



FRE-FLO WATER SYSTEMS, INC.

www.freflowater.com

FRE-FLOTM Solutions for Irrigation PowerPoint



A FRE-FLO™ Technology Provider

Welcome to FRE-FLO™
WATER SYSTEMS's INC.

PowerPoint presentation on its water conditioning technology,

agricultural and turf development, results, and solutions for irrigation.

FRE-FLO™ SOLUTIONS FOR IRRIGATION

With this PowerPoint, you'll see profitable, sustainable FRE-FLO applications, including:

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FRE-FLO™ SOLUTIONS FOR IRRIGATION

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HOW FRE-FLO™ BENEFITS YOU

- FRE-FLO™ is a descaling water conditioning technology that solves calcium carbonate scale problems.
- FRE-FLO breaks surface tension of water
- FRE-FLO reduces the size of the water cluster

- Calcium carbonate in water typically forms a "hard" crusty, crystalline structure that stubbornly adheres to surfaces, clogging up water flow in mechanical pipes, industrial machinery, soil, crop root systems and turf roots.
- Found throughout the world, calcium carbonate is one of the most common minerals in nature, capable of having many different forms and functions.

- Going through a FRE-FLO™, calcium carbonate in water remains the same mineral, calcium carbonate, yet fortunately becomes a very different form, providing substantially different functions --- changing into a "soft" ultra smooth, round crystalline structure that does not stick to surfaces.
- With FRE-FLO™ water treatment, the "soft" round crystalline structure now has the desirable functions of letting water flow freely so that scale does not form, plus it also dissolves existing hard calcium carbonate scale into a soft powdery form that no longer poses problems.

For over three decades, FRE- FLO™ catalytic technology has provided a wide range of successful, documented descaling solutions for agriculture, turf, industry and business.

What FRE-FLO™ is not: FRE-FLO™ is not a filter (as it does not remove anything, instead it does crystallize calcium carbonate into a different structure), is not a magnet (FRE-FLO™ is not a temporary fix), and is not a water softener (water softeners remove beneficial calcium and magnesium, replacing these elements with an increase in water sodium levels, which is harmful to plants, soil and sewers). FRE-FLO™ uses no electricity, has no wires and no grounding, and is not a sacrificial anode.

- Importantly, FRE-FLO™ is eco-friendly equipment that does not add anything to the water. It is chemical free. Great for sustainable, profitable growing!
- By itself, it does not control other types of scale or contaminants. FRE-FLO™ does one highly specialized, scientific job, with remarkable effectiveness --- solving a spectrum of calcium carbonate scale problems.

Made in U.S.A.

HOW FRE-FLO™ BENEFITS YOU

FRE-FLO™ equipment effectively functions to provide several key benefits:

AS A WATER CONSERVATION TOOL, uses much less water (research documents up to 29% less water needed in irrigation applications).

AS A SOIL AMENDMENT TOOL, cleans up calcium carbonate build-up in the soil, eliminates soil crusting, permitting improved water penetration into the soil and plant root systems, providing better nutrient uptake, healthier plants, healthier turf, improved crop quality and quantity, and increased profits from crops (typically from \$300) to \$1,000 more profit annually per acre).

AS AN INDUSTRIAL DESCALING TOOL,

solves expensive, troublesome calcium carbonate scale problems in heat exchangers, ice machines, tankless water heaters, steam boiler equipment, evaporative coolers, fume scrubbers, misting lines, and water cooling towers, to name several applications.

AS A WATER CONDITIONING TECHNOLOGY,

reduces hard calcium carbonate scale problems to a lovely round number --- zero -- with water systems that are environmentally friendly, non-chemical, non-polluting, sustainable, easy to maintain.

AS EQUIPMENT THAT EASILY INTEGRATES WITH **OTHER SYSTEMS**, FRE-FLO™ can contribute to significant results. For example, by eliminating hard water calcium carbonate build-up, other systems (such as irrigation drip lines and emitters) down the treatment line from a FRE-FLO™ are better able to operate at design specifications, allowing their systems to deliver more reliable performance. Other documented examples include integration with systems that take water from being contaminated with perchlorate and nitrates, to being potable water appropriate for irrigation and drinking use.

AS EQUIPMENT PROVIDING EXCELLENT ECONOMIC ADVANTAGES, the FRE-FLO™ return on investment for over 30 years has consistently been from 3 months to 2.8 years. FRE-FLO™ also saves money in beneficial ways such as:

- Improves efficiency of drip system
- Decreases repairs and replacement of Drip parts
- Increase in crop size and quality grade
- by using less water, and
- providing more profits.
- Allows growers to grow crops with lower quality water

In 1972 Frank Schutz invented FRE-FLO™ in California as a non-chemical replacement for hexavalent chromium to control scale in industrial applications.

FRE-FLO™ Expansion to Agriculture and Turf

Reasonable thinking was if FRE-FLO™ controlled hard calcium carbonate scale in industrial applications, it should also work in agricultural and turf settings.

FRE-FLO ™ Expansion to Agriculture and Turf

Thus, it was discovered that FRE-FLO ™ also has the benefit of eliminating calcium carbonate build-up in soil, breaking water surface tension and reducing the water cluster size. This allows plants to uptake nutrients significantly better, while saving water by increasing percolation.

With water problems becoming increasingly urgent in many places, FRE-FLO™ technology provides extensive benefits for both agricultural and urban communities, including the following solutions:

- Water savings by increasing water percolation flow into the soil, resulting in much less agricultural and turf water needed.
- Less water used by growers frees up water for <u>urban</u> <u>families and businesses</u>.
- Lower maintenance costs for irrigation drip lines and emitters.
- Environmentally friendly, non-chemical, building up goodwill in the community.
- Investing in FRE-FLO™ technology yields <u>higher profits</u> by increasing crop quantity and quality (with improved nutrient uptake resulting in healthier plants).

FRE-FLO™ Technology



The proprietary metal core forces the calcium and carbonate ions in the water into a "soft" crystal state. This helps to leach salts away from the root zone.

