

Ponds have a natural tendency toward eutrophication. That is, a pond that starts out as clean, clear and well aerated will later become clogged with weeds and algae and will exhibit low dissolved oxygen. This is especially true of small ponds where the outflow is limited and the water is not circulating. When they get to this stage, your water feature becomes a real eyesore rather than a focal point of your grounds. As a grounds manager it is your job to see that your pond does not deteriorate to this level.

Fortunately, pond-management techniques and products can help you maintain your pond. Here are a few of the traditional methods from which you can choose:

**Diluting and flushing.**

Add large quantities of fresh water to dilute the amount of nutrients in the existing pond.

**Draining and dredging.**

Remove nutrient-rich water and refill with fresh water. In combination with dredging, this practice removes decomposed matter and nutrient-rich water.

**Controlling weeds with biologicals.**

Grass carp (white amur) are enthusiastic herbivores. Their primary diet is bottom-growing plants, but they will eat almost any aquatic vegetation. Therefore, many states have restricted these fish. Some states permit the triploid (sterile) variety because they cannot breed.

**Applying chemicals.**

Iron or aluminum sulfate binds with phosphorus to prevent algae from blooming. Copper sulfate and chelated coppers are algaecides. Chelated copper requires more accurate application rates. You must apply chemicals regularly to prevent algal blooms.

**Aerating water.**

A variety of products are available to increase the level of dissolved oxygen. This allows more biodegradable organic compounds to exist, leading to a good environment for aerobic bacteria to proliferate and help control algae.

In addition to all these pond-management techniques and products, you can use dyes to add an aesthetic touch and, in the case of one dye product, even control submerged weeds and algae.

**Stayblue**

Stayblue colors and shades the water. The colorants aqua-culturists most often select are blue and black. Blue dyes work well in water 3 or more feet deep and are not commonly used or recommended in shallow ornamental ponds. In shallow ponds, one should use black, vegetable-based colorants to create the illusion of depth while inhibiting light penetration. One can add them to small and shallow ornamental pools or to larger bodies of water with limited outflow. Typically, their effectiveness lasts a month and does not cause any cumulative environmental damage. Once dispersed in the water, the colorants cause no restrictions on swimming, fishing or irrigating.

In shallow ponds, a colorant increases the reflectivity of the water, creating the illusion of greater depth. In addition, it reduces the penetration of sunlight.

**Algae and submerged weed control**

Weeds and algae depend on sunlight for photosynthesis. More specifically, the light needed for photosynthesis must be rich in blue and yellow wavelengths. Pond Colorants have been formulated to block these wavelengths, thus depriving aquatic weeds and algae of the light they need for photosynthesis.

Obviously, pond colorants cannot shade floating or immersed plants that have foliage near the surface. However, they are effective on submerged plants, as well as phytoplankton and filamentous algae on the bottom. The colorant is quite long lasting and is expected to slow the growth of submersed plants where water is more than 60cm (about two feet) deep. Within 2 feet from the surface, enough sunlight to sustain plant life can penetrate the dye. However, deeper water allows the pond colorant to provide enough shade to suppress the plant growth below. Further, the relative safety of colorants gives you flexibility in application and use.

Colorants are not remedies for water-quality problems. They help reduce algae blooms and plant growth, but they do not address other problems you may have such as high nutrient load or low dissolved oxygen. High nutrients cause water-quality dilemmas and result in excessive, unwanted plant growth. If possible, you should re-circulate the water through plant basins where desirable plants are growing before resorting to dyes.

In smaller ponds, you must routinely re-circulate the water through a biological filter. The same is true for larger bodies of water, but, in place of the biological filter, you can divert re-circulated water through a biological basin before it returns to your pond. In the biological basin, you can plant desirable aquatic plants such as flowering iris, lobelia (cardinal flower) and pickerel rush to control your water's nutrient levels.

Your biological basin also captures drainage and runoff and helps mitigate some of the contaminants and nutrients that otherwise would accumulate in the catch pond. This is less effective during heavy downpours when flow rates are too great. You can periodically harvest the bio-basin to remove most of the unwanted contaminants and encourage new growth.

A biological basin is an effective way to provide filtration, and you can use this system with larger falls and flow rates. Space and pump capacities are the only things that limit the width and flow of falls. You also can scale the basin to any size of pond as long as 10 percent of the pond surface is used for the basin area. The pump-discharge (perforated) piping is distributed under 3 to 6 inches of pea gravel. Use 1/8-inch-wide slots in the bottom half of the piping to prevent gravel infiltration. You either must install a check valve at the pump or a weep hole or vacuum breaker in the discharge pipe-above water level-to prevent siphoning the basin dry when power fails.

Natural colorants serve a purpose and-with justified need and proper amounts-beautifies your pond. By combining colorants use with other pond management techniques, such as aeration and natural filtration, you can sustain the pristine look of your pond, while enhancing surrounding property aesthetics.

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| STAYBLUE is a powder formulation that comes in a case of four floating packets. Each packet treats one acre-foot of water. STAYBLUE does not make the water unsafe for fishing or swimming. For best control, colorant should be applied early in the season. |  |

**CONTENTS:**

BRILLIANT GREEN 5.52%

BRILLIANT BLUE 40.47%

TURKISH BLUE 11.05%

Patent blue 4.15%

Acid Yellow 4.49%

NATURAL BLACK 1.13%

Components ineffective as adjuvant 33.19%

Total 100.00%

**SUGGESTED LEVEL AND METHOD OF USAGE**

Each STAYBLUE packet will treat 1 acre of water 1 foot deep. So, for an acre size pond with an average depth of 4 feet, 4 packets will be needed.

Color intensity can be increased by adding more packets as desired.

Maintenance applications are recommended every 30 days depending on rainfall and other conditions.