StableSoils™

The Poly Grout Professionals

HEAL THE EARTH™

NO EXCAVATION

HERCU-LIFT
EARTH LIFTING TECHNOLOGY

Long Lasting Soil Solutions for a Stable Future

WHY STABLE SOILS?

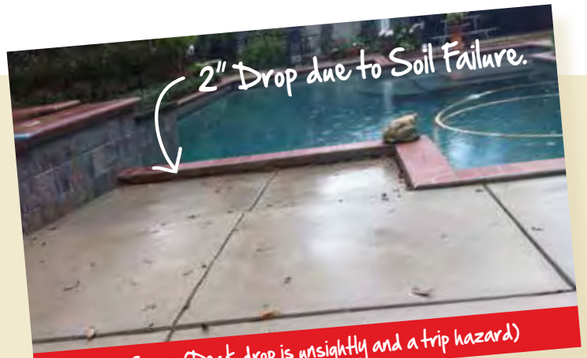
Stable Soils of Florida, Inc. is a wholly-owned subsidiary company of Foundation Services of Central Florida. We were founded in 2009 and are one of the top polyurethane applicators in the state. We work exclusively with Foundation Services for residential repair but we are also known throughout the industry for our highly technical, commercial applications.

OUR STAFF AND CREWS:

Since inception, we have retained every employee! Our crews are highly trained and are sent to our manufacturing plant for factory training and refresher courses twice each year. Unlike other companies that have high employee turnover rates, you can be assured that each and every crew member is thoroughly trained to handle your repair.

Each of our crew members are background checked and randomly drug-tested to ensure honesty and integrity in all aspects of their work. We have known and trust each of our crew members to act professionally and cordially to our clients at all times. We demand that they report to work each day displaying proper clean hygiene, properly uniformed, and ready for work. We respectfully demand performance and they respond.

Safety is a huge issue and we require quarterly safety meetings to review safety and handling procedures of products as well as structural safety and respect for your home. We have never had an accident.



Before (Deck drop is unsightly and a trip hazard)

After (Just like new with no excavation!)

WE ARE INNOVATORS:

Stable Soils works with outside Engineering firms to test and demonstrate newly designed chemical blends in a constant desire to find better and stronger products. We also test and monitor different dispensing methods to achieve better results. Proper placement of these chemical grouts is paramount to the success and longevity of the products.

We also have the ONLY remote product stroke-counter. This was designed and engineered by us here at **Stable Soils** and is utilized in every job. This flow meter is magnetically inducted to count the precise stroke of the pump piston, insuring exact measurements of chemical are introduced at each point. Other companies monitor inside the truck or at the pump, and must radio or yell to the gun operator to stop.

Stable Soils helped design and implement the first-ever spring-loaded, button-head quick connect dispensing system that eliminates spills or over-spraying of material. It makes each application efficient and clean.

Stable Soils offers a wide array of products and services to lift concrete and stabilize soil.

Case Study

FLORIDA LOTTERY:

WATERPROOFING THE MAIN OFFICE

Stable Soils

The Poly Grout Professionals

Waterproofing should not be a gamble

Imagine what would happen if the Florida Lottery failed to pull the daily numbers! Obviously, the ticket buying public would be outraged and the future of the Lottery would be in jeopardy! That's exactly why they chose Stable Soils Worldwide to perform the very delicate task of waterproofing their below-grade floors at their headquarters in Tallahassee, Florida.

Definitely not a job for novices!

This building, constructed 27 years ago, is approximately 200'x250' comprising 5 stories. The building site is set in a hilly part of town with 2 floors (including the live broadcast studio) below grade. The building is tilt-wall constructed, concrete panels experiencing severe panel joint failures...both horizontal and vertical, allowing water intrusion nearly everywhere. And to top it all, it is set in very wet, clayey sand...a VERY difficult repair situation to begin with. Now couple these factors with the amount of utilities, fiber optic runs and cables that have been added since the original construction and people coming and going from 6:00 a.m. to 1:00 a.m. Remember that they have multiple drawings daily with the last live broadcast at 11:00 p.m. each day!

How we did it...

Working with MJD Construction, Stuart, FL and Mathers Engineering, Stuart, FL, we devised a plan to curtain grout the entire below grade floors using our specialty chemical grouts. Our first challenge was the west wall that contains the ever-critical live drawing studio and it's required utilities! Due to the excessive moisture and because the parking area sloped toward the building creating massive rainfall amounts to flow against the building, very special hydrophilic grouts were used. Because the footer was located at a depth of 32' below grade, we water-jetted our injection rods every 18" along this wall and pumped the hydrophilic resin while extracting the rods, working off of man lifts...pumping the grout mixture up to the lifts and then down through the injection rods! All while monitoring and recording product flow and pressures to present to engineering!

We then completed the rest of the building using a hydrophobic resin placed strategically and surgically at all horizontal and vertical joints, laying a "bead" of grout directly on the joints!

Thousands of gallons of Chemical Grout...several miles of injection rods...and hundreds of man-hours! Complete success!

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LEARN MORE AT:
www.StableSoils.com

NO EXCAVATION

There are people out there that claim they can perform, but when you want the BEST, give us a call! NASA, Sikorsky Helicopter, U.S. Department of Energy (to name a few of many) know who to call when repairs are critical! Visit us on the web at StableSoils.com!

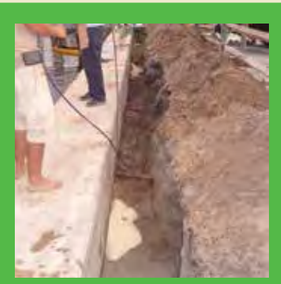
Quick, easy, non-disruptive and ready to use in a couple of hours... not days!

Case Study

UF Health Shands Hospital: Gainesville, FL

UFHealth UNIVERSITY OF FLORIDA HEALTH

The University of Florida knew who to call during a risky excavation project! Due to extreme topographical variances located between a busy street and the bottom floor of an adjacent parking garage, the need for a retaining wall was evident. Because the excavation would extend 13' below the active roadbed, there was fear of collapse and the thought of having to close the main street in front of one of the biggest hospitals in the State (Shands) was not an option. Stable Soils dispatched an emergency crew to "curtain grout" the soils at a 9 degree angle by drilling through the sidewalk and inserting injection rods to a depth of 15' and product introduced while extracting the rods. PERFECT SUCCESS as this injected area held as promised, even through several weeks of torrential August rain events!



Case Study

Seawall Repair: Lake Park Harbour Marina

LAKE PARK HARBOR MARINA

Stable Soils was chosen through a public bid to perform 4 different (engineered) seawall repair methods for the City of Lake Park, FL Marina in an effort to help them determine the best repair method to eliminate soil loss/settlement that was occurring. Nearly every panel joint had failed and soil loss was evident both behind the wall on the landward side as well as videoed inspection by Stable Soils divers at the bottom of the seaward side panels.

