Harbor Commission

Regular Meeting Agenda

Tuesday, January 17, 2012
5:30 p.m., City Hall Council Chambers

City of South Haven

1. Call to Order

Roll Call: Chairman Fred Jeffers, Vice-Chairman Mary Stephens, Jeff Arnold, Cathy Pyle, Alan Silverman, Daniel Strong, Greg Sullivan.

2. Approval of Agenda

3. Approval of Minutes: November 15, 2011 Regular Meeting

4. Interested Citizens in the Audience Will be Heard on Items Not on the Agenda

5. Financial Report

6. 2012 Meeting Schedule

7. Wave Absorbers

8. Marina Audit

9. Strategic Plan

<u>Member and Staff Comments</u>

Adjourn

RESPECTFULLY SUBMITTED,
Paul VandenBosch
Harbormaster

Harbor Commission

Regular Meeting Minutes

Tuesday, November 15, 2011
5:30 p.m., City Hall Council Chambers

City of South Haven

1. Call to Order by Jeffers at 5:45 p.m.

Present: Pyle, Silverman, Stephens, Sullivan, Jeffers
Absent: Arnold, Strong

Also present: Robin Abshire, Marina Manager; Paul VandenBosch, Staff

2. Approval of Agenda

Motion by Stephens, second by Silverman to approve the agenda as presented. All in favor. Motion carried.

3. Approval of Minutes: October 18, 2011 Regular Meeting

Motion by Silverman, second by Stephens to approve the October 18, 2011 minutes. All in favor. Motion carried.

4. Interested Citizens in the Audience Will be Heard on Items Not on the Agenda

None at this time.

5. Marina Report

VandenBosch gave an overview of the Marina Report. Stephens asked about the negative balance on page 10. VandenBosch said that is the City's match for the project and will be coming out of City funds. VandenBosch noted this figure is a capital investment.

Stephens asked, regarding page 10 under "Expenses", what "Other Expenses" consists of. VandenBosch said he would like to investigate that and bring a report back to the Commission. Stephens noted that the Finance Director did a nice job with this report.

Silverman asked if there is anything to point to for the increase in transient income to which Abshire noted that she guesses it is because of more slips being available due to the decrease in seasonal boaters. Abshire stated that she saw more boaters from the other side of the state

than she has before; Pyle indicated that their business has been marketing heavily on the other side of the state.

Stephens asked about the Downtown Development Authority pledge; VandenBosch said that he asked about that last month and he has not yet received a response.

Stephens asked whether the Capital Outlay of $10,000 is dredging money to which VandenBosch responded that it is set aside to be used for spot-dredging as needed.

Abshire asked if there will be any problem accommodating the deep-draft boats during the Queen's Cup to which Silverman responded that it would depend on the how much snow they get in Lake Superior. Silverman noted that we have designated the seawall for deep-draft boats.

6. South Haven Yacht Club Proposal

VandenBosch noted that there has been an amendment adding the Tripp Cup to the Queen's Cup event.

Silverman gave an overview of the Queen's Cup, which is the oldest fresh-water race and will soon be celebrating its 75 year anniversary. Silverman noted that he modified his original request to ask the City for free dockage for two days. Silverman noted that he knows this will be a substantial loss of revenue to the City to keep those vacant and have put together a sponsor's division which is out there raising money; the sponsors are planning to raise $5,000 for the benefit of the City.

Silverman stated that the Harbor Commission needs to recommend to the City that these slips be kept vacant for the 29th and 30th of June. This is really consistent with the experience those racers have had to date. The Grand Haven and Muskegon marinas have been used in the past as destinations; Silverman explained how each of these harbors accommodated the large number of boats, and indicated that this would offer a real benefit for our finish. Silverman pointed out that the City has been a real supporter of the Yacht Club hosting the finish and hopes the Harbor Commission will support it as well.

Silverman explained the details of the request which would allow the Tripp Cup boaters to pay for the weekend and get Monday and Tuesday nights free. Silverman noted that the Yacht Club is asking the Harbor Commission to recommend to City Council that these dates be reserved for the Tripp Cup event.

Pyle asked about that affecting the boaters that usually come in the weekend before the July 4th holiday. Abshire said she has shared her concerns with VandenBosch and also has forewarned some of her rendezvous people who generally come then, one of which is from Chicago. Silverman pointed out that a rendezvous from the Chicago area would likely have members participating in the Queen's Cup.

Motion by Sullivan, second by Jeffers to recommend to City Council that the requests from the Yacht Club be approved to make the marinas available to the start of the Tripp Memorial "2 for

1” and the South Side and Museum marinas available for the finish of the Queen’s Cup on June 29 and June 30, 2012. All in favor. Motion carried.

Abshire asked about Museum boaters during the Tripp Cup; Silverman said no one needs to move for the Tripp Cup.

Silverman said we are trying to make this a family-oriented event. Pyle asked if there is any incentive to have people stay before and after the events. Silverman said our website will include every non-profit, housing, association, B & B, the hospital, hotels, and merchants, who can participate as sponsors. Every boater will receive a finish bag with coupons, information on places to visit, eat and participate in activities. Silverman said there will be a large tented area in the parking lot of the Yacht Club where sponsors can have a display area. Silverman said we have asked the City to develop activities such as, for example, Pyle’s Porthole could organize activities such as a kid’s fishing area.

Stephens said it is commendable for the Yacht Club to have such a broad interest in the City as a whole.

Member and Staff Comments

There were none.

Adjourn

Motion by Silverman, second by Pyle to adjourn at 6:45. All in favor. Motion carried.

RESPECTFULLY SUBMITTED,

Marsha Ransom
Recording Secretary

Harbor Commission

Workshop Minutes

Tuesday, November 15, 2011
4:30 p.m., Council Chambers

City of South Haven

1. Call to Order by Jeffers at 4:30 p.m.

Present: Pyle, Silverman, Stephens, Sullivan, Jeffers
Absent: Arnold, Strong

Also present: Robin Abshire, Marina Manager; Paul VandenBosch, Staff

2. The Harbor Commission will hold a workshop to discuss the marina customer satisfaction survey.

Silverman asked for clarification of the surveys; VandenBosch said there were two different surveys each using a different database of people. One survey was from the seasonal boaters and the other from the transient boaters.

3. Adjourn at 5:40 p.m.

RESPECTFULLY SUBMITTED,
Marsha Ransom
Recording Secretary

Suggestions from Harbor Commission based on Review of Boaters' Surveys

Silverman noted that the comments fall into two very broad areas, things we can do something about and things we cannot do anything about.

Transient:

Surge Prevention:

1,) What was looked at when it was built?
2.) Anything further we can look at today?
3,) Baffles
4,) Check archives for building plans, site plans etc.
5.) Don Nichols, John Marple
6.) Corps of Engineers study

Scheduling/reservations:

Silverman requested that it be determined whether the City is tied by the grant to using the State Reservation System. Abshire said the downside is that the marina manager loses control of the marina and loses money for the City.

Silverman asked whether there is any association for harbormasters or marina managers. Abshire said the Michigan Boating Association puts on an annual conference; it will be in Gaylord, MI this year. Abshire said she attends every year, VandenBosch does not. **Silverman asked whether it is the City or the Marina Manager who is responsible for coming up with the reservation system.** Abshire said it is not her.

Jeffers noted that perhaps another workshop meeting would be to cover everything to do with reservations in the marinas.

Pyle brought up cable TV; Abshire said we lost the hard wire when the docks were renovated. Abshire said they got an estimate; VandenBosch said it was about $50,000. Silverman says we are in a transitional stage; within the next 5 years everything is going to go wireless. Some boats have a wireless receiver on them. Cable is going to be obsolete so cable of any kind would be cost prohibitive. Silverman said you can provide feeds off satellites to provide service to more than one location. Some companies will buy the boxes and rent them to the boaters. **Silverman suggested contacting Corey Burrows at Coastal Audio Visual who knows about this satellite technology.**

VandenBosch noted there is free wireless at the Museum, North and South Marinas but not at Black River. Silverman asked if the city will go wireless at some time. VandenBosch noted that BTC-BCI plans to put antennae on the water towers and sell service to city after the fiber-optic is in place. VandenBosch said the wireless service is almost a substitute for cable. The new North marina will have a lounge and a large screen television.

Stephens said bathroom cleanliness came up several times. Silverman said we had enough complaints about that he is concerned. Abshire said all staff is trained on cleaning. Pyle asked whether there is a check-off list in the restrooms. Silverman said his experience has been that if there is a cleaning schedule posted he can avoid the times when the bathrooms are being cleaned. **Suggestion: Placing a cleaning schedule and check-off list in the bathrooms.**

Jeffers brought up the dinghy dock; thinks it is too small. Abshire said it is usually only full during events. She noted that during Harbor Fest there was a person who forbade the public from using the dinghy docks; that has been addressed with the Harbor Fest people; that is why the dinghy dock is there, so boaters can access events via the water. Silverman asked about the fact that the gangway goes over the dinghy dock rather than up to it. Abshire noted that originally the dinghy dock jutted out like a regular dock and it broke away. **Silverman asked if the dinghy dock could be moved out a little. Abshire will look into extending the arms.**

Pyle asked about the procedure for boater parking. Abshire said at the South Side, when the boaters come in and register on a 3-carbon reg card. They put one copy in their dashboard. Silverman asked if there were any parking spots reserved for the transient boaters. Abshire said the "Reserved for boaters" signs are ignored by the general public. Silverman said there is nothing to say, Permit Required. Pyle said when she chaired Blueberry Fest they would let boaters down there. **Silverman said the City Ordinance needs to be checked. Suggestion: check signage and perhaps replace with "permit required"**

Silverman said maybe signage would help. Abshire said on the North Side there is a parking spot designated; if they are docked in slip 45 there is a parking spot with 45 marked on it. Silverman said maybe that is **something to think about for your seasonal renters, set up a cone in every one of their spots.** Abshire said she would like to know for sure that a boater is coming to use that spot before placing cones.

Jeffers noted there were a lot of positive comments on the transient boater survey this year.

Silverman said the last item was someone suggesting we offer a month long package. Abshire said the Harbor Commission discussed that years ago and decided not to do that because of the negative impact on the transients overall. Silverman asked what any size slip transient rate. 32.25 and 23.25 up to 27' in length. To stay a month on transient rate is $1100 for a 30' boat and to stay the season is $2915 on a 30' boat. Silverman said it takes about 3 months at a transient rate to equal the seasonal rate.

Pyle asked about credit cards. Abshire said we don't use credit cards because the Customer Service does not have the means to process them, and all of her deposits and payments go through Customer Service to get into the accounting. Stephens said the credit card fee could be charged as a convenience fee. Abshire said it would make it easier for me. Stephens noted that if you get people to pay the whole fee up front for the whole season, you could waive the

convenience fee, or whatever you can do based on crunching the numbers. **Suggestion: look into using credit cards and the pros and cons.**

Jeffers noted that people are allowed to just walk right down on the docks on the transient side. Maybe there could be some kind of code. Abshire said there is signage, but on the red railing there's a lever, which you can move to access the docks. Jeffers asked if that is a big problem; Abshire said she has had to run a family off one time, but it is not a big issue. Silverman said other than Michigan City most of the marinas he stayed at do not have that kind of security. Stephens said coming from the west coast she was used to gates, and barbed wire fences and locks; and there is a certain ambience that it creates here in the Great Lakes because those are not present.

Seasonal:

Silverman noted the deck boards at the Museum Marina. Jeffers said this needs to get on someone's maintenance punch list. Abshire said staff uses screws to replace the nails the Museum docks were built with, with screws. Are the docks pressure-washed regularly? Silverman said we have a lot of docks and we have had them power washed using a low pressure and then they put on a sealant. Abshire said at the museum we have put the non-skid tape on the docks and that has worked out well. Jeffers asked whether the staff regularly hoses off the decks because of the goose droppings. Abshire notes that staff does try to fit that in whenever they aren't busy assisting boaters. Silverman said could we hose down Black River Park area daily. Abshire noted that would be a full-time job.

Pyle asked whether staff turns over every season; Abshire said no but she does train all of them every season.

Silverman said ventilation in the North Side facility was mentioned quite a bit. If we get the new building that will be a moot point. Silverman asked when that is going to happen. VandenBosch said he hopes the site plan will be going to the State in two weeks. The State Review could take 30 days to 2 months. VandenBosch said we need to talk to the bidders to see what the chances are that we could start before May 1st; but every day that goes by reduces those chances. Jeffers asked if there is a drop-dead date; VandenBosch said he thinks we should make a decision by the end of December. Silverman said if it is put off, we should develop some plan to deal with the ventilation system. Abshire said the North Side system was replaced last year. Silverman said maybe just installing a couple of box fans to move the air. Abshire said at the south side there is no floor drain in the hallway which adds to the problem.

Silverman asked about the Black River Park facility. Abshire said there are separate mens' and womens' bathrooms with a hallway between with the showers which have a combination lock. Silverman asked if the facility is for the general public; Abshire said yes, the bathrooms are open for the general public. VandenBosch said during his weekly inspections his observation was that those bathrooms are usually in pretty good shape.

Silverman asked if we have had any contact with **people who responded to the survey. Should let them know they are being heard.** Silverman said if we do

annual surveys we might get more participation. **Silverman said especially on the North Side, go as far as you can; have coffee and dessert and have the Harbor Commission there, the Marina Manager, and let people know; the boaters loved it when that was done in the past. Stephens asked for more notice so Harbor Commission members can plan to attend.**

Stephens said she thinks that compared to last year, these surveys are a little brighter. Stephens asked whether the **staff that were commended were given feedback. Abshire said staff had already left for the season.**

Abshire said the loopers were very unusual; we heard that a lot of people were recommending South Haven. **Silverman asked if there is a newsletter that South Haven can get info about our harbor to the loopers.**

Marina Fund Revenue
As of December 31, 2011

Fiscal Year Ending in	Seasonal	Transient	Revenue Total	Operational Expense	Net Revenue
2002	234,236	161,984	396,220	369,081	27,139
2003	259,840	166,084	425,924	403,463	22,461
2004	280,151	167,907	448,058	429,353	18,705
2005	282,245	170,944	453,189	479,287	-26,098
2006	300,819	173,817	474,636	517,881	-43,245
2007	343,171	170,869	514,040	471,088	42,952
2008	368,408	168,362	536,770	493,906	42,864
2009	377,955	166,674	544,629	492,039	52,590
2010	350,635	161,584	512,219	485,399	26,820
2011	314,270	140,546	454,816	521,900	-67,084
2012	30,740	102,174	132,914	218,328	-85,414

NOTES ON OPERATIONAL EXPENSES:

Due to year end audit and closing out the last FY, some monthly expenses have not been posted to the accounts for the new fiscal year that started in July.

