

A Cleaner, Greener Approach to Landscape Care.



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# Siphoning System

Keep this manual handy for future reference

## Owner's Manual



INSTALLATION | OPERATION | PARTS LIST | DOSAGE

### Caution:

Read all instructions carefully before beginning the installation

This System is made for applying American Hydro Rust Stain Preventers, Pest Repellants and Liquid Fertilizer products.

**RID✓RUST**

**NatureShield**  
ALL-NATURAL PEST REPELLANT

**GrassSoGreen**

### Questions? Need parts or supplies?

Call us at  
**1-800-347-7487**

or e-mail us at  
**info@americanhydro.com**

or visit our web site  
**www.americanhydro.com**

 **American  
Hydro**  
SYSTEMS®

A Cleaner, Greener Approach  
to Landscape Care.

American Hydro Systems

# American Hydro Systems

**W**e have been focused on the irrigation and landscape market since 1985, and are dedicated to helping you solve problems that come with using well water to irrigate. Our proven range of products and systems for rust stain prevention, fertigation and pest repelligation make installation and treatment easy and effective. It's just a cleaner, greener approach to landscape care. Put our "know-how" to work for you. American Hydro Systems is at your service — just a phone call or a mouse click away.



To find out more about our easy to use products and systems, visit our web site:

[www.americanhydro.com](http://www.americanhydro.com)



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# General Comments on Siphoning Systems



American Hydro feeder systems are used to inject Formula into sprinkler system irrigation lines. We offer two types of feeder systems: siphoning feeder systems and injection feeder systems.

Siphoning systems are very simple; they have no moving parts. They are installed on the intake side of a well pump. When the pump turns on, the solution of Rid O' Rust Formula and water is automatically drawn from the feeder tank.

Because they only work properly when installed on the intake side of a well pump, siphoning feeder systems can only be used with above ground well pumps.

## LOCATION

We recommend that your siphoning system be placed in a well-ventilated location within 6 feet of the pump. You may hide the tank behind a wall, fence, or shrubs. Set the tank on a smooth, level surface such as a patio block or concrete slab. We advise against burying the tank; you will not be able to see the water level in the tank and will likely find servicing difficult.

### Siphoning System, 30 Gallon

- Feeds at the rate of approximately one gallon per hour
- Must be refilled after 30 hours of operation
- Easy to install and service, no moving parts
- Removable flip off lid
- UV resistant
- Measures 32" high by 18" in diameter
- Weighs 14 lbs
- Comes with all necessary plumbing, including 6 feet of discharge tubing and a drain plug

Part No.	Description
2650	Siphoning System, 30 gallon



### Siphoning System, 15 Gallon

Differs from #2650 in the following:

- Must be refilled after 15 hours of operation
- Snap lid for refilling and servicing
- Measures 22" high by 14.5" in diameter
- Weighs 10 lbs

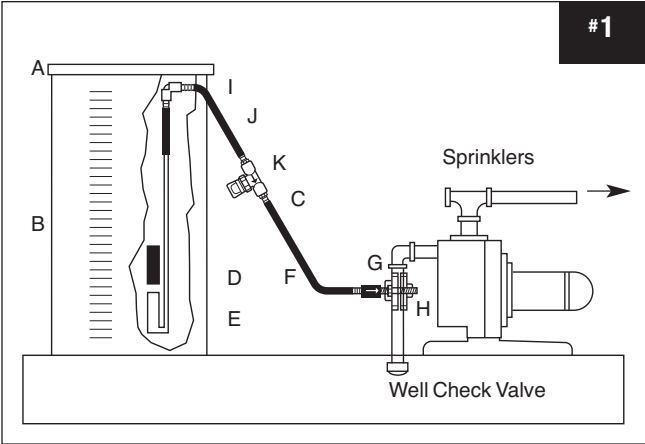
Part No.	Description
2660	Siphoning System, 15 gallon

# Installation Instructions:

## There are Two Easy Ways to Install your Siphoning System.

Remember that the siphoning system can only be installed on the intake (suction) side of an above ground centrifugal pump. If you install it on the discharge side, you will only create a big leak in your irrigation system.

