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To: Chris Yanez & The City of Austin Navigational Committee

Chris, we sincerely appreciate your efforts helping us obtain Navigation Committee approval of a floating Wavebreak System for Lake Austin Marina to enable us to provide a much safer boating environment for the public at our ship store and docks. I have been told that some of you would like to see how this Wavebreak works so you could potentially consider a policy for other public areas that have similar safety issues. This way, any precedent that might be set would only be for public areas that have safety issues.

It is still our opinion that a No-Wake Zone stretching from Lake Austin Marina to the Dam would be the most logical and beneficial solution to the poor safety conditions created by the rise in popularity of wakeboarding and surfboarding which affects all of the commercial establishments that serve the public in this area of the lake, however, this is the fourth year we have tried to get something accomplished and we would appreciate consideration of another alternative.

The alternative to our original request of fixed Wavebreaks and subsequent request of a No-Wake Zone is a floating Wavebreak system that Randy Scott and a couple of other parks employees suggested and Chris Yanez feels will potentially be beneficial to public safety as well. The Wavebreak system will be built in the form of a grid pattern as shown on the attached aerial drawing, approximately 20' wide. The Wavebreaks outer lake edge will be located at the current location of the No-Wake Bouys that run along the boundary of Lake Austin Marina now. It is built out of high strength polyethylene material which is the same material encapsulated foam is made from. We will also install floating warning buoys every 70'-75' on the outer lake edge points of the grid pattern with solar navigational lights in order to mark the Wavebreak system for both day and night. In addition to its good wave attenuation characteristics and providing a much safer docking environment, they will also guard



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against an out of control boat from ever hitting our docks or people getting gas or supplies from the ship store. Boats will glance off of the

Wavebreak in most cases, similar to what a car railing would do to an automobile, or in a perpendicular hit be slowed and ultimately stopped by the cable that attaches the floating units. It can also be made out of alternating colors so it would be even more visible if that is what you require.

Lake Austin Marina requests administrative approval to install a small demonstration section of Wavebreak to determine if this product will cause wave reduction of 50% or greater. If waves are reduced by 50% or more, then within 60 days Lake Austin Marina will have the right to complete its installation of a Wavebreak for the length of all its floating docks.

Best Regards,

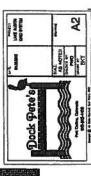
<b>Lak</b> By:	e Austin Marina I, LP Lake Austin Marina, Inc. General Partner
Ву:	¥:
	Scott Dabney, President

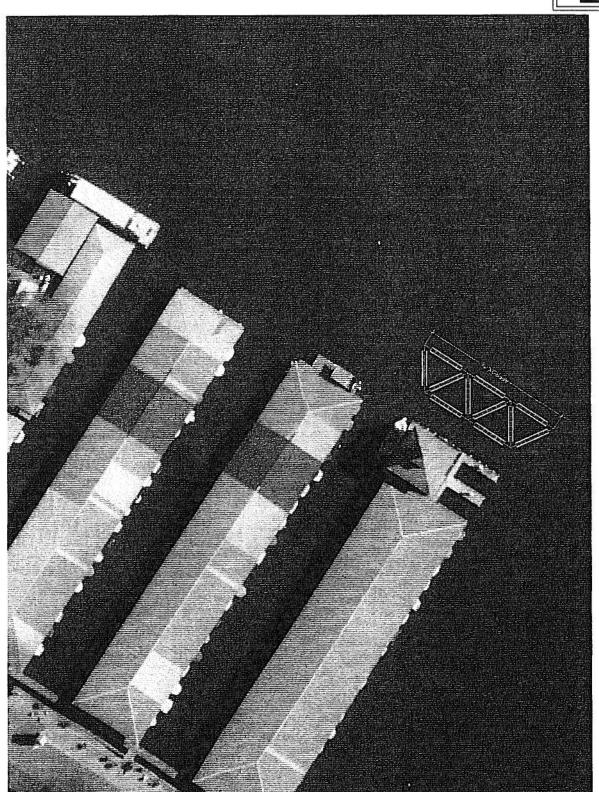
# Enclosures

Regarding the details of the Floating Wavebreak for Lake Austin, please find enclosed the following:

- Aerial overlaid with small 75' section
- Aerial overlaid with full section
- Photographs of the Wavebreak System
- Information from the webpage of the Wavebreak system which includes details and specifics on installation of the system
- Reference survey we completed with (3) prior installations, of which one is the U.S. Army Corps of Engineers, who actually ordered a second system because they were so pleased with it. The other (2) references mentioned they were pleased and would order again.