Operational Expense does not include depreciation of approximately $98,000 per year.
Operational Expenses do not include large construction expenses.
Operational Expenses do not include the annual transfer to the River Maintenance Fund of approximately $25,627 annually.

Seasonal Marina Revenue

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Calendar Year Total
2007	58,007	147,702	34,975	42,960	23,115	-3,846	6,199	1,554	703	1,100	22,348	19,285	354,102
2008	60,795	185,520	32,325	36,210	19,130	16,761	820	50	0	6,550	26,799	900	385,860
2009	44,784	185,069	32,390	25,955	31,150	23,488	843	50	850	900	27,990	1,000	374,469
2010	13,035	218,460	41,530	20,235	5,050	20,692	0	434	350	200	29,812	1,000	350,798
2011	43,222	157,210	38,473	31,230	12,498	-158	800	1,950	400	1,100	17,625	8,865	313,215

Transient Marina Revenue

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Calendar Year Total
2007	0	0	0	8,528	11,494	39,340	56,647	48,986	10,983	1,553	-41	0	177,490
2008	0	0	0	11,657	8,957	29,620	53,315	53,501	11,385	630	0	0	169,065
2009	0	0	0	11,972	10,994	24,877	55,645	39,835	22,176	1,301	0	0	166,800
2010	0	0	0	8,445	9,029	25,154	52,730	40,107	8,654	1,299	0	0	145,418
2011	0	0	0	373	16,162	21,221	47,565	41,459	12,635	515	0	0	139,930

City of South Haven
Marina Fund - Fund 594
For the period ended December 31, 2011

Revenues:	*Month Actual*	*YTD Actual*	*2011-12 Adpoted Budget*
State Grant	$ -	$ 4,194	$ 550,000
Interest and Rents	(4)	6,817	10,000
Charges for Service	8,865	132,914	510,000
Other Revenue	-	6,466	7,000
Total Revenues	$ 8,861	$ 150,391	$ 1,077,000

Expenses:	*Month Actual*	*0*	*YTD Actual*	*2011-12 Adpoted Budget*
Personnel Costs	$ -		$ 35,975	$ 70,385
Supplies	-		3,305	6,400
Admin/Computing/Equipment Fees	5,650		33,898	67,796
Contractual Services	12,425		39,408	76,300
Other Services and Charges	11,772		67,897	138,980
Utilities	986		17,112	32,700
Repairs and Maintenance	-		3,044	13,600
Capital Outlay	42,991		75,380	1,100,000
Operating Transfers Out	-		-	25,627
Total Expenses	73,824		276,020	1,531,788
Depreciation	-		-	98,000
Total Expenses and Depreciation	$ 73,824		$ 276,020	$ 1,629,788

Net Fund Change	$ (64,963)	**$**	**(125,628)**	$ (552,788)

Retained Earnings	June 30	$	2,026,722
Less Net Capital Assets		$	(944,937)
Net Undesignated Reserves		**$**	**1,081,786**
Add Seasonal Rentals paid but not posted to income yet		**$**	**183,324**
Deduct Interest earned, but not received yet		**$**	**(2,804)**
Deduct Market Value Adjustments not realized yet			
Deduct Expenses paid in advance, not posted to expense yet			
Deduct amounts owed to Marina but not yet received		**$**	**(1,082)**
Add current expenses owed but not paid yet		**$**	**35,526**
Adjusted Undesignated Reserves		**$**	**1,171,122**
Cash & Investments Balance		**$**	**1,171,122**

Black River Park Revenues

Black River Park Revenue
As of December 31, 2011

Fiscal Year Ending	Seasonal Dock	Transient Dock	Boat Launch & Parking fees	Seasonal Launch Permit	Revenue Total	Operational Expense	Net Revenue
2007	84,563	9,480	42,544	10,471	147,058	90,412	56,646
2008	96,484	11,143	37,896	10,053	155,576	97,145	58,431
2009	93,239	9,240	37,261	11,922	151,662	99,992	51,670
2010	84,432	9,249	38,478	10,183	142,342	90,883	51,459
2011	66,393	8,658	42,038	3,859	120,948	113,430	7,518
2012	12,959	7,886	38,084	1,297	60,226	55,521	4,705

Note: Operational Expense does not include depreciation of approximately $50,000 per year.
Operational Expenses do not include large construction expenses.
Operational Expenses do not include the annual transfer to the River Maintenance Fund of approximately $4,200 annually

Boat Launching & Parking Fees Revenue

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Calendar Year Total
2007	0	0	0	1,289	4,160	7,725	13,459	7,941	5,917	1,808	0	0	42,299
2008	0	0	0	831	2,768	5,172	11,030	10,046	4,709	2,170	0	0	36,726
2009	0	0	0	370	3,378	5,558	10,738	7,704	8,311	812	0	0	36,871
2010	0	0	0	527	6,102	4,284	13,972	11,844	2,799	2,186	0	0	41,714
2011	0	0	0	126	4,301	6,870	19,145	10,345	7,373	1,221	0	0	49,381

Launching - Seasonal Permit Revenue

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Calendar Year Total
2007	0	0	0	2,261	4,157	2,749	1,453	0	0	0	0	0	10,620
2008	0	0	0	1,885	3,743	2,972	1,620	0	0	0	0	0	10,220
2009	0	0	0	2,770	4,924	2,608	640	0	0	0	0	0	10,942
2010	0	0	0	1,370	7,158	1,015	1,546	0	75	0	0	150	11,314
2011	0	0	0	610	75	1,403	1,222	0	0	75	0	0	3,385

Seasonal Dock Revenue

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Calendar Year Total
2007	9,140	27,530	6,155	11,695	12,270	5,762	0	0	250	400	5,200	4,787	83,189
2008	7,940	45,315	9,400	11,905	12,675	-1,388	0	0	200	2,000	5,009	1,655	94,711
2009	6,865	41,215	7,085	9,125	4,990	15,095	0	0	0	0	5,000	0	89,375
2010	3,740	30,265	19,680	11,325	15,585	-1,163	1,650	0	0	0	4,650	2,369	88,101
2011	6,550	22,995	3,740	7,215	8,505	8,720	727	3,707	0	1,680	2,175	4,670	70,684

Transient Dock Revenue

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Calendar Year Total
2007	0	0	0	169	1,303	1,986	3,988	2,672	984	0	0	0	11,102
2008	0	0	0	329	1,562	1,609	2,571	2,904	1,204	303	0	0	10,481
2009	0	0	0	0	483	1,776	2,444	3,796	1,332	0	0	0	9,831
2010	0	0	0	0	748	930	2,657	2,479	746	0	0	0	7,560
2011	0	0	0	0	818	1,958	4,492	2,190	1,181	23	0	0	10,662

City of South Haven
Black River Park Fund - Fund 545
For the period ended December 31, 2011

Revenues:	*Month Actual*		*YTD Actual*	*2011-12 Adpoted Budget*
State Grant	$ -	#	$ -	$ -
Charges for Service	4,670		60,732	143,500
Interest and Rents	(1)		140	3,000
Other Revenue	-		59	-
Total Revenues	$ 4,669	#	$ 60,931	$ 146,500

Expenses:	*Month Actual*	*YTD Actual*	*2011-12 Adpoted Budget*
Personnel Costs	$ -	$ 24,475	$ 44,569
Supplies	-	1,429	2,300
Admin/Computing/Equipment Fees	2,042	12,254	24,508
Contractual Services	1,093	7,890	25,700
Utilities	431	3,956	7,000
Other Services and Charges	865	4,570	9,225
Repairs and Maintenance	-	948	8,500
Capital Outlay	-	-	3,650
Operating Transfers Out	-	-	5,547
Total Expenses	4,431	55,521	130,999
Depreciation	-	-	50,000
Total Expenses and Depreciation	$ 4,431	$ 55,521	$ 180,999

Net Fund Change	$ 238	**$**	**5,410**	$ (34,499)
Retained Earnings	June 30	$	656,243	
Less Net Capital Assets		$	(541,437)	
Net Undesignated Reserves		**$**	**114,806**	
Add Seasonal Rentals paid but not posted to income yet		**$**	**38,729**	
Deduct Expenses paid in advance, not posted to expense yet				
Add current expenses owed but not paid yet		**$**	**788**	
Adjusted Undesignated Reserves		**$**	**159,733**	
Cash & Investments Balance		**$**	**159,733**	

City of South Haven
River Maintenance Fund - Fund 296
For the period ended December 31, 2011

Revenues:	*Month Actual*	*YTD Actual*	*2011-12 Adpoted Budget*
Assessments	$ 6	$ 15,216	$ 16,000
Interest and Rents	1	1,312	-
Other Revenue	-	-	-
Operating Transfers In	-	-	41,174
Total Revenues	$ 7	$ 16,528	$ 57,174

Expenditures:	*Month Actual*	*YTD Actual*	*2011-12 Adpoted Budget*
Operating Supplies	$ -	$ -	$ 500
Contractual Services	-	-	-
Repairs and Maintenance	-	-	-
Capital Outlay	-	-	10,000
Total Expenditures	$ -	$ -	$ 10,500

Net Fund Change	$ 7	$ 16,528	$ 46,674
Prior Year End Fund Balance	June 30	$ 10,260	
Estimated YTD Fund Balance		$ 26,788	
Cash & Investments Balance		**$ 26,788**	

HARBOR COMMISSION
OF THE CITY OF SOUTH HAVEN
COUNTIES OF VAN BUREN AND ALLEGAN, MICHIGAN

RESOLUTION NO. 12-01

A RESOLUTION SETING MEETING DATES FOR 2012

Minutes of a regular meeting of the Board of Directors of the Harbor Commission of the City of South Haven, Allegan and Van Buren Counties, State of Michigan, held in the City Hall, 539 Phoenix Street, South Haven, Michigan, on January 17, 2012, at 5:30 p.m., local time.

Present, Boardmembers:_____

_____

Absent, Boardmembers:_____

_____

The following preamble and resolution were offered by Boardmember _____ and supported by Boardmember _____.

NOW, THEREFORE, BE IT RESOLVED THAT:

1. The regular meetings of the Harbor Commission are hereby scheduled for the following dates:

January 17, 2012
February 21, 2012
March 20, 2012
April 17, 2012
May 15, 2012
June 19, 2012
July 17, 2012
August 21, 2012
September 18, 2012
October 16, 2012
November 20, 2012
December 18, 2012

AYES: _____

_____

NAYS:_____

_____

RESOLUTION DECLARED ADOPTED.

_____
Paul VandenBosch, Harbormaster

CERTIFICATION

STATE OF MICHIGAN)
) ss.
COUNTY OF VAN BUREN)

I, Marsha Ransom, the duly qualified and acting Secretary of the Harbor Commission of the City of South Haven, do hereby certify that the foregoing is a true and complete copy of a resolution adopted by the Board at a meeting held on January 17, 2012, the original of which is on file in the office of the Harbormaster. Public notice of said meeting was given pursuant to and in compliance with Act No. 267, Public Acts of Michigan, 1976, as amended.

IN WITNESS WHEREOF, I have hereto affixed my official signature this January 17, 2012.

_____
Marsha Ransom, Secretary

Vol. 161 Oct 2005

US Army Corps
of Engineers
Detroit District

Great Lakes Update

Wave Absorbers at Federal Harbors on the Great Lakes

Attenuation or reduction of wave action in federal navigation channels has become a pressing issue throughout the Great Lakes region. Wave heights on the Great Lakes can reach well over 20 feet in deep water creating dangerous commercial and recreational boating conditions. Additionally large waves can accelerate erosion, putting both private and public property in jeopardy.

Figure 1: Wave action at Grand Haven Pier

Many inlets around the Great Lakes are stabilized by parallel jetty structures, also known as piers. Channel geometry and construction materials contribute a large portion to wave attenuation in federal harbors. The geometry and impermeable material used to construct these piers, allow them to shelter the inner-channel from a large portion of wave energy. These structures were originally built in the mid to late 1800's using stone filled timber cribs. Due to many years of physical, chemical and biological weathering, these structures deteriorated to the point where they became unstable. They were absorbing wave energy, but concurrent with every passing storm, being continually destroyed. The U.S. Army Corps of Engineers was tasked to rehabilitate these structures. The goal of the rehabilitation was to restore them so they would perform in a similar way as they did when the structures were originally installed.

The usual construction method has been to drive steel sheet pile on both sides of the deteriorating jetty and pour a concrete cap over the top. Steel sheet pile was chosen over timber to extend the structures useful lives. While this has proved to be a very durable alternative, it has made the wave climate between the jetties at some harbors more energetic when compared to the climate when the structures were deteriorated.

Because steel sheet pile is vertical and smooth, waves tend to reflect entirely off these structures with little to no energy being dissipated. With waves continually bouncing off the sides of these structures, resonance may occur, and on rare occasions may result in a large standing wave. A standing wave may hamper vessels' ability to gain safety inside a harbor.

To remedy this situation and provide for a safer environment, the Detroit District began installing wave absorber cells in some of their structures. A wave absorber is a pocket cut out of the existing steel sheet pile jetty, where large armor stone is placed. The armor stone size usually ranges from 2.5-10 tons and is normally placed on a slope. The uneven face of the stone configuration allows for much more effective wave absorption, while protecting the integrity of the structure. The armor stone configuration allows for a much more porous structure which absorbs wave energy much more effectively. Figure 1 shows the northern wave absorber at Pentwater Harbor. Figure 2 shows wave action on the lakeside of the wave absorber cell. Figure 3 shows wave action after interacting with the wave absorber cell.

Figure 2: Wave Absorber Cell (Courtesy of Don Carpenter)

Figure 3: Wave action before the cell (Courtesy of Don Carpenter)

Figure 4: Wave action after the cell (Courtesy of Don Carpenter)

Depending on the configuration of the harbor, wave absorbers have been placed in both jetties or just one. The lengths of the absorber cells range from 200 feet to 600 feet, while the widths range from approximately 20 feet to 60 feet. In Figure 5, the 200-foot wave absorber structures on both the north and south jetties at Pentwater harbor are shown.

