## SUSTAINABLE BIOFUELS FROM LEGACY MINING SITES:

# **Cleaner Soil, Water, and Fuels**

#### FIELD OPERATIONS: ASSESSMENT ..... & SCALE-UP

Perform techno-economic analysis and life cycle assessment to determine **economic viability and sustainability**. Conduct field trials of selected biomass and algal species **at scale on-site**.

### NREL RESEARCH

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**GREENHOUSE/LAB** 

algae to demonstrate

New Mexico State University and

Santa Fe Community College conduct studies on plants and

phytoremediation potential.

**STUDIES** 

Scientists analyze data to determine potential for biofuel production volumes and phytoremediation efficacy.



BIOFUEL PRODUCTION

Harvest seed and algal oils and convert to biofuels.

NREL, New Mexico State University, and Santa Fe Community College scientists will apply the principles of phytoremediation and investigate growth of arid-climate plants and algae in the greenhouse and lab using soil and water from a legacy uranium mining site. Small samples of biofuels will be produced to demonstrate overall feasibility. Scientists will scale up the operation and grow plants and algae on site in New Mexico. Plant and algal biomass will be harvested to confirm potential for simultaneous phytoremediation and biofuel production and to provide data for techno-economic analysis and life cycle assessment.



#### nrel.gov/bioenergy