Needless to say, chemical injection that was surgically placed directly down the panel joints on the landward side was a complete success! This process took the least amount of time and was least disruptive to the surrounding area.

For a complete detailed report on this project, visit our web site or see it for yourself on YouTube.com!

CRACK INJECTION & LEAK SEAL

Stable Soils
The Poly Grout Professionals

Stable Soils performs unique, permanent repairs to cracking concrete in any slab (horizontal or vertical) in parking garages, seawalls, water/sewer storage tanks, pre-cast support columns...*You name it, we can seal it!*

WHY IS IT SO IMPORTANT TO SEAL CONCRETE CRACKS?

All concrete structures contain steel reinforcement. Without a proper maintenance plan to keep moisture out of your slab, this steel will begin to corrode and rust. Once this process begins, the concrete will start showing signs of spalling, chipping, and additional cracking. Typically this will occur on a grid pattern that matches the steel reinforcing pattern within the slab. Even trace moisture found in these cracks can freeze/swell, pressuring the area to induce yet more cracking.

Vertical water/sewage holding tanks are highly susceptible to cracking, even more so than horizontal structures due to the varying levels of weight and pressure produced by different filling/draining levels. Traditionally, these cracks have been addressed by wire brushing the affected areas to remove debris and patching with a 2-part epoxy. Typically, this patch is made on the negative pressure side of the leak. These repairs rarely last long, and do not create a fail-safe barrier to lock out moisture.

Our method of repair insures a thorough, complete seal from front-to-back of the slab. We drill the cracks every 12", on both sides (stitch) of the crack and actually intersect the crack in the center of the slab thickness. These holes are then flushed with high-pressure water jetting. Injection ports are then installed within these holes and sealant is injected under very high pressure (up to 3000 psi) to create an incredible, waterproof concrete bond that will seal the steel reinforcement to eliminate any further corrosion. There really is no comparison to our repair!

EXAMPLES OF CRACK SEALING

HALF SCIENCE, HALF ART!
WE DO IT RIGHT, WE DO IT FOR GOOD!

Sikorsky
A United Technologies Company

Case Study — Crack Seal: Sikorsky Helicopter Manufacturing Facility

Great stewardship toward our environment is prevalent when working with larger companies, and Sikorsky Helicopter is no exception.

Due to their location in the northwest corner of Palm Beach County, FL, the area is adjacent to a fragile marsh/swamp ecosystem. All of the run-off from their operations is first processed by a fuel/water separator to remove fuel and contaminants prior to releasing the water back into the marsh.

Upon inspection of the in-ground tanks, several large cracks were noticed as these cracks were allowing infiltration of the surrounding ground water. Sikorsky management was quick to remedy the situation by contacting Stable Soils to perform a 3-phase repair plan to insure the tanks were properly sealed.

Step 1: Working in conjunction with Building Science of Jupiter, FL, we quickly installed a "curtain" of Prime Resins #920 by drilling the vertical walls on a grid pattern to inject through the walls to penetrate and waterproof the soils.

Step 2: We drilled and injected Prime Resins #900XLV into all visible cracks in the floor slabs. These injections were made directly into the cracks after installing ports every 12-14". Several larger cracks involved treated, oil- free oakum placement prior to injection.

Step 3: The final process was accomplished by drilling the entire floor slab of the tanks in a grid pattern and pumping #920 directly underneath the slab, "walking" the product from port to port to insure proper seal.

Because this project was critical to the production schedule of the new CH53K Heavy Lift helicopter being developed for the U.S. Marines, scheduling, implementation and execution of the project was paramount.

The entire task took 8 days from start to finish, allowing Sikorsky's instant use of the facility. Had they elected to rip-out and replace the tanks, 60-90 days would have been needed and costs would have been 4-5 times the cost of repair.

Stable Soils: We LOVE the technical tasks!

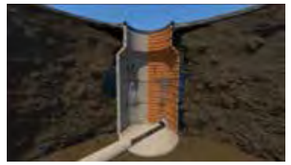
PUBLIC INFRASTRUCTURE

The first Chemical Grout applied to leaking infrastructures occurred in 1955. Since then, it has been used to stop leaks in manholes, tunnels, sewers, lift stations, wet wells, and many other applications all over the world. Recent studies have shown that some of the first repairs completed are still intact and still providing leak protection after 50+ years of service.

NASSCO (National Association of Sewer Service Companies) studies have shown that trenchless Chemical Grouting is still the best, most cost-effective, long-term defense against groundwater infiltration into structurally sound sewer systems. Infiltration occurs when defects in below-grade structures like sanitary sewer lines, manholes, pump stations, catch basins or storm drains allow groundwater to enter the system. This infiltration multiplies treatment costs, increases the flows in sanitary sewer systems, and causes sewer system overflows (SSO's). Groundwater also carries silt, sand and other debris into the system, increasing the wear-and-tear on equipment and accelerating the need for cleaning and de-silting. Voids are often created around these structures and can lead to settlement, unstable foundations, and roadbed failures.

Leaks in manholes are typically repaired by applying quick-set cement over the active leak while a lining system is installed. This repair is easily damaged due to failure of such patches, allowing groundwater to remain in the primary structure and cause weak bonds or future failure of the lining system.

Our process of sealing begins with injecting a 2-part polyurethane under high pressure to the outside of the structure to penetrate the voids and leaks from the outside, in. This allows for little or no chance of failure as this product will last indefinitely unless exposed to direct sunlight for long periods. And best of all, the back-pressure of the leak acts to pull the chemical grout into the structure. This product flows as a liquid to find all leaks and cracks and permanently seals them as it expands 20+ times its volume as a liquid. This not only stops the leaking and seals the structure, it compacts the weak soils and fills voids found outside the structure to help support surface soils and road beds, and it will not over-burden the surrounding soils.



OUR PRECISION PROCESS OFFERS 50+ YEARS OF LEAK PROTECTION!

Images courtesy of Prime Resins

Case Study

Manhole Water Intrusion: New Port Richey, FL

This manhole, located in New Port Richey, FL, was almost at the point of no repair. Groundwater and storm water had begun intruding into the outdated pipe, causing erosion which permitted cracks to become larger and nearly irreparable. To repair this problem, we first located incoming lines and injection rods were installed around the perimeter of the structure. Next, we injected our 1-part polyurethane under a controlled pressure to provide proper expansion of the product and insure a complete seal was completed without putting unnecessary pressure on the structure itself. The polyurethane traveled completely around the structure and found all fissures, cracks, and voids, creating a seal from the outside of the structure. Unlike interior liner systems that eventually leak due to their inability to seal the structure itself, our product seals from the outermost, positive pressure side. ***This leaves NO CHANCE for future failure or leakage!***

SEE IT FOR YOURSELF YouTube

SEARCH: "StableSoils" on youtube.com
for a 3 minute infrastructure repair video.

UTILITIES MAINTENANCE

Stable Soils
The Poly Grout Professionals

PIPE SEALING AND REPAIR: Stable Soils routinely seals and repairs storm water pipe runs, lift stations, wet wells, manholes and culverts!