Figure 5: Pentwater Harbor

Currently, wave absorbers have been installed at seven harbors (Figure 6). Five of them are located on the east coast of Lake Michigan: Charlevoix, Portage Lake, Pentwater, White Lake and Saugatuck. Two Rivers is located on the west coast of Lake Michigan. The seventh is at Ontonagon, located on the southern shore of Lake

Superior. Grand Haven Harbor is scheduled to have one constructed within the next few years.

Figure 6: Wave absorber locations.

In order to examine the efficiency of these structures and possibly improve on them, the U.S. Army Corps of Engineers Coastal and Hydraulics Laboratory (CHL) and Detroit District have undertaken a study at Pentwater Harbor involving both detailed physical and computer modeling. This study is being done under the Monitoring Completed Navigation Projects (MCNP) Program. There were a number of purposes to this study, which are outlined below.

- Experiment with wave absorber length and placement to optimize future designs.
- Provide guidance to future wave absorber designers on how to conduct analyses to determine proper wave absorber size and placement.
- Determine efficiency of each wave absorber configuration and costs associated to achieve various levels of wave energy reduction within the navigation channel.

The bulk of the work effort on this project was on the physical modeling. The physical model was constructed at the CHL in Vicksburg, MS (Figure 7). Several wave conditions were modeled with 9 different wave absorber configurations. The configurations were as follows:

1. 200-foot wave absorber on north jetty, 200-foot wave absorber on south jetty (Existing condition at Pentwater)
2. 200-foot wave absorber on north jetty, no wave absorber on south jetty
3. No wave absorber on north jetty, 200-foot wave absorber on south jetty
4. 400-foot wave absorber on north jetty, 400-foot wave absorber on south jetty
5. 400-foot wave absorber on north jetty, no wave absorber on south jetty
6. No wave absorber on north jetty, 400-foot wave absorber on south jetty
7. 200-foot wave absorber on north jetty, 400-foot wave absorber on south jetty
8. 400-foot wave absorber on north jetty, 200-foot wave absorber on south jetty
9. No wave absorbers on either jetty

Figure 7: Physical Model

In addition to the physical model built at CHL, a detailed computer model was created using CGWAVE, a state-of-the-art computer program that is capable of predicting wave effects inside a harbor. The purpose of the dual modeling scenarios was to compare results of both the physical and computer models and make conclusions on whether the computer modeling is accurate enough to predict the same wave effects inside the harbor as that of the physical model.

Physical modeling is very costly when compared to computer modeling. If the computer model proves to be adequate in predicting harbor response then it can be recommended for future studies at a significantly reduced price. All of the configurations listed above were modeled using CGWAVE.

The graphic below shows a model run using an 8.2-ft wave. A wave of this height would most likely be the result of strong northwest winds. Note the intense wave action along the southern pier. The height of those waves along the pier is about 5 ft. After interacting with the wave absorber cells, the waves are drastically reduced.

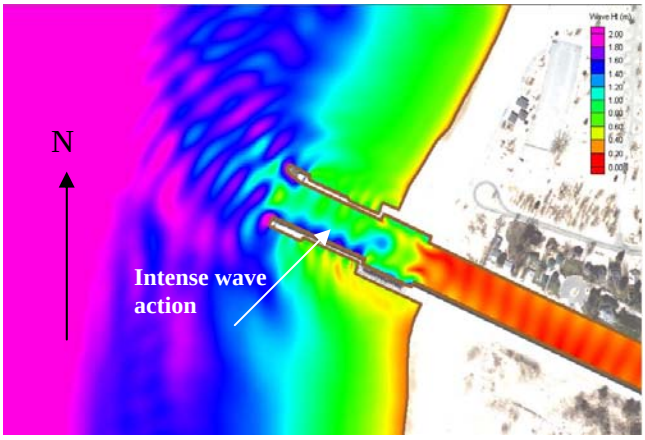

Figure 8: CGWAVE Output

Preliminary results are showing that a wave absorber on both sides of the channel is more effective than just having one. For example, when a 200-foot wave absorber was placed on the north and south side, it generally was more effective in reducing wave energy than just one 400-foot wave absorber on the north or south side. These preliminary results are very positive considering that Pentwater was built with two 200-foot wave absorbers.

The idea for the two-wave absorber configuration came from a field experiment in Charlevoix Harbor. In 1981, during reconstruction of the Charlevoix Harbor north jetty, field engineers attempted to mitigate for the increased wave reflection that was expected at completion of the project. They substituted a 400-ft section of large armor stone for the sheet piling along a portion of the rehabilitated structure, essentially creating a steel sheet pile-rubble mound hybrid structure. The rubble-mound portion was recessed into a pocket so that the toe of the rubble-mound would not encroach into the navigation channel, and these became know as pocket wave absorbers.

The local community found this to work very well in attenuating waves. When the southern jetty was being rehabilitated in 1989, a 200-foot section of rubble mound was placed. From that project forward, the application of a wave absorber at all new rehabilitation projects was examined. The length and placement of the wave absorbers varied from project to project as some harbors only called for small sections of the jetties to be reconstructed. Lengths of 200-foot and 400-foot were traditionally used since they were shown to work at the original harbor.

CHL and the Detroit District have completed all of the physical and computer modeling and are currently analyzing the data. A draft report was completed in September 2005 and the final report should be published sometime in 2006.

Based on the results from this study, the U.S. Army Corps of Engineers hopes to enhance performance of the federal structures and design cost effective improvements in the future. The ultimate goal is to provide safe navigation to all who want to work and play on the Great Lakes.

US Army Corps of Engineers®

Effectiveness of Pocket Wave Absorbers in Vertical-Wall, Coastal Entrance Structures

by Edward F. Thompson, Robert R. Bottin, Jr., and James P. Selegean

PURPOSE: This Coastal and Hydraulics Engineering Technical Note (CHETN) provides preliminary information on the effectiveness of pocket wave absorbers (relative to wave conditions) in vertical steel sheet-pile coastal entrance structures.

OVERVIEW: The U.S. Army Corps of Engineers is responsible for dozens of harbor entrances in the Great Lakes constructed with parallel jetties. These jetties, many in operation for more than 100 years, were typically constructed of rock-filled timber cribs. Over time, the wood cribbing has experienced significant deterioration, thus causing the jetty to be rather porous. Many of these structures have been rehabilitated. The typical rehabilitation approach has been to drive steel sheet pile around the existing structure and place a concrete cap on top, thereby encasing the original structure. After completion of the rehabilitation projects, the wave climate between the jetties appears to increase significantly causing navigational difficulties and damage to moored vessels within the harbor. This is apparently due to the fact that the timber crib jetties were rough, porous structures, especially in their deteriorated state, and were much more effective at dampening wave energy than the rehabilitated, sheet-pile encased jetties. The steel sheet-pile structures, being considerably more reflective than the deteriorating timber structures, are largely responsible for the increasingly energetic wave climate. To mitigate for the more energetic wave climate, the Corps has removed short sections of steel sheet piling at selected harbors and replaced them with pocket wave absorbers.

A pocket wave absorber is created when a section of the sheet-pile wall is recessed from the remainder of the jetty and stone is placed in the area to provide a rough, porous sloping surface that is intended to dissipate wave energy. The crest of the stone is usually offset from the steel sheet-pile wall, thus creating a pocket. The typical length of a pocket is 61 to 91 m (200 to 300 ft). An example of a pocket wave absorber is shown in Figure 1. The U.S. Army Engineer District, Detroit, has installed 10 pocket wave absorbers in six Federal harbors. In some instances the pockets are located at the landward ends of the jetties, while others are situated more lakeward. The wave absorbers have been installed as a single pocket, and in pairs, on opposite sides of the channel. Little or no design guidance was available for predicting the effectiveness of the many variations of wave absorbers.

BACKGROUND, PHYSICAL MODEL STUDIES: To predict design performance of pocket wave absorbers, physical model experiments were conducted by the University of Michigan, Department of Civil and Environmental Engineering (Wright and Carpenter 1999; Carpenter 2001). A generic model, representative of typical dimensions for various rehabilitated harbor jetties, was constructed to a scale of 1:50. The model layout consisted of two parallel jetties 1.2 m (4 ft) apart and 9.4 m (31 ft) long with a water depth of 0.09 m (0.32 ft) (corresponding to prototype dimensions of 61 m (200 ft) in width and 1,550 ft in length with a water depth of 457.2 m (16 ft)). Design parameters such as pocket length, slope of stone, and stone size were varied.

Figure 1. Pocket wave absorber at Pentwater, MI

Strengths and limitations of the physical model experiments are summarized in Table 1. The experiments were conducted under controlled conditions, enabling various experimental parameters to be changed and evaluated relative to pocket wave absorber performance. Wave gauges were initially placed adjacent to the jetty on both the lakeside and harbor side of the pocket wave absorber to determine percent dissipation. However, observed nonuniformity across the channel width prompted additional experiments in which 3-gauge arrays were placed across the channel width lakeward of the pocket and at two locations landward of the pocket. Incident waves were generated to produce near-breaking heights, prototype wave periods ranging from 5.2 sec to 6.7 sec, and wave angles of 0, 15, and 30 deg relative to the channel alignment. Although most experiments were performed with a single pocket, several other configurations were constructed and evaluated (Figure 2). Waves were reproduced by a plunger-type wave machine that was capable of producing only monochromatic waves.

Table 1
Strengths and Limitations, Available Physical Model Experiments

Strengths	Limitations
Controlled experiments with accurate measurements	Unidirectional, monochromatic waves
Multiple gauges	No incident wave data lakeward of entrance
Multiple incident wave conditions	Flat bottom, rather than representative channel bathymetry
Multiple pocket configurations	No river currents

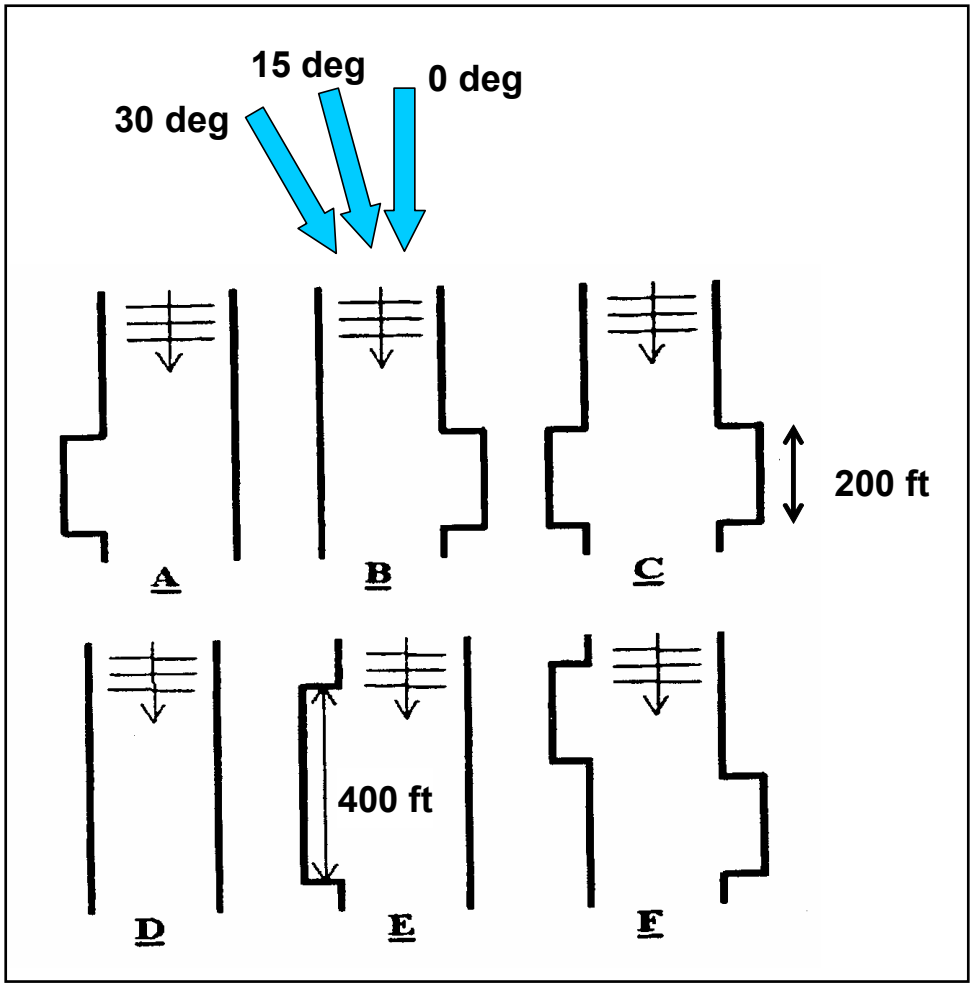

Figure 2. Pocket configurations evaluated in physical model studies (prototype dimensions)

The constraint of unidirectional, monochromatic waves is a major limitation. Wave irregularity is an important component of wave interaction with harbor entrances, and monochromatic waves are prone to exaggerating reflections and spatial variability in both physical and numerical models. However, wave irregularity may be less critical in applications involving wave propagation between long, parallel jetty walls. Since experiments were limited in this study, several of the pocket wave absorber parameters tested yielded inconclusive results. It was recommended that a more detailed study be conducted before significant conclusions could be made for some of the configurations tested.

Despite limitations of the physical model study, some preliminary conclusions could be deduced. For uniform stone size, the study revealed that the effect of stone size on dissipation was negligible, and that graded stone yielded slightly lower wave dissipation rates than uniform stone. The study also suggested that dissipation rates based on slope variation were similar. It was found that dissipation increased erratically with pocket length. This observation led to the consideration that the pocket length alone may not be a determining factor in wave energy dissipation, but rather the ratio of pocket length to wavelength might be more significant, at least for pocket lengths less than about one

wavelength. Figure 3 shows the parameter $(H_{landward}/H_{lakeward})^2$ versus pocket length, where $H_{landward}$ is average wave height measured at a 3-gauge array on the landside of the pocket and $H_{lakeward}$ is average wave height measured at the array on the lakeside of the pocket. The square of the ratio indicates the fraction of wave energy passing the pocket. Local wavelength for the wave periods shown ranges from 33.2 to 38.1 m (109 to 125 ft).

