

POOL OWNERS MANUAL

INTRODUCTION

Congratulations on the purchase of your San Juan Pool. It is one of the finest swimming pools in the industry and is designed to give you countless years of pleasure. It is constructed of only the best materials available and is built to the highest specifications. Your San Juan Pool has been designed to provide you with maximum enjoyment and minimal time spent for maintenance.

Clean sparkling water in your San Juan Pool should be your goal. This goal can be attained by becoming familiar and following the recommendations for maintenance in this manual. It is important to read and keep all of the operating instructions, owners manuals and warranties for your pool and its equipment. Clearly understand the specifics of safe operation and proper maintenance which these manuals provide. Keep these materials on file and pass them along to future owners or renters.

GETTING STARTED SAFETY FIRST

Think safety first because serious injury and even death can result from unsafe use of pools, pool equipment and associated products. The following are some examples:

DROWNING - Although most drownings occur in natural water settings such as oceans, lakes and rivers, drownings do occur in swimming pools. The water depth of any pool is sufficient for drowning to occur. Drowning is a leading cause of accidental death, especially for children under five.

PARALYSIS - Improper diving or sliding, alcohol consumption, horseplay, or roughhousing in and around swimming pools may lead to serious neck and spinal injuries including paralysis, in the form of quadriplegia or paraplegia. Family and guests who will use your pool must do so according to a set of safety rules you have established.

FIRES/BURNS - The chemicals needed to maintain your water chemistry are potentially harmful when stored or used improperly. If mixed with other chemicals, explosion and fire can occur. Read the labels on the chemical containers and follow manufacturers' instructions. Always store chemicals out of the reach of children.

ELECTRICAL SHOCK/ELECTROCUTION - Water is an excellent conductor of electricity. Electrical shock or electrocution can occur in a pool if live electrical current flowing through appliances and devices including current from a telephone comes in contact with the water. Make sure all electrical devices are protected by a ground fault circuit interrupter (GFCI).

Establish safety rules and enforce them. Help ensure your family and guests are not victims of any of these unfortunate accidents.

SAFETY TIPS TO PREVENT DROWNING

- Never leave a child unsupervised and out of eye contact in or near the pool – not even for a second. If you must leave the pool area even for a moment, please take the child with you.
- Do not allow anyone of any age to swim alone.
- Teach your children to swim.
- Do not rely on plastic inner tubes, inflatable arm bands, or other toys to prevent accidents.
- Make certain that all doors leading from the house to the pool area have a self closing/self latching mechanism above the reach of small children to protect against all unauthorized entry and use.
- A fence, wall or natural barrier should be of sufficient height to keep unauthorized people out of your pool. If gates are used, they should have a self closing/self latching mechanism. Ensure that such gates or latches are locked when the pool is not in use.
- Keep lifesaving equipment next to the pool. These items should remain stationary and not be misplaced.

- To avoid entrapment, never use a pool if any of the grate outlets are broken or missing.
- Adults in the family should be trained in cardiopulmonary resuscitation (CPR). CPR training is available through the local chapters of the American Red Cross or the American Heart Association.
- A telephone near the pool area will provide quicker access to a medical facility in case of an emergency.
- When the pool is not in use, the pool owner is responsible for safeguarding the pool.

SAFETY GUIDELINES FOR USING YOUR SAN JUAN POOL

DIVING GUIDELINES

- If the pool is designated as a non-diving pool, no diving of any type should be performed in this pool. Diving into this pool could result in serious injury, paralysis or death.
- If the pool has been designated as a diving pool the following additional instructions are recommended:
 - All diving shall be from the center of the deep end wall. In pools equipped with a diving board all diving shall be from the diving board.
 - ANSI/NSPI standards for inground residential pools require that all diving equipment be used and installed in accordance with the recommendations and instructions of the diving board manufacturer. Consult such recommendations and instructions before installing or using diving equipment on this pool.
 - Be sure that all pool users are familiar with the contours and dimensions of the pool bottom before diving headfirst into pool.
 - When diving, be sure to hold your head up, arms up and steer up with your hands. Remember when you dive down you must steer up to avoid serious injury.
 - Practice carefully before you dive headfirst.
 - Test the diving board for its spring before using.
 - Dive straight ahead – not off the side of a diving board.

- Do not dive into the shallow end of the pool.
- Do not dive from any place that is not specifically designated for diving. Do not dive or slide headfirst out through any objects such as inner tubes.
- Do not use diving equipment as a trampoline.
- Do not back dive, backyard pools are not built for this type of dive.
- Do not run and dive.
- Do not dive alone.

Improper use of diving boards can lead to accidents resulting in paralysis or other serious injury. Make sure your diving board is right for your pool. Learn the correct methods to dive and enforce proper use.

GUIDELINES FOR PROPER USE OF POOL SLIDES

- Slides should only be installed on pools that can accommodate their use. Sliding equipment must be matched to your pool and installed by your San Juan dealer or pool professional according to the slide manufacture's specifications.
- Slides must not be used improperly – no horseplay.
- Do not dive from a slide.
- Do not jump from a slide.
- Do not allow slide entries by non-swimmers into deep water, to protect them from drowning.
- Do not allow any slide to be performed other than sitting, feet first or flat on belly, headfirst.
- If headfirst slides are to be attempted, the pool slide must exit into deep water.
- Do not allow headfirst entries from a slide that exits into shallow water.
- Do not allow standing on the top of a slide or outside the guide rails.