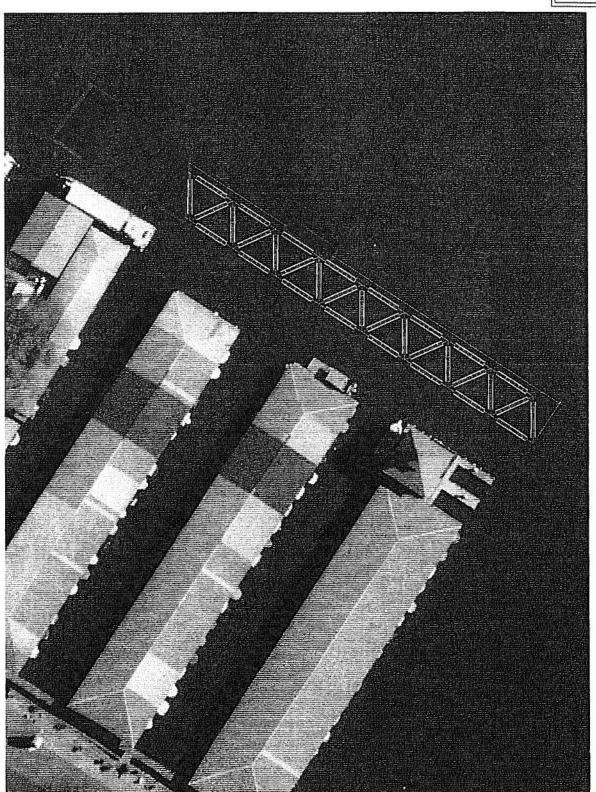
Please let me know if you have any additional questions.





SUPER IMPOSED PLAN ON SATELLITE IMAGERY

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## WaveEater TM



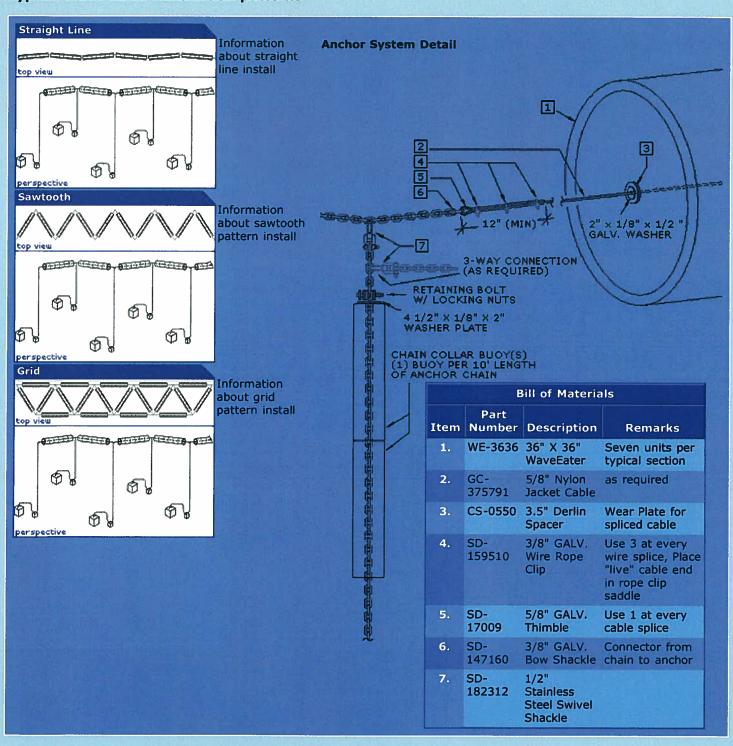
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### WaveEater TM

WaveEater ™ Purchasing Information | WaveEater ™ Installation Patterns

#### **Typical Wave Eater installation patterns**



### WaveEater TM



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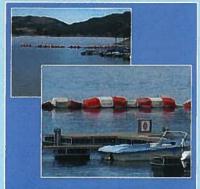
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### WaveEater TM

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The WaveEater™ is an innovative, convenient floating breakwater system designed for use in many waterfront applications. Practical Uses of the WaveEater™ include:

- Wave Attenuation
- Swim Area Barriers
- Shore Erosion Control
- **Debris Boom**



This WaveEater™ installation located in Helena Montana has survived 10 years of freeze/thaw cycles and has not been touched since the original installation.

#### There are two sizes of WaveEater™ available:

- Model 1224 12" x 24". Ideal for swim area markers, aeration floats and jet ski barriers.
- Model 3636 36" x 36". A variety of uses including wave attenuation, erosion control and debris booms.

