SHAC® Ponder

APPLICATION GUIDE

Improves water quality by decreasing odors, turbidity, and organic solids accumulation.

SHAC *Ponder*™ treatment helps to achieve a naturally balanced system by stimulating resident microbial populations and improving the decomposition of organic material.

- **Reduces offensive odors in treated water** providing more pleasant drinking water for livestock and humans.
- **Reduces black organic sludge (biosolids) from the bottom of ponds** which is often the nutrient source for aquatic weeds and algae.
- **Reduces cloudy, turbid water** providing clearer water for all uses.
- **Safe for human and livestock consumption** immediately after application (Please note: *Ponder* does not replace standard water treatment practices in sources intended for human consumption).
- **Certified by the National Sanitation Foundation (NSF) Standard 61.**

For more information on Shac *Ponder* scan QR Code

SHAC *PONDER*™ IS DESIGNED FOR:

- farm dugouts and reservoirs
- municipal reservoirs and lakes
- ornamental ponds
- golf course ponds

Pre-application considerations:

- SHAC *Ponder*™ should not be used with any other chemicals such as bluestone (copper sulfate), water dyes, or herbicides. Ponder should not be allowed to freeze.
- Ponder is not an algaecide.
- Place reservoir intakes at the top portion (approximately 45 cm (18") deep ponds and 10 cm (4") in shallow ponds) of the water column. The best water quality is typically found here.
- In some cases, it may be necessary to raise aerator/pump intakes into the upper portion of the water column.
- It is important to treat with SHAC Ponder™ each time new water is added to the pond.

Please note: Product should be agitated thoroughly prior to use. If solids remain, rinse container with water. For pond volumes under 2 million gallons, it is only necessary to apply *Ponder*™ in one location.

APPLICATION RATES - For Large Ponds:

1st Year			2nd Year & Beyond	
Type of Reservoir	First time Treatment rate *Ponder™* (L) per 500,000 Imp. gal	Maintenance treatment rate *Ponder™* (L) per 500,000 Imp. gal	Spring treatment rate *Ponder™* (L) per 500,000 Imp. gal	Maintenance treatment rate *Ponder™* (L) per 500,000 Imp. gal
Run-off collection	10 L	2-10 L	2-10 L	2-10 L
Golf Course/Stormwater Reservoir	20 L	10 L	10 L	10 L
Irrigation filled	10 L	2-10 L every refill	2-10 L	2-10 L every refill

APPLY MAINTENANCE RATES EVERY 8 TO 10 WEEKS OF OPEN WATER

MAINTENANCE RATES - For Large Ponds:

Site conditions:	Additional amount of *Ponder™* to apply per site condition
River / creek filled	1L
Filled from standing water (e.g. slough)	2L
Copper Sulfate eg. Blue Stone used historically	1L
Bermless or ineffective berms	1L
Direct cattle access	2L
Intended for human consumption	2L
Intended for animal consumption	1L
Stocked-fed fish	1L
Surrounded by trees and vegetation	1L
Age of dugout or last dredging is more than 5 years	1L

MAINTENANCE RATES:

***PONDER™* per 500,000 gallons of water. Maintenance rate is dependant on individual site conditions.**

APPLICATION RATES - For Ornamental / Small Ponds:

	Rate	How and where to apply
Initial	Apply 250 ml (8 oz.) per 500 Imp. gal (600 US gal) of water.	• Apply in one location in the water. • Apply early in season if possible.
Maintenance	Apply half the amount required initially. (250ml per 500 Imp. gal of water)	• Apply every 3 months (during seasons when water is not frozen). • Treat new water added to the pond accordingly.

APPLICATION RATES - For Livestock Water Troughs:

	Rate	How and where to apply
Initial	Apply 250 ml (8 oz.) per 600L (160 gal.) to darken water and reduce algae growth.	· ?
Maintenance	Re-apply PONDER™ as needed at this rate.	

Please note: Chlorinated water should not be used.

SHAC® Solutions Inc.

Quick reference charts for small ponds:

Volume of Pond			*Ponder™* Application Rate	
Gallons (Imp)	Gallons (US)	Litres (L)	Initial	Maintenance
500	600	2300	500 ml	250 ml
1000	1200	4600	1 litre	500 ml
1500	1800	6800	1.5 litres	750 ml
3000	3600	13,600	3 litres	1.5 litres
5000	6000	22,700	5 litres	2.5 litres
10,000	12,000	46,000	10 litres	5 litres

Determining Pond Volume:

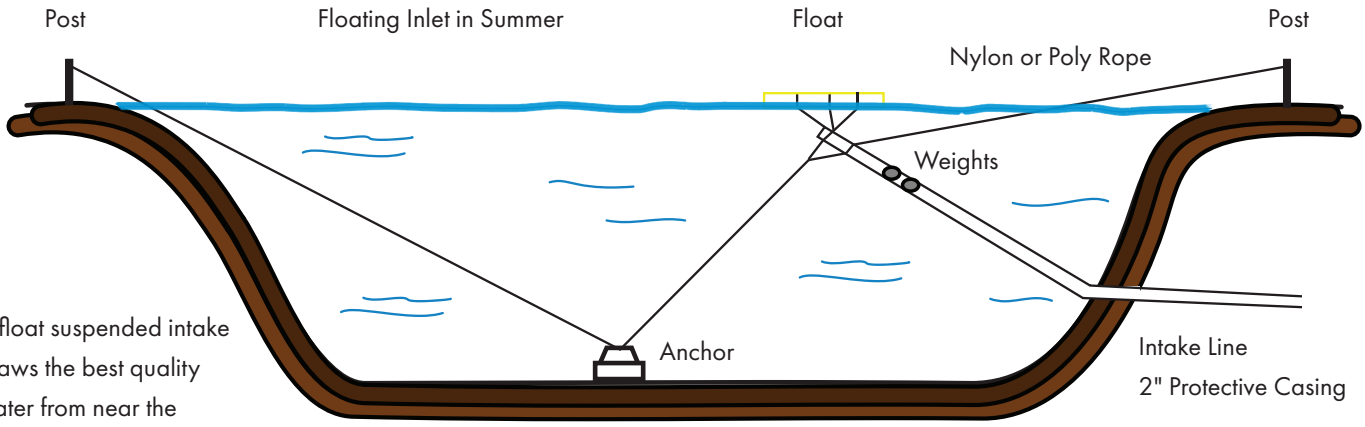
NOTE: The following equation is simplified for ease of use and only estimates the actual volume, depending on the slope value used. For a more accurate volume calculation, see the dugout/lagoon calculator on the Alberta Agriculture website: http://www.agric.gov.ab.ca/calculator/dugout.html

Length X Width X Depth = X 0.7 = AND

Multiply by:

- 6.25 to convert cubic feet to _____ Imperial gals
- 7.5 to convert to _____ US gallons
- 1000 to convert cubic meters to _____ litres

Example of a Floating Intake



A float suspended intake draws the best quality water from near the surface of the dugout.

SHAC® Solutions Inc.

Troubleshooting & Helpful Hints when using *Ponder™*:

Problem/Condition	Possible Cause	Solution
Odorous water in house or barn.	Intake is not positioned at proper location in the water body.	• Position the intake 18 inches below the water surface in the summer and 42 inches below the water surface in the winter. • Water drawn off the bottom is often odorous and may contain greater amounts of particulate matter.
	If odor is only noticeable in the house or barn but not in the dugout, the problem may be in the lines.	• Bacteria may be present in water lines and a line flush may be necessary.
***Ponder™* is not working in my dugout / reservoir to reduce odors, turbidity and/ or organic solids.**	*Ponder™* has been very recently applied.	• Reductions in odors, turbidity and organic solids accumulation should be expected within 2-6 weeks of initial treatment. Note: It is important to apply maintenance treatments every 8-10 weeks during periods of open water (no ice cover).
	Other water additives in use.	• *Ponder™* should not be used in conjuction with other water additives (eg. copper-based algaecides, dyes, etc.)
	Fish present in pond.	• Ensure that fist are not being over-fed. • Excess nutrients from over-feeding may encourage algae / weed growth within the pond.
	Large quantities of water are used requiring frequent re-filling.	• All new water entering the system must be treated accordingly.
	Heavy algae growth present.	• Algae may cause odors and may result in organic solids accumulation after die-off. • While Ponder™ may act to inhibit the growth of certain types of algae, the product is **not an algaecide**. • Application of an algaecide product may be necessary to reduce algae growth, followed by a *Ponder™* application (at least 2 weeks after algaecide application) to aid in the reduction of the resulting organic solids and to help reduce the toxicity of the algaecide product.
***Ponder™* is not working in my small / ornamental pond.**	Aerator / Waterfall in use.	• Place aerator intake pointing downward at a depth of no more than 4 inches. • If discoloration is a problem and persists, turn off aeration for a short period of time to allow settling of the product.
	Fish present in pond.	• Ensure that fish are not being over-fed. • Excess nutrients from over-feeding may encourage algae / weed growth within the pond.
	Other water additives in use.	• *Ponder™* should not be used in conjunction with other water additives (eg. copper-based algaecides, dyes, etc.)
	UV light systems, flow-through systems, and / or fountains drawing water off bottom.	• UV lights should not be used in conjunction with *Ponder™*. • *Ponder™* application is not advisable in flow-through systems where water is not contained to the pond. • Fountains drawing water off the bottom of the pond should generally not be used in conjunction with *Ponder™*.

SHAC® Solutions Inc.

Revised January 2022