Improper use of pool slides can lead to accidents resulting in paralysis or other serious injury. Make sure your slide is right for your pool. Learn the correct methods to slide and enforce proper use.

OTHER SAFETY GUIDELINES

- Jumping – Before jumping, know the depth of the water and look out for any obstacles or other swimmers. Jumping incorrectly into shallow water could lead to accidents resulting in serious injuries.
- On any appliance used at poolside, make sure it is connected to a ground fault circuit interrupter (GFCI). Do not use extension cords. Electrocutation from appliances and telephones in contact with water is a real danger.
- Uses of alcohol or drugs do not mix with pool activities.
- Never allow anyone to use the pool under the influence of alcohol or drugs.

LIFESAVING EQUIPMENT

- Have at poolside a safety device such as a solid pole, a rope or a life ring, which can provide immediate assistance to a person in trouble.
- Only use the above mentioned devices for emergencies.
- Do not allow children to play with lifesaving devices.

FIRST AID

- Have a complete first aid kit at poolside and be able to understand how to properly use its contents.
- Post a list of emergency telephone numbers by the phone nearest the pool. The list should include the names and telephone numbers of the nearest physician, ambulance service, hospital, police and fire or rescue unit.
- At minimum one responsible person should be trained in artificial respiration and or cardiopulmonary resuscitation (CPR). Such training is available from organizations such as the American Red Cross.

WATER LEVEL

DO NOT DRAIN YOUR POOL. Your San Juan Pool is designed to remain full of water at all times. If the pool is drained without proper directions, hydrostatic or ground pressure outside the pool could cause the structure to buckle or crack. All damage to the pool shell resulting from improper pool drainage is the owners responsibility. If it becomes necessary to drain the pool, contact your San Juan Dealer or the San Juan Pool manufacturer. For best operation, keep the pool water level in the center of the skimmer plate when pool is in use. Low water level may cause the circulation pump to lose prime resulting in pump damage. High water level reduces or eliminates the skimmers effectiveness.

POOL SURFACE CARE

The bathtub ring, which forms on the pool wall or tile caused by body oils, Sun tan lotions and airborne contaminates, can easily be removed with BioGuard Off the Wall surface cleaner or other nonabrasive commercial tile or vinyl cleaner. Do not use abrasive cleaners, steel wool, metal scrapers, brushes or tools as they may cause permanent damage to the gel coat finish. Dulled gel coat finishes above the water line may be restored with a heavy cut automotive polishing compound, power or hand applied followed by a coat of wax. The gel coat finish of your San Juan Pool can be scratched like any other glass surface. The gel coat is seven to eight times thicker than a normal coat of paint so it is not likely that scratches will be more than superficial. Hairline cracks, which may develop over a period of time, are not uncommon. They only penetrate the gel coat and do not affect the pools structure or result in leakage. Scratches and hairline cracks are repairable. Contact your San Juan Dealer for further information.

POOL EQUIPMENT

POOL SKIMMER. Water flows from the pool through the skimmer then into the pump. The pool skimmer is designed to

break water surface tension and remove floating debris as it floats by the skimmer then keeps it from drifting back out. Be sure the weir opens and closes freely. If stuck in the closed position, water from the pool can not flow freely into the skimmer and pump damage may result. Debris is caught in the skimmer basket and should be removed and emptied as required. Excessive debris can clog the basket resulting in ineffective skimming and or damage to the pump.

MAIN DRAIN. Water from the bottom of the pool flows through the main drain to the pump. The term main drain implies a way to remove the pool water, however its primary purpose is to circulate deep water, not drain the pool.

RETURN INLETS. The adjustable return inlets return filtered water back to the pool. Adjust one return inlet down and to the left of center. Adjust the other slightly up and left of center. This allows both deep and shallow water circulation along with clockwise water rotation.

Safety Guidelines for Fittings, Grates, and Drains:

- Your pool's skimmer and main drain covers, inlet and outlet fittings and grates should be kept in good condition and secured in place at all times.
- Inform children that these devices are not toys.
- Inform all swimmers not to stick their fingers, toes or body into them. Entrapment and drowning can occur.
- Inform all swimmers with long hair not to get hair near a pool outlet. The suction can cause hair or body entrapment resulting in drowning.

PUMP AND MOTOR. The pump and motor draw water from the main drain and or the skimmer, then push the water through the filter and, if so equipped, through the heater, chlorinator then back through the pool return inlets. If allowed to run dry, the pump and adjacent piping can be damaged.

PUMP STRAINER (in front of pump). The lint and hair strainer basket collects lint, hair, etc., and prevents it from entering the pump and filter. Clean as required. Before removing the lid to strainer basket, be sure to turn the pump motor OFF. Be sure the strainer lid is re-secured, turn the pump on, and open the air relief valve on top of the filter. Silicone based grease or Aqua Lube on the O-ring in the lid will assure you of a better seal. Sandy dirt collected in the bottom of the strainer housing can be washed out by removing the quarter inch plug at the bottom of the strainer housing and flushing it with a hose.