If the appliance or pipe run is structurally sound, why go through the expense of lining the entire pipe when the leaks are occurring at the joints? Ground water infiltration and exfiltration can wreak havoc on your overall system with SSO's during extended rain/storm events, not to mention the introduction of fines and sands that eat up your pumps prematurely. How about the voided soils that are always found in the areas of leaks? Lining does not always address these issues! And besides, liners DO FAIL... it's just a matter of time and pressure! Because they are placed on the inside of the pipe or structure, they are on the negative pressure side. Slowly, the infiltrating water will delaminate the liner and eventually it will leak.

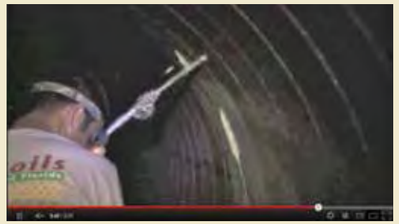
Our process allows for sealing the joints on the outside of the pipe or structure, on the positive pressure side. The active leak actually pulls our chemical components to the area when injected in very close proximity. As this material is drawn into the leak, it chemically reacts to expand, sealing the leak as well as filling the voided soils created by the leak. Wham-Bam...it takes care of ALL of the problems at once! And, because the half-life of this material is rated at 115 years, we will all be long gone before anyone has a leak recur in the same area.

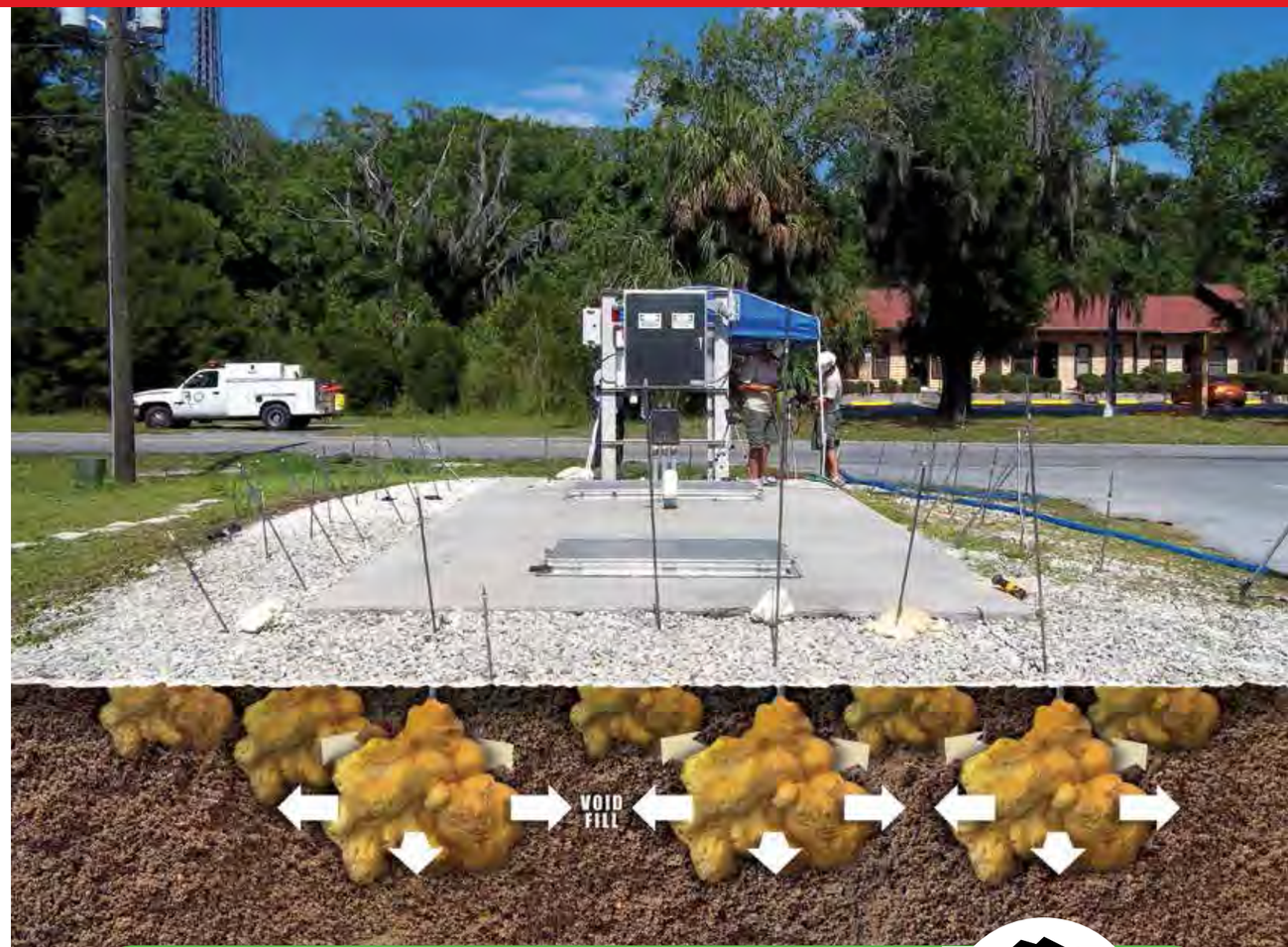
De-watering? Not a prerequisite for these products! We have many different sealing products, some hydrophilic, some hydrophobic. Each have their own unique performance properties and depending on the pipes condition, material being sealed (RCP/CMP, etc.), and the soil condition and soil type, we have a solution to your problem!

We make repair easy... as we make most repairs without shutting down any of your systems. ZERO EXCAVATION!

SEE IT FOR YOURSELF YouTube

SEARCH: "StableSoils" on youtube.com
for a 4 minute pipe repair video.





Case Study

NO EXCAVATION

Lift Station Lid Failure: Crystal River, FL

Due to exceptionally weak underlying soils and a water table that is approximately 4' below ground level, the City of Crystal River continued to have problems with this lift station. #57 stone was incorporated in the construction of this station and continued to settle, weakening the support for the lid. Stable Soils was called in and after injection of approximately 17 cubic yards of expanding polyurethane, the surrounding soils and stone were bonded to create a base capable of properly supporting the lid structure.

This task was performed in one day, without interruption of service, and with ZERO EXCAVATION!

ROAD STABILIZATION

Stable Soils
The Poly Grout Professionals

Most road settlement is often caused by leaking underground utilities.

