



The Facts on Gypstacks

As a crop nutrient company, Mosaic helps the world grow the food it needs. Through the fertilizer manufacturing process, the byproduct phosphogypsum (PG) is created. For every ton of phosphate, about five tons of PG are made. PG is stored in gypstacks, heavily regulated structures requiring government permits. But what does that look like—and are there other options?

Stacks at a Glance

Why is PG stacked?

PG reflects the ore from which phosphate fertilizer is made and contains low levels of Naturally Occurring Radioactive Materials, or NORM. In the 1980s, based on conservative assumptions, the Environmental Protection Agency (EPA) required that PG be stored in stacks. This applies to stacks in Florida, even though Florida's NORM values are among the lowest in the country.

Are PG stacking regulations comprehensive?

Yes. Stacking is heavily regulated, and standards address the design, construction, operation, monitoring, closure

and long-term care. Beyond that, stacks are subject to a host of other requirements under the Clean Air Act and Clean Water Act, along with extensive land use requirements. These activities are managed by a team of environmental and engineering specialists and include frequent inspections both by regulators and Mosaic. Permitting a new stack can take years.

How do our operations use and monitor water?

Water is used to transport PG to the stacks where it is stored in ponds and later reused. Almost 95% of this water is recycled. Water may be discharged through permitted outfalls after treatment and extensive testing. Gypstacks also have comprehensive groundwater monitoring systems and drainage systems to monitor conditions in and around stacks.

95% OF THE WATER
USED IN
GYPSTACKS
IS RECYCLED



By the Numbers

3 Active Mosaic gypstack systems in Florida

95% of water recycled by gypstacks for use in operations

50 Minimum number of years gypstacks are monitored following closure

9 Other states where non-Mosaic gypstacks can be found

1 Other state with active Mosaic gypstack system (Louisiana)

Inspections



TWICE DAILY
by technicians



WEEKLY
by shift supervisors



MONTHLY
by operating supervisors



ANNUALLY
by a third party



ROUTINELY
by environmental regulators, including the Florida Department of Environmental Protection (DEP)

Fact vs. Fiction

FACT

- ✓ **TRUE:** Gypstacks are monitored and reported on for at least 50 years following closure.
- ✓ **TRUE:** Only treated water that meets applicable permit conditions leaves a facility.
- ✓ **TRUE:** A network of monitoring wells of various depths and distances from the gypstack monitor groundwater.
- ✓ **TRUE:** Countries around the world have found more than 55 uses for PG instead of stacking it.
- ✓ **TRUE:** With the science we have available today, we can continue finding uses for PG so gypstacks can become smaller and reduce the environmental footprint they create.

FICTION

- ✗ **FALSE:** Closure is an easy process that doesn't require follow up.
- ✗ **FALSE:** Once used, process water is immediately discharged.
- ✗ **FALSE:** We can only store PG because it's unsafe.
- ✗ **FALSE:** There are no safe alternatives to stacking.

Learn more at mosaicfloridaphosphate.com



For more information, contact Stakeholder and Media Manager Jackie Barron at jackie.barron@mosaicco.com.
mosaicfloridaphosphate.com

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