FILTER. Your pool filter is designed to mechanically clean your pool water by trapping tiny particles inside. The cleaner the water, the less sanitizer and water chemistry adjustments will be required. Your San Juan Dealer will advise you regarding care and maintenance of the filter system provided for your pool.

FILTER PRESSURE GAUGE. The pressure gauge located on top of the filter tells you the condition of your filter and circulating system. With the filter clean and the suction and return valves open, check and note the pressure reading on the gauge. When the gauge rises ten pounds above this starting pressure, it is time to clean or backwash the filter. If the gauge falls below the starting pressure, check the skimmer and hair and lint pump strainer for debris. If the reading remains low, check for any air leaks at the hair and lint strainer lid on pump. If low pressure persists, check for cracked or broken piping on the inlet side of the pump. Excessive air bubbles in the hair and lint pump strainer may also indicate cracked or broken pipes. Follow manufacturer and dealer instructions for operation and maintenance for other pool equipment and accessories.

TIME CLOCK. The time clock turns the pump motor on and off at adjustable predetermined times. For best results the time clock should run the pump eight to twelve hours when water is at swimming temperature and three to five hours at lower temperatures. It is best to set the time clock to cycle on and off

twice in a twenty-four hour period to better balance circulation, filtration and sanitizer disbursement.

LIGHT. Consult your San Juan Dealer for bulb replacement and instructions.

FILTER AND CLEANING

The secret to clean, clear and sanitary swimming pool water is achieved through a combination of the following:

- Filtration.
- Regular cleaning and maintenance.
- Chemical treatment and water balance.
- Swimming pool water will remain fresh and inviting only if all three factors are properly applied. Many water problems can be a result of poor filtration or maintenance and cannot be cured by chemical treatments.

THE PUMP AND FILTRATION SYSTEM

The pool's circulation system is designed to filter the entire contents of the pool every eight to twelve hours. The pump draws water from the skimmer(s) and main drain. The water circulates through the filter, removing fine particles and dirt. Filtered water may also pass through a heater or chlorinator, and then return to the pool through the return inlets.

As the filter becomes saturated with dirt, pressure increases on the pressure gauge and the return flow of water to the pool decreases. The filter must now be cleaned.

There are three different types of filters commonly used, sand, cartridge and diatomaceous earth (D.E.) filters. Please check the equipment manufacturer's guidelines for cleaning. Backwashing the filter should be determined by the pressure not time. Backwash when the pressure gauge on the filter increases ten pounds over its "clean pressure." Backwashing too frequently will waste chemicals and water and will not improve filtration. Because backwashing does not always remove oils and deeply embedded debris, every filter also needs to be chemically cleaned regularly. Your San Juan Dealer or local BioGuard dealer can help you establish a filter

maintenance program or consult your filters manufacturer manual for guidelines.

SAFETY GUIDELINES FOR FILTER SYSTEMS

- Never work on your filter system without turning the entire system off and bleeding off the internal pressure. Most filter systems can maintain internal pressure even when off. When you restart the filter after maintenance, or turn on your equipment to put the pool back in operation, always bleed off air in your filter tank and stand clear. If you are at all unsure of how to proceed, ask your San Juan dealer.
- Follow the manufacturer's instructions for maintaining, servicing or repairing your filter.
- Never inspect filtration equipment without being sure that the internal pressure has been bleed off through the manual valve provided for that purpose.

REGULAR VACUUMING AND CLEANING

Regular vacuuming and brushing of the pool is essential. Manual vacuuming and brushing should be done at least weekly. Automatic cleaners will eliminate most of the work associated with vacuuming and brushing. Dirt and debris consume chemicals and can stain the pool. Therefore, remove all dirt, debris and leaves as soon as possible with a good cleaning. Ask your San Juan Dealer for details on these time saving cleaners.

MANUAL VACUUMING INSTRUCTIONS

The pool vacuum works on the same principle as a carpet vacuum for your home. The pool vacuum uses water suction instead of air to remove dirt and debris from your pool's floor. Follow the guidelines listed below:

- Turn off the pool pump and if so equipped, turn the skimmer or vacuum valve open and the main drain closed.
- Remove the skimmer lid and basket. Note: If so equipped, leave the skimmer basket in place and use the vacuum outlet.
- Attach the vacuum hose to the vacuum head and attach the vacuum pole to the head.

- Sink the vacuum head to the bottom of the pool, and then fill the vacuum hose with water by submerging the hose, displacing the air.
- Insert the open end of the vacuum hose through the skimmer top into the suction outlet. Note: If the pool is equipped with a dedicated vacuum wall fitting, insert the open end of the hose into the fitting.
- Turn on the pool pump then vacuum the pool slowly from shallow to deep end. Note: Do not vacuum large leaves or debris as it may clog the plumbing lines.
- When vacuuming is complete, remove, empty and replace the skimmer basket and re-open the main drain valve.
- Check the filter pressure gauge and if required, backwash or clean the filter.