FRE-FLO™ Technology



Please note the <u>non-sacrificial</u>, <u>non-magnetic</u> core comes in different sizes for specific water flow rates, starting at 0.1 gallons per minute (gpm) and increasing to 4,500 gpm.

FRE-FLO™ Technology

- ➤ FRE-FLO™ irrigation units are serviceable, for decades long use in agriculture or turf.
- ➤ FRE-FLO™ irrigation units start at models for 3" up to 12" pipe size (based on water flow rate going through the pipe), with the outer housing constructed of stainless steel, and have Victaulic or Gruvlok connectors.
- ➤ The following slide shows a standard FRE-FLO™ irrigation unit, expanded to show construction (followed by a photo of an actual FRE-FLO™ installed on an irrigation system).





FRE-FLO TM

Below is a Model # 1000-800, 8" pipe size FRE-FLOTM (capable of conditioning a water flow rate of 750 to 1,500 gpm), installed on an 8" irrigation pipe line with a 1,200 gpm.



How FRE-FLO ™ Works:

Presented by

John Heiny, Chief Engineer

Laminar vs. Turbulent Flow

The FRE-FLO™ "non-magnetic" unit creates a turbulent flow situation within its housing. The resultant turbulence allows the individual dissolved calcium ions to contact the proprietary blend of metals of the FRE-FLO™ core. In the standard laminar flow situation, most of the calcium ions would never contact the metallic core. This is why the FRE-FLO™ unit is sized based on flow. A corollary developed by FRE-FLO WATER SYSTEMS, INC. to illustrate this concept is that bigger is not better. In fact, if the FRE-FLO™ is oversized it will not work.

Soft vs. Hard Crystal

The typical hard water scale is composed of aragonite crystals. These crystals have the familiar sand paper feel of hard water deposits. The FRE-FLO™ is just changing the crystalline form of calcium carbonate. The new crystalline form is spherical (vaterite). As with any spherical shape, it is hard to build up any sort of deposit. A simple example of this would be to try and stack up some ball bearings. That is why FRE-FLO™ treated water does not build up any deposits.

<u>Same Element – Different Crystalline Structure</u>

A well-known example of this duality of form is best illustrated with the element carbon. In one case the element carbon creates the hardest substance on the planet called diamond. In the other case, with the same element carbon, a lubricant is formed called graphite. Same element, totally different structure and totally different physical properties, each are 100% carbon.

How FRE-FLOTM Works

FRE-FLO™ Technology

As a bonus in turf and agriculture, existing hard calcium carbonate blockage in the soil is eliminated. Puddling conditions are corrected and natural leaching again takes place, removing harmful sodium from the soil.

How FRE-FLOTM Works

FRE-FLO™ Technology

Importantly, existing scale is removed from equipment, irrigation drip lines and emitters.

FRE-FLO TM Installed
Very soft powdery material



With Scale Coming Off

No FRE-FLO TM Very hard scale – **no** water flow



35

Simply put, the FRE-FLO™ converts a portion of the calcium and carbonate ions that are <u>dissolved</u> in water into a <u>"soft" calcium carbonate crystal</u>, smaller than talcum power.

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Dissolved hard calcium carbonate ions stick to everything . . . FRE-FLOTM formed calcium carbonate crystals don't. As a bonus and this is a biggie, the newly formed crystals dissolve the hard form of calcium carbonate that was previously built-up in the soil, thus opening the pores so natural leaching is again established.

When there is a "hard" scale build-up, the transfer of heat in heat exchangers, cooling towers and evaporative coolers is Less efficient!

In soil, we see the accumulation of "hard" calcium carbonate. The hard calcium carbonate blocks nutrients and moisture from getting to plants.

Other FRE-FLOTM Applications

Let's look at some graphic examples of FRE-FLO[™] solutions in industry, where the success and visual effects can very easily be seen and felt. Then we'll continue with the FRE-FLO[™] soil examples in agriculture and turf, including visual effects of:

- improved plant growth
- reduced brown spots in turf
- increased propagation

- ➤ All water distribution slots on this evaporative cooler with a FRE-FLOTM installed are uniformly clear and open, where water flows.
- ➤ We have seen FRE-FLOTM treated water working the same way in soil, with pore space opening, to permit more nutrient absorption into the plant, and allowing salts to successfully leach below the root zone.



The FRE-FLOTM on this evaporative cooler prevents hard water deposits on the screen from blocking the water pump circulation.



Sample of our disposable line of FRE-FLO™ units for ice makers and evaporative coolers



Other Applications



FRE-FLO ™ Lake Circulation Unit





Advantages include clarity of the water greatly improves, filaminis algae lessens, and there is additional conditioning provided with multiple passes through FRE-FLO™ lake unit.

FRE-FLO™ water conditioning eliminates difficulties associated with hard water deposits, contributing to solutions for key problems including:

Water shortages

Water lines clogging

- **Emitters** failing
- Lack of percolation

- ► Valve failures
- High maintenance costs
- ► Increased energy costs
- Loss of production

These results with other applications show that FRE-FLO™

is effective in converting

hard scale deposits to manageable

microscopic "soft" crystals.

SMUD Report on the Effects of the FRE-FLO™

Scale Prevention Equipment / Soil Amendment Tool in Irrigation Applications

SMUD Funded Research

In 2001, SMUD (Sacramento Municipal Utility District) funded a field test using FRE-FLO™ to observe the effects on grapes. SMUD is not endorsing any product, only providing an unbiased opportunity to evaluate the technical facts. SMUD wanted to determine if water and power could be saved, and if any significant increase in yield could be realized.

SMUD Results of FRE-FLO™ Project at:

COLONY VINEYARD – SACRAMENTO COUNTY, CA

Report prepared by Allan James, Ph.D.

