DeepRiver
TerraForma LLC

The Innovative Solution

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Unique Problems, Innovative Solutions

Deep River TerraForma combines the expertise of leading industry service providers to create innovative solutions. Our collective patented process methods provide innovative recycling solutions to satisfy the unique requirements of the unconventional shale development trends and mid-continent legacy producing areas.

We Have The Right Tools For The Right Job

Deep River TerraForma LLC is the successful integration of industry leaders and quality service providers operating under a combination of license, joint venture and contracted relationships.

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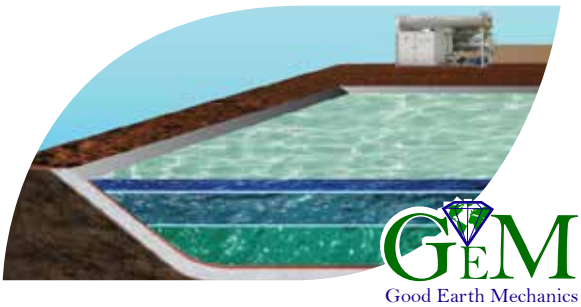
Inside Our Tool Box

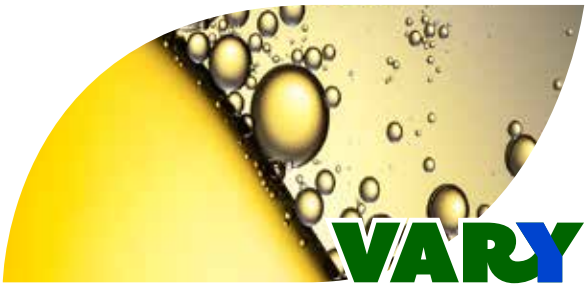
Inland Environmental

We will utilize Inland Environmental's patented methods for recycling of E&P drilling solid waste streams into road base. Inland is the leader in solid recycling and the first to get a recycling permit for road base in the state of Texas.



GEM

GEM, Good Earth Mechanics are global leading experts in Salinity Gradient Solar Pond (SGSP) systems.



VARY

Our environmental experts in oil/fluid clarification separation system using high shear flocculation with proprietary polymers.

VORTEX GMC

Leaders in high speed vortex micro grinding system to assist with mix design of high grade recycled solids.

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Inside Our Tool Box

Robert Ober & Associates LLC

Our specialty design-build partner delivering full-service EPC (engineering, procurement, construction) solutions including engineering, construction, project management, maintenance, development consultation, specification development, contract development and long-range development.

MI SWACO

Leading expert in solids control, from shale shakers to centrifuges.