OTHER IMPORTANT "TO DO'S"

Observe your pool daily and give attention as necessary to these other important cleaning tasks:

- Keep pump and skimmer baskets clean. A clogged basket restricts water flow and filtration.
- Keep water level in the center of skimmer, do not allow water level to go below skimmer opening.
- Clean water line with a swimming pool tile and vinyl cleaner.
- Keep the main drain clear of debris.
- Check the filters pressure gauge regularly.

WATER CHEMISTRY

Determining your pool's water capacity:

To properly apply chemicals you must know your pool's water capacity. Consult your San Juan Dealer for gallons of water in the pool model purchased or use the following formulas to calculate the gallonage of water in your pool.

Multiply (Using Feet)

$$\text{Length} \times \text{Width} \times \text{Average Depth} = \text{Total Volume}$$

$$\text{Length} \text{ Width Average Depth } S \text{ factor Gallons}$$

Use for S (Shape) factor:

Rectangle – 7.5, Oval – 6.7 and Round – 5.9

Average depth is determined by taking the depth of the deep end plus the depth of shallow end and dividing by two.

Knowing your pool's gallons is extremely important to ensure accurate chemical additions, adjustments and overall proper chemical balance.

WATER TESTING

Appearance is not a reliable gauge of the condition of your pool. A good test kit must be used regularly to ensure clear and sanitary water. Your test kit should be able to test sanitizer level, pH, total alkalinity and calcium. Your test kit should also include the type and amount of products required to adjust your pool water chemistry. These are the chemical factors that can change quickly and require frequent adjustments.

Note: For best results when testing pool water, take water samples from at least 18" below surface, opposite side of a return jet.

Make sure to hold test reagent bottles vertically when applying reagents to test cells. Chemical reagents should be replaced every year. There are several other factors that make up proper water balance such as Calcium Hardness, Total Dissolved Solids, Chlorine Stabilizer & Metals that once adjusted to proper levels only need to be tested two to four times a year. Bring a pool water sample to your San Juan Dealer or local BioGuard dealer for a complete water analysis when you open and close your pool, and every 4-6 weeks during the season.

PROPER CHEMICAL RANGES FOR YOUR SAN JUAN POOL

Chlorine Residual – 1.0 to 2.0 ppm

pH Level - 7.2 to 7.6 (Ideal 7.4 to 7.6)

Total Alkalinity – 125 to 150 ppm

Calcium Hardness for Chlorine and Bromine – 175 to 225 ppm

Calcium Hardness for Soft Swim – 200 to 275 ppm

Cyanuric Acid (Chlorine Stabilizer) 30 to 40 ppm

Metals – 0 ppm

PROPER CHEMICAL BALANCES AND ROUTINE MAINTENANCE FOR YOUR SAN JUAN POOL

STEP 1 – TOTAL ALKALINITY TEST 1 TO 2 TIMES A WEEK

Always check total alkalinity first. Proper range for total alkalinity for your San Juan Pool is between 125 to 150 ppm. The total alkalinity is the measure of alkaline materials dissolved in the water. Proper levels of total alkalinity serve as a buffer to prevent fluctuations in the pH. To increase your total alkalinity, add BioGuard Balance Pak 100. In general, 3 pounds of a total alkalinity increaser will raise the total alkalinity in a 10,000 gallon pool by 20 ppm. To lower your total alkalinity you may need to add doses of BioGuard Lo N' Slo. Always follow the directions on the chemical container. Total Alkalinity kept in the proper range will help stabilize the pH level.

STEP 2 – PH CONTROL TEST 2 TIMES PER WEEK

pH is a measure of the relative acidity and alkalinity of water. The pH scale runs from the highly acid range of 0 to the highly alkaline range of 14. A pH level of 7 is considered neutral. The ideal and most comfortable range for your San Juan pool water is a pH between 7.2 to 7.6 (Ideal 7.4 to 7.6).

PROBLEMS WITH “OUT OF RANGE“ PH

LOW PH (PH BELOW 7.2) CAUSES:

- Eye burn and skin irritation.
- Corrosion of pool surface, pool equipment and fittings.
- Rapid loss of chlorine

HIGH PH (ABOVE 7.6) CAUSES:

- Loss of chlorine effectiveness.
- Scaling on pool surface
- Cloudy water
- Ideal conditions for algae growth

It is very important to keep your pH level between 7.2 to 7.6 (Ideal 7.4 to 7.6), to avoid the many problems that can occur with your pool's surface, equipment and water.

WHAT CAUSES THE PH TO CHANGE?

pH can vary week to week, even day to day. Factors that affect the pH include: swimmers, rainwater, leaves, fresh/rain water, chlorine, and the total alkalinity.

ADJUSTING PH

If the pH is low, add BioGuard Balance Pak 200 to raise the pH. Follow directions on the container for dosage and application. Generally, never add more than ¼ to ½ pound of BioGuard Balance Pak 200 per 20,000 gallons of pool water at one time. Re-test after four hours and repeat dosage if necessary. If the pH is high, add pH Lo N' Slo to lower the pH. Follow directions on container for dosage and application.

Note: If you can not maintain a proper pH level, check total alkalinity and adjust accordingly. Proper total alkalinity stabilizes the pH level.