Executive Summary

The FRE-FLOTM caused more water to enter the soil and there was less water standing under the grapevines. The <u>yield</u> in the FRE-FLOTM area was <u>16% greater than in the non-FRE-FLOTM area, even though less water was delivered to the FRE-FLOTM area during part of the growing season. The grape sugar content was 7% greater, and the grapes had firmer, healthier skin.</u>

In Review, FRE-FLOTM Provides:

- Less water needed
- 2. Less power needed to pump water
- 3. Increased soil permeability
- 4. Leaching of salts
- 5. Healthier plants
- 6. Improved nutrient uptake by plants
- 7. Excellent crop production even with poor quality water
- 8. Increased yields
- 9. Better quality of crop
- 10. Cleans and prevents clogging of drip lines and emitters

Not only is there documented evidence that FRE-FLO ™ is beneficial for growing crops, but there is visual evidence as well. On one of the properties, the ranch foreman commented repeatedly that (after just a couple of irrigations) the amount of standing water was clearly, visually less where the FRE-FLO™ was installed.

Resulting Yields

The hand harvested samples indicated the FRE-FLOTM treated area had a 16% higher yield than the untreated FRE-FLOTM control area:

Yield for FRE-FLOTM treated area as tons per acre = **6.31**

Yield for <u>no</u> FRE-FLOTM control area as tons per acre = 5.42

The fruit in the FRE-FLOTM test area was different from the fruit in the no FRE-FLOTM control area. The grapes in the FRE-FLOTM test area were larger and the skin of the grape was firmer. The <u>larger grapes</u> meant bunches from the FRE-FLOTM test area weighed more even if the bunches had the same number of grapes. The larger grapes were probably the major cause of the difference in yield between the FRE-FLOTM test area and the control area.

The skin of the grapes from the FRE-FLOTM treated area was much firmer than the skin of the grapes from the no FRE-FLOTM test area. The skin of the grapes from the <u>FRE-FLOTM</u> test area did not break while being picked. The skin of the grapes in the <u>untreated FRE-FLOTM</u> control area broke easily and often while they were being picked.

The grapes from the FRE-FLOTM area certainly would have had a better chance of producing a wine with the desired depth and richness of color.

Measurement of the percent sugar, commonly called brix, was made five different times. The dates of measurement and readings are given in the following table.

<u>Date</u>	FRE-FLO TM	No FRE-FLO™
7/29/2001	18.0	17.0
8/07/2001	22.0	18.0
8/14/2001	24.0	22.0
8/18/2001	24.0	22.0
8/22/2001	24.0	22.5

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The grapes from the FRE-FLOTM treated area had less disease than the grapes from the no FRE-FLOTM control area.

Less disease in the grapes will contribute to a higher quality wine.

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The firmer skin has importance in the disease resistance of the grapes. It is known that if more calcium is available to the plant, the cell walls have a greater integrity and are less prone to be infected by disease.

The literature in plant nutrition also mentions that when more calcium is available for plant uptake, more potassium is available for uptake by the plant. The more potassium the plant has available, the more efficient the movement of photosynthate from the leaves to the fruit. This would help explain the larger grape berries observed in the FRE-FLO™ test area.

This would also partially explain the higher brix readings seen in the FRE-FLO™ test area compared to the no FRE-FLO™ control test area. In addition, grapes under less stress produce sugar faster than grapes under stress.

The basic premise of the action of water passing through the FRE-FLOTM unit is that it keeps more ions in solution. The ability to keep calcium ions in solution is a reasonable explanation for the observed better quality grape skin of the grapes in the FRE-FLOTM test area.

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Report on the Effects of the FRE-FLO™ Scale Prevention Equipment/Soil Amendment Tool In Agricultural Applications

Results of FRE-FLO™ Project at:

UNIVERSITY OF CALIFORNIA – RIVERSIDE, CA

Executive Summary

- Dr. Jack Rible, University of California, Riverside tested the impact of FRE-FLO™ on water delivery through drip irrigation systems, finding:
- Tubing using FRE-FLO™ treated water containing fertilizer delivered 230% more water per hour to the plants' root systems than the tubing without FRE-FLO™.
- FRE-FLO™ delivered 46% more water containing fertilizer than tubing without FRE-FLO™ and without fertilizer.
- There was greater yield of the broccoli crop using FRE-FLO™.

WESTERN FARM SERVICE (WFS)

Moisture Sensing Probes Verify and Enhance FRE-FLOTM Water Conservation



A FRE-FLOTM Technology Provider

AquaSpy Technology Used in WFS FRE-FLOTM Installations



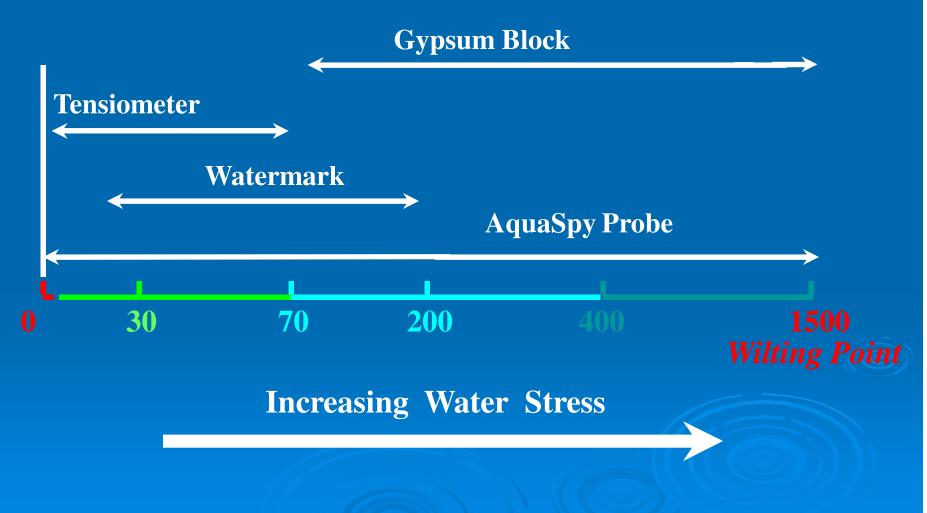
Verify the benefits of FRE-FLO™ with AquaSpy wireless soil moisture probes. Placed in the soil, they supply innovative water management solutions that measure and track in real time the movement and depth of water through the soil. Analysis software lets you control irrigations, resulting in less water use, optimum yields, improved crop quality, higher profits and enhanced water sustainability.

