

State News for NSPE Members

US Army Researchers Assist with Louisiana Saltwater Intrusion Efforts

As residents of Louisiana prepare for possible disruptions in their drinking water caused by saltwater intrusion, researchers from the US Army Engineer Research and Development Center (ERDC) are assisting the US Army Corps of Engineers New Orleans District with assessment and mitigation efforts.

With much of the lower Mississippi River Valley experiencing extreme drought conditions, the lack of rainfall has led to lower levels of fresh water in the Mississippi River. This is allowing for a denser layer of salt water from the Gulf of Mexico to make its way upstream, threatening the drinking water supplies in several Louisiana communities, including New Orleans, according to an ERDC news release.

River conditions are low and have been for some time. The bed of the Mississippi River is much lower than the sea level in the Gulf of Mexico, and if there's not enough fresh water to apply pressure to keep the salt water in the Gulf of Mexico, then it slowly migrates upstream in the shape of a wedge.

"When fluids of different densities encounter each other — which in this case, salt water is denser than fresh water — they tend to stratify," said Gary Brown, a research hydraulic engineer with the ERDC's Coastal and Hydraulics Laboratory. "So, the fresh water flows over the salt water, and the salt water flows under the fresh water."

Salt water has been steadily migrating upstream against the current, and as long as those low river conditions persist, without intervention, that upstream migration will persist.

"Salt is not something that you can conventionally deal with in drinking water filtration," said Brown. "You can't filter it out of the water, and it corrodes the pipes. It's a significant issue, not only for drinking, but also for agriculture and livestock."

Though it's a relatively new term to many, experts at ERDC have been studying these saltwater wedges and intrusion for decades. [Read more](#).

Louisiana Misses Out on Federal Funding for Hydrogen Hubs

The Biden administration is directing \$7 billion from the bipartisan infrastructure law to build seven regional hydrogen power hubs in 16 states, the White House recently announced.

The projects, each of which is a cluster of assets that produce and process hydrogen fuel as an alternative to fossil fuels, will benefit the climate, the economy and US energy security, administration officials told reporters, the [Louisiana Illuminator](#) reports.

“Advancing clean hydrogen is essential to achieving the President’s vision of a strong clean energy economy that strengthens energy security, bolsters domestic manufacturing, creates healthier communities, and delivers new jobs and economic opportunities across the nation,” a news release from the White House said.

Congress approved the funding as part of the \$1.2 trillion infrastructure law early in President Joe Biden’s term in 2021. The projects will have assets in Ohio, Pennsylvania, West Virginia, New Jersey, Minnesota, South Dakota, Indiana, Michigan, Oregon, Washington, Montana, California, Delaware, Texas, North Dakota, and Illinois. A hub based in Houston could “perhaps” involve Louisiana, an administration official said.

Louisiana, which had formed the HALO Coalition with Arkansas and Oklahoma to compete for a green hydrogen hub, was left out of the allocations. “While we will not have the boost that the federal funding would have provided, Louisiana still has the infrastructure, expertise and interest available to be successful in hydrogen, just on a longer timetable,” state Department of Natural Resources spokesperson Patrick Courreges said in an email. “That future success will benefit from the connections we have made in the process of forming and advancing the HALO coalition.” [Read more](#).

Stay up to date on legislative issues through the [NSPE Advocacy Center](#).

Looking Toward a Promising Future

By Bill Atkinson, P.E., F.NSPE, President 2023–24



As I continue on my professional journey as the NSPE president, I often reflect on what our organization has done since its founding in 1934 and what NSPE needs to do going forward. The next stage of NSPE's future begins with our vision to ensure that the public lives in a world where engineering decisions are made by qualified and ethically accountable professionals. This will require that a unified engineering community step up to protect licensure laws across the nation and maintain high standards for professional practice. It will require that we embrace innovation and emerging technologies. This future will be bolstered by a new generation of engineers that we must encourage to understand that they can truly make a difference in the world. I look forward to playing my part and supporting others in these efforts.

Licensure and Emerging Technologies

Protection of the public health, safety, and welfare is at our core as professional engineers. Licensure is key to ensuring consistent standards of practice and professional competencies. We must make sure that these standards and competencies remain relevant to how we do things today, while looking toward the future.

We must continually question ourselves and the regulations that are in place. Are state licensing laws adequately regulating the profession of engineering without precluding otherwise qualified individuals from practicing? Is our current licensure model adequately serving its purpose? Are engineering licensure exemptions creating gaps where the public could be harmed? The answers to these questions can help drive us to better ways of safeguarding the public.

I believe that most individuals that become engineers do so because they are good at making things better. They are not tied to the world they are in today and are always pursuing excellence and improvement. I believe that by pooling our experiences as engineers, we can bring the best and brightest together to tackle any challenge that we may face as we seek to evolve. This evolution will involve the development and use of emerging technologies to spur innovative solutions. NSPE is supporting members by providing professional development that

showcases the use of these technologies in a manner that is ethical and will benefit the public. [Read more.](#)

NSPECon24 – Call for Presentation Proposals

Prepare to share your expertise during NSPECon24 in Raleigh, North Carolina, August 7-9, 2024. [Review the topics](#) NSPE seeks in the areas of career development, leadership, and issues and trends, and think about how you can contribute. The submission site will open on November 1 and the proposal deadline is **January 10, 2024**.

The [NSPECon23 program](#) is still available online and may give potential presenters some ideas about the caliber of sessions needed for next year.

Volunteers are the Heart of NSPE: Get Involved and Share Your Voice



Volunteers are essential to advancing NSPE's vision to ensure a world where the public can be confident that engineering decisions affecting their lives are made by qualified and ethically accountable professionals. Volunteering is also a great opportunity for members to grow their professional network and connect with other leaders in the field.

There are [several ways to get involved](#)...here a few opportunities to consider

Serve as a mentor for an engineering student. If interested, send an email to education@nspe.org.

NSPE online community champion. Virtual opportunity to promote community and sharing of ideas through NSPE's online channels. If interested, send an email to membership@nspe.org.

Write an article for *PE* magazine. Share your expertise and insights on professional practice, education, ethics, leadership, licensure, public policy, DEI,

emerging technologies, and sustainability and resilience by serving as a guest writer for *PE* magazine. If interested, email pemagazine@nspe.org for submission guidelines.

Collaborate with staff to draft/supply input on federal legislation, regulations or public comments to federal Congressional staff and committees (Identify your area(s) of vocational expertise.) If interested, send an email to governmentrelations@nspe.org.

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