STEP 3 – CHLORINE TEST 2 TIMES PER WEEK

Chlorine is the most widely used effective and economical sanitizer for swimming pools. Chlorine controls algae, effectively kills bacteria and other disease causing organisms, and removes waste products through oxidation. You should maintain low, but constant chlorine levels. Proper chlorine levels for your San Juan Pool should be between 1.0 to 2.0 ppm.

Use slow dissolving chlorine tablets or sticks like BioGuard Silk Tabs, Silk Sticks and Smart Sticks in an automatic chlorinator or in skimmer basket. If chlorine level is low, turn the dial up on chlorinator or Silk Tabs in a floater or shock the pool with BioGuard Smart Shock, Burn Out Extreme or Burn Out 35. Too high, turn down or off the automatic chlorinator or remove the floater. The most popular form of chlorine is pre-stabilized “Tri-chlor” which are available in the following forms:

BioGuard .3” or 1” Silk Tab (Pucks) BioGuard Silk Sticks BioGuard Smart Sticks

Not only do the Silk Tabs and Silk Sticks provide sanitation by killing bacteria, SilkGuard is patented technology in Silk Tab and Silk Stick which enhances water by imparting a number of additional benefits, including: prevention of metal staining and corrosion, reduction of scale formation, and softening of water, making it silky smooth. Silk Tabs and Silk Sticks can be used in floaters, chlorinators and skimmer baskets.

BioGuard’s Smart Sticks are extra long-lasting chlorinating sanitizer that when placed in skimmer baskets the sticks will almost stop dissolving when the pump is off, therefore lasting about a week with a 10 – 12 hour pump run time. Smart Sticks can be used in skimmer baskets or chlorinators, but not in floaters.

HOW MUCH CHLORINE IS NEEDED?

The chlorine level should be regularly tested and maintained between 1.0 to 2.0 ppm. Many factors affect the consumption

of chlorine such as sunlight, water temperature, rainwater, fresh water, pH, bather usage and contaminates blowing into the pool by wind and rain. Therefore, there is no reliable chart to properly calculate how much chlorine should be added to any particular pool. However, as a rule of thumb a 10,000 gallon pool will use about 1 to 2 pounds of Silk Tabs or Silk Sticks per week. Of course this will vary based on the factors mentioned above.

STEP 4 – SUPER CHLORINATION (SHOCK) WHY IS SHOCKING YOUR POOL NECESSARY?

Waste enters the pool through wind, rain, and people. Many of these wastes are not filterable and combine with the chlorine to form “chloramines,” a chlorine nitrogen complex. Chloramines cause eye irritation and reduce the amount of “free” chlorine available to provide sanitation. A build up of waste (in the form of chloramines) also causes the water to become cloudy or have a dull appearance.

WHAT SHOCKING DOES

Shocking burns out wastes and transforms the chloramines back to free available chlorine. Shocking uses oxidation to restore the pool water to a sparkling, sanitary, comfortable condition. Normal chlorine levels are usually unable to accomplish this.

HOW AND WHEN TO SHOCK

Shocking should be done every week. Heavy bather use and warm water temperatures will further increase the need to shock. The addition of 1 pound of BioGuard Smart Shock per 12,000 gallons of pool water is usually sufficient. Preferably shock the pool in the evening. Next morning add a maintenance dosage of a BioGuard Back Up or Algae All 60 algicide.

NOTE: Additional shock may be needed after a rain storm, heavy bather load, hot weather or additional fresh water filling.

There are various shocks offered by BioGuard

- Burn Out is Calcium Hypochlorite 47% available chlorine.

This shock product is a multifunctional formula that shocks, clarifiers and oxidizes the water.

- Burn Out 35 is Lithium Hypochlorite (Granular Chlorine) 35% available chlorine This compound is different from many other chlorine shock products because it dissolves almost instantly and does not affect the pH or calcium hardness.
- Smart Shock is 39% available chlorine and also is a multifunctional shock that kills algae, bacteria, shocks and clarifies the water to make it sparkling clear.

STEP 5 – PREVENTATIVE ALGAECIDE

Algae are microscopic plant life that's introduced into the pool water by rain, wind and leaves. When allowed to multiply, algae consumes chlorine and becomes unsightly. Algae can grow quite rapidly, sometimes appearing in just a matter of hours. Warm water dramatically enhances the growth of algae.

The best approach to prevention of algae is a maintenance program. Add Back Up or Algae All 60 (non-foaming and no copper, use for pools with water features or spill over spas) to the pool water every week. Add the algaecide the following morning after shocking the pool.

STEP 6 – WATER CLARIFIER

BioGuard Polysheen Blue should be added once a week to "polish" water. Follow label directions for application procedures. Do not overdose on water clarifiers.

CALCIUM HARDNESS – Is the relative hardness of your pool water. How hard water is has to do with the amounts of dissolved calcium in it. Pool water needs a proper calcium hardness level to prevent damage or scaling to surfaces and equipment. If the water is too soft, it will be aggressive and erode equipment components such as heaters, ladders and handrails along with pool surfaces. If the water is too hard, deposits will form on the pool equipment and pool surface. The proper range for Calcium Hardness in your San Juan Pool is between 175 to 225 ppm for chlorine and bromine pools and 200 – 275 for Soft Swim pools. Test Calcium Hardness

monthly. To increase Calcium Hardness in your pool, add Balance Pak 300 and follow directions on product container for application.

