

Wave Attenuation Buoy System

Briefing to the Environmental Board on a proposal
by the Lake Austin Marina to install a floating wave
attenuation device in Lake Austin

Chris Yanez – PARD Planning & Development Division

Andrew Clamann – WPD Environmental Resource Management



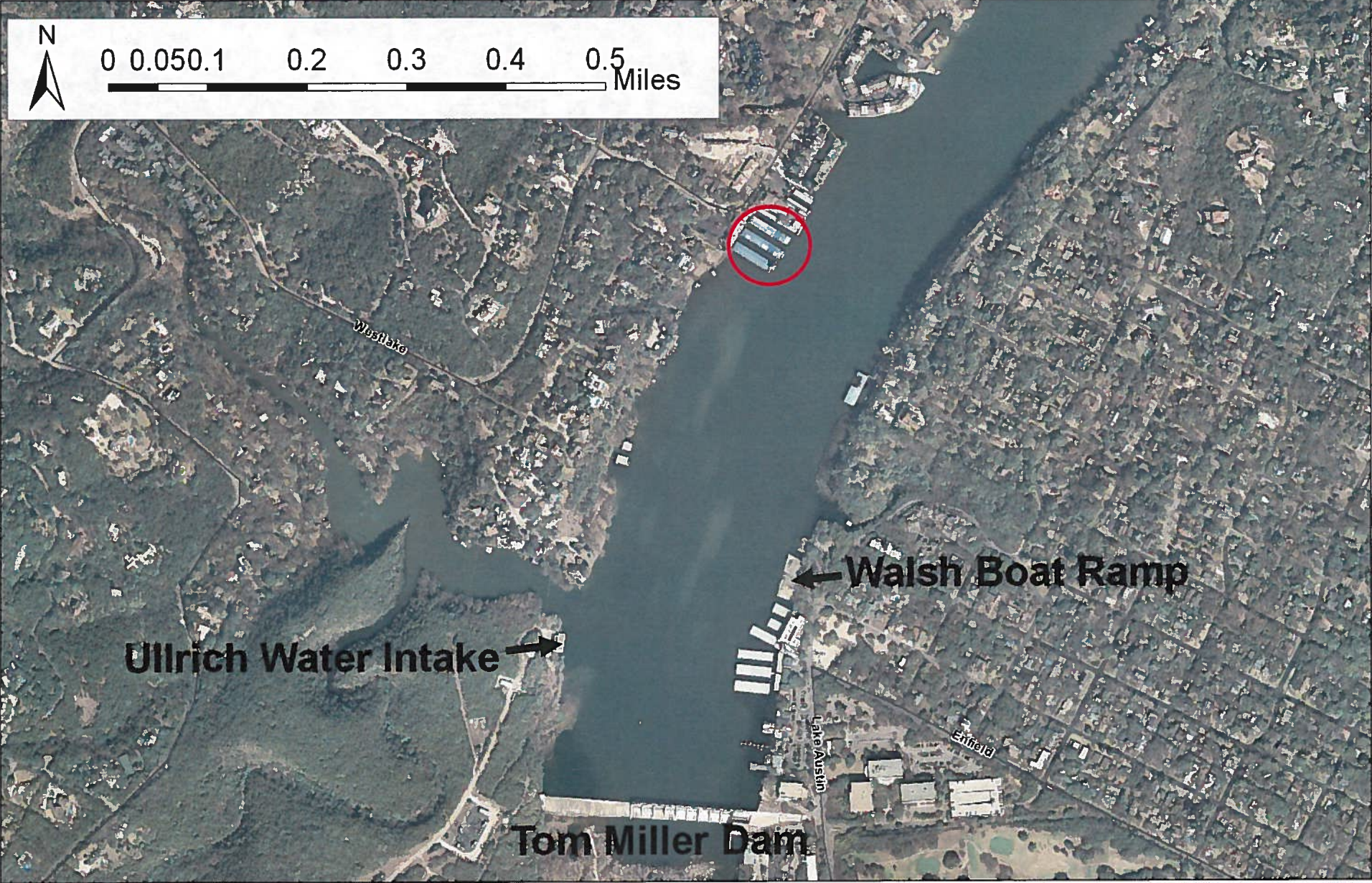
March 7, 2011



Proposal Background

- Recreational boating, weather and flow activity in Lake Austin contributes to wave action which impacts safety on the lake.
- In 2009 marina staff approached PARD and the Navigation Committee of the Parks and Recreation Board about a proposal to install a large concrete wharf in the waters of Lake Austin that would dissipate wave action.
- The Navigation Committee requested that other less invasive methods be explored.
- PARD staff recommended a floating buoy system that was designed to reduce wave action.
- In 2011 a site plan was submitted proposing installation of a floating buoy system designed to reduce wave action.
- On February 12, 2012 the Navigation Committee voted 2-0 to request that the Environmental Board provide a recommendation on the proposal.