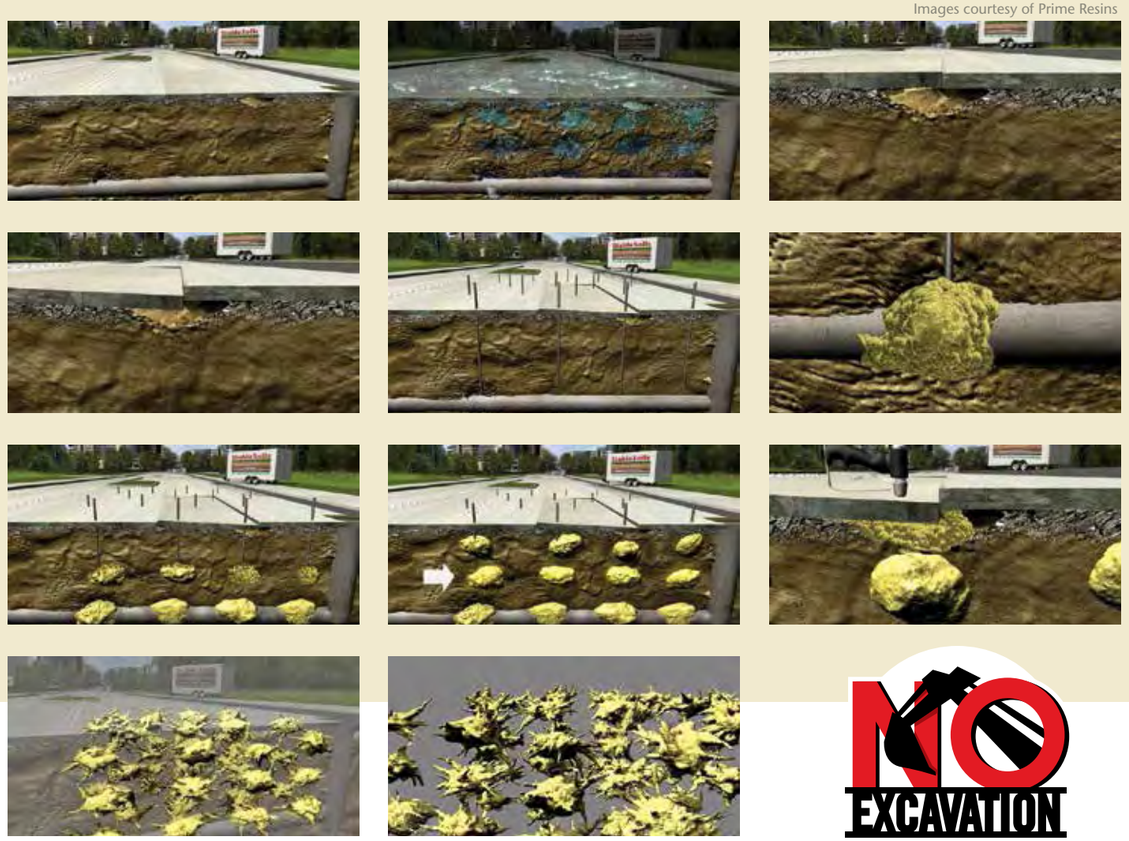
The eroded soils caused by these leaks create voids that will quickly reduce the load-bearing capacity of the soils and cause roadway failure. **Stable Soils** Polyurethane Injections can rapidly repair settlement, leaks and fill all voids in one easy step. And the best thing is, NO Excavation and very little or NO disruption to traffic. This process can greatly extend the life of your road surface.

With budget cuts weighing on every manager's mind these days, our Poly Injection repair process is a very viable option to save valuable infrastructures and budget dollars for use in other areas. When compared to rip-out-and-replace options, ours is incredibly less expensive. And because our material is guaranteed against defects for 10 years, you can be assured that when the job is completed it will remain worry-free for many years to come.

NO EXCAVATION

Quick, easy, non-disruptive and ready to use in a couple of hours... not days!

Images courtesy of Prime Resins



Even with the proper soil data and methodical preparation of road beds during original construction, nearly ALL roadways are susceptible to settlement, especially if constructed near bodies of water or areas with shallow water tables. Low areas (valleys) of roadway are always accumulating rainfall and creating soft soil zones. Proper drainage of this rain fall is vital to the continued strengths of the surrounding soils.

When roads begin to settle, many agencies simply close the road (or lanes) and excavate the problem areas and re-pave. This type of repair is typically a "quick fix" as many do not address the underlying cause for the settlement. If the settlement is caused by any condition other than a sinkhole related "fall-out", chemical grouting of the area is a very viable option.

Our 1-part, catalyzed polyurethane is injected to a pre-determined depth and the rods are extracted while pumping; creating support columns of chemically treated soils as well as fracture grouting of any voids. This treatment raises the N values of the soils and creates a bonded, waterproof mass that will now support 800-1200+ psi.

ZERO EXCAVATION: Only small disruptions to normal traffic flows... or it can even be installed at night when traffic is very minimal. Quick, Clean, Quiet!

NO EXCAVATION

SEAWALL REPAIR

Stable Soils
The Poly Grout Professionals

WEAK SOIL ZONES

Because seawalls are built above normal tidal or current levels, they should be supported by properly compacted soil. This will allow water pressures exerted during high tide to be equal to the solid contained soils. However; with the change in tide, more stress and pressure exist from the soils, water, and gravity on the landward side, as they try to equalize as the water levels drop.