BIOGUARD STABILIZER 100 (CYANURIC ACID) – Sunlight is a major factor in the consumption of chlorine. When Stabilizer 100 is added to the pool water, it makes the chlorine more resistant to the U.V. rays of the sun. Chlorine stabilizer helps keep your chlorine levels more constant while reducing your chlorine costs. The proper chlorine stabilizer level for your San Juan Pool should be between 30 to 40 ppm. You should have your chlorine stabilizer level tested monthly at your San Juan dealer or local BioGuard dealer. To increase your chlorine stabilizer add Stabilizer 100. Three pounds of Stabilizer 100 will raise a 10,000 gallon pool by 30 ppm. Unlike chlorine, chlorine stabilizer is depleted only through splash out and backwashing. And because many forms of chlorine contain stabilizer, you may not need to add chlorine stabilizer every season.

Consult your San Juan dealer or local BioGuard dealer for additional information or recommendations regarding Cyanuric Acid levels.

SAFETY GUIDELINES FOR CHEMICAL STORAGE AND USE

- Before using chemicals, read the labels and directions. Follow all instructions.
- Keep chemicals out of the reach of children.
- Maintain all the original lids on chemical containers and make sure the lids are closed.
- Do not stack different chemicals on top of each other.
- Store chemicals in a clean, cool, dry, well-ventilated area, preferably off the floor.
- Keep pool chemicals away from lawn and garden chemicals.
- Keep liquid chemicals away from dry chemicals.
- Keep separate all different forms of chemicals.
- Wash your hands after using chemicals.
- Never mix two chemicals together. Use a clean scoop for

each chemical.

- Always add the chemicals directly to pool water, either in a feeder, distributed across the surface of the pool, or diluted and poured into the pool water.
- Always add chemicals to water. Never add water to chemicals.
- Never add chemicals to the pool with swimmers in the water.

Do not guess with chemicals. Before using, read the labels and follow directions.

ALTERNATIVES TO CHLORINE – Here are some alternatives to the traditional chlorine applications:

BIOGUARD MINERAL SPRINGS IS A CHLORINE GENERATION

device that are plumbed inline at your equipment area and work by electrolytically converting minerals in the pool water into chlorine as the water passes through the device (cell). Mineral Springs Beginning must be added to the pool at start up per label directions. Thereafter, Mineral Springs Renewal is added on a weekly basis to replace any minerals levels lost due to splash out or backwashing. The device generates free chlorine, which controls algae, effectively kills bacteria and other disease causing organisms, and removes waste products through oxidation. Chlorine production is controlled by a setting and the device operates in conjunction with your pump and filter system. Properly used, there is much less sensation of chlorine being present than with the traditional chlorine system. The other water chemistry parameters must be maintained, as with any chlorine maintained pool. Use Mineral Springs Beginnings (initially) and Renewal (on a weekly basis) to prolong the life of the cell, enhance swimmer comfort, help balance pH, and maintain crystal clear water. Consult your San Juan dealer or local BioGuard dealer for additional information or directions concerning a Mineral Springs unit.

OZONATORS – Ozone is a form of oxygen and is a powerful oxidizing agent that can help control algae, destroy bacteria and other disease causing organisms, and remove waste products. It is not a complete sanitizer in the truest sense, because it does not remain in the water very long. In a swimming pool, there must be a backup sanitizer such as chlorine maintained at 1.0 to 2.0 ppm. Ozone purification systems can greatly reduce the quantity of chlorine that would otherwise be required. The devices that generate ozone fall into two categories: U.V. or Corona Discharge. With ozonation the other water chemistry parameters still must be maintained. For further information please consult your San Juan dealer or local BioGuard dealer. For other alternatives to the traditional chlorine applications, check with your San Juan dealer or local BioGuard dealer.

PROBLEM SOLVING

Occasionally problems will occur. Your best approach is to bring a pool water sample to your San Juan Dealer or local BioGuard dealer for a complete water analysis. Below are some of the most commonly occurring problems and their most likely solutions.

CLOUDY WATER

PROBABLE CAUSES:

Cloudy water is caused by any of, or a combination of the following conditions:

- High pH.
- Waste build-up.
- Low chlorine level.
- Early stages of algae growth.
- Poor filtration or non-filterable particles.

LIKELY SOLUTIONS:

- Backwash or chemically clean filter with BioGuard Kleen It.
- Check pH and adjust to between 7.2 to 7.6 (Ideal 7.4 to 7.6)
- Add 1 pound of Smart Shock per 12,000 gallons or 1 pound

of Burn Out Extreme per 10,000 gallons of water.

- Add Polysheen Blue.
- Check filter system for proper operation and circulation.

GREEN WATER

PROBABLE CAUSES:

Possibly caused by metals, but most likely caused by algae growth.