AquaSpy Technology Used in WFS FRE-FLOTM Installations

The AquaSpy moisture probe gives the grower scientific power to know when to stop irrigating (resulting in even more water savings and profitability).

The AquaSpy technology also provides valuable data in determining the FRE-FLOTM return on investment.

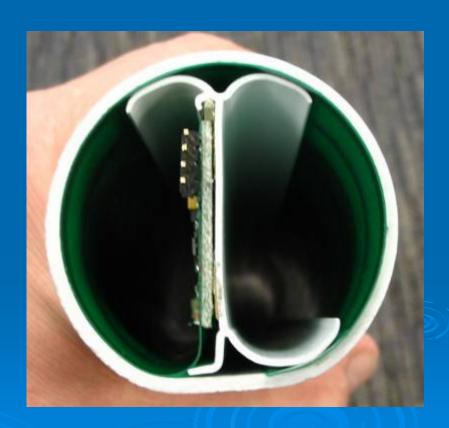
Comparison of Sensor Range Between Different Brands of Soil Sensor Probes



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AquaSpy ® Probe Construction

- The sensor inside the AquaSpy soil moisture probe is held against the inner wall of the access tube
- No air gaps are inside the tube
- Probe is normalized in the same access tube installed in the field, resulting in better accuracy
- Sensor is <u>BOTH</u> ACCURATE and REPEATABLE
- Tube can be fully sealed for underground use
- Designed for large scale production



Multiple Sensor AquaSpy Components



The First 4 Steps in Choosing the Right FRE-FLO ™ for Each Specific Grower

The following research steps will set reasonable expectations for a FRE-FLOTM installation and performance.

- Crop deficiency analysis
- Water analysis (irrigation suitability)
- ➤ Soil analysis
- Pump gallons per minute (gpm), to properly size FRE-FLO™

Note: The right size FRE-FLO™ is essential and is based on the flow range of water (gpm) going through the specific pump.

Further Key Information From Grower

> Types of crops grower is producing

> Irrigation type (drip, furrow, sprinkler, etc.)

Past yield data of crop

Pump energy usage (for potential utility rebates)

Choosing the Right FRE-FLO™ Model

The FRE-FLO $^{\rm TM}$ model is chosen based on the range of water flowing through the FRE-FLO $^{\rm TM}$.

For example, the FRE-FLOTM sizing chart on the next slide shows that a water flow range of anywhere between 750 to 1,500 gpm will require FRE-FLOTM Model # 1000-800.

Please note: It is okay for the water flow to start and stop and start again as needed. When the water is flowing however, it is essential to be in the water flow range of the FRE-FLOTM model selected.

FRE-FLO™ SIZING CHART

FRE-FLO™ Model Number / Water Flow Range (gpm)

```
063-025 0.1 to 1.1
  100-050 0.4 to 2.3
  125-075 2.2 to 4.7
 150-100 4.3 to 7.5
  200-125 7.3 to 16
 250-150 15 to 35
 300-200 36 to 53
 400-250 50 to 100
 500-300 100 to 250
 800-400 240 to 595
1000-600 480 to 800
1000-800 750 to 1500
1400-1000 1500 to 2500
1400-1200
            2500 to 4500
```

FRE-FLO ™ Irrigation Markets

- Growers, golf courses, cities, municipalities, businesses, with less available water for irrigation
- Growers seeking higher quality crops
- Gypsum and acid treatment users
- Progressive growers
- Organic producers
- Golf courses seeking greener, higher quality, better playing turf
- Anywhere a lack of water is reaching crisis levels

On a 150 acre farm, using 450 acre-feet of irrigation water per year, a 20% water savings (based on a water cost of \$100 per acre-foot per year) would save \$180,000 over 20 years. With usage of 35 gallons of sulfuric acid per acrefoot per year at \$1.00 per gallon (including maintenance of the injection equipment), elimination of acid treatment would save \$315,000 over 20 years. Thus, FRE-FLO™ would pay for itself in just 2.8 years or less. In addition, growers have typically found a seasonal increase in crop value from \$300 to \$1,000 per acre!

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	\$/Bu.						
Corn	\$3.50	\$4.00	\$4.50	\$5.00	\$5.50	\$6.00	\$6.50
20% Add'l Yield	\$0.70	\$0.80	\$0.90	\$1.00	\$1.10	\$1.20	\$1.30
Assume 155 bu./ac.	\$108.50	\$124.00	\$139.50	\$155.00	\$170.50	\$186.00	\$201.50
Assume 125 ac.	\$13,562.50	\$15,500.00	\$17,437.50	\$19,375.00	\$21,312.50	\$23,250.00	\$25,187.50
Cost	\$30,000.00	\$30,000.00	\$30,000.00	\$30,000.00	\$30,000.00	\$30,000.00	\$30,000.00
YRS To Payback	2.21	1.94	1.72	1.55	1.41	1.29	1.19
+ Water Savings (Est, 20%)							
+ Electrical Savings (Est. 20%)							

FRE-FLOTM return on investment at different commodity prices. For example, when corn is selling at \$5.00 a bushel, the ROI is 1.55 years!

