New Mexico faces serious challenges concerning the supply, development, quality, management, and administration of water resources. Responses to the challenges will have major impacts on the regional economy, environmental quality, and the quality of life of the residents of New Mexico. A major need exists to train the next generation of water resources researchers, educators, and managers to address these challenges, both inside and outside New Mexico.

The primary purposes of the interdisciplinary master's and doctoral degree programs in Water Science & Management are to provide graduate education for addressing state, national, and international water issues and to train the next generation of water professionals.

## Website Directory

NMSU Graduate Admissions

- gradadmissions.nmsu.edu

WSM Affiliated Faculty

- wsm.research.nmsu.edu/content/faculty

International Student & Scholar Services

- isss.nmsu.edu

Graduate Catalog

- catalogs.nmsu.edu

## Contact Information

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Las Cruces, NM 88003-8001

Website: wsm.research.nmsu.edu
Email: wsm@nmsu.edu
Phone: (575) 646-1194

## Application Deadlines:

Fall Semester – February 15
Spring Semester – October 1

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**New Mexico State University**

# Water Science & Management Graduate Program

NM STATE

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**Water Science & Management**
**wsm.research.nmsu.edu**

## Master of Science

**Admission Requirements**

- Bachelor's degree
- 3.5 GPA or higher on 4.0 scale
- Three letters of recommendation
- Brief resume or curriculum vitae
- Letter of intent or statement of purpose

**Degree Requirements**

- 26 CR = Formal coursework; 6 thesis credits for a minimum total of **32 CR**
- 3 CR = **AEEC 575** Advanced Water Resource Management & Policy
- 3 CR = **RGSC 518** Watershed Methods & Mgmt. **or** **SOIL 456** Irrigation & Drainage
- 4 CR = **A ST 505** Statistical Inference I
- 1 CR = Seminar
- 10 CR = Relevant electives from water course list
- 5 CR = Committee approved electives
- 6 CR = Thesis

## Doctor of Philosophy

**Admission Requirements**

- Master's degree
- 3.5 GPA or higher on 4.0 scale
- Three letters of recommendation
- Brief resume of curriculum vitae
- Letter of intent of statement of purpose
- Evidence of research experience (master's thesis, professional paper, peer reviewed manuscripts, consulting reports, or other evidence of experience conducting research)

**Degree Requirements**

- 30-40 CR = Formal coursework beyond the MS, plus dissertation research credits for a minimum total of **75 CR beyond BS degree**
- 3 CR = **AEEC 575** Advanced Water Resource Management & Policy
- 3 CR = **RGSC 518** Watershed Methods & Mgmt. **or** **SOIL 456** Irrigation & Drainage
- 3 CR = **C E 557** Water Resources Development
- 4 CR = **GEOG 578** Fundamentals of Geographic Information Systems **or** 3 CR **GEOG 521** GIS Application
- 4 CR = **A ST 505** Statistical Inference I **or** 3 CR **C E 582** Statistical Hydrology
- 2 CR = Seminar (two different depts.)
- 10 CR = Relevant electives from water course list
- 5 CR = Committee approved electives
- 18 CR = Dissertation

## Five Concentrations

### *Water Informatics*

Is an interdisciplinary science primarily concerned with the collection, classification manipulation, storage, retrieval, and especially the dissemination of water information, including both human and machine-readable documents. Examples of human readable documents include maps, field data sheets, operational schedules, and long-term asset management plans with narrative text. Machine-readable documents include files for geographic information systems (GIS), Global Positioning Systems (GPS), relational database management systems, and emerging applications.

### *Water Economics & Policy*

Examines the demand for water by all its competing uses, including irrigated agriculture, energy, urban supply, and environmental restoration and management. Policies are examined for their influence on water supplies, water demands, and economic values of water reallocations among agricultural, environmental, energy, and urban users. It examines the role of water markets, water user decisions, institutional adjustments, and water-related policies with respect to resource costs, water quality, profitability, and environmental effects.

### *Watershed, Riparian & Aquatic Systems*

Includes the processes of organizing and guiding land and other resources used in a river basin to provide desired goods and services without adversely affecting soil and water resources. Watershed, riparian, and aquatic system management involves an array of nonstructural (vegetation management) practices, as well as an array of structural (engineering) activities, when conditions warrant.

### *Water Quality & Treatment*

Includes processes used to make water acceptable for desired end-uses. These can include use as drinking water, industrial processes, agricultural uses, and environmental management. The goal of water treatment processes is to remove existing contaminants in the water or to reduce the concentration of such contaminants so the water becomes fit for its desired end-use.

### *Agricultural Water Resources*

Relates to the major use of ground and surface water in providing safe and secure food systems while ensuring ecosystem services. This field of study includes water allocations, water conservation, and water management issues facing urban water supply and irrigated agriculture.