Aggreko

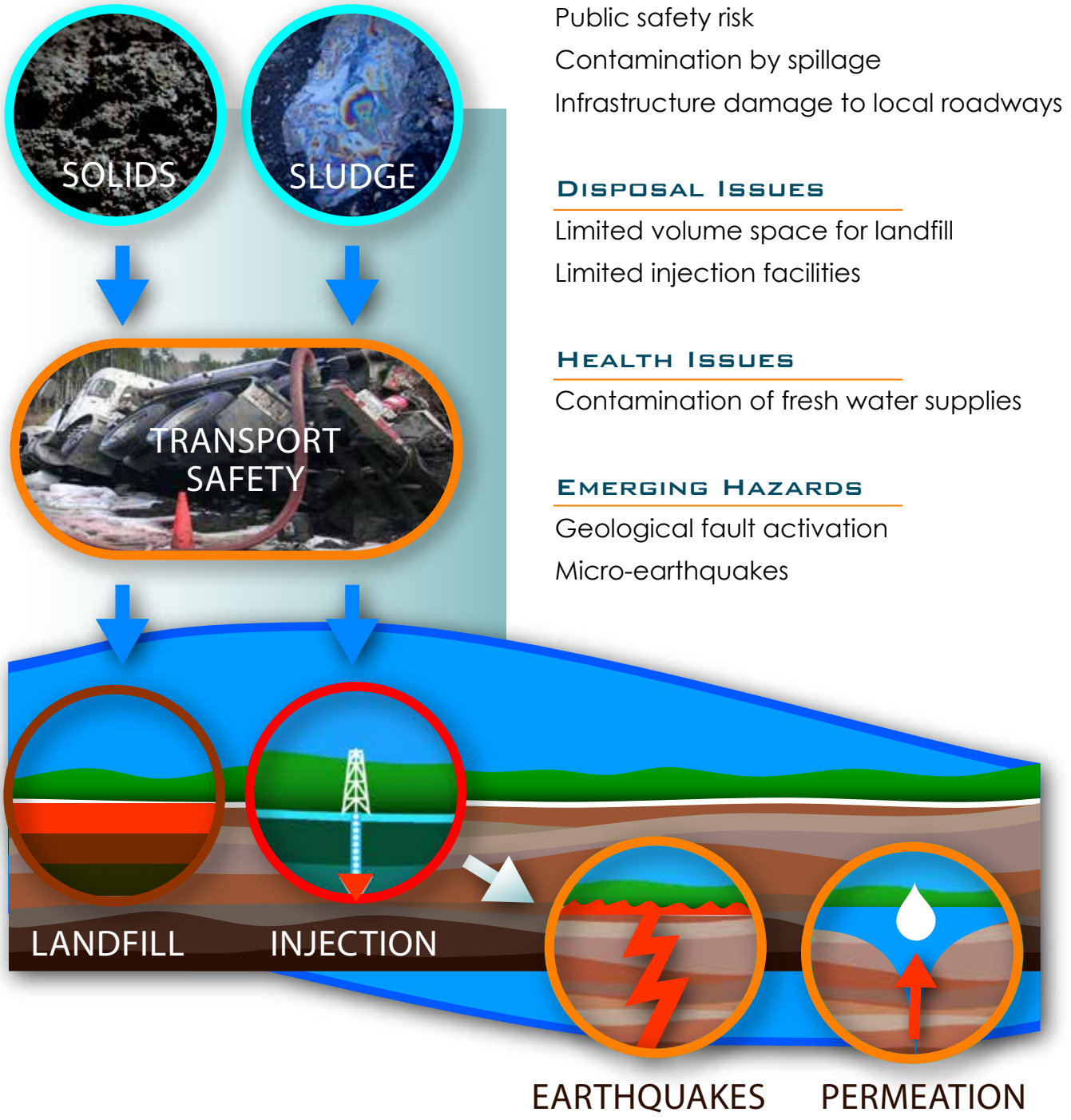
Our industrial partner to generate dependable power from natural gas.

Canal

Canal offers advanced filtration and separation solutions. Their fluid/solids separation system represents a breakthrough technology in the separation of sub-micron impurities and particles from liquid streams. It is the only continuously operating, self-cleaning filtration and separation system in the world.

We Understand Your Challenges

E&P solid and liquid waste streams have traditionally been disposed by using subsurface injection methods and landfill, creating potential liabilities due to the following factors:



Truck Transport

Public safety risk

Contamination by spillage

Infrastructure damage to local roadways

Disposal Issues

Limited volume space for landfill

Limited injection facilities

Health Issues

Contamination of fresh water supplies

Emerging Hazards

Geological fault activation

Micro-earthquakes

The Problem

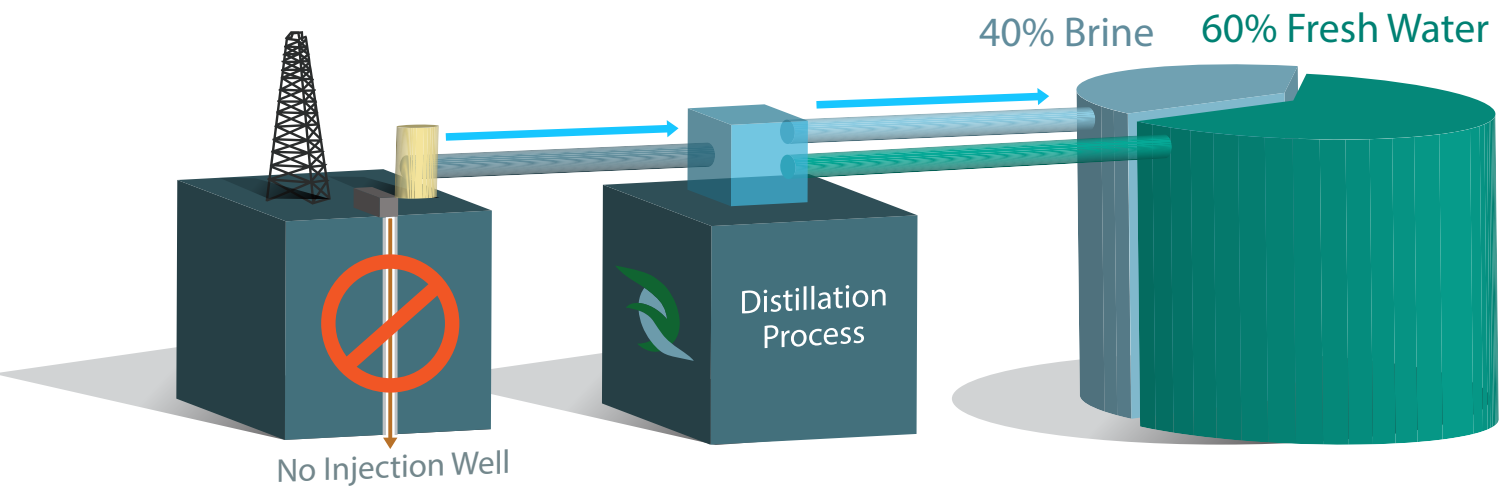
How to reduce your waste streams and the inherent liabilities of these solids and liquids traditionally transported to remote waste disposal sites.

Our Innovative Solution:

RECYCLE - RETASK - REUSE

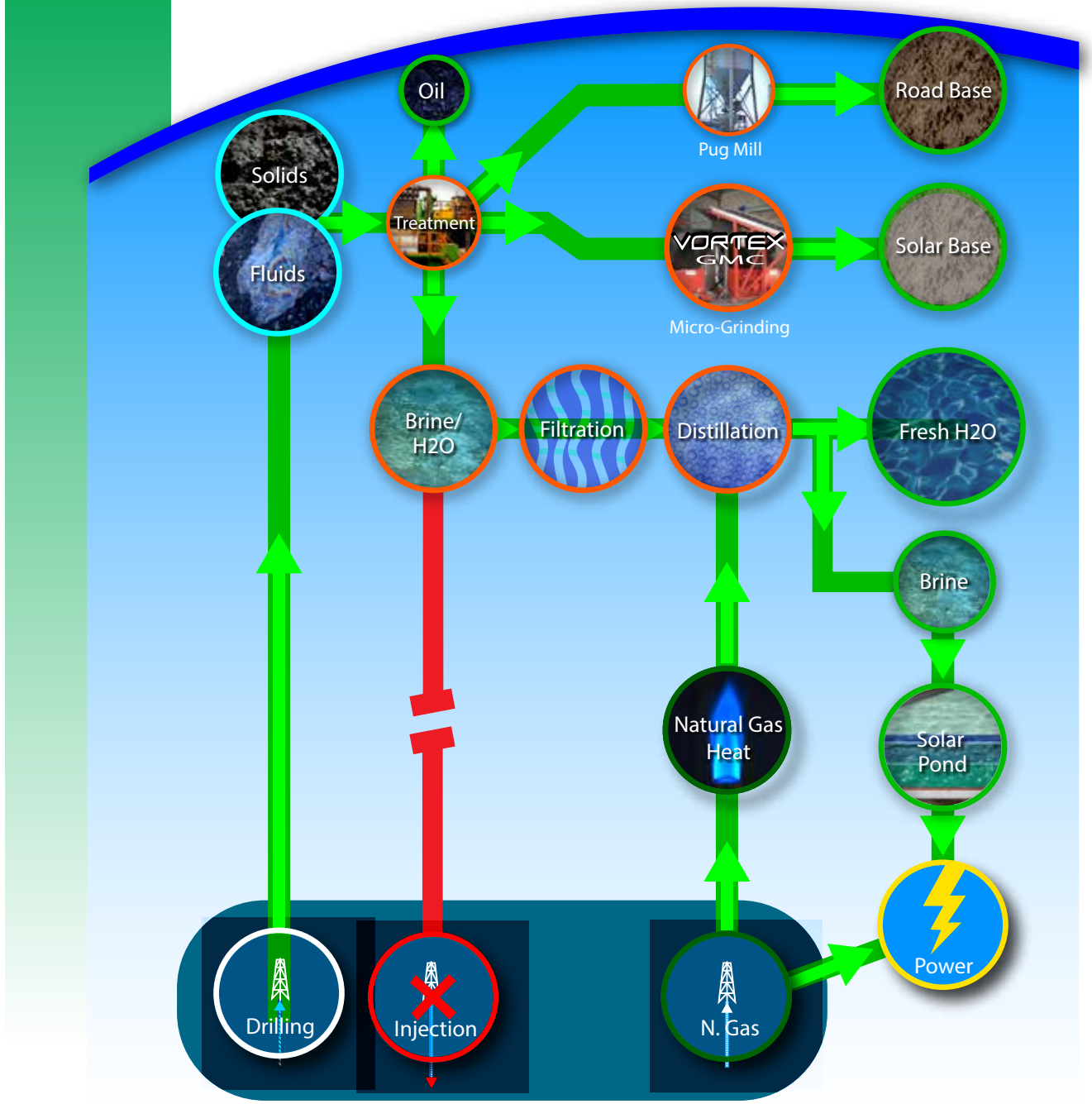
We recycle the waste streams generated from drilling operations, re-task them for local use, and thereby dramatically reduce or eliminate the transportation of waste to disposal locations. By using regionally-produced natural gas, we eliminate the need for power transmission lines, fresh water supply wells and salt water injection wells. By integrating solar pond power generation technology into our product mix, building the ponds with components manufactured from solid and liquid waste streams, we transform oilfield waste into clean, renewable energy.