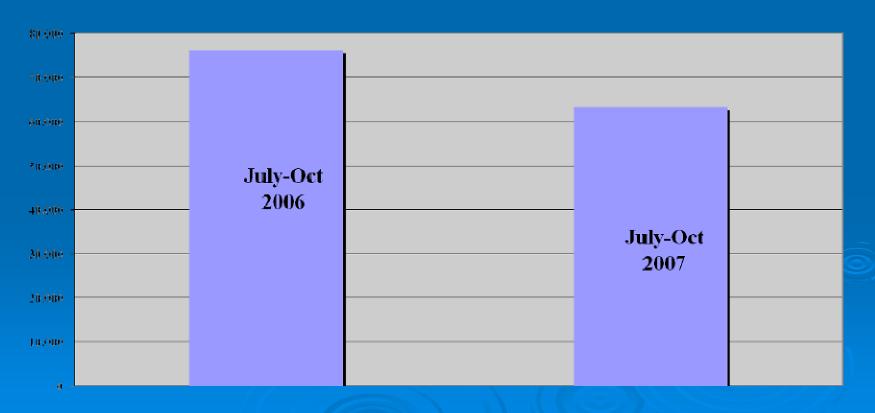
Leasing Option Available in U.S.

Very flexible leasing available (in U.S. locations).

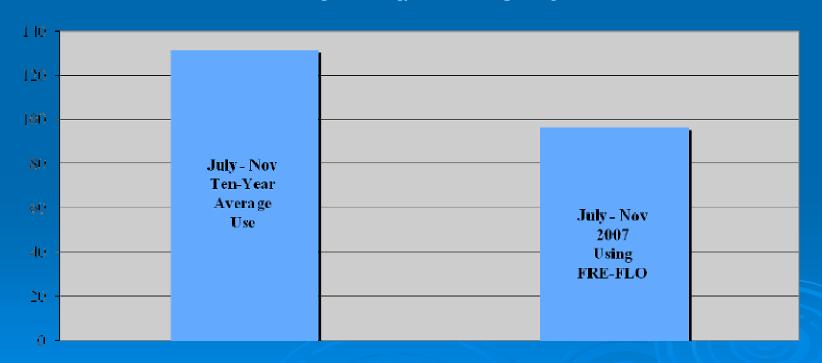
For your convenience, one annual payment at cash flow time after harvest, with 11 very small monthly payments each year.

Term of lease is variable.

Calabasas, CA Country Club achieved 16% water reduction after a Western Farm Service installation of FRE-FLOTM, saving S28,000 in only 4months, while providing excellent quality turf!



Bear Valley Springs, CA Golf Course after Western Farm Service installed a FRE-FLOTM, had water usage reduced by 27% while providing excellent quality turf!



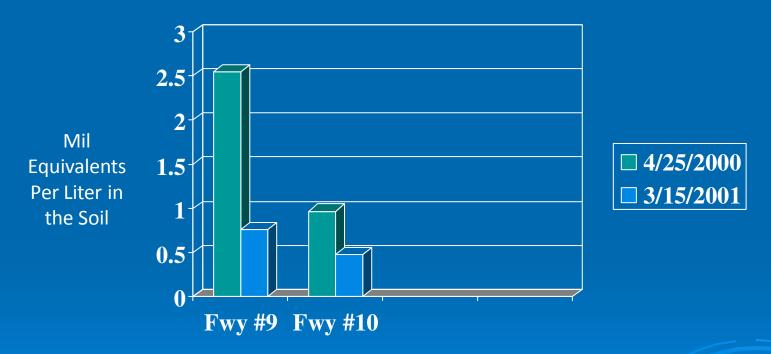
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Western Farm Service Documented Field Trials in Turf and Agriculture

The following results from Western Farm Service field trials document improved effectiveness of water use and desirable leaching effects for several growing applications.

Cypress Ridge Golf Course Before and With FRE-FLOTM

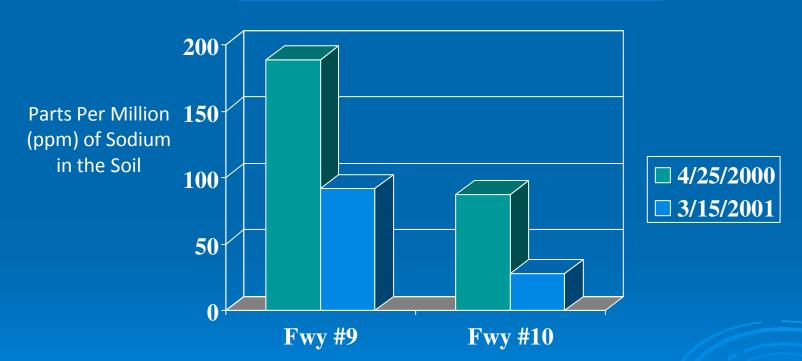
Soil Electroconductivity (EC)



With FRE-FLO™, over 50% reduction in soil EC in one year in top 6" of soil, is giving the big advantage of lowering harmful salts.

Cypress Ridge Golf Course Before and With FRE-FLOTM

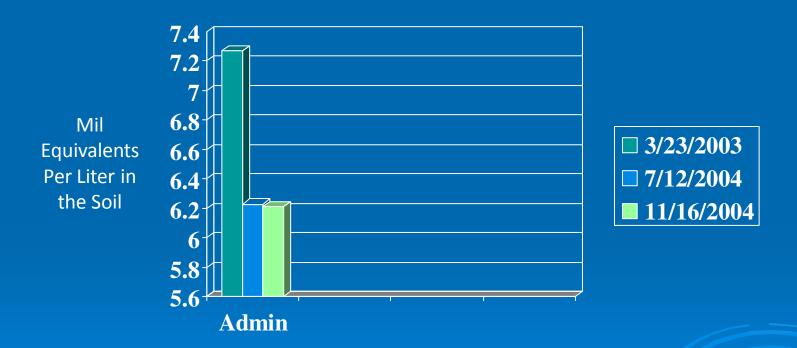
Sodium (Na) in the Soil



With FRE-FLO™, huge reduction in sodium allows healthier turf growth and better nutrient uptake.