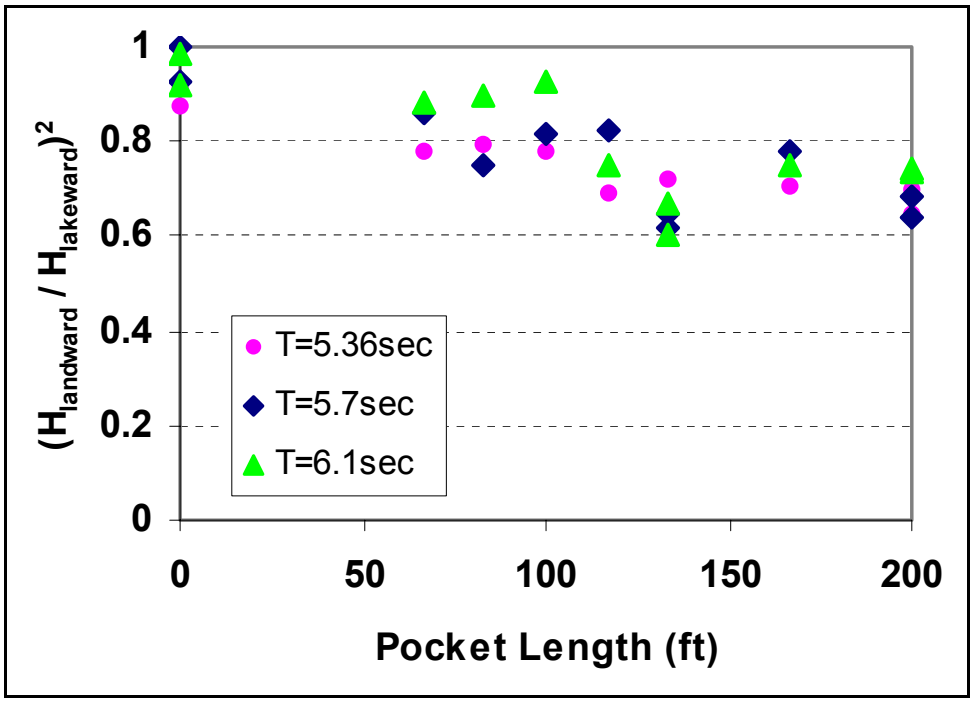

Figure 3. Wave energy fraction passing single pocket for various pocket lengths; wave direction aligned with channel; from physical model (prototype dimensions)

From experiments in which direction of wave approach varied, it was determined that waves approaching from straight down the channel represent overall worst-case scenarios in the channel (as opposed to waves approaching from various angles). Figure 4 shows wave energy parameter $(H_{landward}/H_{lakeward})^2$ values for each configuration in Figure 2 for 0-, 15-, and 30-deg wave direction. For every configuration tested, wave energy past the pocket decreases as incident wave obliquity increases. As would be expected, pocket configuration can have a major impact on performance. Figure 5 shows wave energy parameter averaged over the three periods and directions tested, which is more representative of the overall effectiveness of the various configurations. Configurations C, E, and F would be expected to perform better than A, B, and D, based on the general expectation that wave dissipation correlates with total length of pocket, regardless of configuration details. Configuration C, the double pocket similar to those constructed at Pentwater and White Lake Harbors, Lake Michigan, appears to be most effective at reducing wave energy in the channel. For configuration C, only about one-third of the energy remains after waves pass the pockets. configuration F, identical to configuration C except that the pockets are offset along the channel length rather than opposite each other, performs similarly to C for 0- and 15-deg wave directions.

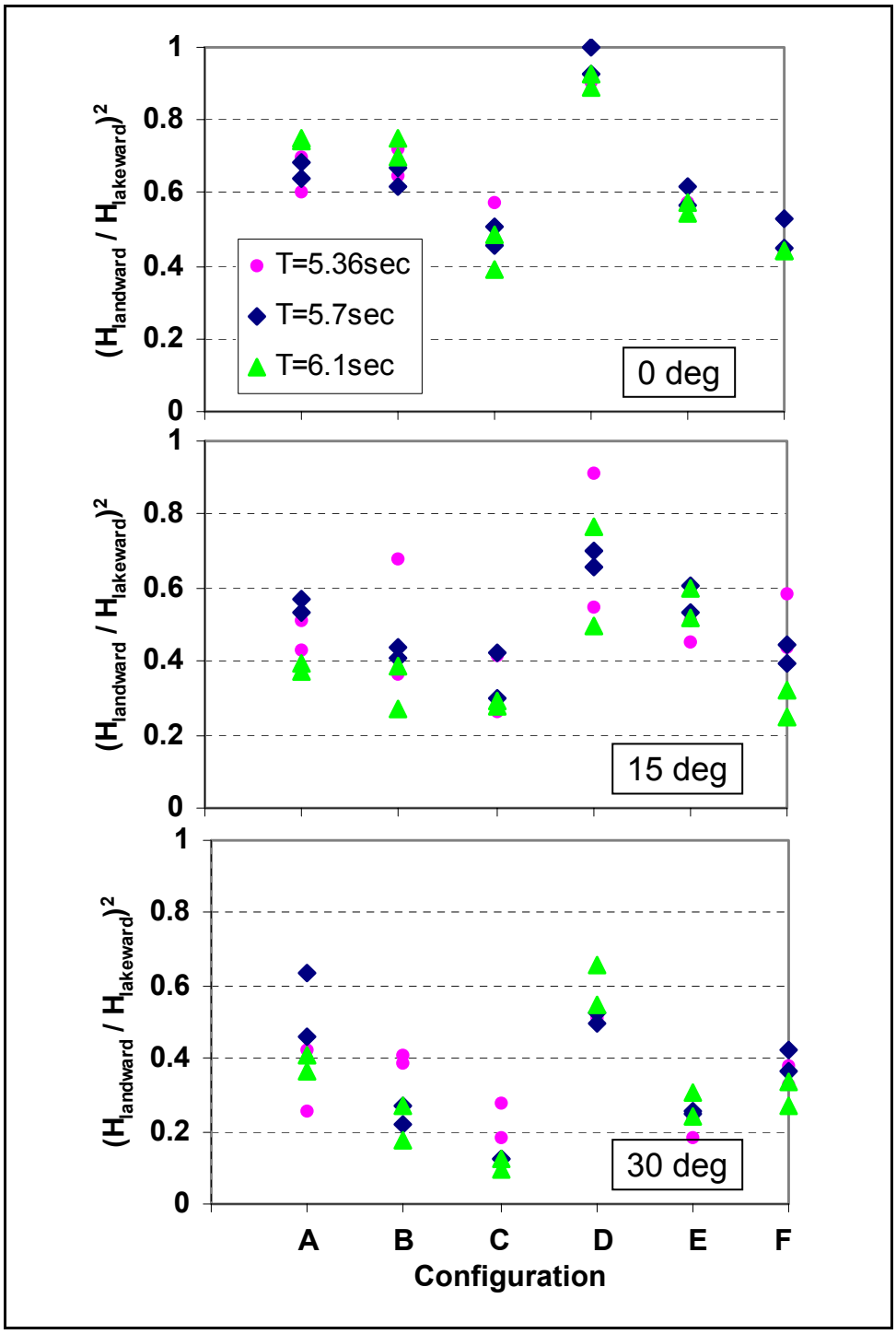

Figure 4. Wave energy fraction passing pocket for various pocket configurations and incident wave directions; from physical model (prototype dimensions)

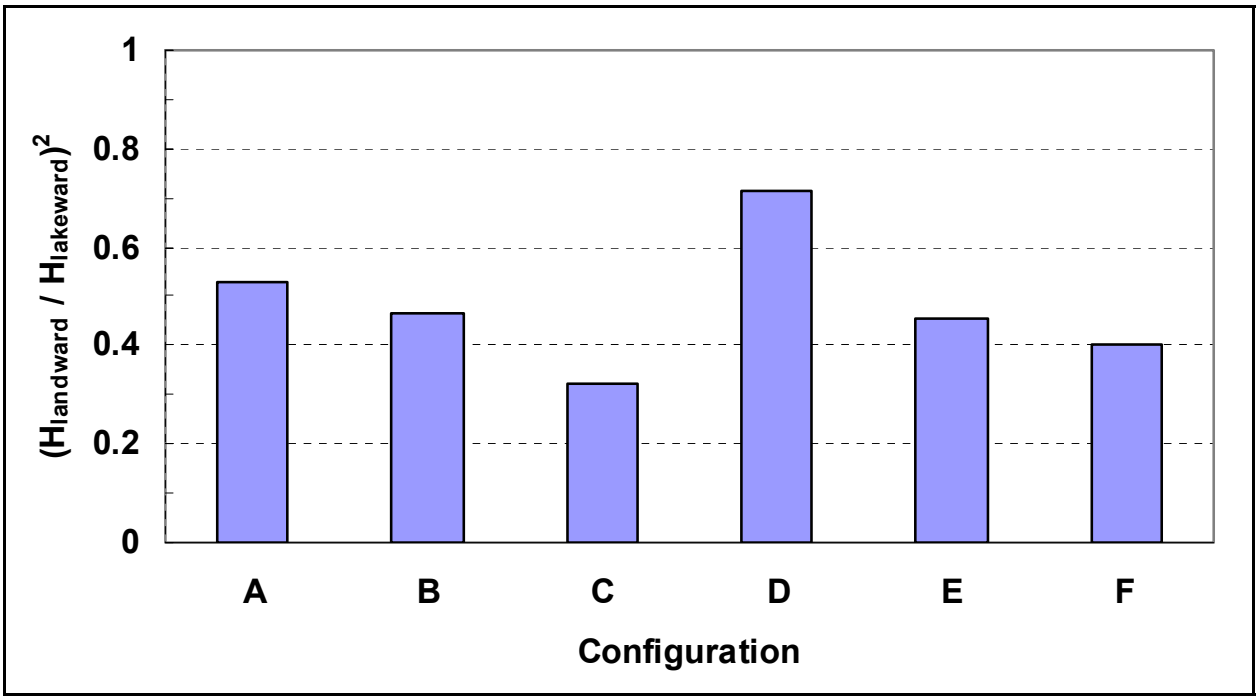

Figure 5. Wave energy fraction passing pocket for various pocket configurations; average from three incident wave directions studied in physical model (prototype dimensions)

However, F is not as effective as C for 30-deg wave direction. This behavior can be attributed to the pocket geometry of configuration F, which affords wave energy approaching at 30 deg a fairly clear path to reflect off the jetty walls and avoid direct impact with either pocket. The same process appears to be detrimental to the performance of configuration E for 15-deg wave direction.

BACKGROUND, FIELD STUDIES: The University of Michigan, Department of Civil Engineering, study also included a limited field measurement effort to supplement the physical model studies (Carpenter 2001). Field investigations were conducted at Pentwater and White Lake Harbors, Lake Michigan. Similar data also were obtained at Ontonagon Harbor, Lake Superior, during one week in November 2000 by Michigan Technological University, Department of Civil and Environment Engineering, as part of this effort. Pentwater has two 59.4-m- (195-ft-) long pockets opposite each other in a 44.2-m- (145-ft-) wide channel, similar to configuration C in the physical model experiments (Figure 6). White Lake has a similar configuration with 53.9-m- (177-ft-) long pockets. Ontonagon has a different configuration and wider channel (76.2-m (250-ft) wide). Ontonagon data were collected to quantify the effect of a single 61-m- (200-ft-) long pocket, comparable to configurations A and B in the physical model experiments.

Strengths and limitations of the field investigations are summarized in Table 2. Wave heights were measured adjacent to one of the jetties on lakesides and landsides of the pocket by submerged pressure transducers. Due to logistical problems with collecting data during periods of high wave energy at the Lake Michigan sites and lack of directional incident wave data at all sites, results are

Figure 6. Aerial view of Pentwater Harbor entrance

Table 2
Strengths and Limitations, Field Data (Carpenter 2001)

Strengths	Limitations
Quantitative data on actual performance of prototype pockets in presence of real waves	Limited length of record and range of conditions
Includes time series data and spectral analysis	No measurements of incident waves or directionality Gauges adjacent to jetty walls

considered preliminary. Data from three events at each site are summarized in Figure 7. Incident wave directions are rough approximations. The results indicated that about 20-50 percent of the wave energy passed the pocket at the Lake Michigan sites and about 60-80 percent at Ontonagon. No strong dependence on incident wave direction is evident.

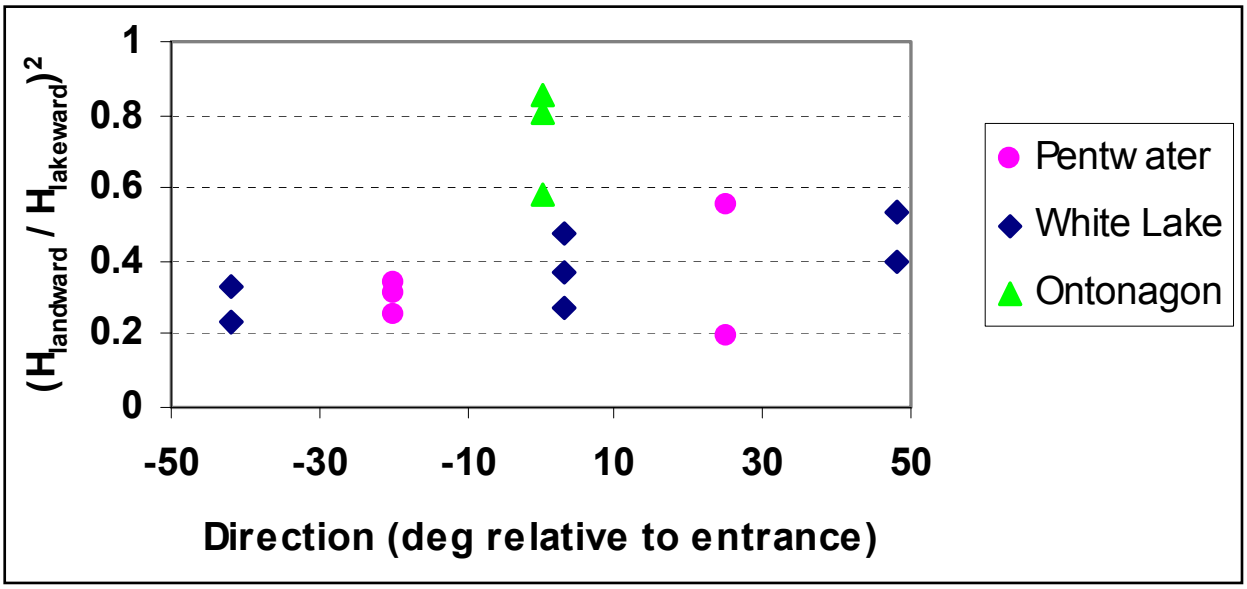

Figure 7. Wave energy fraction passing pocket for three field sites; relative direction is wave approach direction minus direction aligned with entrance channel (Carpenter 2001)

These field results provide some information about the effectiveness of a double versus single pocket absorber. The Lake Michigan results compare reasonably well with corresponding physical model data for configuration C in Figure 5. However, the pocket effect on waves does not appear to vary with incident wave direction as much as in the physical model studies (Figure 4). This difference in behavior can be attributed to the unidirectional, monochromatic waves used in the physical model. Distance between the pockets and the jetty entrance may also affect comparability of field and physical model data, though this effect cannot be evaluated with existing data. The Ontonagon results, which were selected to represent waves coming straight into the entrance, compare reasonably well with corresponding physical model data for configurations A and B, 0-deg direction, in Figure 4. It was noted, however, that these were single-point field measurements in a system with potentially significant cross-channel variation.

