	North Central River Forecast Center
9993	NGOs	non-governmental organizations
9994	NIFC	National Interagency Fire Center, Boise, Idaho
9995	NSAW	National Seasonal Assessment Workshop
9996	NWS	National Weather Service
9997	NYCDEP	New York City Department of Environmental Protection
9998	OASIS	A systems model used for reconstructing daily river flows
9999	PDO	Pacific Decadal Oscillation
10000	PET	Potential Evapotranspiration
10001	RGWM	Regional Groundwater Model
10002	RISAs	Regional Integrated Science Assessment teams
10003	SARP	Sectoral Applications Research Program
10004	SECC	Southeast Climate Consortium

10005	SFWMD	South Florida Water Management District
10006	SPU	Seattle Public Utilities
10007	SRBC	Susquehanna River Basin Commission
10008	SWE	Snow Water Equivalent
10009	SWP	State Water Project (California)
10010	TOGA	Tropical Ocean - Global Atmosphere
10011	TRACS	Transition of Research Applications to Climate Services program
10012	TVA	Tennessee Valley Authority
10013	USACE	U.S. Army Corps of Engineers
10014	USGS	U.S. Geological Survey
10015	WMA	Washington (D.C.) Metropolitan Area
10016	WRC	U.S. Water Resources Council
10017	WSE	Water Supply and Environment – a regulation schedule for Lake
10018		Okeechobee