West Hills College Before and With FRE-FLO™

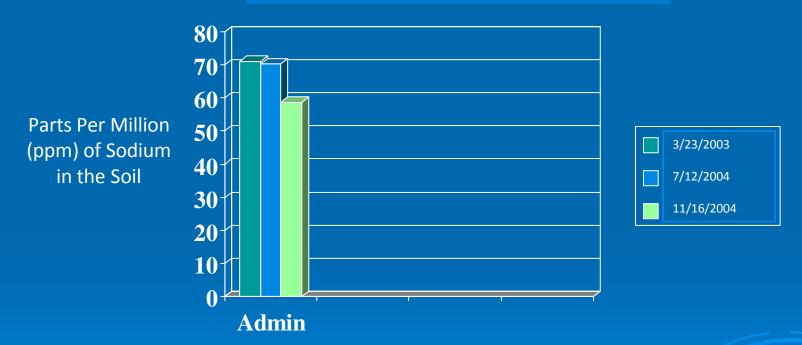
Soil Electroconductivity (EC)



With FRE-FLOTM, good water drainage is achieved in the soil, allowing for a much better, lower soil EC result.

West Hills College Before and With FRE-FLO™

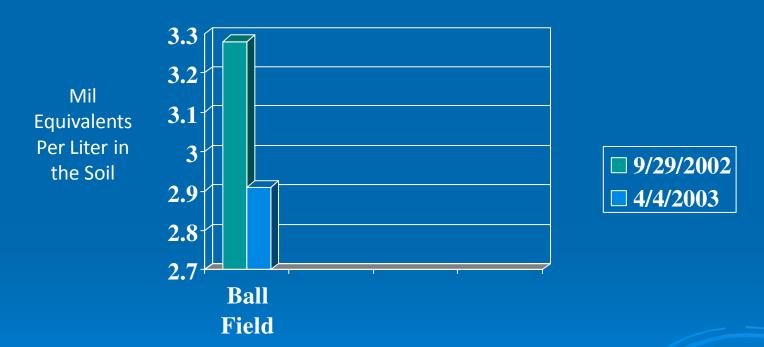
Sodium (Na) in the Soil



Harmful sodium continued to leach out of the root zone, allowing turf to become healthier.

Barney Swartz Park Before and With FRE-FLO™

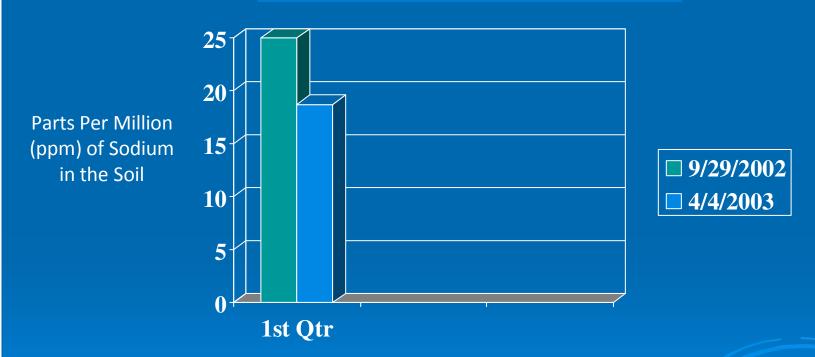
Soil Electroconductivity (EC)



New park started with high soil EC. In less than one year with FRE-FLO $^{\text{TM}}$, greatly reduced soil EC indicates much improved soil quality.

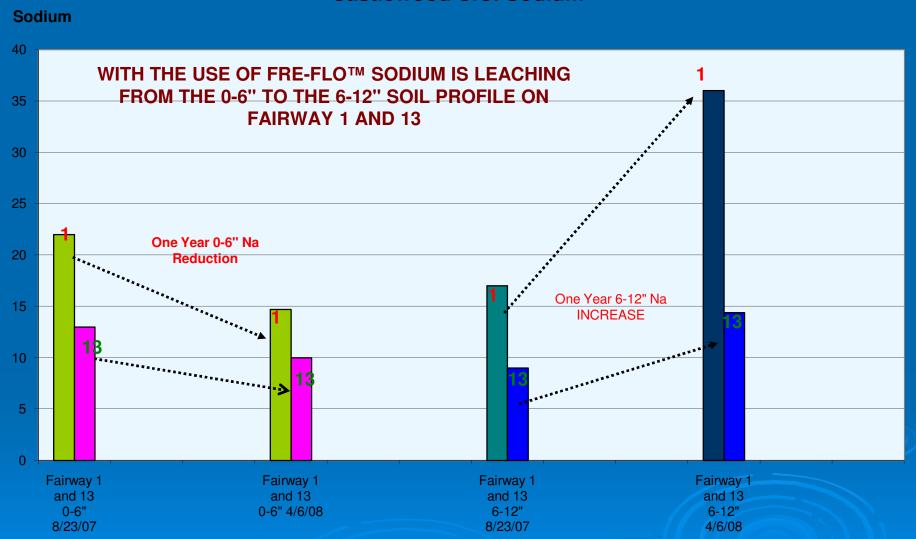
Barney Swartz Park Before and With FRE-FLO™

Sodium (Na) in the Soil



Sodium in the soil is reaching a much more desirable equilibrium with the irrigation water, allowing healthier turf growth.

Castlewood C.C. Sodium



Barney Swartz Park

FRE-FLO TM Treated

Healthy, dense green grass in baseball diamond outfield



No FRE-FLO TM

Brown patches and spotty growth before FRE-FLOTM treat<u>ment</u>



Water Percolation and Infiltration Comparison Test

- ➤ The following slide documents the effectiveness of FRE-FLOTM conditioned water to percolate into the soil faster. Without the FRE-FLOTM, the water would puddle on top of the ground, eventually evaporating off as wasted water. Unconditioned water clogs the surface with hard water deposits, causing infiltration problems.
- With the FRE-FLO™ conditioned water going more rapidly into the ground, the salts are leached out of the root zone. Nutrients, air and water are now allowed into the root zone, resulting in healthier plant growth, using less water.