MONITORING PROGRAM: As part of the Monitoring Completed Navigation Projects (MCNP) program, pocket wave absorbers at Pentwater Harbor entrance, MI, were selected for monitoring. An aerial view of the site is shown in Figure 6. The objective of the monitoring program was to determine the effectiveness of pocket wave absorbers in reducing wave heights in entrance channels and harbor areas where they are utilized in parallel steel sheet-pile jetty configurations. Additional prototype wave data would be obtained and a physical model would be constructed. After validation of the physical model with prototype data, it was anticipated that design guidance relative to pocket wave absorber parameters would be developed.

ADDITIONAL PROTOTYPE WAVE DATA: The MCNP-supported prototype data collection effort was planned for the fall of 2002. It included an offshore directional wave gauge lakeward of the Pentwater jetties and nondirectional wave gauges along the north side of the channel lakeward and landward of the pocket absorbers (Figure 8). Gauge deployment was delayed until early April 2003. The channel gauges, designated MI002 and MI004, collected hourly data during the 7-week deployment. The offshore gauge failed to provide any incident wave data. Time series data from the channel gauges were subjected to spectral analysis and interpretation by McKinney and Sabol (2003). Long-period motions, with possible periods as long or longer than the 1,024-sec time series, were evident in some records. The long periods may be related to natural oscillations in Lake Michigan and inlet/harbor resonance at Pentwater, as described by Seelig and Sorensen (1977), but record lengths are too short to evaluate this possibility. For the long-period motion events highlighted by McKinney and Sabol (2003),[1] the NOAA/NOS 6-min water level record at Ludington, MI, 16 km (10 miles) north of Pentwater, shows prominent oscillations with approximate height and period of 30 cm (11.8 in.) and 1 hr, respectively. A recent study using water level data and numerical modeling to identify natural oscillation modes in Lake Michigan, shows several modes with periods near 1 hr and antinodes located in the coastal scallop between Big Sable Point and Little Sable Point, which includes both Ludington and Pentwater (As-Salek and Schwab 2004). Strengths and limitations of this field data collection effort are summarized in Table 3.

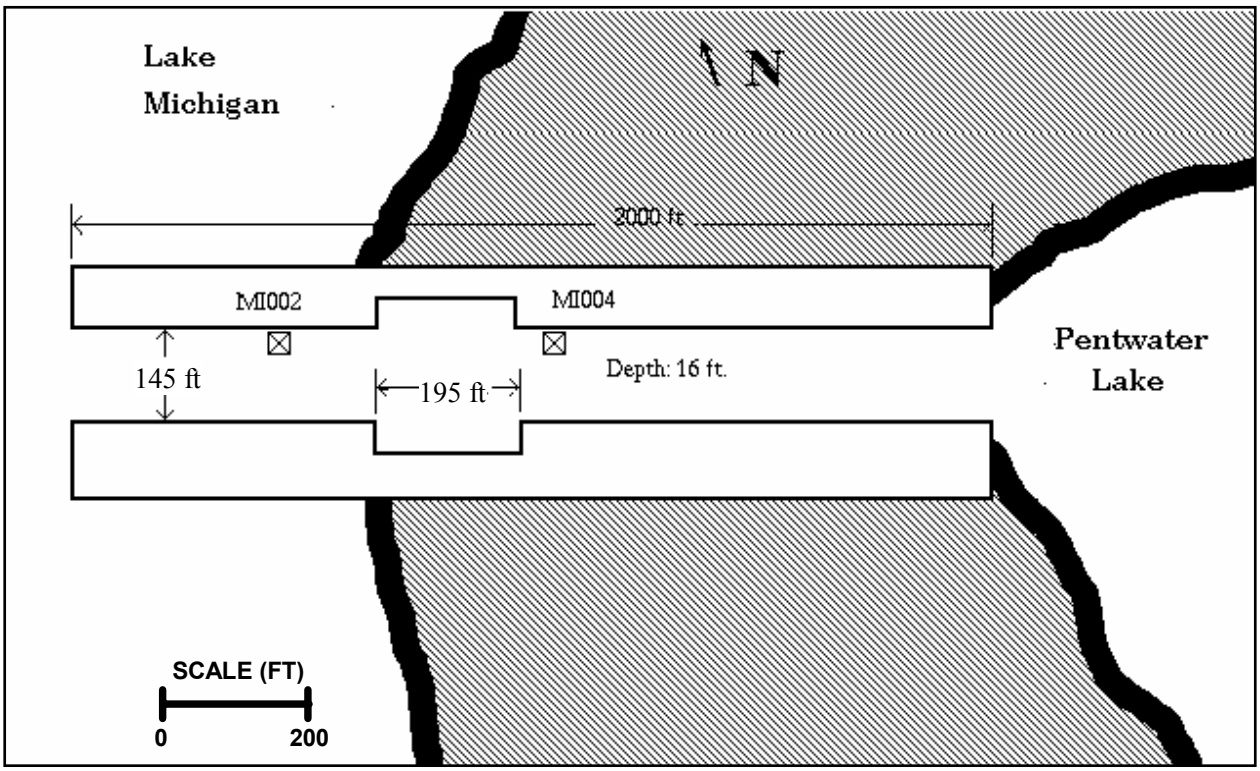

Figure 8. Location of MCNP wave gauges, Pentwater, MI

[1] McKinney, James P., and Sabol, Margaret A. (2003). "Evaluation of the Wave Absorber at Pentwater, Michigan," Unpublished report, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

Table 3
Strengths and Limitations, Field Data (McKinney and Sabol 2003)[1]

Strengths	Limitations
Quantitative data on actual performance of prototype pockets in presence of real waves	Limited length of record and range of conditions (no fall or winter storms)
Hourly data over a 7-week time period	No measurements of incident waves
Includes time series data and spectral analysis	Gauges adjacent to jetty walls

Based on cases with significant height from Gauge MI002, $H_{m0MI002}$, greater than 0.1 m (0.33 ft), the average ratio of significant wave height from the landside of the absorber, $H_{m0MI004}$, to that on the lakeside of the absorber is 0.621 m (2.0 ft). The corresponding energy ratio is 0.39 m (1.3 ft), indicating that wave energy after the pocket absorbers was 39 percent of the energy level before the absorbers. The percent energy passing the pocket exhibits a mild tendency to increase with significant height, reaching 45 percent for cases with $H_{m0MI002}$ greater than 0.5 m (1.6 ft) (McKinney and Sabol 2003). This field data set suggests that the Pentwater absorbers are slightly less effective than indicated by the University of Michigan field data (Figure 7) and physical model data (configuration C, Figure 5).

Although the MCNP field study has limitations, it provides a much more extensive suite of field data than was previously available for pocket absorbers. Pocket absorber effectiveness as a function of various wave parameters can be examined. As before, absorber effectiveness is expressed with a parameter indicative of relative transmitted wave energy, $(H_{m0MI004}/H_{m0MI002})^2$. An indication of incident wave direction can be obtained from National Data Buoy Center (NDBC) buoy 45007, which operated through the time period of the MCNP study. The NDBC buoy is located in the middle of the southern lobe of Lake Michigan, about 144.8 km (90 miles) south-southwest of Pentwater.

The dependence of absorber effectiveness on significant wave height lakeward of the pocket is shown in Figure 9. Only cases with dominant deepwater waves traveling toward the entrance are included (cases for which wave direction from the NDBC buoy fell within the range 225-360 deg). Similar plots for dependence of absorber effectiveness on peak wave period, T_{pMI002} , and incident wave direction, as represented by the NDBC buoy, D_{NDBC} , are given in Figures 10 and 11. The fraction of wave energy passing the absorber appears to be independent of wave height, period, and direction.

SUMMARY OF INTERIM RESULTS AND FUTURE PLANS: Preliminary results from the generic physical model and the prototype data presented herein indicate that pocket wave absorbers are effective in reducing wave heights in vertical-wall entrance channels. However, both the physical model and prototype data collected are limited in their applicability, as summarized in Tables 1-3. The prototype data obtained were at single points adjacent to the jetty walls and do not depict variation across the channel. Also, prototype data were obtained for limited wave conditions and only one pocket configuration. Physical model and prototype data give an incomplete, and somewhat inconsistent, portrayal of the dependence of absorber effectiveness on incident wave parameters.

[1] McKinney and Sabol, op cit., p. 9.

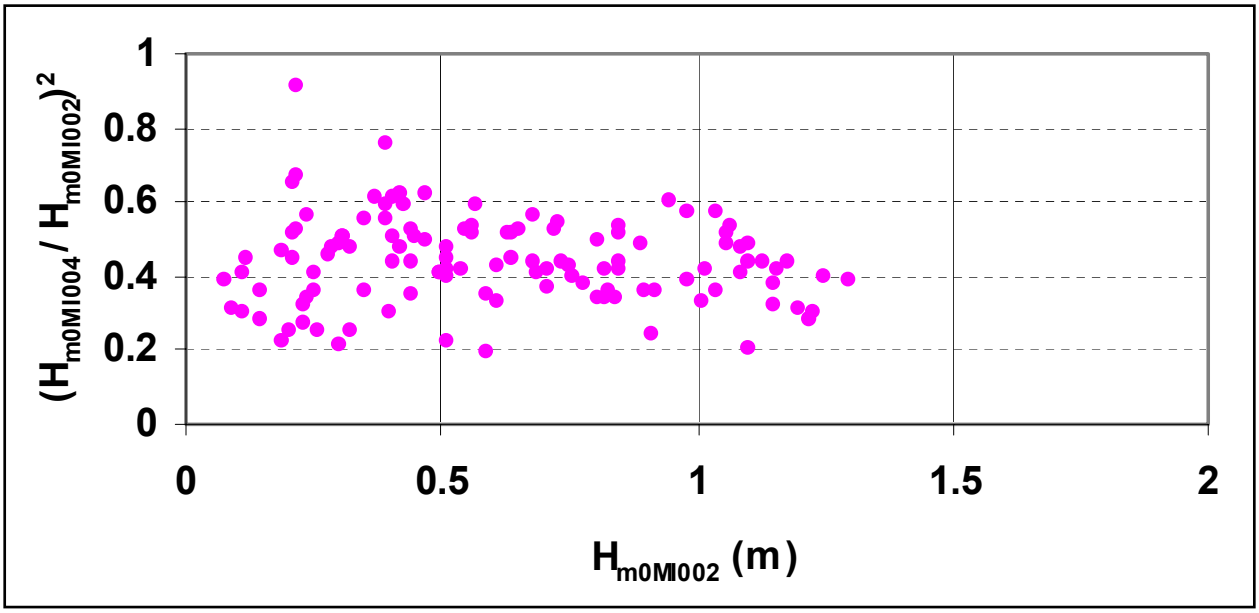

Figure 9. Wave energy fraction passing pocket versus significant height incident to pocket, Pentwater, MI

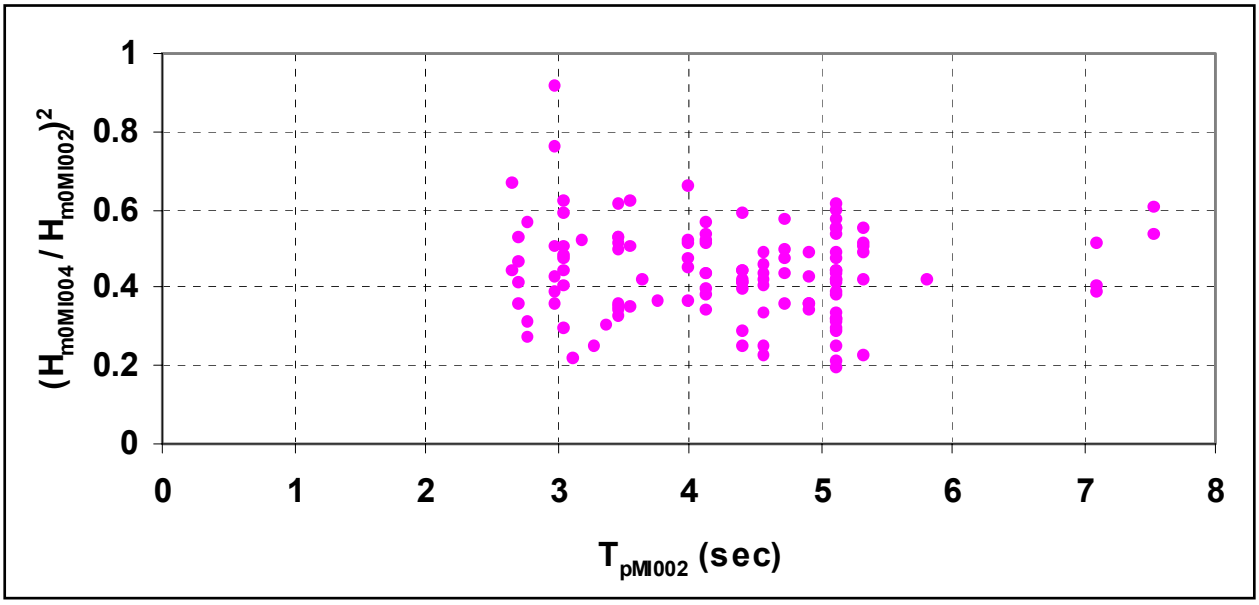

Figure 10. Wave energy fraction passing pocket versus peak wave period incident to pocket, Pentwater, MI