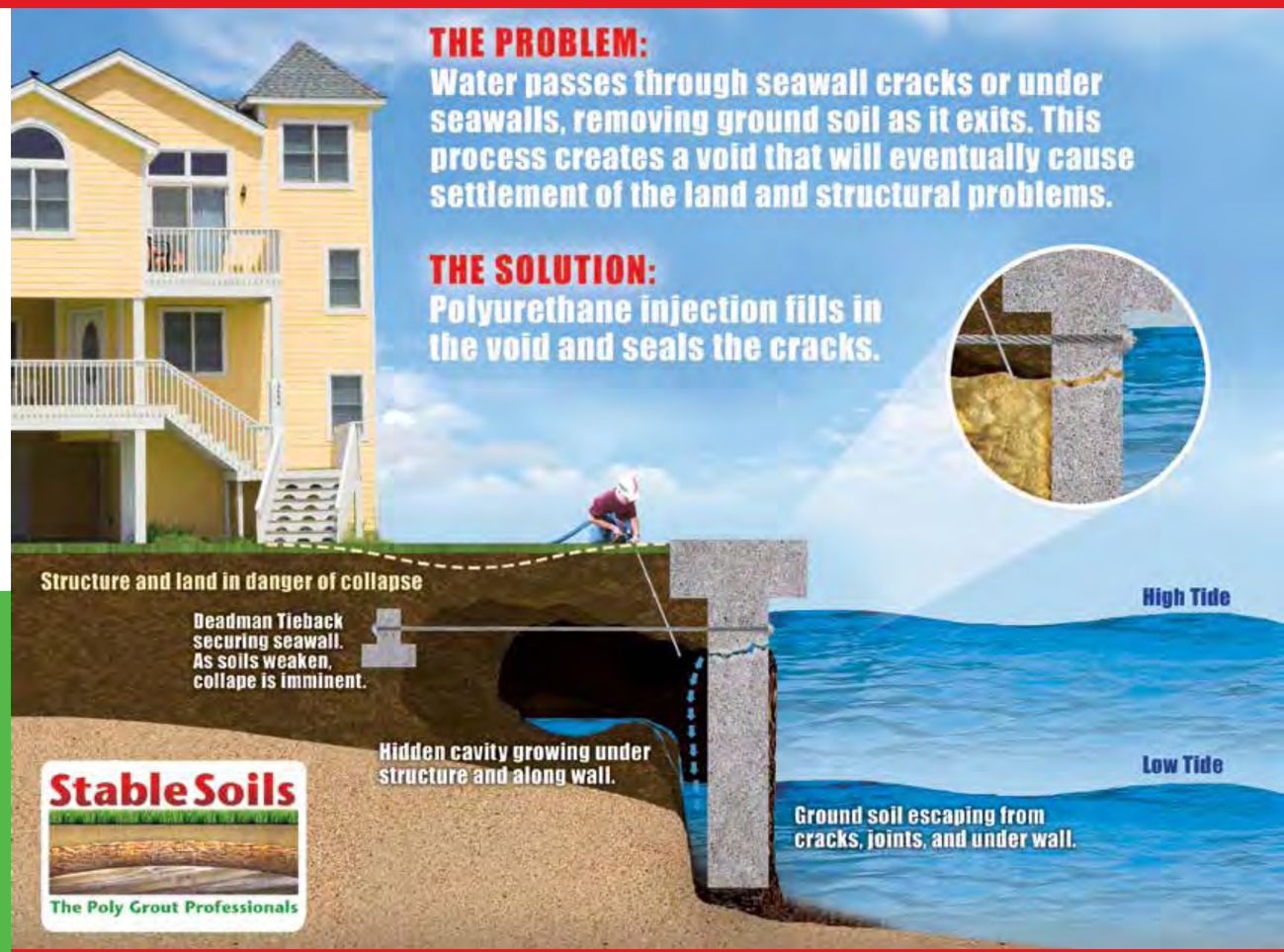
If left unattended, these weak soil zones will continue to expand, and over time, create the possibility of losing all of the soil above the lowest water level of the wall. To make matters worse, if buildings or structures are located close to the seawall and problems occur, you will eventually see stress fractures, then gradual settlement and the possibility of structural failure.

Typically, the soils that are supporting the structures are very weak due to their source. Most seawall neighborhoods are constructed on strips along excavated canals. When the canals were originally constructed, the spoil dirt from the canal was stacked to form the strips upon which your home or condominium is now located. Within these excavated soils you may find wood/ tree debris, aquatic animal remains, and anything else that was present during excavation. This matter is organic in nature and either has failed, or will eventually decay, leaving voids and weak zones.

Case Study

Porto Venezia: Seawall Renovation Ft. Lauderdale, FL

Built in 2008, Porto Venezia Condominiums is located on the water in Ft. Lauderdale, Florida. They were experiencing a potential case of poor settlement conditions on their structure. After the installation of crack monitors months prior to our work beginning, it was confirmed that the weak soil zones were in fact growing and migrating from the seawall towards the building, causing the building to become unstable. Stable Soils using small flexible stainless steel injection needles, inserted the first of two rows of rods directly down the seawall panel to a depth of 4 feet below the bottom of the panel. The rods were extracted during pumping all the way up to refusal at the surface. This process creates a solid, waterproof "curtain" to completely seal off the seawall from erosion continuing both through and underneath the wall. This project was completed for half the price of the replacement method and took a quarter of the time! After completion of the project, Engineers continued to monitor results, and because the seawall was sealed tight, soil moisture levels continued to reduce, and ZERO movement was shown on the crack monitors.
We do it right! We do it for good!



To properly repair a seawall and to eliminate soil loss, it must be sealed AND vented to help alleviate the extreme pressures that are present.

Our repair method involves a 2-part approach to accomplish both tasks!

STEP 1: Properly evaluate the drainage of the soils adjacent to the wall, landward to the structures. Can this water be evacuated by land-born drains? Can this water be pumped out or purged into the existing storm drainage? Are there currently drains of any type installed? If not, options need to be explored. Venting the contained water through the seawall is an option if the drain field is properly constructed utilizing vented piping and soil retaining cloth along with 1-way check-valves located at the wall. The trick is to let land born water into the canal but restrict canal water inflows.

STEP 2: Inject our 1-part, rigid polyurethane soil stabilization resin into and below the soils directly behind the current seawall panel to create a rock hard, water tight mass of impermeable soil. This low viscosity resin will bond and strengthen the soils to form a "curtain" of protection to totally eliminate voiding soils and to fortify and super-strengthen the wall. Unlike traditional concrete injection, our resins are very lightweight and excavate the water in the soils during injection. Trying to fortify your wall with traditional concrete will create several issues. Concrete shrinks during cure (days to cure) and is extremely heavy (3800+lbs. per cubic yard)! Introducing these weights on already weak soils will spell disaster as it will continue to settle for years! Chemically treating soils (cure time, 8-24hrs) is like making concrete out of the soils that are present without the weight! We insert very small, 1/8" stainless steel injection rods to the desired depth and begin pumping the resin under pressure while extracting the rods at 1-foot intervals. The resin penetrates and saturates the soils – bonding, solidifying and waterproofing in one step! And these products last for decades. In fact, this technology has shown excavated, treated areas are still providing seal 50+ years after installation. AND, all of these products are inert and harmless to our environment and sea life! Some products are even ANCI/NSF certified for use in potable water tanks!

INTERIOR SLAB LIFT

Stable Soils
The Poly Grout Professionals

There are occasions when home interior concrete slabs can settle. You may begin to notice cracking or drywall separation at the top or bottom of a wall panel, creating a gap. Sometimes, entire rooms will show signs of "bellying" whereas the slab bows without cracking and forms a low spot. We have seen this numerous times with elevation differences of 2-3 inches.

WHY DOES THIS HAPPEN?

Causes for settlement vary. The most common causes can include: organic fill material being used during original construction that has begun to decay, plumbing leaks, large grain soil consolidation, clay shrink/swell, underground water migrations, foundation settling and sinkholes.

Instead of jack-hammering the old flooring out (very messy) and building the slab back up to normal grade, we can enter your home or office and drill very small holes (1/2") and inject our heated, pressurized, 2-part structural polyurethane resin that chemically expands to precisely lift your slab back to perfect grade. Because of our product's controllability, we can lift slabs in stages, as little as 1/10 of an inch each time until it is perfect. This will close the gaps and cracks and create a new, very strong, support (100 psi) for your slab. These products carry a 10-year factory warranty against shrinkage or deformation. Quick, Clean, Quiet!

These are the identical products that we use every day to lift highway bridge approach slabs and commercial airport runways. If we can support a 400,000 pound airplane, imagine what we can do to support your home!

HALF SCIENCE, HALF ART! WE DO IT RIGHT, WE DO IT FOR GOOD!

Case Study

Slab Lift with Marble Floor

In May 2012, Stable Soils was chosen to complete a shallow void fill for a resident in Dunnellon, Florida.