LIKELY SOLUTIONS:

Check and adjust pH and total alkalinity. Add 1 pound of Smart Shock per 12,000 gallons or 1 pound of Burn Out Extreme per 10,000 gallons of water. Follow up the next morning with a preventative dosage of Back Up or Algae All 60. If water does not start clearing in 24 hours, repeat treatment. Bring water sample to your San Juan Dealer or local BioGuard dealer for a complete analysis.

EYE/SKIN IRRITATION- CHLORINE ODOR

PROBABLE CAUSES:

Low pH and/or Total Alkalinity. Possible waste build-up and formation of chloramines.

LIKELY SOLUTIONS:

Check and adjust the pH and Total Alkalinity. Shock pool water with 1 pound of Smart Shock per 12,000 gallons or 1 pound of Burn Out Extreme per 10,000 gallons.

CAN'T KEEP CHLORINE LEVEL UP

PROBABLE CAUSES:

Low stabilizer level and/or high chlorine demand from excess wastes in the pool water.

LIKELY SOLUTIONS:

Take a pool water sample to your San Juan Dealer or local BioGuard dealer for a complete water analysis. Make sure they test

for stabilizer level and total dissolved solids and chlorine demand. Add chlorine stabilizer if level is below 30 ppm. Shock pool water with 2 pounds of Burn Out Extreme per 10,000 gallons of water to remove excess wastes. Other actions may be required.

METAL STAINING

WHAT IS A METAL STAIN?

Metal staining can occur on your San Juan Pool surfaces. Stains may show up on the pool's surface as large colored "splotches" or as overall "plating." Staining may occur quite suddenly or slowly over a period of months or even years.

WHAT CAUSES METAL STAINING?

Colored stains can be caused by the following:

- If the pool is filled or topped off with well water or even in some cases city water and BioGuard Pool Magnet Plus or Scale Inhibitor is not used while or after filling,
- minerals from the fill water can deposit on the surface of the pool and result in staining. Most fill water contains trace to measurable amounts of metals. These metals are completely dissolved in water and in most cases are not visible: The most common metals present in fill water are iron, copper, and manganese. The metal content usually depends on your source of fill water. Iron stains appear reddish or light brown, Copper will be green or blue and Manganese is black.
- If chlorine levels get extremely high such as after shocking the pool, and metals are present in the water they may be forced out of solution (water) and deposit on the surface of the pool (as a stain).
- If pH and total alkalinity are not kept in proper range and the water becomes acidic (corrosive), water running through the heater could bring copper from the heat exchanger into the pool.
- Raising the pH and total alkalinity too quickly, and if

metals are present in the water they may be forced out of solution (water) and deposit on the surface of the pool (as a stain).

- Additions of metal based algaecides, or any other metal contaminants such as coins or metal shavings from the job site.
- Fertilizer used in yards and gardens are a major source of staining (caution should always be used when applying these products near the pool).

STAIN PREVENTION

These are some of the possible causes, now let's discuss prevention. The first line of defense is to always ensure that your chemical levels are in proper range:

CHLORINE RESIDUAL – 1.0 to 3.0 ppm pH level – 7.2 to 7.6
(Ideal 7.4 to 7.6)

TOTAL ALKALINITY – 125 to 150 ppm Calcium Hardness – 175 to 225 ppm for chlorine and bromine, 200 – 275 ppm for Soft Swim

CYANURIC ACID (CHLORINE STABILIZER) 30 to 40 ppm Pool Magnet Plus or Scale Inhibitor should be added after filling or topping off the pool water level, or after heavy rains. Untreated water may stain your San Juan Pool surface. For prevention use a Pool Magnet Plus or Scale Inhibitor. Follow manufacturer's label directions for proper application.

NOTE: In many cases depending on the chemical manufacturer, there are different chemical product formulations for either prevention or removal. Make sure you are purchasing the best type of product for your needs. Consult your San Juan Dealer or local BioGuard dealer for additional information.

STAIN REMOVAL

How do I know if the Stain is removable?

Get a small sample of Lo N' Slo in a white sock or use a couple of Vitamin C tablets. Place the sample powder or tablet directly over a small stain (perhaps a step area) if possible, with the pool pump off. If the stain around the test area is removed within a couple hours, this indicates that the stain will likely respond to BioGuard Stain Remover.

Lower pH to 7.0 – 7.4 and adjust total alkalinity to 125 to 150 ppm bring your chlorine level to less than 1 ppm. Follow label directions for Stain Remover treatment amounts for existing stains. If possible, identify source of staining and follow prevention guidelines. After stains are gone, use Pool Magnet Plus or Scale Inhibitor on a regular basis following manufacturer's directions (especially after refilling, topping off, or heavy rains). Slowly bring chlorine level up to proper range (1.0 to 3.0 ppm). High chlorine levels or shocking the pool immediately after treatment may re-stain the surface. There are also other possible causes for stains, such as stains caused by organics from plants and leaves. Such stains require a different treatment. Consult your San Juan Dealer or local BioGuard dealer for further solutions.