**👉 Before you install, shut off the electricity to the well pump and read these instructions!**



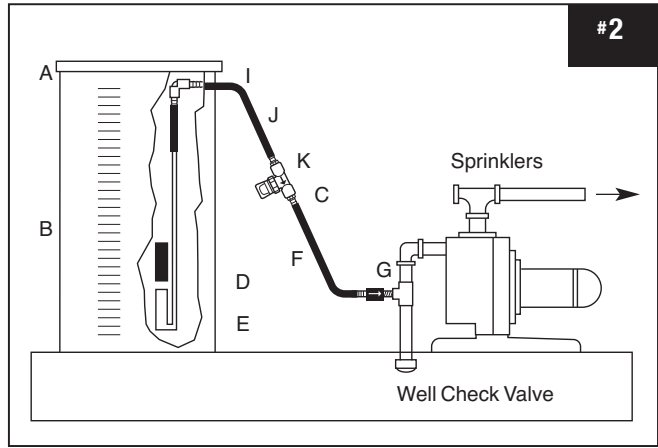
### #1 The Easiest Way Possible

Tools needed: Drill with 1/4" bit, phillips head screw driver, plumbers tape and saddle clamp.

NOTE: Saddle clamp works only with 1 1/4" PVC pipe.

#### Steps:

1. Using a phillips head screwdriver, attach the saddle clamp (H) to the suction line of the well pump. The saddle clamp should be placed between the check valve for the well (Note: This may be underground) and the intake side of the well pump.
2. Drill a 1/4" inch hole into the center of the threaded opening of the installed saddle clamp. (Note: If your pump has a pressure tank, turn power off to pump and open up any water valve to relieve pressure from your water line before drilling into pipe).
3. Screw the grey check valve (G) into the saddle clamp. (Note: Add several wraps of plumber's tape to the check valve threads to ensure a proper seal).
4. Your pump will need to be re-primed. Refer to your irrigation pump manual for repriming instructions.
5. Go to "Start Up."



### #2 The Second Easiest Way Possible

Tools needed: PVC or hack saw, PVC Tee (SXF) suction line size by 1/2", PVC glue & primer.

NOTE: If your pump has a pressure tank, turn the power off to the pump and open any water valve to relieve pressure from your water line before cutting the pipe.

#### Steps:

1. Cut vertical section of suction pipe between pump intake & well check valve. You may need to remove a small section of pipe to accommodate tee. Reposition pump.
2. Glue tee onto pipe run using PVC primer & glue.
3. Screw the grey check valve (G) into the Tee. (Note: Add several wraps of plumber's tape to the check valve threads to ensure a proper seal).
4. Your pump will need to be re-primed. Refer to your irrigation pump manual for repriming instructions.
5. Go to "Start-Up."

#### Installation Diagram Key

Item	Description
A	Tank Top
B	Tank
C	Metering Jet
D	Food Valve Sleeve
E	Foot Valve
F	6' Tubing
G	Check Valve
H	Saddle Clamp
I	Threaded Nylon Fitting
J	6" Tubing
K	In-line Filter

## Start Up, Final Check-out & Operation:

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### Start Up

1. Attach the free end of the 6" of clear vinyl tubing (J) to the barbed end of the threaded nylon fitting (I) on the side of the tank and attach the free end of the 6' of tubing (F) to the barbed end of the check valve (G). Secure both ends with provided zipties.
2. Fill the tank 1/2 full of water. It is preferable to use municipal or soft water when available.
3. Turn on the sprinkler pump and sprinkler zone. Watch the clear vinyl tubing (F) and the clear housing of the in-line filter (K). Water should appear in about 30 seconds to a minute as a thin continuous stream from the metering jet (C) that is attached to the in-line filter. If it does, congratulations, your system is ready to run.
4. If it does not, the foot valve (E) in the tank is likely not operating correctly. Shut off the pump. Shake the foot valve vigorously, whacking it against the side of the tank. This will purge trapped air from the foot valve and free up the float ball that is enclosed in the foot valve housing. SEE #3 above.
5. Add chemical according to dosage recommendations in your Owner's Manual or on our website and fill the tank up to the 30 gallon mark. Note: Make sure to have your well water tested to ensure you have the correct Rid O'Rust Formula for your type of water.
6. When the tank is full, add 2 cups of household bleach to prevent algae growth in the tank.

