## BENEFICIALLY USING PG



## GOOD FOR THE ENVIRONMENT. SUPPORTING A STRONG ECONOMY.

#### WHAT IS PG?



Phosphogypsum, also known as PG, is a byproduct created during the phosphate manufacturing process.



Phosphate is an essential nutrient that promotes healthy plant growth and has no synthetic substitute. Phosphate nourishes crops, and in turn, nourishes us.



In the U.S., PG has been limited to certain agricultural applications and scientific research, but many advanced economies use it for much more.

#### **INNOVATIVE USE**

America's phosphate producers are developing sustainable and innovative methods to use PG, a byproduct of the manufacturing process. The goal? Zero waste.



55 different beneficial uses for PG have been discovered - so far.



Innovative uses include road construction, reforestation and rare earth element extraction.

Globally, 35 million tons of PG is used each year.



Over 20 countries already use PG. including Canada and Japan.



PG can be substituted for finite natural resources.



Recycling PG means less waste and smaller gypstacks.



More land for conservation and wildlife habitats.



28 Million 1.7 Billion

Tons Stacked in the U.S.



ton of Phosphate

**New Tons Produced** Each Year in the U.S.













## LET'S STOP STACKING PG -AND START RECYCLING IT

### PHOSPHATE INNOVATION INITIATIVE

#### WHAT ARE GYPSTACKS?



Heavily regulated and federally required for PG storage.



Thirty-year-old EPA requirement due to NORM present in phosphate rock.



Designed to collect and retain rainfall and "process water" for recycling in phosphate manufacturing.



Extensive monitoring by engineers to verify structural integrity.



Daily inspections ensure compliance with strict local, state and federal engineering standards.



Innovative uses for PG that may reduce future reliance on gypstacks.

#### "NORM"

Phosphate ore contains low-levels of Naturally Occurring Radioactive Materials, commonly referred to as "NORM".

#### Common, everyday items contain NORM, too.



Granite countertops



Ceramic dinnerware



**Bananas** 

NORM is found in soil across the county, and Florida's soil is considered to have lower amounts of it than many other states. Process water and PG are part of making phosphate and contain these elements, too. NORM in PG is considered low, even for those working near or with it daily. PG has been extensively reviewed by the EPA, which has determined that exposure to NORM is well below their risk threshold.

#### **RECYCLE**



Recycling paper and plastic keeps it out of landfills. When PG is recycled, we keep it out of gypstacks, and give it a useful life.



Recycling PG reduces the need to extract more raw materials and preserves the environment.



PG is a durable, multipurpose material that is being used in over 20 countries around the world – in fact, multiple countries are using 100 percent of their PG.

# LESS WASTE. CIRCULAR ECONOMY. SUSTAINABLE FUTURE.



When we put PG to innovative use, we secure the future of an essential American industry and ensure our domestic phosphate producers stay competitive with global producers who do not face the same strict regulations.

## FLORIDA'S PHOSPHATE ECONOMY

13,000 jobs.

\$5.03 Billion

60% of North America's phosphate supply.