OPENING YOUR POOL GET READY FOR THE SEASON

Start the Pool off Right

Follow these simple steps to open the pool properly:

1. REMOVE POOL COVER

(New pools and uncovered pools can skip this step.) If your pool has a solid cover, drain off the water. Don't let the standing water get into the pool. Sweep off the cover and then clean with a cover cleaner – deodorizer to prevent sticking and unpleasant odors by using BioGuard Stow Away. Once it is clean, store the cover in a dry place that is free of debris and protected from the sun and outside elements.

2. FILL POOL

Fill the pool to the middle of the skimmer opening for proper circulation.

3. CHECK THE EQUIPMENT

Make sure everything is clean and in working order, including the pump, skimmer, filter and heater (if applicable.) Start the circulation system, and remove debris from the pool. Pay close attention to the filter; it is a very important part of the pool's maintenance program. If it is not working properly, neither will the chemical products you add. Follow care instructions as recommended by the filter manufacturer.

4. CLEAN SURFACES

Give the pool a good brushing and vacuuming, and skim the surface for debris.

Use BioGuard Off the Wall surface cleaner around the water line to remove oil, grease, and other debris.

5. TEST AND BALANCE WATER

Test pool water for chlorine residual, pH, Total Alkalinity, Calcium Hardness, Cyanuric Acid (chlorine stabilizer), and metals. Balance the water to the following chemical ranges:

Chlorine Residual – 1.0 to 2.0 ppm

pH Level - 7.2 to 7.6 (Ideal 7.4 to 7.6)

Total Alkalinity – 125 to 150 ppm

Calcium Hardness – 175 to 225 ppm for chlorine and bromine, 200 – 275 ppm for Soft Swim

Cyanuric Acid (chlorine stabilizer) 30 to 40 ppm

Metals – 0 ppm If metals are present use a Pool Magnet Plus or Scale Inhibitor. Follow manufactures label directions for proper application.

6. SHOCK THE POOL using either Smart Shock, Burn Out Extreme, or Burn Out 25 per label directions to remove organic contaminants and make the water sparkle. Add Back Up or Algae All 60 to prevent, control, or kill algae.

7. BEGIN REGULAR MAINTENANCE PROGRAM.

CLOSING YOUR POOL

Get Ready For the Off-Season

When the temperature drops you need to prepare the pool for the winter months. Depending on where you live, you may close the pool completely or just use it occasionally. Either way, you want to winterize the pool properly so spring start-up is less time and money consuming. BioGuard has various winterizing products available that are designed to keep pool water clear and trouble free throughout the off season.

CLOSING FOR COLD CLIMATES:

- Balance the water. Test pH, total alkalinity, water hardness and adjust as needed. Apply BioGuard Basic Winter Kit products according to label directions.
- Add Winter Shock or Winter Shock II for long term winter protection.
- Add Winter algicide to prevent algae growth and Winter Anti-Stain.
- Run the filter for 24 to 48 hours.
- Clean up. Vacuum and brush the pool. Clean out the skimmer baskets and traps.
- Prepare equipment. Following equipment manufacturers' instructions, lower the water level below inlets; shut off the filter pump; drain the pump, filter, heater, hoses and all other applicable equipment; and store. Where necessary, use antifreeze formulated for pools.
- Raised the water level back to approximately 1 inch below skimmer. This level needs to be checked and maintained thought out the winter.
- Replace cover. Covering the pool keeps unwanted debris from getting into it, plus it also keeps chemicals from getting out. A good cover will save many hours when it's time to open the pool next season.
- If using a mesh-type cover additional treatments of Winter Shock or Winter Shock II should be applied mid-season. Note: In northern climates where frost lines exceed six inches, special care must be taken to eliminate the possibility

of freezing pool plumbing lines and equipment. Please consult your San Juan Dealer or local BioGuard dealer for specific information or directions for closing your pool.

CLOSING FOR WARM CLIMATES:

- Keep balancing the water, chlorinating and shocking-but do it about half as often.
- Reduce the filter running time, by about half.
- Consider a cover. Even though you may live where it's warm there may still be weeks at a time when the pool isn't being used. A cover will save work by keeping debris out and helping conserve pool chemicals.

PROPER CHEMICAL RANGES

Chlorine Residual – 1.0 to 2.0 ppm

pH Level - 7.2 to 7.6 (Ideal 7.4 to 7.6)

Total Alkalinity – 125 to 150 ppm

Calcium Hardness – 175 to 225 ppm for chlorine and bromine, 200 – 275 ppm for Soft Swim

Cyanuric Acid (chlorine stabilizer) 30 to 40 ppm

Metals – 0 ppm

PLEASE CALL 800-870-6370 FOR WATER CHEMISTRY QUESTIONS AND SOLUTIONS ONLY.

NOTES

Only pool professionals, licensed electricians, builders, carpenters or other appropriate experts should perform the following services: Selection, installation and servicing of diving boards, pool slides, electrical equipment, heaters, filters, covers, solar systems and plumbing devices.

- If you elect to have a pool service maintain your pool, please have them review this manual. It is important to have your pool service company follow the water chemistry values for your San Juan Fiberglass pool.

- The pool accessories and attachments on your San Juan Pool are manufactured by others and have separate warranties. Contact your San Juan Dealer or accessory manufacturer for specific information.

NOTES