## Final Check-out and Operation:

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1. Turn on the sprinkler system. Watch for a thin stream of solution flowing from the metering jet (C) in to the clear tubing (F) by letting your sprinkler system run for several minutes. Turn off the pump to see if the liquid level in the clear tubing holds. If the well pump's check valve and the siphoning system check valve (G) are installed properly, the solution in the clear tubing will not continue to siphon out.
2. Generally, the liquid level in the tank will drop one gallon per hour of operation (based on a 1 horse power pump). To ensure continuous treatment, refill the tank before it drops below the top of the foot valve (E) in the bottom of your tank.

### Guidelines for Using Products in Your Irrigation Feeder System:

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#### Caution:

The American Hydro Systems Irrigation Feeder System works with Rid O' Rust rust preventer formula and GrassSoGreen liquid fertilizer.

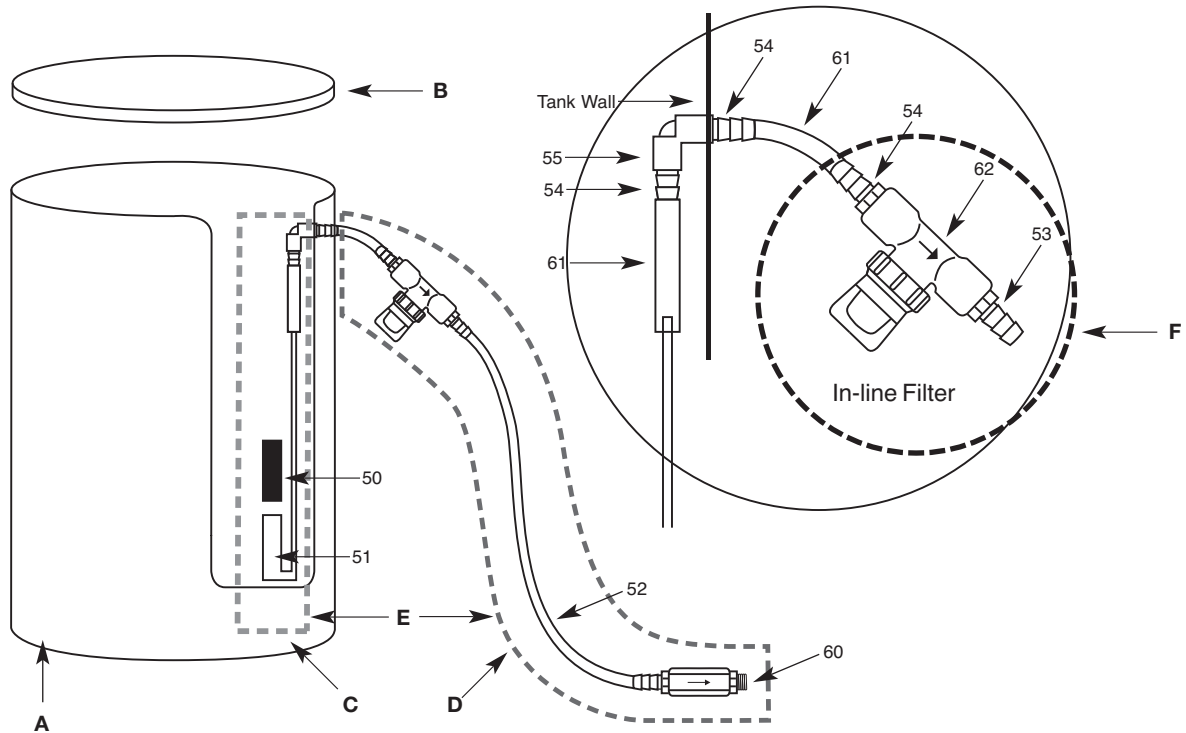
GrassSoGreen is

formulated to be mixed in the same tank with the Rid O' Rust formula. However, the nitrogen in the fertilizer will react with bleach if mixed together at the same time. Allow the fertilizer to mix thoroughly with water before slowly and carefully adding bleach.

ONLY add bleach after the tank has been filled with water. Again, the feeder tank should be located in a well-ventilated place.