Short-Term Solution

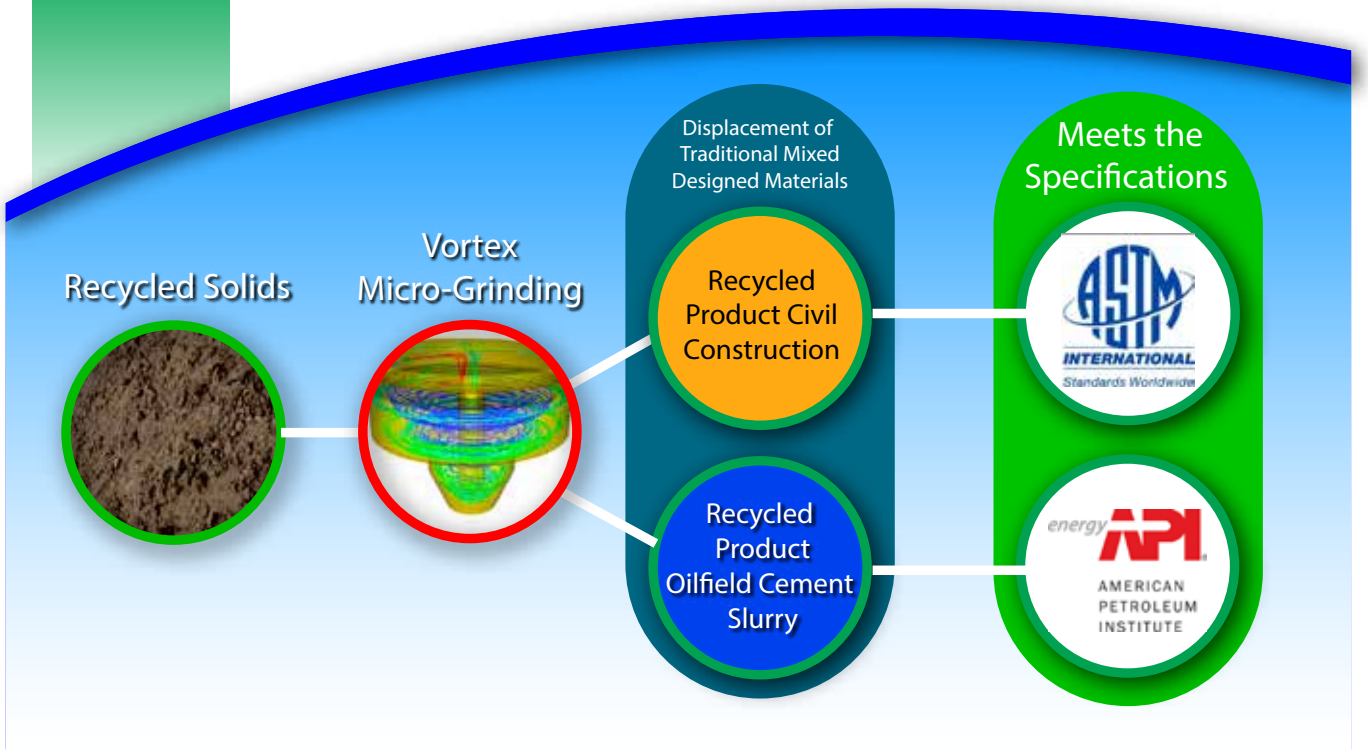


Base System

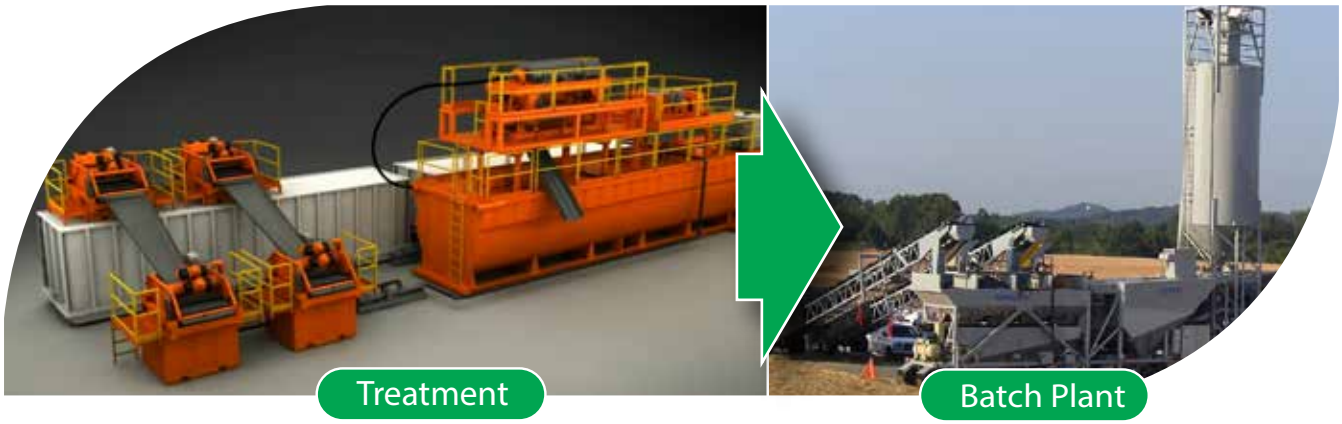

Treatment
Batch Plant


Oil
Solids
Fluids
Treatment
Pug Mill
Road Base
VORTEX GMC
Micro-Grinding
Solar Base
Brine/ H2O
Filtration
Distillation
Fresh H2O
Brine
Natural Gas Heat
Solar Pond
Power
Drilling
Injection
N. Gas

Super System



Satellite System



Safe, Environmentally-Friendly, Cost-Effective

Deep River TerraForma facilities are self-sufficient, with minimal impact on the local ecological environment, thanks to our environmentally sound and cost effective recycling process methods, enhancing the public safety and the integrity of your operation.

