

**Harbor Commission**

**Regular Meeting Agenda**

**Tuesday, December 17, 2013  
5:30 p.m., City Hall Council Chambers  
South Haven City Hall**



**City of South Haven**

1. Call to Order

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

2. Approval of Agenda

3. Approval of Minutes: October 15, 2013 Regular Meeting

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

5. Marina Reports

6. Fish Cleaning Station

7. Weather Buoy

8. Fishing Charter License Agreement

9. 2014 Meeting Schedule

Member and Staff Comments

Adjourn

RESPECTFULLY SUBMITTED,  
Paul VandenBosch  
Secretary, Harbor Commission

**Harbor Commission**

**Regular Meeting Minutes**

**Tuesday, October 15, 2013  
5:30 p.m., City Hall Council Chambers  
South Haven City Hall**



City of South Haven

**1. Call to Order by Arnold at 5:30 p.m.**

**Roll Call:**

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

**2. Approval of Agenda**

Motion by Silverman, second by Strong to approve the agenda as presented.

All in favor. Motion carried.

**3. Approval of Minutes: September 17, 2013 Regular Meeting**

Motion by Reineck, second by Sullivan to approve the September 17, 2013 regular meeting minutes as written.

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 Reports**

VandenBosch reviewed the Marina Reports, Black River Park Revenues and River Maintenance Fund.

Plans are to disable the gate at Black River Park for the winter season, leaving it open.

VandenBosch noted that the rain has helped the lake levels.

## 6. Black River Park Master Plan

VandenBosch noted that the plan has been to Parks Commission and Planning Commission for review and comment. Minor changes were recommended. After review by the Harbor Commission, the next step is to recommend the plan to City Council.

Tony McGhee, Business Development Director and Kathy Burczak, Senior Landscape Artist, both from Abonmarche are here to review the draft Master Plan.

Burczak reviewed the progression of the plan since Abonmarche was tasked with improving vehicular traffic flow and determining the best place for a new fish cleaning station. Abonmarche proposes a small restroom in the same area. The entrance gate to the boat launch and flow of the boat launch parking area and launch site would remain the same with the addition of ADA (Americans with Disabilities Act) parking. Abonmarche also proposed a small restroom at the far end of the parking area for marina guests. The existing restroom would be made ADA compliant. Proposed additions to improve usability for guests include picnic areas, canoe and kayak launch improvements, pedestrian connectivity from the marina to all components of the area over impervious paving with minimized vehicular crossing and an ADA compliant pavilion.

The current dredge spoils site will eventually provide unpaid and ADA overflow parking and an unloading area near the new fish cleaning station; while this area will not be paved during the early phases of the project, there will be bituminous ADA access to the fish cleaning station in conjunction with the loading/unloading area.

There was discussion regarding the role the Black River Park Master Plan plays in the future development of that area and how it relates to the city's Master Plan. VandenBosch noted that this is separate from the Planning Commission's Master Plan and explained that a master plan does not lock anyone into anything, but it provides a vision or plan for potential future development.

Discussion ensued regarding the formerly proposed cul-de-sac on Dunkley. McGhee noted that the cul-de-sac became a roadblock and the currently proposed Dunkley Street access is designed, not to be convenient, but to provide secondary one-way access and to provide important access for fire safety.

There was discussion regarding the various options for access to the Black River launch site; means used to determine what percentage of vehicles stop at Pyle's Porthole compared to the ones who launch without stopping at Pyle's and the Dunkley loop.

There was discussion regarding impervious and pervious paving and the ratio of black and green spaces in the Master Plan. VandenBosch pointed out that at present grass pavers are still too expensive; perhaps during a later phase alternative paving options could be explored.

Motion by Stephens second by Strong to recommend the Black River Park Master Plan to City Council for approval.

All in favor. Motion carried.

## 7. Marina Facility Rental

VandenBosch explained that information regarding marina facility rental was sent to the city attorney, who made some very minor changes. This policy would allow rental of north and south side marina facility buildings.

VandenBosch started work on a contract addendum with the marina manager; the marina manager would manage this for a percentage of the rental fee. Research needs to be done regarding the costs of cleanup and management. VandenBosch noted the city has had a number of requests to use the marina facility and have been told it is not for rent until we have a policy in place.

Policy presently only allows consuming or selling alcoholic beverages on public property by resolution of the City Council, according to VandenBosch. A recent resolution, focused more on festivals, allows certain public areas to have wine tastings or beer tents; if it was desired to serve alcohol in the marina facilities that policy would have to be amended. There was discussion regarding the regulations of the liquor commission, which they only regulate in this type of situation if the alcohol is being sold. At this time VandenBosch recommends only allowing non-cash bars and that would only be allowed if there was an amendment to the City Council's recent resolution.