The use of any other chemicals such as pesticides or herbicides is prohibited. These can be harmful to plants and animals and will likely damage the system. Use of these chemicals or any other chemicals not manufactured by Pro Products will void the warranty.

# Siphoning Feeder System Parts Diagram



Key No.	Description
50	Foot valve sleeve
51	Foot valve
52	3/8" I.D. tubing – 6 feet
53	1/4" Metering jet
54	1/4" Nylon fitting
55	1/4" 90 PVC elbow
57	30 Gallon tank & top
58	Replacement top
60	1/4" Check valve
61	3/8" I.D. tubing – 6 inches
62	In line filter

### Repair Kits & Parts:

Key No.	Part No.	Description
A	265057	30 Gallon tank & top
B	265058	Replacement tank top
C	265070	All inside parts
D	265071	All outside parts
E	265072	"The Works" – all parts
	265066	Saddle Clamp
	2650-KIT	2 metering jets; 2 sleeves; 2 ties
F	265062	In-line Filter Kit

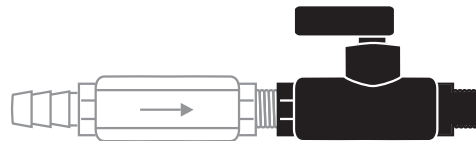
### In Line Filter

The In-line Filter assembly, with metering jet positioned after the filter, prevents the metering jet from being blocked up by well water sediment.

### Cut-off Valve (optional)

The Cut-off Valve is installed after the check valve and enables the user to disengage the siphoning system entirely. This is particularly useful when a feeder system is being used to fertilize or repel pests only.

Part No.	Description
265065	Cut-off valve





# Maintenance & Troubleshooting

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## MAINTENANCE

(Refer to Parts List Diagram on page 6)

1. The holding tank should be cleaned out on a regular basis with soapy water and bleach to achieve maximum performance from your system.
2. Add 2 cups of household bleach each time the tank is filled, or at least a cup every 2 weeks to prevent algae from forming inside the tank.
3. Remove clear filter housing from in line filter (62) and wash out filter screen with soapy water and bleach on a regular basis to ensure the metering jet (53) stays free of dirt and algae.

## TROUBLE SHOOTING

(Refer to Parts List Diagram on page 6)

### 1. No Chemical Flow from Tank:

- Foot valve closed (51): Shake foot valve or tap it against the inside wall of tank to purge trapped air or remove clear tubing (61) from outside of tank and blow through opening to free ball in foot valve housing.
- Metering jet clogged (53): Remove and clean the opening with a thin wire.

Note: Do not enlarge jet opening. Replace if needed.

- Clogged filter (62): Remove clear filter housing and wash out filter.
- Check valve closed (60): Remove clear hose (52) from metering jet (53).

Put thumb over hose opening and turn on well pump to see if you have suction.

If there is suction, there is no problem with the check valve. If there is no suction, remove the check valve, wash it out and screw it back in. Perform steps again to confirm that you now have suction.

Note: On a regular basis all items should be washed and rinsed in a bleach solution to achieve maximum performance from your feeder system.

### 2. Solution in Tank Drops To a Certain Level and Stops:

- Check fittings to see if they are secure. There may be a possibility that the fittings are too loose, permitting air to be sucked into the line from the ends of the tubing so that the vacuum is lost. Secure fittings with nylon ties or hose clamps.

### 3. Tank Empties Too Fast:

- Enlarged Metering Jet (53): Remove and replace with new metering jet.
- Well pump check valve malfunctioning. If the well pump has not been able to hold prime prior to the time the feeder system was installed, there is a strong possibility that the check valve in the pump suction line is old and needs to be replaced. In any event, check valves in older pumps can fail and cause solution to be siphoned out of the tank after the well pump stops pumping.

## TECHNICAL HELP

If none of the above trouble-shooting steps produce results, please call your local installer or American Hydro Systems at 1-800-347-7487.



# Rid O'Rust Formula & Dosage Options

## How do you determine which Rid O' Rust Formula to use?

### Step One:

Test the well water for two things:

### pH:

The measurement of well water's relative acidity or alkalinity is termed "pH." Neutral pH is 7.0. A reading lower than 7.0 is to the acidic side, a reading higher than 7.0 to the alkaline side.