Our Process Methods

Recycle Solid Waste Streams Into EPA Approved Base Materials

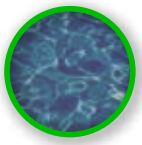
Drilling waste stream solids (micro-fines derived from OBM) are recycled into base materials by cement encapsulation and can be reused for construction.

Recycle Liquid Waste Streams

Processing liquids into reusable products dramatically reduces or eliminates the need to transport waste to disposal sites.

No need for salt water disposal wells

Required steps of Filtration & Distillation/Vapor Recompression



Inherent Values

Bulk fresh water

- Use for E&P completion/stimulation operations or retasked for agricultural or municipal consumption

Optimized saturated brine

- Use for solar pond power generation

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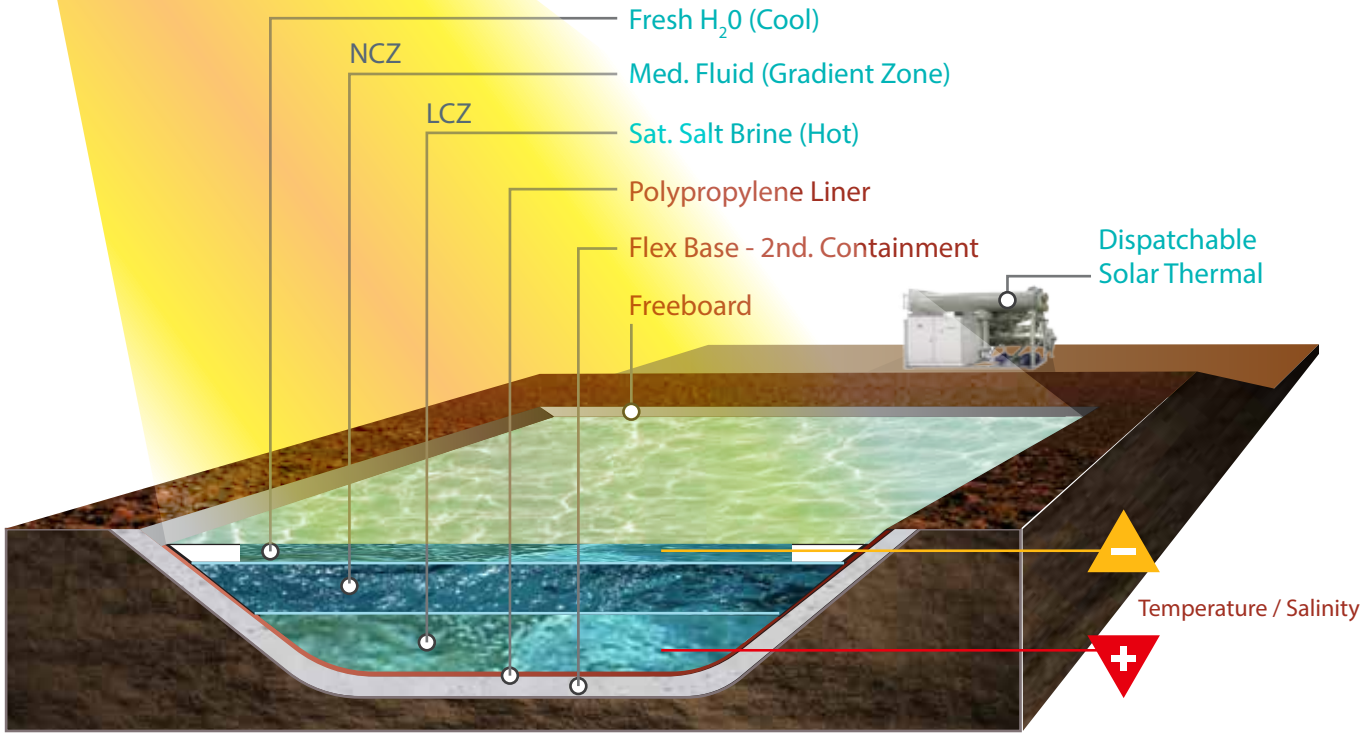
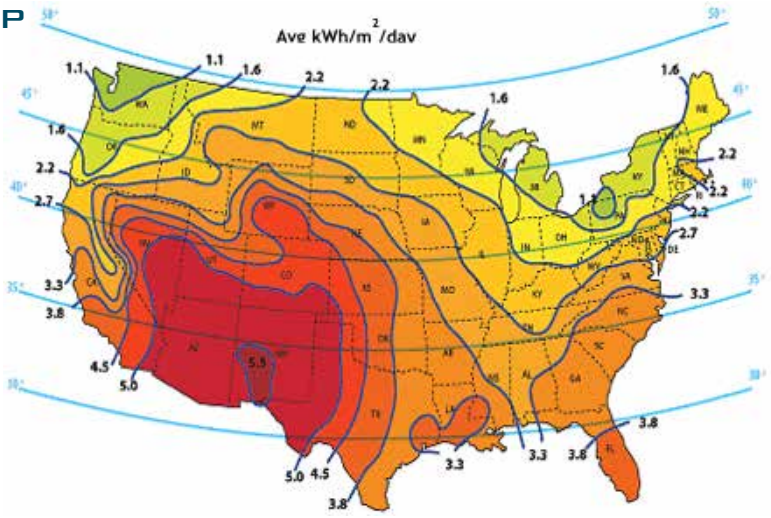
Solar Pond System