***"As we neared completion of the project, the home owner asked me to take a look at a settled marble floor inside of his house and asked if we were able to fix the problem without removing and replacing the expensive flooring."*, said Crew Chief Colt Hullander.**

After team collaboration with multiple members of Stable Soils, we drilled through the side of the home to save their costly marble floor and injected our 2-part expanding polyurethane material to lift the slab back to level. This was the first time we completed a slab lift without drilling directly through the deviated slab. The work was completed with ZERO damage done to the flooring and with an extremely satisfied customer! We have no limits for repair work.

We are Innovators... We are Stable Soils!

Before (Slab drop causes separation at baseboard)

After (No drill holes in marble!)

Before (2" Drop)

After

EXTERIOR SLAB LIFT

Every concrete slab failure is due to erosion of the underlayment of a prepared base. Water flow (rain, drainage, etc.) will continue to wash away this base and amplify the failure. Stable Soils will drill a couple of ½" pilot holes and inspect for void areas.

We will then begin the introduction of a 2-part Polyurethane Foam, capable of penetrating voids as small as 1/32". As this foam reacts and begins to expand, you will witness lifting. Because we lift very slowly and with the aid of laser levels placed strategically on the slab being lifted, we accomplish a perfectly level grade (or back to original grade if sloped) every time. This process also seals any cracks that were present to eliminate further erosion.

After the slab is lifted to the desired, pre-determined position, all injection holes are filled with cement or chemical grout. The only evidence will be the grouted ½" holes. This is much more aesthetically pleasing than rip-out-and-replace slab methods that can be discolored compared to surrounding slabs.

Before (1" Speed bump)

After (Like new with no costly excavation)

Before (3" Drop)

After (Eliminates the risk of lawsuit)

Before (3" Drop)

After (Note the Deck of Cards)

Case Study

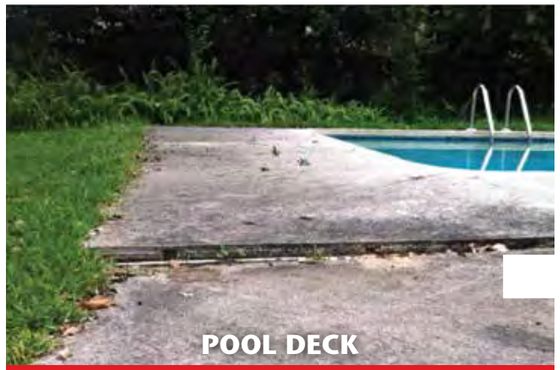
Tillman Pool Deck

In June 2012, Stable Soils received a phone call from a home owner whose pool deck had settled and had sunk up to 2" in a particular area. They had received quotes from rip out and replacement contractors which demanded high costs and a week of jackhammers, removal of material, placement of new material, and a lot of undesired foot traffic. Stable Soils completed this job in less than 4 hours, for 1/2 the cost, and with ZERO EXCAVATION required! *Quick, Clean, Quiet! We do it right! We do it for good!*

Before (Deck drop is unsightly and dangerous)

After (Just like new with no excavation!)

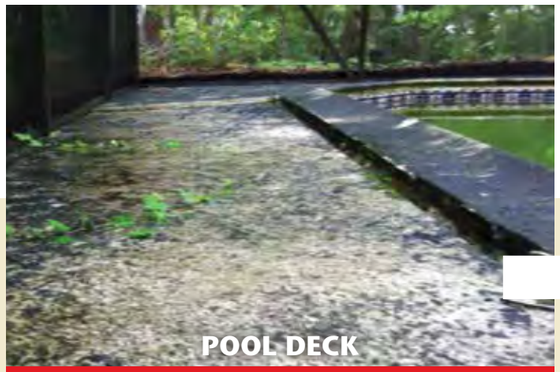
EXTERIOR SLAB LIFT (Cont.)



POOL DECK

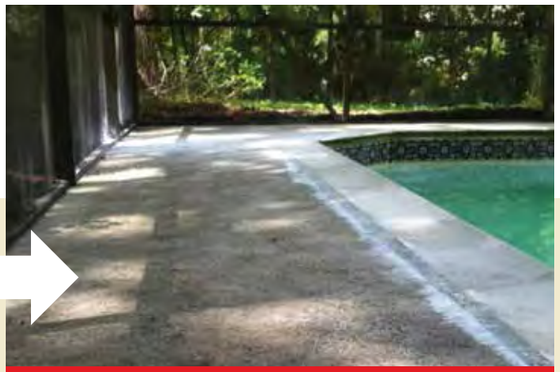
Before (2" Drop)

After (Trip hazard is gone)



POOL DECK

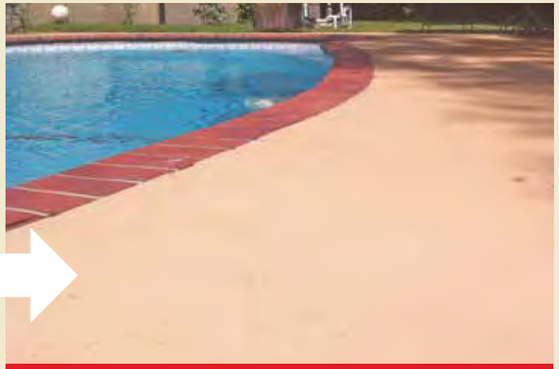
Before (3" Drop)



After (Material is non-toxic)

POOL DECK

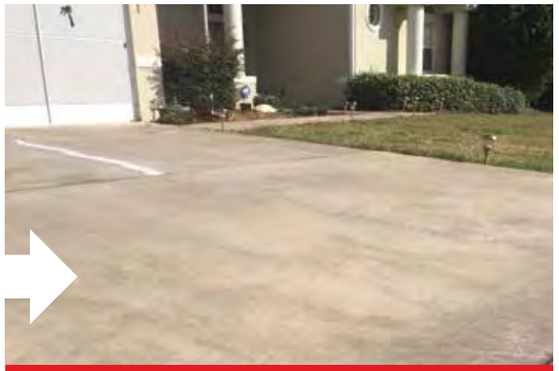
Before (1.5" Drop)



After (Like new with no costly excavation)

RESIDENTIAL DRIVEWAY

Before (1-2" Drop)



After (Like new with no costly excavation)

Case Study

Spa Lift and Soil Stabilization Fort Myers, FL

Due to poor compaction of the soils prior to construction and organic materials found within the fill dirt, this subdivision amenity spa located in Fort Myers, Florida was experiencing rapid settlement, already dropping 4.5" in elevation from its original construction! With a rip out and replacement cost of nearly $75,000, Stable Soils devised a plan that not only would save the HOA money, but the residents of the community the headache of jackhammers, cranes, and trucks. In conjunction with Aqua Kleer Pools and our parent company Foundation Services of Central Florida, we were able to salvage their community spa. Helical piers were placed on 6' centers around the entire circumference of the spa to hydraulically lift the spa to its desired elevation. The helical piers were placed in a soil zone specified by the engineer that had a load bearing capacity capable of supporting this 40,000 lb. structure. Once the spa was lifted to its desired elevation, small 3/8" holes were drilled in strategic locations through the floor of the spa where our 2-component polyurethane foam was introduced to add density to the shallow subgrade soils and to fill the void that had been created by the original settlement. The project was a success that not only saved the HOA close to $60,000 but only took 3 working days to complete!