### Iron:

Iron content is measured in parts per million (ppm). One part per million (1 ppm) will produce a noticeable rust stain in a month or so.

### Step Two:

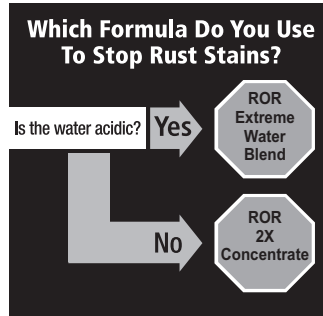
Choose the proper formula:

For "**acidic**" well water measured at a pH of 6.0 or lower, you **MUST** use Extreme Water Blend.

For all other well water, we recommend 2X Concentrate Preventer.

Note:

We recommend that well water be tested annually at least, and preferably every six months.



Call us if you need to have your water tested:

**1-800-347-7487**

## What are the recommended dosage amounts for a Siphoning Feeder System?

Stain Preventer Formula: Dosage Amounts for a 30 Gallon Tank	
Amount of Formula to add at each filling	
Parts per Million of Iron	1/2 Gallon Bottles of Rid O' Rust
1	1/2
2	3/4
3	1
4	1 1/2
5	2
6	2 1/2
7	3

### Notes:

- The remainder of the tank should be filled with water. Bleach may be added for algae prevention only after the mixture is fully diluted. Adding bleach directly to the Formula will cause a gas release.
- A 25 gallon per minute maximum flow rate is assumed for the irrigation system. Dosage should be increased proportionately, if the flow rate is higher.
- At a one gallon per hour feed rate, the system should provide about 30 hours of watering before the tank must be refilled.

**Please retain the following information for your records:**

Date Siphoning System installed:

\_\_\_\_\_

System purchased from:

\_\_\_\_\_

Installer's name:

\_\_\_\_\_

Telephone number:

\_\_\_\_\_

Well pump HP:

\_\_\_\_\_

Results of well water test:

Iron (in PPM) \_\_\_\_\_

pH \_\_\_\_\_

# General Warranty Information

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## General Statement

Because of the nature of the water treatment business, we can warranty our hardware — the pumps, tanks and parts that feed chemicals — but cannot make a blanket guarantee as to the performance of our chemicals in the field. We do warranty that we have provided the appropriate amount of ingredients and that under stated conditions, they should perform as represented. Many factors over which we have no control affect the performance of our products. Actual well conditions, for instance, may differ from those represented to us when we recommend dosage rates. We have no control over the equipment installation, or the maintenance and service provided to sustain the performance of a water treatment system. A blanket guarantee of performance, given these conditions, would be impossible.

## On Rust Stain Prevention

Our Formula chemicals work to prevent rust stains and corrosion by sequestering and chelating ferrous (clear water) iron in the well water. To the extent that there is ferric iron in the well water, we will not be able to prevent a stain. Generally speaking, ferric iron can be produced in two ways:

By introducing air, chlorine or any other oxidizing agent into the well water prior to the point that our formulas are injected.

By the presence of iron-related bacteria in the well water that produce ferric iron as a by-product of propagation.

It is difficult to test well water to determine the amount of ferric iron present. Iron bacteria, in the other hand, signify their presence by reddish tinged water, slime on pipes, and slime and "sludge" build-up around the edges and corners of an irrigation system.

Please note that lake water or any other bodies of water exposed to the atmosphere can have substantial amounts of ferric iron that we cannot treat.

As noted elsewhere in our literature, stains are also caused by tannin in the well water. We find that stains can appear with tannin in excess of 3 ppm. Our products do not prevent stains of an organic nature

and tannins are organic.

A final point is that "mother nature" can interfere with the best application charts through changes in the water table. We would recommend that users test their water each year to monitor changes in iron, hardness and pH levels.