- No need for injection of waste water
- Shelf technology for fast deployment



Scale Slope Model

US. Solar Gradiant Map



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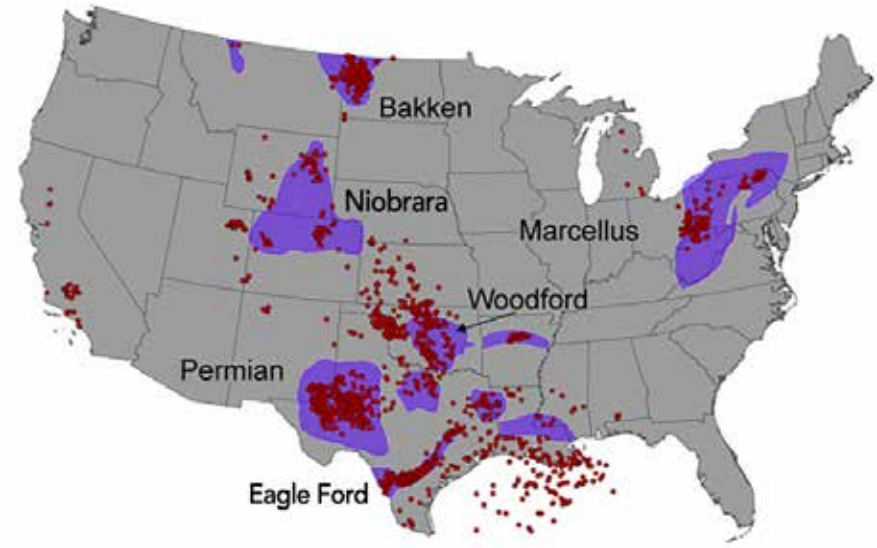
We are Close To Your Service Area

The current proposed configuration of our recycling facilities will be locally sited/centrally located with road access to allow gathering of waste streams, processing and distribution.



Domestic Unconventional Trends

Our Products

- Well-proven recycled materials
- Reclaimed oil/diesel
- Fresh water
- Optimized saturated brine
- Closed loop wash facilities for transportation decontamination

The Right Match

Deep River TerraForma has the right integrated tools with the solutions to help you reach your environmental goals in a cost-effective manner.