The Washington State Section of the American Water Resources Association (WA-AWRA) offers an annual Fellowship of $1,500 to full-time graduate students completing an advanced degree in an inter-disciplinary water resources subject. Since 1998 two fellowship awards have been given. One award is presented to a member of a Washington Section affiliated Student Chapter. In 2007 the Washington Section declared the Fellowship awarded to the Student Chapter member the Rod Sakrison Memorial Fellowship in honor of Rod's work to establish the U of W student chapter. The other award goes to a student enrolled in a graduate program at any college or university in Washington State.

In addition to the cash award, the fellowship includes a one-year membership in both the State and National AWRA, a one-year subscription to the Journal of the American Water Resources Association, and admission to the Washington State Section Annual Conference.

A committee of four WA-AWRA members selected the two award winners for the 2007– 08 year from a field of five applicants. Of the five applicants, three are students at the University of Washington, one attends Washington State University and one attends Central Washington University. As the University of Washington boasts the only student chapter in Washington, the selection criteria requires that the Rod Sakrison Memorial award go to a student from the U of W.

Eric Rosenberg working through the Water Center at the U of W is the 2007 – 08 Rod Sakrison Memorial award winner. Eric's thesis title is, Adaptation of remote sensing data and seasonal climate forecasts for water resources management. Eric's work seeks to address the need for better data needed for water management by adapting advanced technologies for hydrologic prediction in the operational environment.

From Eric's application we find that, "With snowmelt accounting for roughly 75% of the streamflow in the West, quantification of snow water equivalent (SWE) has historically been the method for predicting spring and summer streamflows, and statistical regression-based models have long provided water supply forecasts for the period of peak demand. Yet these models, which are based on point surface observations of snowpack, may not capture fully the considerable spatial variability in snow properties over large areas. Furthermore, since forecasts are based solely on conditions known at the time of issue, their accuracy may not be better than climatology prior to the onset of snowfall. Even afterwards,

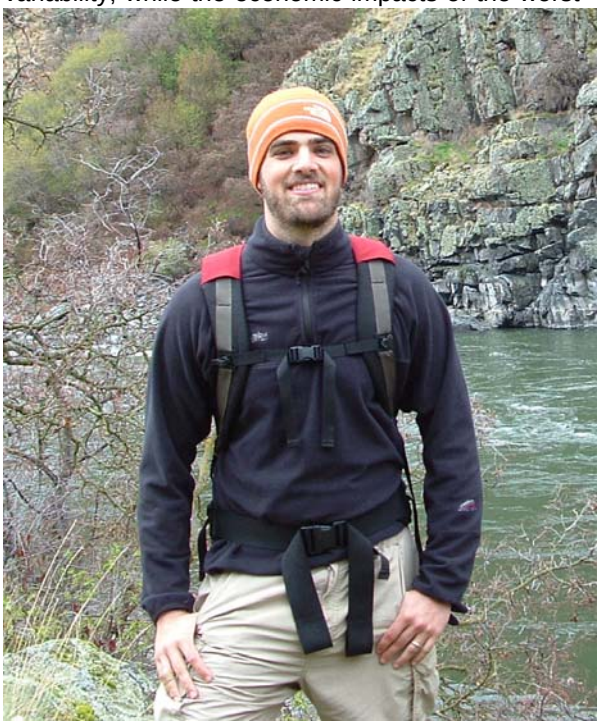
significant forecast error can result from uncertainty in the amount of precipitation falling through the end of the target season.

"Remote sensing and seasonal climate forecasts offer the potential for improvements to streamflow prediction. Remote sensing has been studied for decades as a supplement to surface observations, dating from early efforts using aerial photography to more recent applications of satellite imagery. The contrast in reflectance between snow-covered and snow-free areas makes the estimation of snow extent straightforward using visible wavelength sensors, although the need for cloud-free conditions and difficulty identifying snow under trees pose limitations. With the launch of the NASA Terra satellite in 1999, however, focus has shifted to snow extent products based on the moderate resolution imaging spectroradiometer (MODIS), whose higher spatial and spectral resolutions offer improved cloud discrimination and snow detection under vegetation canopies."

The "open" category award recipient is Jeremy Leib. Jeremy is a CWU student working within the schools Resource Management Program. Jeremy's thesis is titled, Historical relationships between climate variability, water resource development, and socioeconomic development in the Upper Yakima Basin. Jeremy's research is focused on developing an accurate account of the historical relationships between socioeconomic development, water resource development, and climate in the Upper Yakima Basin.

From Jeremy's application, "As a result of predicted climate change, increasing growth, and increasing concern for anadromous fish habitat in the basin, fears have begun to grow over future water shortages. Several methods have been proposed to deal with potential water shortages; a favored option included among proposed methods is the addition of new storage reservoirs. Research in support of increasing storage in the Upper Yakima Basin has focused on future predictions for demand and climate change, but has not grounded those predictions with the historic impacts of climate variability and water resource development. The purpose of my research will be to fill this void in historical research on water resources and climate, and to assess the historic impacts of water resource development and climate variability and the economy of the basin. This will be accomplished through qualitative and quantitative comparisons of the historic climate variability (temperature, precipitation and seasonality), water resource development and water use, and several socioeconomic indicators, as well as broad socioeconomic changes over time.

"Of particular importance to this research are two currently prominent and inadequately justified ideas: 1) the Upper Yakima Basin is particularly susceptible to drought and the already serious threat of drought will be exacerbated by predicted climate change; and 2) additional storage and other water resource development will reduce the potential impacts of drought while allowing future economic growth. In actuality the Upper Yakima Basin may be better prepared for drought than is commonly believed. Dunbar found that management agencies in the Yakima Basin as a whole were currently capable of effectively managing for present and predicted future climate variability, while the economic impacts of the worst



drought on record in 1977 were not nearly as severe as predicted… Historical trends throughout the western U. S. have indicated that increasing water storage commonly increased water use, thereby offsetting the benefits of increased storage for the reduction of drought risk…my research aims to synthesize that historical information for the Upper Yakima Basin into a single comprehensive source."

Other projects entered include those of Zain M. Al-Houri PhD candidate from Civil and Environmental Engineering at WSU whose dissertation title is, Proposed modification on the existing design parameters for improved performance of Infiltration Treatment BMPs in cold climate; Joowon Park, PhD candidate in Forest Resources at the University of Washington, Comparison of the Positional Accuracy of Stream Mapping Methods; Considering the effects of Minimum Contributing Area and Spectral Data; and Caroline Paulson, MS candidate at the University of Washington's Aquatic and Fishery Sciences program, whose thesis title is "Evaluating the effects of hypoxia on the marine community in Hood Canal, Puget Sound.