

**MEMORANDUM OF UNDERSTANDING FOR
SCIENTIFIC AND EDUCATIONAL COOPERATION
BETWEEN
SCRIPPS INSTITUTION OF OCEANOGRAPHY,
UC SAN DIEGO
AND
SONOMA COUNTY WATER AGENCY**

WHEREAS, The UC San Diego Scripps Institution of Oceanography (hereinafter referred to as SIO) and Sonoma County Water Agency (hereinafter referred to as Sonoma Water) are mutually interested in cooperative research activities involving ocean, meteorology, and hydrology research and development;

WHEREAS, Sonoma Water is particularly interested in research relating to the forecasting of winter storms events, which influence the manner in which reservoirs upon which Sonoma Water relies for water supply purposes are managed during the wet winter season;

WHEREAS, the parties have agreed to establish the following nonbinding Agreement for Scientific Cooperation to further and advance this research;

NOW, THEREFORE, SIO and Sonoma Water agree as follows:

Article 1. Purpose of Research Cooperation.

- A. SIO and Sonoma Water shall initiate cooperation to further the development of basic scientific and applied research with goals of advancing research in ocean science, meteorology, and hydrology; gaining a more fundamental understanding of the oceans and hydrometeorology; and benefiting society at large.
- B. The parties wish to maintain and promote channels of cooperation and communication that permit the exchange of academic and scientific knowledge, which will assist Sonoma Water in carrying out water supply and flood control operations more effectively and efficiently.

Article 2. Areas of Research Cooperation.

- A. Upon mutual agreement by the parties, cooperative research may be conducted in fields of current research and those to be undertaken in the future by the two parties in areas of common interest.
- B. Principal subjects of research cooperation to be pursued under this Agreement shall include, but not be limited to, those fields specified in the Appendix.

Article 3. Forms of Research Cooperation.

The parties agree in principle to the following general forms of cooperation, subject to each party's institutional regulations and procedures:

- A. Exchanging researchers, scientists, faculty members, and graduate students;
- B. Exchanging scientific information in fields of mutual interest;
- C. Exchanging scholars for lectures, talks, conferences, colloquia, symposia and sharing of experiences;
- D. Implementing cooperative research programs;
- E. Making facilities and equipment of one party available to researchers from the other party;
- F. Encouraging direct contacts between researchers;
- G. Permitting other forms of research cooperation by mutual arrangement;
- H. Supporting staff of one party to support research activities of the other party; and
- I. In connection with such research, Sonoma Water will provide SIO with two offices in Sonoma Water's Administration Building at 404 Aviation Boulevard, Santa Rosa, California, or at Sonoma Water's Operations Center at 204 Concourse Boulevard, Santa Rosa, California. The offices will include furniture as available from existing stock, computer access/network service, telephone, security card access to building, and use of work space/shop space as may be available and as determined by Sonoma Water. Use of such space will be at no charge to SIO; however, the market value of the space and equipment shall be tracked for use as matching funds for future grant applications by SIO or Sonoma Water. SIO personnel agree to adhere to Sonoma Water policies and procedures with respect to building access and use of IT infrastructure.

Article 4. Meetings.

Representatives of the two parties shall meet, as occasion demands, to review the progress of research cooperation currently underway and to discuss future cooperation plans. The primary contacts for this MOU are Jay Jasperse for Sonoma Water and F. Martin Ralph for SIO.

Article 5. Procedures.

- A. Financial arrangements for research cooperation and the treatment of intellectual property rights shall be determined by SIO and Sonoma Water through mutual consultation and agreement.
- B. Research data developed under this cooperative Agreement may be made available to the general scientific community through, but not limited to, the following: publications, seminars, lectures, and conferences.
- C. This Agreement may be modified by written consent of both parties.
- D. Each party shall defend, indemnify, hold harmless, and release the other, its officers, agents, and employees, from and against any and all actions, claims, damages, liabilities, or expenses that may be asserted by any person or entity, including the parties, to the extent that such actions, claims, damages, liabilities, or expenses arise out of the negligence or willful misconduct of the indemnifying party in connection with activities under this Agreement. In addition, in connection with SIO's use of Sonoma Water facilities under Article 3, Paragraph I above, SIO shall be liable to Sonoma Water for any loss or damage to Sonoma Water property, but only in proportion to and to the extent such liability, loss, expense or damages are caused by or result from SIO's negligence or willful misconduct.
- E. Matters not provided for by this Agreement shall be determined through mutual consultation and agreement.

Article 6. Term of Agreement.

This Agreement contains all of the terms and conditions agreed upon by the parties and supersedes any prior agreement, oral or written, and all other communications between the parties. This Agreement will be valid for five (5) years starting from the latter date of the signing indicated below by each party. This Agreement may be extended by mutual, written agreement, signed by the duly authorized representatives of both institutions. Either institution may withdraw from this Agreement, provided written notification of the withdrawal is given to the other institution at least six (6) months prior to the withdrawal date. However no termination shall adversely interrupt or impair active participation in a program already in progress.

Article 7. Non-Discrimination.

Each party agrees not to discriminate in the selection or acceptance of any participants on the basis of race, color, national origin, religion, gender, sexual orientation, mental or physical disability, age, veteran's status, ancestry, marital status or citizenship within the limits imposed by law or UC San Diego policy.

Article 8. Language

This MOU has been executed in English. It is the intent of the parties that both versions be identical in substance, spirit, and interpretation.

IN WITNESS WHEREOF, the undersigned, duly authorized, have signed the present agreement on behalf of their respective institutions.

Date

Dr. F. Martin Ralph
CW3E, Scripps Institution of Oceanography

Date

Grant Davis, Sonoma Water General Manager

Date

APPENDIX

Agreement For
Scientific And Educational Cooperation
Between
SCRIPPS INSTITUTION OF OCEANOGRAPHY,
UC SAN DIEGO
And
SONOMA WATER

FIELDS OF RESEARCH COOPERATION

Under the Agreement for Scientific and Educational Cooperation between the UC San Diego Scripps Institution of Oceanography and Sonoma Water, research cooperation is anticipated to include, but not be limited to, the following major areas:

1. Forecast Informed Reservoir Operations
2. Ensemble Forecast Operations Model
3. Advanced Quantitative Precipitation Information (AQPI)
4. Decision Support Tools for Water Managers
5. Advance scientific understanding of atmospheric rivers and their role in extreme events
6. Maintain advanced observing system in the Russian River Watershed