



The WV STEM Club is a social organization which meets monthly for lunch with a speaker on a topic of interest. Short field trips are occasionally scheduled. Membership is open to anyone who has worked in or has an interest in Engineering, Science or Technology. Meetings are held at 11:30am on the first Friday of each month (unless otherwise noted), October through June, at Grandview Terrace, in the fourth-floor ballroom, at 14515 W. Granite Valley Drive, Sun City West, AZ. **Guests and visitors are always welcome.** Contact Phil Main: maintwin3@gmail.com, 623-826-0101 (cell).

MARCH 7 PROGRAM

NASA Europa Clipper: Exploring an Ocean World

Dr. David A. Williams, Research Professor, School of Earth and Space Exploration, ASU



Dr. David A. Williams is a Research Professor in the School of Earth and Space Exploration at Arizona State University, Tempe, Arizona. Dr. Williams is the Director of the Ronald Greeley Center for Planetary Studies, a NASA-supported planetary data center at ASU. David is currently performing research in volcanology and planetary geology, with a focus on planetary mapping, geochemical, and remote sensing studies.

His research has included computer modeling of seismic wave propagation through planetary interiors, visible and near-infrared spectroscopy of the lunar surface, planetary geologic mapping of the satellites of Jupiter and Saturn, the planet Mars, the asteroid Vesta and the dwarf planets Ceres and Pluto, computer modeling of the physical and geochemical evolution of lava flows in a variety of planetary environments, and petrologic study of lava samples from Mount St Helens. He was involved with NASA's Magellan Mission to Venus, Galileo Mission to Jupiter, the European Space Agency's (ESA's) Mars Express orbiter mission, and the NASA Dawn Mission to asteroid Vesta and dwarf planet Ceres. He is currently a Co-Investigator and Deputy Lead for the multispectral imager on NASA's Psyche Mission, which launched on October 13, 2023. He is also a member of the Italian JANUS camera team of the ESA Jupiter Icy Moons Explorer (JUICE) mission that launched on April 14, 2023. In 2014 David was elected a Fellow of the Geological Society of America, and asteroid 10,46Dawilliams was named in his honor. He was the Secretary of the Planetary Sciences Section of the American Geophysical Union in 2019-2020.

Abstract: Jupiter's icy moon Europa was revealed by NASA's Galileo mission in the 1990s to contain a salty, liquid water ocean beneath its icy surface. Since the late 1990s, planetary scientists including ASU's Ronald Greeley (1939-2011) led the effort to send a dedicated mission to Europa, with modern instruments, to assess its habitability. Now that mission has come to fruition, which the launch of Europa Clipper on Monday, October 14, 2024. Professor Williams will discuss Europa, why it is important, and how NASA and ASU will explore this mysterious moon and search for evidence for life.

PAST PRESIDENT'S MESSAGE

Steve Sumner

The Super Bowl has come and gone and Baseball Spring Training is starting up. That can only mean that the "Snow Birds" are thinking about heading back to their Summer residence. However, your Board still will be working to award scholarships for the 2025-2026 school year.

As of the writing of this Message (mid-February), we have received several applications. Interviews are scheduled for the first week of March. A winner will be announced at the April, 2025 STEM luncheon. We have not determined if more than one scholarship will be rewarded. However, as a result of your generous contributions to our scholarship fund, it is possible that a second scholarship may be awarded. Again, thank you for your generosity.

The Field Trip to the Biodesign Institute at ASU in Tempe is next Wednesday, March 12, 2025. The address is 727 East Tyler Street, Tempe, AZ 85281. Parking is in the Tyler Parking Structure at McCallister Avenue and Tyler Street, north of Biodesign or south of Biodesign at Rural Road between Terrace and Lemon. This tour is full but contact George if you interested in case there are cancellations.

National Engineers Week was celebrated the week of February 16 through February 22. The theme for this year was "Design Your Future". This celebration of Engineers, as well as all STEM fields, was started by the National Society of Professional Engineers in 1951. (credit Wikipedia)

As a courtesy to our speaker and to fellow attendees, it is appreciated if you will turn off or mute your cell phones during the presentation.

Our next Luncheon meeting is April 4, 2025, the FIRST Friday of April. Thank you for your continued participation and support.

2025 MEMBERSHIP DUES

Dues for 2025 are \$25.00 of which half goes to the Scholarship Fund. **Please consider making an additional donation to the Scholarship Fund** (put scholarship in the memo line). Please mail your check(s), made out to West Valley STEM to: Philip Main 17604 N Buntline Drive, Sun City West, AZ 85375-5148 maintwin3@gmail.com , 623-748-8222 (Home), 623-826-0101 (Cell)

WEST VALLEY STEM March 2025

2025 OFFICERS

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Email the Board at: js3820@msn.com

from the University of Idaho, an M.S. in Agricultural and Resource Economics from Oregon State University, and a B.S. in Mathematics and Economics (dual major) from Willamette University.

Abstract: The situation in the Colorado River Basin continues to be featured prominently in the media. While the near-term situation has improved through recent conservation actions and the relatively wet hydrologic conditions seen in water year 2023; considerable uncertainty remains regarding future hydrologic conditions and reservoir operations. Against this backdrop, the presentation will discuss the current status of the system and near-term impacts to Arizona and the Central Arizona Project, a discussion of the difficulties and uncertainty facing the basin in the long-term, and models and tools used by the Bureau of Reclamation and stakeholders to address these issues.

2025 MEETING DATES

The Club's **REVISED** meeting dates for 2025:

04/04/2025 (First Friday of the Month)

05/09/2025 (SECOND Friday of the Month)

06/06/2025 (First Friday of the Month)

TREASURER'S REPORT FEBRUARY 2025

Gross General Fund Balance	\$11,500.40
Net Fund Balance (after payment of obligations)	\$10,135.58
Membership	109

The February 50/50 winner was Phil Main, who donated his \$68 winnings to the Club. Thank You for Your Support!

APRIL 4 PROGRAM

Current Status of the Colorado River Basin

James Heffner, Senior Hydrologist
Colorado River Management Arizona
Department of Water Resources



James Heffner is a Senior Hydrologist in the Colorado River Management Section at the Arizona Department of Water Resources (ADWR). At ADWR, James serves as the primary contact for Colorado River system modeling as well as providing technical analysis for projects and operations on-river and in Central Arizona. Prior to joining

ADWR, James was a Hydrologist in the Water Management Bureau for the Montana Department of Natural Resources and Conservation where he worked on statewide water use and technical support for compact negotiations. He holds an M.S. in Hydrology

FEBRUARY 6 PROGRAM

Beyond the Buzz: Alcohol's Impact on Cognitive Health

Claudia Hristova, PsyD,
Neuropsychology Fellow, Banner Alzheimer Institute
& Sun Health Research Institute



Front L to R: Briana Auman, PsyD, Claudia Hristova, PsyD and Serena Lowery from Banner.