Area map

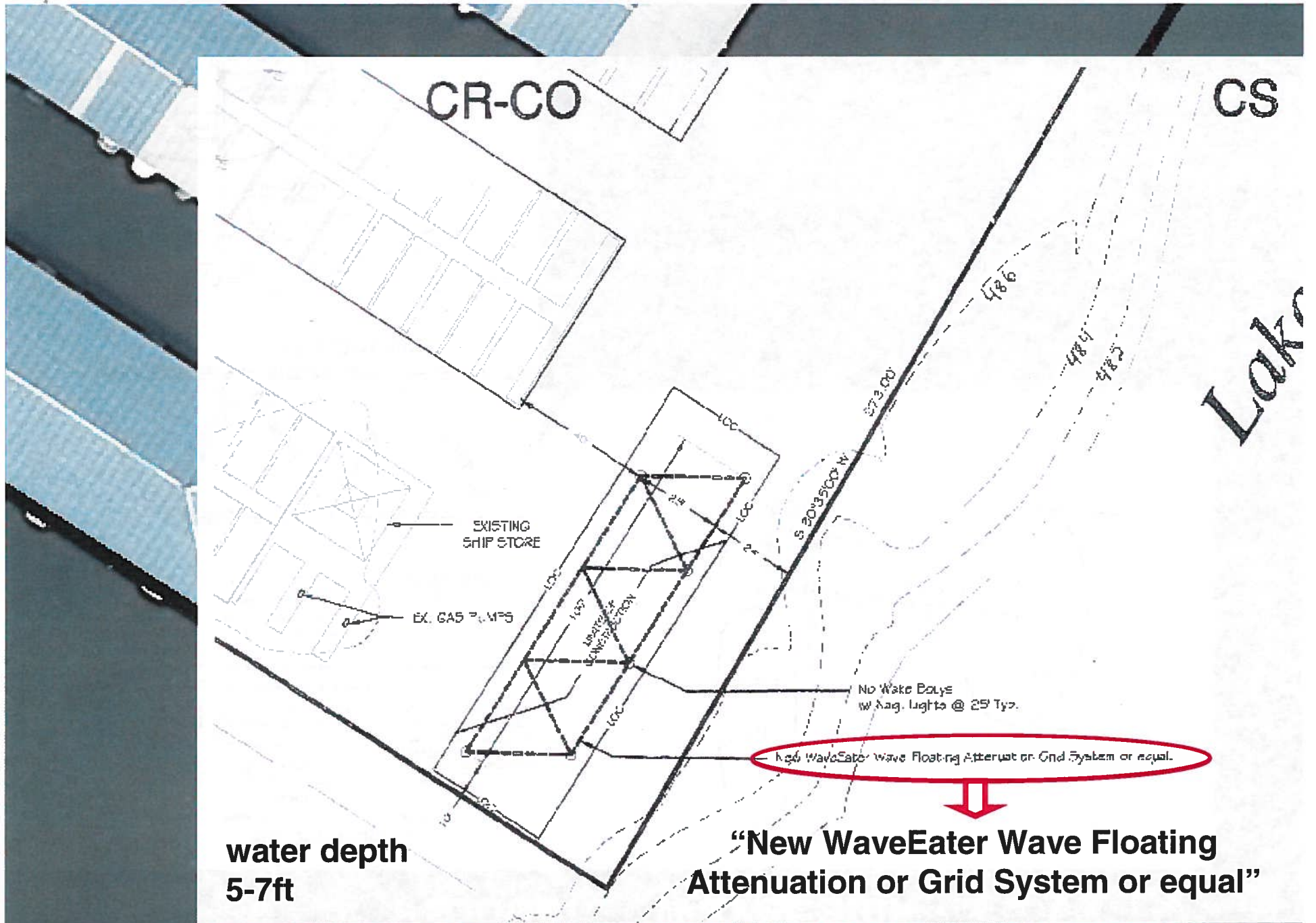


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Project Area



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