Stable Soils, Healing the Earth since 2009.

Before (Spa dropped 4.5" from original elevation)

After (Just like new, and a savings of $60,000!)

SOIL STABILIZATION

Stable Soils
The Poly Grout Professionals

Stable Soils Polyurethane Foam Injection provides a ZERO EXCAVATION repair solution for nearly any concrete structure, slab, or subterranean infrastructure.

Injected under high pressure, this product lifts, seals and fills voids all in one easy step. Very small injection points (as small as 1/4") are drilled through the concrete and foam is then introduced to reach the desired lifting and sealing effect.

NO EXCAVATION

Lifting an underground manhole junction? Re-leveling a basketball court? Is your living room floor beginning to settle and separate? Seawall showing signs of stress? Concrete roadway beginning to get bumpy? Warehouse floor showing stress?

All of these problems, and a whole lot more, can be quickly repaired and brought back to original grade in hours... not days, and are ready for use immediately!

This process is EXTREMELY clean... no big pumps and nasty concrete slurry puddles. In fact, the small, filled injection holes are the only evidence seen.

Our injection points are so small we don't even remove carpet in most residential cases! And our products are guaranteed for 10 years against shrinkage and loss of strength.

Every concrete slab failure is due to erosion of the underlayment of a prepared base.

Case Study

Villages Hospital: Morse/Moffitt Cancer Addition

This hospital wing addition required approximately 9' deep excavation of existing soils for installation of support piles. Stable Soils injected our 1-part soil binder to hold back the foundation soils as undermining the existing structure was a strict concern. Binder was injected at a depth of 10' while extracting the rods on approximately 2' center. The bonded soil wall remained intact during the entire excavation. A few days after our portion of the work was completed, a heavy rain came through Central Florida causing major erosion all around the Moffitt Center. The location we injected our 1-part soil stabilizer was the only area that had ZERO erosion!

MOFFITT CANCER CENTER

WHAT IS SOIL BINDING/ SOIL STABILIZATION?

Stable Soils Soil Binder (or Soil Stabilization as some people refer to it) is a process of injecting a 1-part polymer based liquid to firm up and strengthen weak and/or shifting soils. This process is used to gain superior strength and eliminate erosion or to allow higher load bearing capacity.

Weak or eroding soils will eventually undermine a structure's foundation, or worse, allow it to breach and possibly break and separate.

Stable Soils Soil Binder is a 1-part polymer that is activated by moisture. Our product is created for a Quality, Consistent and Predictable strength. In fact, this product has shown to raise typical ball-bearing fill sand to a load bearing capacity of 1200+ psi.

Totally Hydrophobic, **Stable Soils** Soil Binder displaces and vacates water during injection. Even swamp-like soil conditions can be bonded to provide load bearing, structural strength. It cures to 90% load capacity in 24 hours.

If you are looking for extreme soil strength, look no further! This product can be injected to depths of 40 feet to strengthen even the weakest soils.

MOISTURE PROOF UNDER SLAB SEALING

THE PROBLEM

With the water table already high in Florida and increasing after heavy rains, moisture rising through your concrete slab can be a major problem that can be extremely costly to you.
This moisture can be the cause of mold that is dangerous to your health and the environment.

THE CONVENTIONAL "RECOMMENDED" SOLUTION:

Applying a surface sealer or epoxy based material to the affected area.

WHY THIS WON'T CURE THE PROBLEM:

The moisture will eventually penetrate through the sealer and delaminate the product, thus the problem will be reoccurring until the proper action is taken.

THE ONLY SOLUTION

Creating an impermeable barrier on the positive side of the moisture penetrating the slab. This will create an extremely long lasting repair.

HOW IT WORKS

Professionally injected polyurethane seals the concrete from the underside. Our unique product travels and coats the bottom and sides of the slab, creating an impenetrable vapor barrier.

1 PART VS. 2 PART

THE DIFFERENCE BETWEEN OUR PRODUCTS

Stable Soils
The Poly Grout Professionals

Weak soils are very abundant in Florida. Some of these lands have been undisturbed for millions of years. Once development begins on some of these loose soils, structural failure is inevitable. Upon building a structure, these soils begin to slowly compact against the weight of the structure and sometimes the soils need help in supporting the newly introduced loads to eliminate settlement.

NO EXCAVATION

The technology and methodology of building has changed dramatically over the last 10 to 15 years. Now, typically, soils are tested prior to construction to determine the density and composition in relation to the support characteristics needed for the proposed structure to be built. Earlier, testing was not used, and we can begin to see the stresses (cracks) in some structures from older construction.

In either case, new or old construction; there are 2 different products used to stiffen and compact these soils:

1-Part Polyurethane, Soil Stabilizer

This product can be used in conjunction with the foam product or used by itself and is injected directly into soft soils to provide a glue-like bond of weak or shifting soils. It can be injected beneath the 2-part foam to depths of up to 20 feet to provide a very secure base or it can be applied prior to construction and has the capability of turning ordinary "ball-bearing" type contractor fill dirt into 1200+ psi bonded soil... like turning your soil into concrete. This product, as well as 2-part, carries the same longevity claims as well as being totally harmless to the environment. Our Soil Stabilizer can also be used for building water-tight soil curtains while excavating, provide a rock- hard bed for pipe-laying, or be topographically sprayed onto soils as a temporary (remember, sunlight will break it down) erosion control.

2-Part Polyurethane, Structural Foam

This product is used to lift concrete structures (slabs) back to original grade after settlement due to weak soils, erosion, or even sink-hole conditions. Older, traditional methods for raising concrete depended on slab-jacking. Slab-jacking required large holes that are cut into your floor slab and introducing a pump-driven cement, under high pressure (developed at the pump) that is injected underneath your slab or floor. This method is difficult and very messy and requires voiding the area of furniture and floor coverings. Because the desired pressures are attained from the pump, it is sometimes very difficult to control. Another draw-back is the burden that is introduced to your already weak soils as the weight of this material is extremely heavy.

Our product is also injected underneath your slab or floor but accomplished by drilling very small, 1⁄2" holes and introducing the 2-part Polyurethane. Because this product chemically expands (at rates up to 20+ times original volume), we attain our pressures from the chemical reaction... not from a pump! And since it is injected through such small holes under much lower pressures, there is no moving of furniture or removal of floor coverings. It's lightweight characteristics (88-96 lb/yd) will not over-burden your soils making it an ideal product for this use. In fact, sunlight is the only enemy of this product and if kept from direct sunlight (we always inject into total darkness), this polyurethane will last thousands of years... and it is totally harmless to the environment.