There is inadequate information to provide design guidance. It is unfortunate that the offshore directional wave gauge at Pentwater malfunctioned during the spring 2003 deployment. Plans are to redeploy the prototype wave gauges at Pentwater in early 2004. If adequate data is obtained, a physical model will be constructed and unidirectional spectral waves reproduced to study the pocket wave absorber design parameters. Once the wave conditions have been validated at various locations

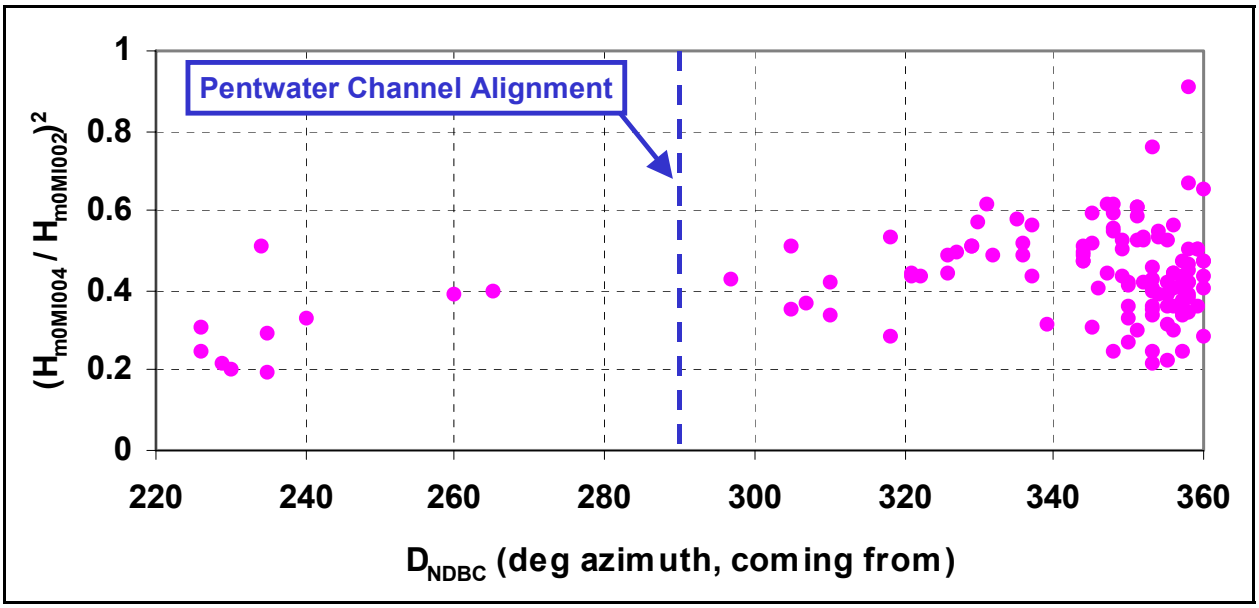

Figure 11. Wave energy fraction passing pocket versus wave direction measured at NDBC buoy 45007, Pentwater, MI

in the model with the prototype data, model wave heights throughout the region between jetties would be obtained with a high degree of confidence. Experiments would determine the impacts of pocket wave absorbers on wave conditions in the navigation channel, as opposed to only those adjacent to the vertical jetty wall. In addition, once validated, the model would be used to study a wide range of incident wave conditions (wave heights, periods, and directions). Changes in pocket wave absorber parameters (lengths, locations, stone sizes, slopes, etc.) would then be made to develop design guidance. Prototype and physical model data will be used to validate the numerical model, CGWAVE, for development of a pocket wave absorber "performance index," which is relevant to the objectives of the monitoring study. The performance of Boussinesq (BOUSS-2D) will also be evaluated using the available prototype and physical model data.

POINTS OF CONTACT: Questions relative to this CHETN may be addressed to Dr. Edward F. Thompson at (601-634-2027), FAX (601-634-3433), or e-mail: Edward.F.Thompson@erdc.usace.army.mil or Mr. Robert R. Bottin, Jr., at (601-634-3827), FAX (601-634-4827), or e-mail: Ray.R.Bottin@erdc.usace.army.mil, both of the Coastal Harbors and Structures Branch, Coastal and Hydraulics Laboratory, U.S. Army Engineer Research and Development Center, or Dr. James P. Selegean at (313-226-6791), FAX (313-226-2398), or email: James.P.Selegean@lre02.usace.army.mil of the U.S. Army Engineer District, Detroit. Additional information on the MCNP program may be obtained from: *http://chl.wes.army.mil/research/navigation/mcnp_site/default.htm*.

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December 22, 2011

TO: Brian Dissette

FR: Paul VandenBosch

RE: City Management Response to Marina Audit

In reviewing the audit, there are three areas of concern: Record keeping, discounting and staff hiring.

Record Keeping

As part of the grant agreement for the North Side Marina, the City is required to implement the State Reservation System at the marinas. In 2012, This system will be implemented in a way that transient and possibly also seasonal dockage will be tracked and recorded in the system. City management will review the Customer Reservation System and will set up the system in a way which will benefit marina record keeping.

The Marina Manager will implement the State Reservation System so that it is operational for use by April 15, 2012.

Until it is known whether the State Reservation System software can provide adequate reporting, the current system of tickets and database entry will be continued.

Management requires a number of changes to the current ticket and database system:

Database Changes
The Database will include a drop down box selection for each marina, and each boat will be logged in by marina.
Black River Park will be added as a marina drop down box selection.
VOID will be added as a marina drop down box selection.
Reservation and Cancellation will be added as a drop down box selection and will not be counted as a boat-day
Short term dockage will be added as a drop down box selection and will not be counted as a boat-day

The Marina Manager will implement the changes to the ticket and database system prior to April 15, 2012.

Data Entry Changes
Staff will enter data for each ticket (boat) on the day that the boat leaves the marina
Staff will be instructed to keep all mistake tickets and write VOID on them.
Staff will enter mistake tickets in the database.
Staff will enter short term dockage as a separate item in the database

The Marina Manager shall train and direct staff to enter data as described above.

Manager Review of Data Entry
The Marina Manager will review data entered on a daily basis
The Marina Manager will check the fee charged, boat length, number of nights and any applicable special rates

Manager Responsibility regarding Reporting

The Marina Manager will provide timely reports to the State of Michigan and to the Harbor Commission.

Discounting

All discount programs will be proposed to management for approval in writing prior to use.
No discount program will result in a daily fee of less than the state required minimum.
Staff will be directed to use only discount rates that have been approved by City management.

The Marina Manager will request in writing any discount rates which will apply during the 2012 season and will not apply any discounts unless City management approval is granted in writing.

Staff Hiring

The Human Resource Director will review and approve all hires prior to employment.

The Marina Manager will submit all proposed hires to the Human Resource Director and will not employ any person until granted approval of the hire by the Human Resource Director.

City of South Haven

Harbor Commission Agreed Upon Procedures

For the 2011 Boating Season

Vredeveld Haefner LLC

Agreed Upon Procedures for the 2011 Boating Season

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INDEPENDENT ACCOUNTANT'S REPORT ON APPLYING AGREED UPON PROCEDURES

November 21, 2011

To the Harbor Commission
City of South Haven, Michigan

We have performed the procedures enumerated below for the 2011 boating season or other periods as indicated, which were agreed upon by the City of South Haven Harbor Commission and management of the City of South Haven to assist with certain aspects of the Marina operations. The agreed upon procedures engagement was performed in accordance with standards established by the American Institute of Certified Public Accountants. The sufficiency of the procedures is solely the responsibility of those parties specified in this report. Consequently, we make no representation regarding the sufficiency of the procedures described below either for the purpose for which the report has been requested or for any other purpose. We performed the following procedures:

- Documented "business rules" related to slip rentals and other charges (including price setting, discounting, free nights etc.)
- Reviewed daily usage logs of each marina for the 2011 boating season (April 15 through October 15)
- Calculated daily revenue at each marina based on usage logs
- Reviewed the number of seasonal slip rentals at each marina
- Determined payment for each seasonal slip has been received
- Compared daily calculated revenue to bank deposits
- Compared marina usage from seasonal and transient boats to total availability for each day
- Compared budgeted to actual expenses for each of the years ended June 30, 2009, 2010, and 2011
- Obtained explanations for all line items where there is an unusual difference between budget and actual expenses – unusual is defined as any line item over or under budget by more than $1,000.
- Reviewed marina manager's bonus calculation

We were not engaged to, and did not, perform an examination, the objective of which would be the expression of an opinion on the revenues, expenses or internal controls associated with the marina operations. Accordingly we do not express such an opinion. Had we performed additional procedures, other matters might have come to our attention that would have been reported to you.

This report is intended solely for the use of the City of South Haven Harbor Commission and management of the City of South Haven and is not intended to be and should not be used by anyone other than these specified parties. Distribution of this report without the consent of Vredeveld Haefner LLC and management or Harbor Commission of the City of South Haven approval is prohibited.

Vredeveld Haefner LLC

CITY OF SOUTH HAVEN HARBOR COMMISSION
Agreed Upon Procedures for the 2011 Boating Season

Discussion on Limiting Conditions

We were engaged to perform agreed upon procedures as outlined in the Independent Accountant's Report on Agreed Upon Procedures. These procedures included obtaining data from the City of South Haven and the contracted marina manager to perform our analysis. Since we were not engaged to perform an examination under Generally Accepted Auditing Standards, our services did not necessitate obtaining evidential matter that would have increased the reliability of information given to us for review.

The following list summarizes limiting conditions related to the services performed as part of this engagement:

REVIEW OF CURRENT ACTIVITY

Our services included reviewing transactions for the 2011 boating season which runs from April 15 through October 15. Some of the findings identified in this report are based on certain information from previous boating seasons which were not reviewed by us.

ITEMS NOT AVAILABLE OR PROVIDED

There were certain items we anticipated receiving which did not exist or were not made available to us. We did not receive a database of boating days information for the transient activity at the Black River Park Marina. Tickets are not used for transient boaters at Black River Park Marina. We did not receive transient boating tickets for the month of October 2011 for either the North or South Marinas.

- Document “business rules” related to slip rentals and other charges (including price setting, discounting, free nights etc.)
    - See attached
- Review of daily usage logs of each marina for the 2011 boating season (April 15 through October 15)
    - This was completed by comparing transient “cards” or “tickets” to the transient access data base maintained by marina staff.
    - Separate data bases are not kept for North and South Marina’s.
    - There does not appear to be any database kept for boat days at Black River Park.
    - We were not provided with transient tickets for the month of October 2011.
    - We noted the transient database was missing many ticket numbers including entire series (1-50) as well as 98 individual tickets from within included series.
    - Comparing boat days per the tickets to boat days in the transient data base resulted in 265 differences totaling 258 boat days.
    - There were boat days indicated in the transient database for which there were no tickets resulting in 298 unaccounted for boat days.
    - The tickets were completed inconsistently and did not always include all information.
    - The transient database is updated with the ticket information haphazardly throughout the season.
    - Boat length and fee is included in the transient database, however the fee listed was not for the correct boat length 195 times.
    - We noted one instance where a boat purchased 3 nights and received 3 nights free (4 nights were required for the 3 free nights special).
    - We noted one instance in the transient database where a 75’ boat stayed three nights and only paid for two.
    - There does not appear to be a process in place to periodically reconcile the transient tickets to the transient database or to reconcile the transient database or tickets to the daily deposits.
    - The pre-numbered tickets are not accounted for.
- Calculate daily revenue at each marina based on usage logs
    - Due to the way reservations and cancellations are handled, this was not practical. Instead, we attempted to tie charges per the transient database to revenue recorded in the general ledger.
    - The transient database includes total boat slip charges for the boating season of $129,026.75 while the general ledger shows $140,438.86 for the same time period.
- Review of the number of seasonal slip rentals at each marina
    - We observed seasonal excel spreadsheets (one for each seasonal marina) maintained by marina staff. The spreadsheets indicated 57 seasonal renters at the North Marina, 17 at the Museum, and 40 at Black River Park.

- Determine payment for each seasonal slip has been received
    - See attached seasonal revenue analysis and the following comments.
    - We noted 9 slips were charged a partial season fee as has been common practice in past years.
    - North Side Marina spreadsheet indicates slip #65 was charged $3,395 while approved rate schedule shows $2,915 for this slip.
    - Museum slip #27 was charged $6,250 per spreadsheet; there is no such rate included in the approved rate schedule (all museum slips are charged $3,795).
    - Black River slip #21 was charged $1,655 according to the spreadsheet; the approved rate schedule indicates $1,870 for this slip.
    - In the Marina fund (North, South and Museum slips) the general ledger revenue for the boating season was higher than the calculated revenue based on the spreadsheet information by $5,017.
    - In the Black River Park fund, the general ledger revenue for the boating season was higher than the calculated revenue based on the spreadsheet information by $1,380.
- Compare daily calculated revenue to bank deposits
    - We traced transient rental general ledger amounts to transient daily deposit sheets which indicated the transient slip rental days charged.
    - This comparison totaled 3,054 boat days per the daily deposit sheets for the North and South Marinas.
    - Black River Park daily deposit summaries did not include information on boat days or sizes.
    - The cash register considers a reservation fee as a boat day (first day is charged at time of reservation).
    - Refunds given do not result in a decrease in boat days which may result in a boat day being counted when no boat stayed in the marina.
- Compare marina usage from seasonal and transient boats to total availability for each day
    - This was not considered relevant as the marina was full only a very limited number of times during the season.
- Compare budgeted to actual expenses for each of the years ended June 30, 2009, 2010, and 2011
    - See attached analysis.
- Obtain explanations for all line items where there is an unusual difference between budget and actual expenses – unusual is defined as any line item over or under budget by more than $1,000.
    - See attached explanations for variances and the following comment.
    - We noted an unbudgeted maintenance staff member was hired in May 2011.
- Review marina manager's bonus calculation
    - Prior three years average of North and South Marina activity is 2,671 boat days; the bonus payment is based on 3% increase in boat days (2,750 boat days).
    - North and South transient activity indicates boat days of 3,069

- We noted an addition error in the North and South Marina transient activity reducing the 2011 boat days to 3,026.
- We were not provided any statistical information for Black River Park transient rentals for 2011 or previous years – the contract appears to include Black River Park in the bonus calculation.
- We noted temporary tie-ups (2 or 4 hours) appear to be included in the statistics as a boat day – the contract is unclear as to the definition of a boat day.