Untreated

water still 13"

Water Percolation and Infiltration Comparison Test

Supervised by Bill Galli, CCA (WFS), between FRE-FLO™ treated water and nontreated water, on a golf course in Bakersfield, CA. August 2006

- ½ cup of FRE-FLO ™ treated water was poured into the tube on the left.
- ▶ ½ cup of untreated water was poured into the tube on the right at the same time.

above ground

FRE-FLO™ water at ground level --

- ▶After 3 minutes the FRE-FLO™ treated water on the left was at ground level.
- The untreated water still had 13" of water remaining.





FRE-FLO



Soil plug on a golf course with FRE-FLO™ shows the soil is turning from white (with crusty calcium carbonate deposits) to brown, documenting the desirable leaching effect.

Documented Improvements With FRE-FLO TM From Western Farm Service Field Trials

Alfalfa: 100% increase in crop quantity (probably the exception rather than the rule)

Strawberries: 30% increase

Grapes: 20% increase

Pomegranates: increase by one grade size

Lettuce: quality and 20% yield weight

Sweet Potatoes 30% increase in #1 grade

Pomegranate Grower:

"I saved 20% on my water bill, send me one more before the end of the year." Action - done.

Grape Grower:

"I like the FRE-FLO TM performance over the acid, let's work out my needs this winter." Action - done.

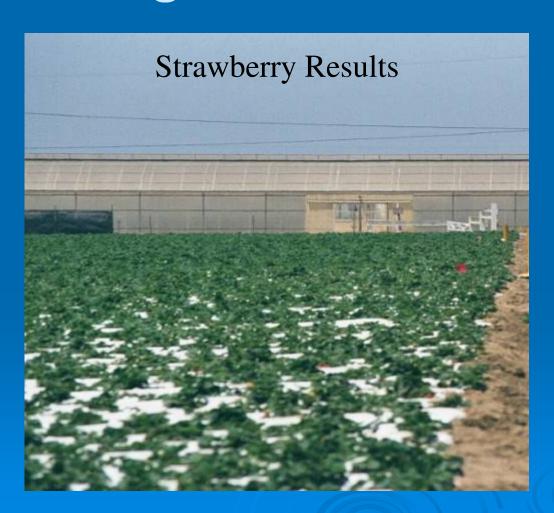
Strawberry Grower:

"I want to expand the FRE-FLO TM usage next year."

Action – done.

WFS Field Trials

Foreground Untreated Background FRE-FLO TM Treated



FRE-FLOTM treated strawberries have a better developed canopy, more blossoms per plant, providing increased profits per acre.

Alfalfa Results

FRE-FLO TM Treated

No FRE-FLO TM





FRE-FLOTM treated alfalfa is denser, healthier, as the close-up in the next slide clearly demonstrates.

Alfalfa Results

FRE-FLO ™
Treated



No FRE-FLO TM

With FRE-FLOTM, fuller, healthier plants plus 29% water savings!

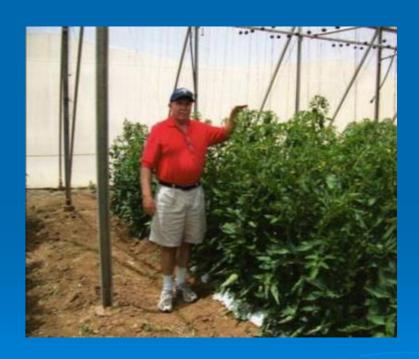


FRE-FLO ON LEFT NON TREATED ON RIGHT SWEET POTATOE RESULTS

TOMATOE PLANTS IN BAJA, MEXICO

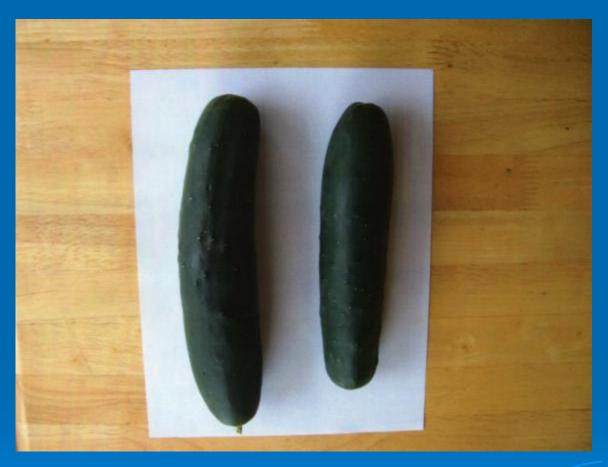
FRE-FLO™ Treated Water

Untreated water





CUCUMBERS IN BAJA, MEXICO



FRE-FLO™ Treated Water

Untreated Water

Grapes With No FRE-FLOTM



- Sulfuric acid treated
 Cabernet Sauvignon
- Poor growth indicating chlorosis
- Fewer leaves
- Reduced flower spikes per vine

FRE-FLO TM Treated Grapes



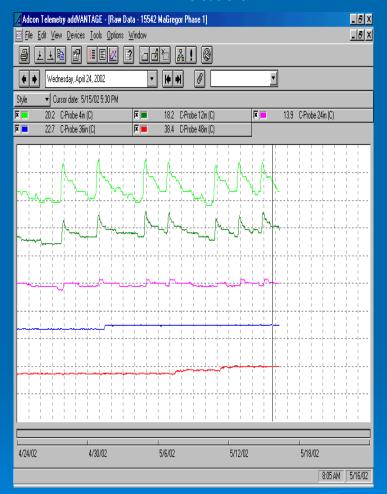
- FRE-FLOTM treated
 Cabernet Sauvignon
- Darker more vigorous growth
- More leaves
- More flower spikes