## FULL ONE YEAR WARRANTY ON PARTS THAT FAIL

For one year from the date of purchase, we will replace any defective part of a feeder system, free of charge. This warranty extends to five years on certain molded tanks and a lifetime for the PumpHaus™. We reserve the right to provide reconditioned parts as replacements. Warranty service is available by contacting your nearest American Hydro Systems products supplier. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

## American Hydro Systems, Inc.

7201 Engle Road, Ft. Wayne IN 46804

**1-800-347-7487**

info@americanhydro.com

# Rid O'Rust Products

## Rid O'Rust Products and Feeder Systems Create the Best-looking Landscapes Around.

Many well-based irrigation systems create stains and other deposits on walls, driveways, sidewalks and even on plants, shrubs and trees, depending on the minerals present in the water. Rid O'Rust® products remove and prevent sprinkler stains with maximum results and minimum work. Rid O'Rust

spray-on Remover gets rid of rust stains immediately. Rid O'Rust Preventer formula is designed to be fed through your irrigation system using an American Hydro Feeder System, so every time you water, you also prevent ugly rust stains from coming back. You can also use the feeder system to fertilize and repel pests. See page 12 for information about liquid fertilizer and all-natural pest repellent products.



### Rid O'Rust® Rust Stain Remover

Liquid & Powder Exterior Rust Stain Remover

- Dissolves rust stains on most exterior surfaces
- No scrubbing, mixing or measuring required

Sizes: Liquid - 1 gal, 2.5 gal, 55 gal  
Powder - 12 oz, 39 lb



### Rid O'Rust® Rust Extreme Stain Preventer 2x

Problem Well Water Stain Preventer Concentrate for Low pH Conditions

- Prevents rust and lime scale staining caused by well-based irrigation
- Strongest, most economical formula

Sizes: 64 oz, 2.5 gal, 30 gal



### Rid O'Rust® Rust Stain Preventer 2x

Well Water Stain Preventer Concentrate

- Prevents rust and lime scale staining caused by well-based irrigation
- Strongest, most economical formula

Sizes: 64 oz, 2.5 gal, 30 gal



### Rid O'Rust® Calcium Scale Preventer 2x

Well Water Calcium Stain Preventer Concentrate

- Prevents lime scale staining & drip emitter build-up from well-based irrigation
- Prevents hard water spots on glass, vehicles, brick and more

Sizes: 64 oz, 2.5 gal, 30 gal

# Liquid Fertilizers & All-Natural Pest Repellent

## Our Products are Designed to Work Naturally.

American Hydro offers a range of professional liquid fertilizer and pest control formulas created to deliver lush plant growth and beautiful landscapes throughout the growing season. They're completely natural products that reinvigorate the landscape,

provide a safe, effective pest barrier and are polite to the environment. All our products are designed to be applied through an irrigation feeder system every time you water with your sprinklers, supporting healthy, pest-resistant plants, shrubs, trees and grasses.

## NatureShield<sup>™</sup>

ALL-NATURAL PEST REPELLANT



### All-Natural Pest Repellent

Repel unwanted pests with NatureShield<sup>®</sup> — its all-natural, proprietary blend of essential oils is naturally formulated to control mosquitoes, ants, ticks, fleas, carpet beetles, centipedes and other crawling and flying insects. It can be used as a stand-alone solution or it can be combined with Rid O' Rust and GrassSoGreen. Unlike chemical pesticides that can be harmful to pets and children, the essential oils in NatureShield come from natural sources that include garlic, cinnamon, castor and cedar oils. NatureShield provides a safe, effective pest barrier and is designed with nature in mind.

### Multiple Uses

- For pump sprayer, use 4 oz. per gallon of water
- Fill the hose-end sprayer and set application rate to 4 oz.
- May also be used in spray rigs



## GrassSoGreen<sup>®</sup>

### All Purpose 30% Organic Blend 7-7-7

GrassSoGreen<sup>®</sup> All-Purpose Blend contains an organic base with several beneficial synthetic macro-nutrients that help establish a healthy ecosystem and feeds the landscape. The balanced blend can be used in nearly all applications, including new and established lawns, trees, shrubs and gardens. All-Purpose blend can also be used to transition landscapes from a synthetic fertilizer program to an organic program to prevent undesirable nutrient withdrawal.



### Maintenance Formula 19-0-0

GrassSoGreen<sup>®</sup> Maintenance Formula is an environmentally-friendly liquid fertilizer that is applied through an American Hydro Systems Feeder System in continuous, small doses, breaking the feast-or-famine cycle caused by the typical application of dry fertilizers. Maintenance Formula provides a beautiful landscape throughout the entire watering season.