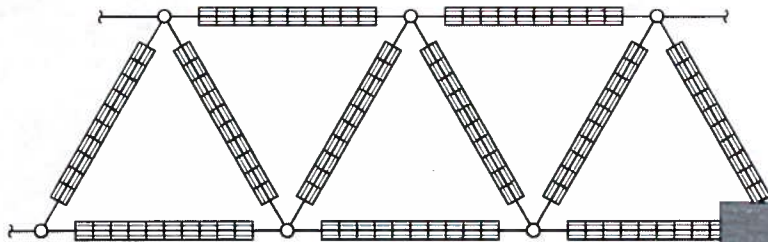
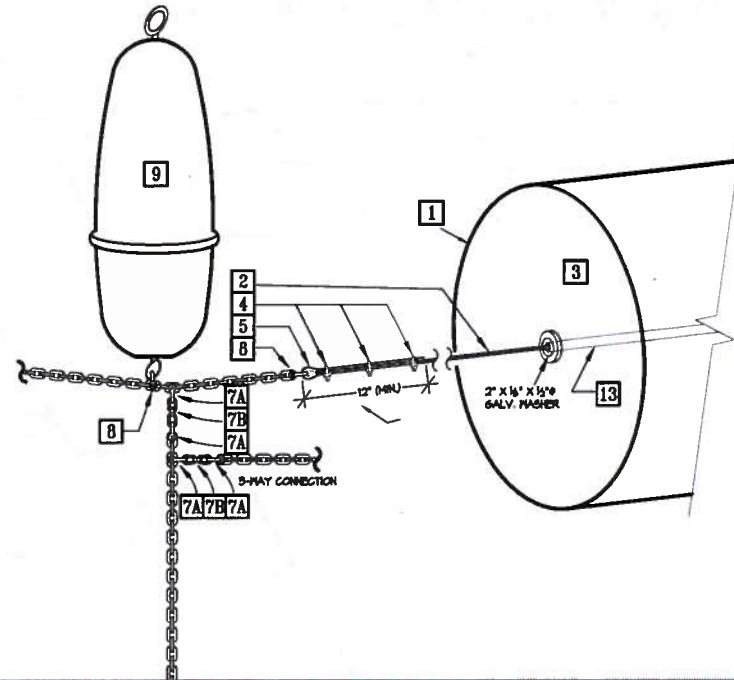


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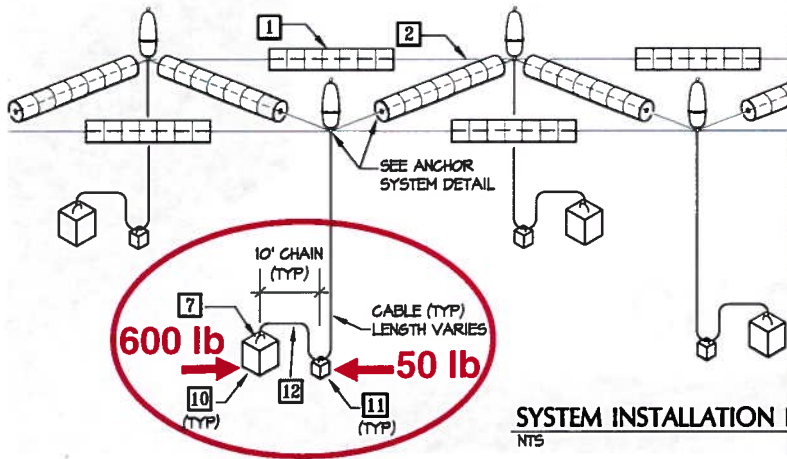
Product: "WaveEater"