ATTACHMENTS

CITY OF SOUTH HAVEN HARBOR COMMISSION
Agreed Upon Procedures for the 2011 Boating Season

Business Rules

The City maintains 3 marinas: the South Marina with 34 slips plus headwall for 8 more boats, the North Marina consisting of 97 slips and 26 at the museum plus 300 feet of broadside dockage (about 8 additional boats), and the Black River Park Marina consisting of 58 slips. The City is required to maintain 40% of the total slips for transient boaters. Currently, the South Marina is kept strictly for transient boaters and portions of the North Marina and Black River Park are for seasonal (not to exceed 60% of total slips).

Slip rates are set by City council for both transient and seasonal slip rentals before the boating season begins. The rates are based on state requirements.

Rates for the 2010-2011 boating season included a special Pre-Memorial Day/Post Labor Day rate of stay 4 nights get 3 nights free. (This is not included in the Council's rates, but was approved by the Harbor Commission to increase business).

Transient vessels

Marina employees provide a pre-numbered ticket (in triplicate) to the boater when they arrive. The boater completes the top portion; staff fills out the bottom "financial" portion. The white copy is given to the boater, the pink copy is kept on a clip board, the gold cardstock copy is kept on the top shelf until the boat departs at which time it is moved to the bottom shelf until it is input to the database. Until the copy is moved to the bottom shelf, changes can be made for additional nights, misc charges, etc. Once the boat leaves the copy is moved to the lower shelf and entered into the database which includes information such as length of boat, dates in dock, power or sail, name, address etc. This information is used for completion of monthly reports for the Harbor Commission and an annual state report.

When the boat leaves, their credit card is charged for the number of nights stayed based on rates which are pre-programmed on the cash register. Small amounts of cash are collected at the Marinas for purchase of ice or other items. The vast majority of the fees for slip rentals are paid by credit card with a receipt given to the customers (if asked). At end of each day, a "Z tape" report is run from the cash registers, a daily deposit balancing form is completed with the Z tape and credit card run for the day attached and faxed to Sharon. Sharon double checks the credit card and cash deposits against the bank information each day and picks up the deposit ticket from the bank each morning. Revenue is recorded in the general ledger by Sharon based on the daily deposit form. Each of the Marinas do their own deposits with the use of sealed bank bags delivered to the banks night deposit drop box. The closing staff makes the night deposit.

On a somewhat regular basis, the tickets are entered into the database. Each entry includes the information on each ticket along with initials of the individual making the entry.

CITY OF SOUTH HAVEN HARBOR COMMISSION
Agreed Upon Procedures for the 2011 Boating Season

Business Rules

Transient boaters can reserve a slip ahead of their stay for a $5 fee, their credit card is charged one night's stay at the time the reservation is made.

Transients who do not stay overnight are charged a fee of $7.25 for up to two hours and an additional $7.25 for two hour blocks thereafter. The fee is $12.00 for boats over 40' in length.

Occasionally, the City uses one of the museums docks for a transient vessel; in this case a fee is paid to the museum as a reduction to revenue. This amount is usually minimal in any given boating season. The 2010-2011 boating season included only four such payments during the year totaling $221.00.

Seasonal slip rentals

Seasonal rentals are nearly all paid prior to the start of the season. Payments come directly to City hall through the mail or are received at the counter and are then processed through the regular cash receipting process of the City. The full season is due in advance or a late payment penalty is applied.

During the boating season, individuals may decide they want a seasonal slip. These individuals are given a discounted seasonal rate for the remainder of the season computed as follows:

> (Remaining days until October 15) * (Seasonal Rate) / (number of days in boating season Apr 15 to Oct 15)

Boating days as used in this document is the number of nights stayed.

CITY OF SOUTH HAVEN HARBOR COMMISSION
Agreed Upon Procedures fo the 2011 Boating Season
Seasonal Slip Rental Analysis

	amount paid
North Marina per seasonal database	$ 242,307.50
South Marina	-
Museum per seasonal database	66,945.00
	$ 309,252.50

Revenue per general ledger	$ 327,624.05
Deferred at 6/30/11	183,324.44
Deferred at 6/30/10	(196,678.00)
Agrees to unadjusted trial balance at 6/30/11	314,270.49
Revenue per database detail	309,252.50
Difference	**$ 5,017.99**

Black River Park per seasonal database	$ 65,013.54

Revenue per general ledger	$ 79,119.85
Deferred at 6/30/11	38,729.40
Deferred at 6/30/10	(51,456.00)
Agrees to unadjusted trial balance at 6/30/11	66,393.25
Revenue per database detail	65,013.54
Difference	**$ 1,379.71**

CITY OF SOUTH HAVEN HARBOR COMMISSION
Agreed Upon Procedures fo the 2011 Boating Season
Budgeted to Actual Expenses - Black River Park Fund

Only those accounts with unusual fluctuations are displayed:

Account Number	Account name	Amended Budget	Actual	Variance	Explanation Reference
	FY 08-09				
545-776-704-000	SALARIES & WAGES - PART-TIME	34,147.00	31,867.00	2,280.00	**1**
545-776-741-000	OPERATING SUPPLIES	1,000.00	2,606.00	(1,606.00)	**2**
545-776-932-000	REPAIRS/MAINTENANCE - OTHER	2,500.00	555.00	1,945.00	**3**
	FY 09-10				
545-776-703-000	SALARIES & WAGES - FULL-TIME	14,852.00	3,059.00	11,793.00	**4**
545-776-704-000	SALARIES & WAGES - PART-TIME	35,179.00	31,913.00	3,266.00	**5**
545-776-713-000	PAYROLL TAXES	3,848.00	2,795.00	1,053.00	**6**
545-776-801-000	PROFESSIONAL/CONSULTING FEES	500.00	5,191.00	(4,691.00)	**7**
545-776-802-000	OTHER CONTRACTUAL SERVICES	2,850.00	25,534.00	(22,684.00)	**8**
545-776-922-000	UTILITIES - WATER & SEWER	2,800.00	4,670.00	(1,870.00)	**9**
545-776-931-000	REPAIRS/MAINT-BUILDS & STRCTRE	1,500.00	405.00	1,095.00	**10**
545-776-932-000	REPAIRS/MAINTENANCE - OTHER	2,000.00	248.00	1,752.00	**11**
	FY 10-11				
545-776-703-000	SALARIES & WAGES - FULL-TIME	1,213.00	2,379.00	(1,166.00)	**12**
545-776-704-000	SALARIES & WAGES - PART-TIME	34,304.00	32,502.00	1,802.00	**13**
545-776-741-000	OPERATING SUPPLIES	1,400.00	2,765.00	(1,365.00)	**14**
545-776-802-000	OTHER CONTRACTUAL SERVICES	14,500.00	22,041.00	(7,541.00)	**15**
545-776-803-000	CREDIT CARD FEES	-	1,534.00	(1,534.00)	**16**
545-776-968-000	DEPRECIATION EXPENSE	49,176.00	45,853.00	3,323.00	**17**

CITY OF SOUTH HAVEN HARBOR COMMISSION
Agreed Upon Procedures fo the 2011 Boating Season
Budgeted to Actual Expenses - Marina Fund

Only those accounts with unusual fluctuations are displayed:

Account Number	Account name	Amended Budget	Actual	Variance	Explanation Reference
	FY 08-09				
594-776-704-000	SALARIES & WAGES - PART-TIME	48,255.00	44,495.00	3,760.00	**1**
594-776-714-010	CAR ALLOWANCE	2,105.00	844.00	1,261.00	**2**
594-776-741-000	OPERATING SUPPLIES	9,000.00	7,263.00	1,737.00	**3**
594-776-801-000	PROFESSIONAL/CONSULTING FEES	8,000.00	4,397.00	3,603.00	**4**
594-776-802-000	OTHER CONTRACTUAL SERVICES	51,000.00	33,012.00	17,988.00	**5**
594-776-921-000	UTILITIES - ELECTRIC	18,000.00	21,671.00	(3,671.00)	**6**
594-776-922-000	UTILITIES - WATER & SEWER	9,500.00	12,692.00	(3,192.00)	**7**
594-776-931-000	REPAIRS/MAINT-BLDS & STRCTRES	7,000.00	5,949.00	1,051.00	**8**
594-776-932-000	REPAIRS/MAINTENANCE - OTHER	6,000.00	1,374.00	4,626.00	**9**
594-776-933-000	REPAIRS/ MAINTENANCE - EQUIP	800.00	2,704.00	(1,904.00)	**10**
594-776-957-000	CONCESSION EXPENSE	5,000.00	3,230.00	1,770.00	**11**
594-776-968-000	DEPRECIATION EXPENSE	97,259.00	99,116.00	(1,857.00)	**12**
594-776-975-011	NORTH SIDE MARINA UPGRADE	35,500.00	253.00	35,247.00	**13**
	FY 09-10				
594-776-703-000	SALARIES & WAGES - FULL-TIME	43,237.00	4,919.00	38,318.00	**14**
594-776-704-000	SALARIES & WAGES - PART-TIME	46,884.00	47,932.00	(1,048.00)	**15**
594-776-710-000	HEALTH/DENTAL INSURANCE	4,718.00	922.00	3,796.00	**16**
594-776-710-001	PAYMENT IN LIEU OF INSURANCE	1,530.00	128.00	1,402.00	**17**
594-776-713-000	PAYROLL TAXES	6,962.00	4,422.00	2,540.00	**18**
594-776-741-000	OPERATING SUPPLIES	5,500.00	7,273.00	(1,773.00)	**19**
594-776-801-000	PROFESSIONAL/CONSULTING FEES	1,500.00	82.00	1,418.00	**20**
594-776-802-000	OTHER CONTRACTUAL SERVICES	41,000.00	70,093.00	(29,093.00)	**21**
594-776-850-000	TELEPHONE	3,200.00	2,055.00	1,145.00	**22**
594-776-921-000	UTILITIES - ELECTRIC	20,000.00	21,167.00	(1,167.00)	**23**
594-776-922-000	UTILITIES - WATER & SEWER	11,000.00	12,338.00	(1,338.00)	**24**
594-776-931-000	REPAIRS/MAINT-BLDS & STRCTRES	15,500.00	2,645.00	12,855.00	**25**
594-776-968-000	DEPRECIATION EXPENSE	97,259.00	99,806.00	(2,547.00)	**26**
594-776-975-011	NORTH SIDE MARINA UPGRADE	7,600.00	-	7,600.00	**27**
594-776-979-001	YARD EQUIPMENT	-	1,500.00	(1,500.00)	**28**
	FY 10-11				
594-776-703-000	SALARIES & WAGES - FULL-TIME	2,232.00	6,515.00	(4,283.00)	**29**
594-776-704-000	SALARIES & WAGES - PART-TIME	48,403.00	55,352.00	(6,949.00)	**30**
594-776-741-000	OPERATING SUPPLIES	5,200.00	9,613.00	(4,413.00)	**31**
594-776-802-000	OTHER CONTRACTUAL SERVICES	70,000.00	77,385.00	(7,385.00)	**32**
594-776-803-000	CREDIT CARD FEES	-	4,968.00	(4,968.00)	**33**
594-776-850-000	TELEPHONE	3,000.00	1,912.00	1,088.00	**34**
594-776-921-000	UTILITIES - ELECTRIC	20,000.00	18,654.00	1,346.00	**35**
594-776-931-000	REPAIRS/MAINT-BLDS & STRCTRES	5,000.00	9,638.00	(4,638.00)	**36**
594-776-932-000	REPAIRS/MAINTENANCE - OTHER	1,000.00	7,177.00	(6,177.00)	**37**
594-776-968-000	DEPRECIATION EXPENSE	97,259.00	92,286.00	4,973.00	**38**

Black River Park Fund (Fund 545)

2008-09

1 Part time salaries below budget due to actual hours being down which is consistent with less dock activity during year
2 Operating supplies over budget due to timing of some purchases of needed items
3 Repair & maintenance - other under budget due to set budgeted amount that was not needed

2009-10

4 Full time salaries below budget due to change from employee to contractual service began in August 2009
5 Part time salaries below budget due to staff not needed as much as anticipated
6 Payroll taxes under budget due to change from employee to contractual service
7 Professional/consulting over budget due to design work from Abonmarche for trail project and C2AE for fisheries grant application charged here but not budgeted
8 Other contractual services over budget due to change from employee to contractual service
9 Utilities - water and sewer over budget due to usage and rates - noted 24 payments made during the year
10 Repair & maintenance - buildings under budget due to set budgeted amount that was not needed
11 Repair & maintenance - other under budget due to set budgeted amount that was not needed

2010-11

12 Full time salaries over budget due to Pauls allocation being adjusted after budget was set
13 Part time salaries below budget due to staff not needed as much as anticipated
14 Operating supplies over budget due to budget being lowered based on under expenditure in prior year
15 Other contractual services over budget due to purchase of advertising items (coolers etc.) for promotion
16 Credit card fees over budget - this was a new charge this year and was not budgeted - was previously charged to other contractual
17 Depreciation under budget due to two old assets becoming fully depreciated during 2011

Marina Fund (Fund 594)