#### Call toll Free 800-828-2343 for more information

#### WaveEater's greatest qualities:

- Economical Most breakwater systems cost \$1500+ per lineal foot. WaveEater's™ economical materials and simplicity of design allow this system to cost as little as \$150.00 per lineal foot installed.
- Strong Molded of high-strength polyethylene, WaveEater™ is nearly

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indestructible.

- Easy Installation Simply set the units in place, connect the line to moorings and fill with water to submerge the units to a depth of two-thirds their diameter. If seasonal removal is required, just haul, drain and store.
- Safe WaveEaters™ are bright orange or white for high visibility in all weather and water conditions (other colors available on request). There is no wood to rot or treated piles to leech chemicals into the water.
- Environmentally Friendly WaveEater™ is clean. In the event of a catastrophe just collect the units and reconnect. No tires at the bottom of the lake, Styrofoam on the beach, or underwater obstacles to interfere with navigation.

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The WaveEater is a Floating Breakwater System that can be used for Wave Attenuation Swim Area Barriers, Shore Erosion Control and Debris Boom

Designed by Information Point Technologies





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#### WAVE EATER BREAKWATER SYSTEM REFERENCE CHECK

We contacted the three references that were provided by Wave Eater (Peter Odenbach) per Scott's request to find out their feedback on the product. Listed below are the questions we asked them and their responses to the questions. ONE COMMON ANSWER between all three respondents was that installation technique/skill was paramount. If we end up getting the product, we should definitely have G Tex S speak to these three respondents as well as the manufacturer to make sure we don't re-invent the wheel.

#### Mark Campbell DeGray Lake State Park (501) 865-2809

Q: Do you like the product?

A: (see below for combined answer, but short answer is "yes")

Q: Does it work as you expected it to?

A: It handles boat wakes great, but not larger than 2-3'. Doesn't work well on wind/ storm-generated wave action, but it's inexpensive compared to other products on the market (works well for what they paid for it).

Q: Does it knock down at least 2/3 of the wave action?

A: Depends on the size of waves, but for most boat wake, ves.

Q: What configuration do you have? (Single line, "V", or "Grid")

A: Grid system

Q: Would you buy the product again?

A: Yes, great for smaller docks for the price.

Q: How has it held up/ what maintenance does it need?

A: They are having to replace pieces of the unit right now. They don't know if it was installed correctly and if that may have contributed to the needed repairs. They think the wrong type of chains were used and/ or the chains did not have enough support (anchors). They used a 3<sup>rd</sup> party installer that did not follow Peter's instructions (manufacturer). They think they should have used galvanized steel chains rather than just normal steel. Everything "above the water line" is great and no maintenance has been needed.



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#### Larry 11 Mile Park Marina (719) 748-0317

Q: Do you like the product?

A: For the most part, it works well as long as you don't have extreme weather conditions.

Q: Does it work as you expected it to?

A: They have extreme weather conditions at their location, but it works great for boat wake action.

Q: Does it knock down at least 2/3 of the wave action?

A: Absolutely.

Q: What configuration do you have? (Single line, "V", or "Grid")

A: Single line

Q: Would you buy the product again?

A: It is probably the best option on the market for the price. In the future they would configure the breakwater differently just because the have such extreme weather conditions (would go with a "grid" system).

Q: How has it held up/ what maintenance does it need?

A: Installation is an issue. They used 800-pound cement blocks with chains (for anchoring). They found that cement blocks were to light and moved on them. Also, be sure to protect your cable that attaches to the anchors (coated cable, put it through a protective hose, etc.) to reduce wear and tear on the float barrels. Put floats on the chains as well to keep from pulling the breakwater down at the ends. They remove the unit every year because their lake freezes over (unavoidable maintenance issue for them).



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### Phil Deffenbaugh U.S. Army Corps of Engineers (559) 597-2301

Q: Do you like the product?

A: Yes, they love it.

Q: Does it work as you expected it to?

A: They are really happy with it and are buying a 2<sup>nd</sup> section.

Q: Does it knock down at least 2/3 of the wave action?

A: Yes, but only for boat wakes (not weather-created waves)

Q: What configuration do you have? (Single line, "V", or "Grid")

A: Single-line, saw-tooth pattern.

Q: Would you buy the product again?

A: Yes, and they are buying a 2<sup>nd</sup> section now.

Q: How has it held up/ what maintenance does it need?

A: It has held up really well with one exception: the shackles that hold the individual wave eaters (barrels) together loose their pins over time and they have had to wire them back in to keep the unit in one piece.