1-Part

2-Part

Both of these products carry a 10-year Manufacturers Warranty against shrinkage and deterioration.

TESTIMONIALS

Chemical Infrastructure Grouting is a very effective process for stopping groundwater intrusion into stormwater and sewer collection systems. Chemical grouting creates an impermeable layer of protection and stabilizes the surrounding soils outside of leaking manhole walls and pipe joints!

LAKELAND, FL Grouting of sanitary sewer joints in 1982 with urethane grout has reduced flows by 1,000,000 gpd and permitted an additional 3,700 service connections. Effectiveness confirmed in 1987

EL LAGO, TX Frank Adams reported in 1985 on the sealing of a 42" storm sewer by Naylor Industries in 1977. Urethane foam grout was used successfully to seal joints and stop the cave-ins of streets and sidewalks above the storm sewer infrastructure.

MINNEAPOLIS, MN Manholes grouted in 1980 with urethane grout and oakum impregnated rope were successfully sealed through inspection in 1987.

ALBANY, GA In 1984, Billy Daniel reported on the successful use of urethane grout to seal brick and concrete manholes in high groundwater locations of the city. Leaks of 2-100 gpm had been stopped. Grouting saved replacement of the manhole structures and reduced flows at the treatment plant.

LITTLE ROCK, AR Large diameter pipe grouting with urethane foam in 1973 was confirmed to remain effective in 1987. The 60 inch sanitary sewers under the Municipal Airport were built in the 1930's and about 1900 joints had remained sealed.

COCOA BEACH, FL Chuck Billias reported in 1984 on a 2-year grouting program conducted about 1975. Flows at the treatment plant were reduced by 800,000 gpd, and reduced flows are still being experienced.

ORLANDO, FL Greiner Engineering Services presented a paper in 1985 on a project involving grouting 36" to 48" storm sewers under runways at the International Airport. Urethane foam grouts were used to seal the joints; cement was used to fill voids under the runways.

ST. LOUIS, MO In 1984, Bill Skinner reported on the sealing of 14 pipe-to-manhole seals in 7 different manholes. Approximately 12 gallons of urethane foam grout were used. Exfiltration tests showed no leaks after several hours with water to the top of each manhole.

JACKSONVILLE BEACH, FL Tests of joints grouted in 1965 showed to be intact and preventing infiltration. Altair Maintenance Services reported in 1984 of the retest. These sewers were shallow and subject to saltwater and fluctuating groundwater levels. After 19 years, the grouted joints were still effectively sealed.

The information contained is intended to document that Chemical grouting is long lasting and very effective. These case studies have been taken from numerous engineering and municipal publications. Source: NAASCO

TECHNICAL DATA & PRODUCT WARRANTY

Stable Soils
The Poly Grout Professionals

All of our polyurethane products are environmentally inert and pose no risk to our surroundings! These products are hydrophobic, which means they will set up in wet conditions and form a water-tight barrier. Our foam products are non-shrinking and lightweight (3-4 lb. per sq. ft.). It fills voids as small as 1/32", and is fire resistant as well as a high-density, closed cell structure. It has a peak compressive strengths of 117+ psi (lifting strength of 16,848 lbs per sq. ft.) and tensile strengths of 123+ psi. Our foam products attain 90% strength in 3 minutes and our soil binder sets in 24 hours, depending on soil moisture.

Polyurethane concrete lifting, stabilization and void filling applications are preferred by Contractors and Department of Transportations around the USA.

The perfect product for your repairs.

- QUICK
- CLEAN
- QUIET
- TIME SAVING
- COST EFFECTIVE

HEAL THE EARTH™

NO EXCAVATION

HERCU-LIFT
EARTH LIFTING TECHNOLOGY™

FINANCING AVAILABLE
MAY BE AVAILABLE UPON REQUEST

EXAMPLES OF COMPLETED WORK

HUNDREDS OF COMPLETED RESIDENTIAL JOBS, BOTH PERIMETER GROUTING AND INTERIOR SLAB LIFTS

Ormond Beach Rivera Park seawall repair, Ames Park seawall repair
Ashborough Condominiums (Marietta, Ga.) Creek diversion, retaining wall, soil stabilization
Porto Venezia (Ft. Lauderdale) Extensive seawall repair and seal, elevator shaft seal
City of Crystal River Lift Station #1 settlement repair (30' depth)
K-Mart Distribution Storm water seal, parking lot void fill and lift
Pasco County New construction lift station seal (35' depth)
Moffitt Cancer Center Soil stabilization, chemical subterranean curtain wall
Seminole County Waste transfer station, 8" slab lift and support, pre-construction void fill
University of Florida/Southern Scholarship Dorm facility lift and support
City of Orlando Kirkman Road, Storm water lift station ground water intrusion seal and repair
Florida D.O.T. Numerous support contracts
Darden Restaurants Numerous entrance slab lifts
City of Ocala Tuscawilla spill over dam seal, void fill
Marion County Salt Springs lift station- ground water intrusion seal
South Florida Water Management District Moss Bluff passage
Sikorsky Helicopter Testing Facility Crack seal in ground tanks
Jacksonville Electric Authority Sewage Clarifier Tank Seal
Shands Hospital Pre-Excavation Soil Support
Disney World/Reedy Creek Lock Structure Lift/Support/Seal
Pulte Homes Storm Water Repairs, Residential Lifts
City of Largo Abandon Pipe Grout, Manhole Seal, Void Fill
City of Lake Park Seawall Seal and Repair/Drain Installation
Hyatt Regency Pier 66 (Ft. Lauderdale) Void Fill/Slab Support

WATCH REPAIR VIDEOS OF SELECT PROJECTS ON YouTube
Animated videos provided by Prime Resins!

PRODUCT WARRANTY

Stable Soils uses only High-Quality polymers manufactured by **Prime Resins**, one of the largest polymer producers in the world.

All of these fine products carry a 10-year manufacturer's warranty against shrinkage and deterioration. Should a failure occur due to product failure within the first year of installation, **Stable Soils** will repair at no cost to you. After the first year, and up to the 10-year warranty period, **Stable Soils** will complete a repair due to product failure with free product (labor rates may apply).

PRIME RESINS
Injecting Life into Infrastructure
A BAYTON INDUSTRIES COMPANY

Proud user of Prime Resins chemical grouts.

Concrete Lifting and Soil Stabilization

NO EXCAVATION




StableSoils

The Poly Grout Professionals

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Emergency? (352) 843-5440

Because sometimes it can't wait until morning.

Stable Soils of Florida, Inc. is a
Foundation Services Company
www.SinkholePros.com
Certified Contractor by the State of Florida CB-CA59697

Contact Stable Soils today for a free site inspection and proposal.
We have over 80 years of combined hands-on experience here in Florida!

Learn more about Stable Soils products and services, Visit: **www.StableSoils.com**