2008-09

1 Part time salaries below budget due to actual hours being down which is consistent with less dock activity during year
2 Car allowance below budget - Robin received allowance for personal vehicle for 6 mos of year
3 Operating supplies below budget due to timing of some purchases of needed items
4 Professional/consulting below budget due to anticipated costs associatd with Northside Marina upgrade
5 Other contractual services below budget due to anticipated costs associatd with Northside Marina upgrade
6 Utilities - electric over budget due to usage and rates - noted 24 payments made during the year
7 Utilities - water and sewer over budget due to usage and rates - noted 24 payments made during the year
8 Repair & maintenance - buildings under budget due to set budgeted amount that was not needed
9 Repair & maintenance - other under budget due to set budgeted amount that was not needed
10 Repair & maintenance - equipment over budget due to emergency electrical repairs made to a pump
11 Concession expense under budget - account consists only of ice purchases for sale and is hard to predict, noted budget was reduced in 2009-10 and 2010-11
12 Depreciation over budget due to changing life of North Side comfort station from 40 to 10 years
13 North side marina upgrade under budget as amount is capitalized for financial reporting, budget was $35,500 approximately $10,000 was spent on this project in 2008-09

2009-10

14 Full time salaries below budget due to change from employee to contractual service began in August 2009
15 Part time salaries over budget due to budget lowered from prior year based on hours, but activity was up again and more hours were utilized
16 Health/dental insurance under budget due to change from employee to contractual service
17 Payment in lieu of insurance under budget due to change from employee to contractual service
18 Payroll taxes under budget due to change from employee to contractual service
19 Operating supplies over budget due to budget being lowered based on under expenditure in prior year
20 Professional/consulting below budget - budget was guess based on prior experience
21 Other contractual services over budget due to change from employee to contractual service
22 Telephone under budget due to budgeting too high for service
23 Utilities - electric over budget due to usage and rates - noted 24 payments made during the year

24 Utilities - water and sewer over budget due to usage and rates - noted 24 payments made during the year
25 Repair & maintenance - buildings budgeted high for work that was not needed
26 Depreciation over budget due to changing life of North Side comfort station from 40 to ten years
27 North side marina upgrade under budget as amount is capitalized for financial reporting purposes; budget was $7,600 and approximately $13,000 was spent on this project in 2009-10
28 Yard equipment over budget due to painting

2010-11

29 Full time salaries over budget due to Pauls allocation being adjusted after budget was set
30 Part time salaries over budget due to adding new position in May 2011 which was not budgeted (maintenance position)
31 Operating supplies over budget due to higher paper products purchased, and purchased 1500' of rope
32 Other contractual services over budget due to purchase of advertising items (coolers etc) for promotion
33 Credit card fees over budget - this was a new charge this year and was not budgeted - was previously charged to other contractual and amounted to approximately $5,800 in 2009-10 and $5,400 in 2008-09
34 Telephone under budget due to budgeting too high for service
35 Utilities - electric under budget due to lower usage - noted 24 payments made through out the year
36 Repair & maintenance - buildings - over budget due to a break in where all copper was stolen and had to be replaced
37 Repair & maintenance - other - over budget due to a break in where all copper was stolen and had to be replaced
38 Depreciation under budget due to south side boat slips becoming fully depreciated during 2011

HARBOR COMMISSION STRATEGIC PLAN
Approved November 16, 2010

Mission Statement

In the performance of it duties the Harbor Commission shall remain committed to the continuous improvement of the Black River Harbor by taking a long term view of the harbor's capacity, it's navigability, it's value to the community, and it's use by both public and private interests, and shall assure the health, safety and enjoyment of the harbor by providing recommendations for its maintenance and operation.

Goals and Objectives

A. Safety and Navigation

1. Dredging Needs of the Harbor

Assess the river conditions and prepare to perform maintenance dredging as necessary.

Develop a checklist that outlines the steps to be used in assessing the need for dredging and the process of dredging.

Maintain valid permits for maintenance dredging.
Dredging is one element of a comprehensive Black River maintenance program that must be ongoing.

Develop recommendations for maintaining ingress and egress to the harbor, including adequate depth at the pierheads.

2. Electrical Utilities

Encourage all marinas and private slips to upgrade their electrical wiring if they are making any electrical improvements.

3. Fueling of Marine Vessels

The Commission has identified the direct fueling of boats as a major safety concern and has developed the following action steps to educate the public and enforce the laws regarding direct fueling:

- Work with marina managers and commodores to have signs posted clearly explaining how and where boaters may fuel their boats.

- Develop an educational campaign that can be used in local schools, boater safety classes, in the newspaper and other outlets.
- Enlist support of the Van Buren County Sheriff Marine Patrol along with SHAES and South Haven Police to educate boaters on the dangers and laws regarding direct fueling. Encourage warnings before citations and fines.
- Send a letter to the State expressing concern and requesting a statement on the back of the Marina Operating Permit (MOP) stating: "Direct Fueling is against the law and can lead to revocation of this MOP".
- Pass a city ordinance against direct fueling.

4. Emergency Services

Promote a close working relationship with the Sheriff Marine Patrol, Coast Guard, Coast Guard Auxiliary, South Haven Police Department and South Haven Area Emergency Services. Meet at least annually to discuss mutual issues related to harbor safety.

Encourage agencies to maintain oil absorbant equipment to manage emergencies.

Consider replacing the fireboat with a boat adequate for use in the harbor and in Lake Michigan.

5. Erosion and Contaminants

Work with the DEQ, DNR, Drain Commission, farmers and other entities to ensure proper procedures are followed to reduce erosion and contaminants in the river in the City and upstream from the City.

Review procedures to respond to fuel and contaminant spills.

Support testing for E. coli and work to resolve any related issues.

6. Harbor Traffic Flow and Safety

Identify ways to improve traffic flow especially on weekends and during special events

Ensure that the channel between the harbor lines is kept clear of natural obstructions, anchored boats and barges, and all new docks and headwalls.

Determine if a new location for the existing boat launch location at Black River Park would improve traffic flow.

Determine if additional docks are needed in the river based on demand.

Look at the feasibility of moving the Black River Park launch ramps downstream away from the corner.

Add a light to the bridge that will signal to boaters when the bridge is closing.

7. Public Access

Support public access and use.

Explore installation of a mast hoist for people launching sail boats at the boat launch.

Traffic at the launch area can be dangerous, identify safety improvements.

8. Signage

Evaluate the current signs and upgrade/remove as necessary. Locate signs strategically so as not to block valued views.

Increase the number of No Wake signs, including adding signs at the bridge and at the Southside Marina.

B. Municipal Marina Facilities

1. Municipal Marina Facilities

Promote quality facilities at all municipal marinas.

The Southside Marina has excellent facilities (showers and restrooms, lounge and meeting rooms, picnic areas, etc) for its boaters. Similar quality facilities should be provided to all other Municipal Marinas.

The City should move forward expeditiously with the construction of a new facilities building at the Northside Marina. Support use of grant funding to replace the existing facility.

The City should upgrade and expand the restroom/shower facilities at the Museum and Black River Park Marinas, adding a lounge area. These are likely to be long term projects.

At Black River Park Marina and the Museum Marina, add a roof and screen walls to the new deck. All facilities should be handicap accessible. Boaters should be surveyed first to determine if this meets their needs.

Promote availability of bicycles for boater use at the municipal marinas.

C. Infrastructure

1. Develop a Capital Improvement Plan

A capital improvement plan should be developed for each of the marinas. The Harbor Commission should review the plan and identify projects that it would like to see completed. The plan should include a budget and timeline for such improvements.

Review the River Maintenance capital improvement plan.

2. Dinghy Docks and Paddle Craft Facilities

Fully support the Pedestrian, Bicycle and Paddle Plan which was adopted by the City Council on 2/16/2009. Improve existing dinghy docks and access at the Dyckman bridge.

http://www.south-haven.com/csh%20folder/csh/Pages/Communications/PlansReportsStudies.html

Clean out and trim Celery Pond creek to create a small craft launch site and dinghy dock.

Add a dinghy dock at the Musuem Marina.

Try to design dinghy docks so they would be usable for a river launch service if one becomes available.

3. Harborwalk

Complete the Harborwalk to include signage, lighting, benches, landscaping etc.

Find and analyze the original plan for the Harborwalk to determine if the plan has been fully implemented. If it has not continue implementing the plan.

Improvements are needed on the public easements in front of Old Harbor Inn and through Mariner's Dockage and Pier's End Cove.

Complete Harborwalk to create a unified concept by adding better way finding signs, paving materials, improve interpretative plaques etc.

Encourage a cooperative maintenance agreement between the City and the Michigan Maritime Museum.

4. Green Space/Views

The Commission recommends that the city retain and acquire, when available, adequate public space along waterfronts. These areas should be maintained and developed for open green space and public access.

5. Former Street Garage

Add a sea wall extension and dinghy dock at the former street garage, encouraging natural sea walls.

D. Planning

1. Future Development and Impact on Safe Navigation

The Harbor Commission supports a detailed Harbor study that would update existing material from the 2001 Smith Group JJR report. To accomplish this we need to hire a competent and professional consultant to determine the capacity of the Black River Harbor and to provide guidance for future policy and decision making with a 10 year outlook.

The South Haven City Council should authorize a forward looking study of our Harbor to determine if additional slips and/or services are needed. Is our Harbor at capacity (defined as its ability to safely handle its current usage)? If not, how many additional boats can it handle given its current configuration? Are additional slips needed? If so, where should they be located? If it is at capacity based upon current configuration, are there modifications that would permit increased capacity?

Consider funding a comprehensive professional study. The study should look at where are we and where do we want to be in the next 5 to 10 years. This study should be delayed at this time due to the unusual economic conditions until a certain level of economic normalcy returns to the harbor. In the interim, contact area schools, colleges and universities seeking their help with acquiring accurate data on size, quantity and frequency of use of vessels using the Black River. Analyze the new numbers from the study with a focus on the last paragraph on page 4 of the JJR memorandum of 4/23/2001 which discusses the capacity of the river based on channel widths.

Additionally the needs assessment should look at existing facilities to determine if they currently serve our needs, how they could be modified to best serve our needs today and what needs to be changed to best serve our future needs?

A process needs to be defined, created, promoted and followed setting development goals and criteria based on consideration of our harbor size, location and boating and community concerns.

Continue to monitor and provide guidance on the new waterfront park extension east of the Steelheader's fishing wall and its impact on safety and navigation

Any additional waterfront development or development affecting the waterfront must be scrutinized very carefully, both before, during and after the planned construction. In advance of any construction the impact upon the harbor (which includes the Black River to the City limits) by the project as well as the proposed methods of construction of the project (remember Sherman Hills) must be carefully examined and evaluated. The impact on boat traffic (if, for example, additional slips are proposed) and the impact

upon navigation must be evaluated. Of concern is erosion of soils flowing into the river caused by poor and unsupervised developments.

As proposals for the development are presented, the Harbor Commission will consider issues of need, safety, navigational hazards and environmental concerns and make appropriate recommendations.

2. Development Approval Role

All projects using harbor maintenance funds and all developments along the river should come before the Harbor Commission for their recommendation.

Participate in any discussion regarding the Celery Pond property.

The Harbor Commission should have a role in any changes that affect marinas, river or harbor.

3. Natural Environment Preservation

Allow for innovative development without totally eliminating the vegetation and public access in the Black River around the present canoe launch area.
We need to be proactive on waterfront development for example Sherman Hills. The City needs to determine how the river needs to be protected when a development is purposed.

Work with DNRE and other entities regarding environmental issues for the entire Black River Watershed.

Encourage all marinas to acheive Clean Marina Status.

4. Effects of Development and Loss of Marine Services

Assess whether we have adequate marine services in the harbor, including fueling, haul out, storage, marine repair service, marine parts and supply, dockage (seasonal and transient) and pump out facilities. If some services appear to be lacking, encourage private businesses to provide them. If private businesses are unable to provide the services or stop providing needed services, consider municipal services.

E. Funding

1. Ongoing Dredging Project Funding
Investigate other sources of revenue for dredging.

Recommend an increase from 3% to 6% of marina revenues set aside for the River Maintenance budget.

Recognize the need for additional funding for dredging and allocate some of the tax collection from the increased assessments of property and homes on the river for dredging.

Request funding from the DDA to allocate toward harbor maintenance.

Determine if the current method of calculating special assessments for dredging is equitable and or if changes are needed.

2. Capital Improvement Plan

The Commission duties include an annual review of this plan along with the Black River Maintenance document. As part of that review recommendations must be made in a timely manner.

3. Harbor Budget Policies

It is the duty of the Commission to review and make recommendations to the annual River Maintenance, Marina Fund and Black River Park budgets in a timely manner so they can be considered during the budget adoption process of the City Council.

All assessment categories should identify a budget and funding mechanism. Consider for example:

- Future waterfront developments should be specifically assessed for their impact on the harbor.
- Establish a broad based assessment (as broad as possible) to fund the maintenance of the harbor.
- Analyze the current income from the operation of the Municipal Marinas and Public Launch site to get a full understanding of the usage and to determine an appropriate contribution to harbor maintenance.

F. Marketing and Communication

1. Emergency Communication

Be in a position to communicate safety information for ongoing and emergency issues with marina owners, managers and users. Develop ways to communicate safety information with boaters.

Establish an FM radio station for the harbor.

Install bulletin boards at the boat launch.

2. Marina Management

Evaluate management of municipal marinas.

There needs to be more communication with transient and seasonal boaters using marina facilities and the boat launch. Create and distribute feedback cards to survey customer service and desired amenities. Do customer satisfaction surveys on a regular basis and conduct appropriate follow up.

Include welcome packages with information on the City and local businesses, gifts and coupons. Inform boaters where they can rent bicycles and vehicles.

Install informational bulletin boards at all municipal marinas to inform boaters and the public of events, phone numbers, tourist information etc.

Improve on-going staff training.

Encourage development of a marina and harbor marketing plan on an annual basis.

The Commission needs to schedule annual meetings at the marinas to hear concerns and suggestions for improvements of services.

Meet with seasonal boaters to gather feedback about needs, concerns, wants etc.

3. River Stakeholders

Communicate with the City and its boards and commissions as well as the DEQ, DNR, Drain Commission, farmers, boaters etc. to ensure we maintain a high quality harbor, including water quality issues.

4. Survey and Feedback Procedures

Survey boaters and slip owners to determine what services they want and how it should be provided. Gather feedback and implement changes on dredging and other issues.

Survey all boaters, slip owners and marina owners regarding river maintenance and safety issues. Use an email list to inform and listen to river stakeholders.