BILL OF MATERIALS

ITEM	QTY	PART #	DESCRIPTION	REMARKS
1	TBD	WE-3636	36' X 36' WAVE EATER	
2	TBD	CG-012581	1/2" NYLON JACKETED CABLE	AS REQUIRED
3	TBD	CG-0350	3.5" DELRIN SPACERS	WEAR PLATE FOR SPLICED CABLE
4	TBD	SD-159510	1/2" WIRE ROPE CLIP	USE 3 AT EVERY CABLE SPLICE; PLACE 'LIVE' CABLE END IN ROPE CLIP SADDLE
5	TBD	SD-170009	1/2" GALVANIZED THIMBLE	USE 1 AT EVERY CABLE SPLICE
6	TBD	SD-147062	1/2" GALVANIZED BOW SHACKLE	CONNECTOR FROM CHAIN TO ANCHOR
7	TBD	SD-182312	1/2" STAINLESS STEEL SWIVEL SHACKLE	
8	TBD	SD-147060	7/16" GALVANIZED BOW SHACKLE	CONNECTOR FROM CHAIN TO ANCHOR
9	TBD	CW-CABK-125	CHAIN ANCHOR BUOY	
10	TBD		600 LB+ CONCRETE ANCHOR	
11	TBD		50 LB CONCRETE SHOCK ABSORBER	
12	TBD	GC-40601	3/8" GALVANIZED CHAIN	AS REQUIRED
13	TBD		1" POLY PIPE	RUN THROUGH CENTER OF WAVE EATERS AS BEARING FOR CABLE



GRID SYSTEM PLAN
NTS



SYSTEM INSTALLATION PLAN
NTS



Product: "WaveBrake"



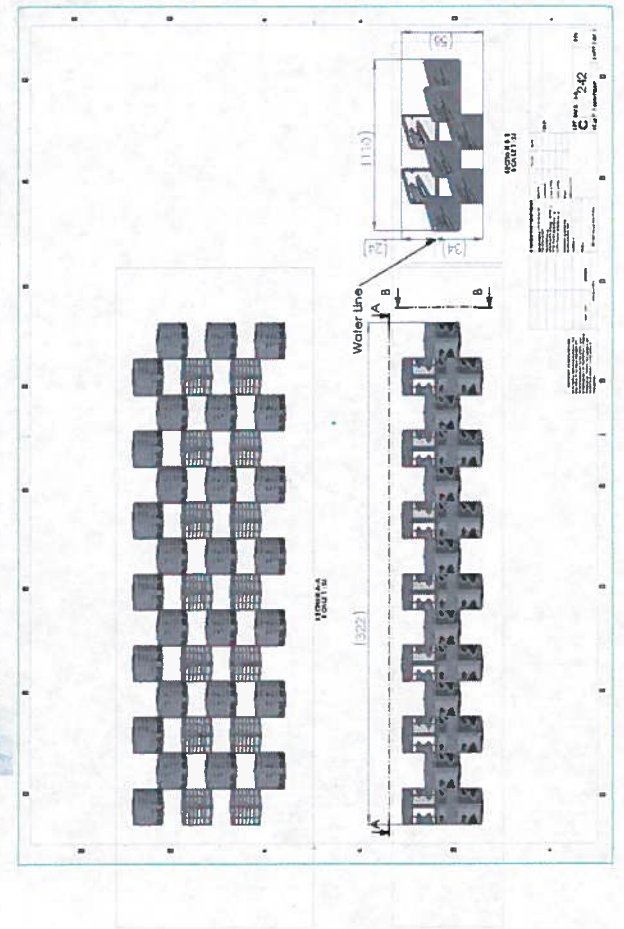
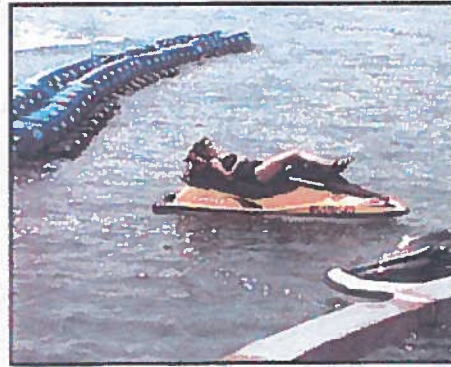
WaveBrake



BEFORE



AFTER



Land Development Code

How does the LDC apply?

- Primarily a navigation issue
- Development in CWQZ of Lake Austin
- § 25-2-1172 Definitions:

DOCK includes a wharf, pier, float, floating dock, island, boat dock or other similar structure

Environmental Considerations

Potential Environmental Concerns:

- Unclear which device will be used in SP-2011-0283DS
- Unclear how the re-directed wave energy will behave
- Potential for increased turbidity / suspended sediments
- How will flooding / storm flow effect the device
- Ramifications of precedence on the rest of the lake(s)
- Does not address the underlying problem, only the symptom

Potential Environmental Benefit:

- Protection from wave action at gasoline pump facility

Conclusions

- Environmental impacts are unclear
- If a floating wave abatement device is supported, then it should be supported under a narrow context specific to this circumstance:
 - to provide protection from a refueling facility
 - Device specifications established prior to the approval of the site plan