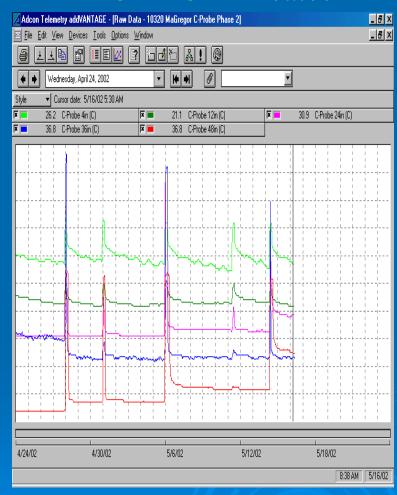
WFS Field Trials

Improved Water Usage on Grapes

Acid Treated

FLO-FLO ™ Treated



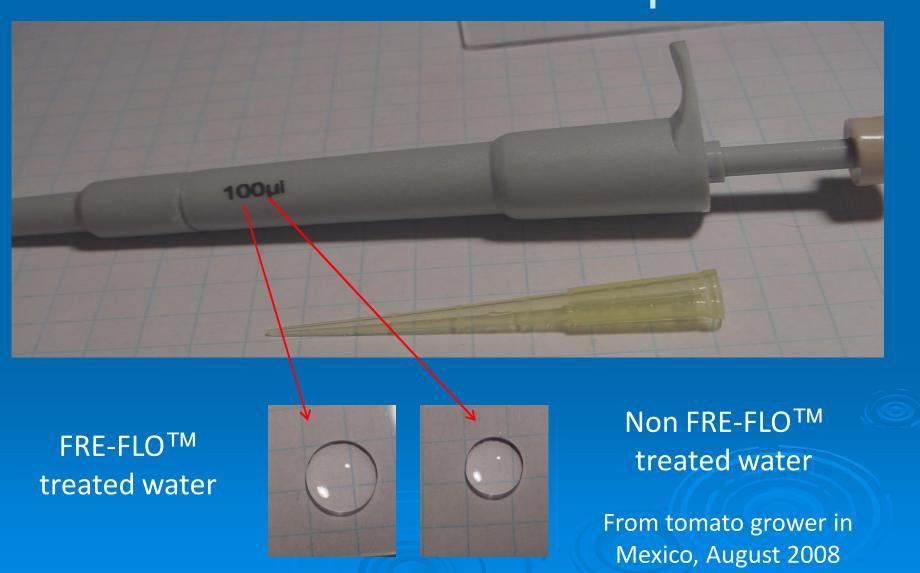


7 Irrigations

With FRE-FLO™, less water needed and used and deeper water penetration achieved into the soil.

5 Irrigations

Surface Tension Comparison



FRE-FLOTM RESULTS

Thus, we have seen considerable evidence that:

- > FRE-FLOTM corrects marginal farm land.
- ➤ FRE-FLOTM provides a great return on investment to the grower.
- > FRE-FLOTM is good for the environment.
- > FRE-FLO TM is a great water conservation device.

EASY FRE-FLOTM MAINTENANCE

Proper servicing ensures excellent performance! Year, after year, after year.





Recommended core cleaner is nickel-safe 10

FRE-FLOTM MAINTENANCE AND SUPER SUCCESS

➤ If FRE-FLOTM is put on existing equipment that has a great deal of "hard" scale build-up already, the scale can then dislodge in large amounts, requiring shoveling or scoping out the now free, "soft" powdery scale (as shown in the next slide).

Maintenance

FRE-FLOTM Super Success Initially Was Perceived a Failure





Reality! The FRE-FLO™ very successfully de-scaled the Western Farm Service Madera, CA 22,000 gallon water tank (with large amounts of scale breaking free into the tank). Solution? Empty tank by shoveling out a foot of dislodged scale, clean FRE-FLO™, reinstall.



Western Farm Service is a FRE-FLO™ technology provider. For more information on how you can benefit from these systems please contact your Western Farm Service P.C.A. or call Bill Galli at Western Farm Service (559) 287-3980

Report on the Effects of the FRE-FLO™ Soil Amendment Tool/Water Conditioner in Root Propagation Tests

Results of FRE-FLO™ Project at:

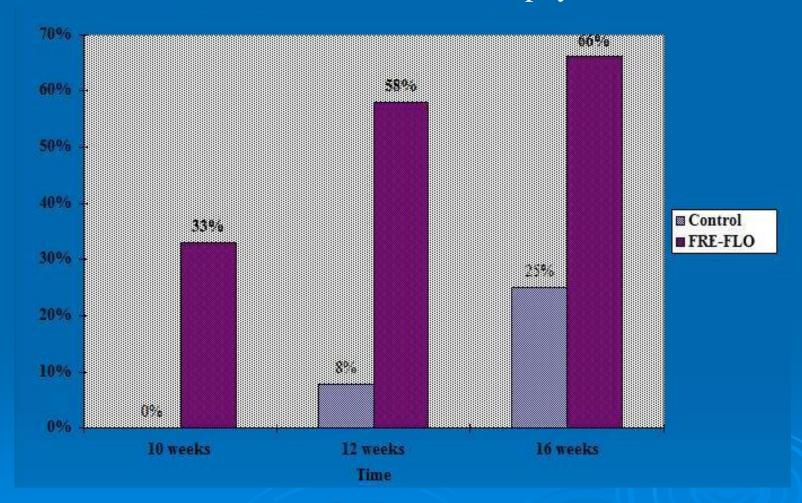
MT. SAN ANTONIO
COLLEGE - CALIFORNIA

Root Propagation Executive Summary

A series of experiments on the rooting propagation of various plants found the plants irrigated with FRE-FLO™ conditioned water develop far faster, with much healthier root systems, than those irrigated with untreated water.

Steven Cohan, Ph.D. ran a series of experiments on the rooting of various plants. The plants irrigated with the FRE-FLO™ conditioned water showed consistent patterns of faster rooting. The only difference in the two samples was that the irrigation water in the experimental group was run through a FRE-FLO™ water conditioner, while the control was not. All other growing conditions were identical.

Percent of Root Initiation in Aretostaphylos Manzanita



Propagation Research



Same amount of growing time, same soil. FRE-FLO $^{\text{TM}}$ (installed on right) is obviously better, with larger root structure and foliage development.

Thank you for viewing this presentation.



FRE-FLO WATER SYSTEMS, INC.

www.freflowater.com