There was discussion regarding the paragraph indicating non-profit organizations and social groups. Silverman pointed out that there is no definition of a social group. VandenBosch indicated that the purpose of that designation was so a South Haven resident can rent the facilities for fifty percent (50%) off. Silverman suggested adding 501(c) 3 in front of the word non-profit. Silverman feels it is asking for trouble to use an undefined group. Silverman said you need to determine exactly what you are trying to accomplish. Stephens agreed that the present wording is not clear but confusing and that the wording should just clearly state the intent. Arnold likes the idea of a resident discount. VandenBosch suggested indicating that residents of the City of South Haven and 501(c) 3 non-profit groups can rent for fifty percent (50%) discount.

Silverman suggested that at the end of paragraph 8.d.II where it states that a renter or a caterer be responsible for cleaning the facility after an event that it be changed to make the renter be responsible for the cleaning; if the renter wants to assign that to the caterer he can but the renter is ultimately responsible. In section 9 VandenBosch said management would like to be able to exclude any caterer that the city has problems with. There was agreement that the renter shall require the caterer to fully clean the facility.

The group discussed the marina manager being the one to designate parking for the rented facility during the busy season.

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There were question about when the date restriction would be for the application to be turned in with the deposit. Final payment is due one week before the event, but there is no indication of how far ahead the deposit and application need to be turned in.

Discussion ensued regarding how far in advance cancellation notice needs to be made; a sliding scale based on lead time was discussed with several comments regarding the amount of the administration fee for cancellation.

VandenBosch would like to rewrite this policy based on today's suggestions and send it out to everyone by email for comment. Requested a motion to recommend to City Council subject to Harbor Commission review by email.

Motion by Silverman to approve the marina facility rental policy and recommend it to City Council subject to the changes we discussed;

- Revision of final paragraph of Section 2 to allow fifty percent (50%) discount for City of South Haven residents and any 501(c) 3 non-profit group.
- A change to Section 6 to allow cancellation without penalty if made sixty (60) days or more in advance.
- The reduction of the administration fee to \$100
- Paragraph 8. D. II. Eliminate word "caterer"
- Section 9. Fourth sentence. To provide that the renter shall require the caterer to clean the facility.
- Section 10. Second sentence. That the marina manager will designate where the attendees are to park during the remainder of the year

all of which will be included in a revised copy to be emailed to the Harbor Commission members for their final approval.

Second by Strong.

All in favor. Motion carried.

Sullivan suggested that a percentage of the rental fee would be better than a set administration fee. VandenBosch noted that can be considered when the review by email is done.

## **8. Dredging Update**

VandenBosch updated the Harbor Commission regarding soundings that came back at the end of the dredging project because we pay by the volume removed. Pre and post soundings

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are taken and the difference is how the dredging contractor gets paid. There is a substantial amount of material in the federal channel which is an issue. Due to the federal shutdown VandenBosch has been unable to contact the Corps. VandenBosch plans to work with the dredging contractor to get some additional dredging done in some of the worst areas. The Dunkley Street area will be flattened out when the dredging contractor is finished, at which time that area will be capped with gravel. VandenBosch hopes the dredging project will be done by the end of the year.

VandenBosch informed the board that if they hear complaints of higher than normal levels, VandenBosch would like to know about it. Silverman said J & B Marine could probably tell you every high spot; they have been pulling boats out up the river.

VandenBosch noted that the lighthouse/pier heads area has been done; everything except the area near the Idler should be taken care of, but we do not have soundings from after the Army Corps did their dredging and probably won't until the federal government starts up again. Strong and Silverman agreed that the level is better this year than it was last year.

Stephens questioned page thirty-two (32) to which VandenBosch said that is related to the army corps project early on. If soundings indicate twelve feet (12') they will dredge it to fourteen feet (14').

### **Member and Staff Comments**

In response to Strong's request for an update on bridge repairs VandenBosch explained that due to circumstances no one is sure when the project will be rebid.

VandenBosch indicated that the Black River Park gate will be opened full time November 1, 2013 to March 30, 2014.

VandenBosch stated that the City is currently going through their annual audit, and he will add the marina audit to the next agenda if he gets that information in time.

Today is last day for marinas. Staff is in the process of winterizing; people are moving out.

Silverman asked what will be done with the furniture in the north side marina. VandenBosch said the outdoor furniture will be put in storage. Staff may buy or rent banquet tables.

Sullivan questioned whether anything proactive can be done for future dredging, particularly the sediment traps. VandenBosch agreed that sediment traps need to be addressed; that is something that can be contracted out in the winter.

Silverman would like to see a method of reducing or eliminating the surge that affects the South Side marina. There are a number of surge protection devices available now; suggests it be looked into. If we want to increase transient traffic, we have to deal with the one consistent complaint the users have which is the surges that affect that marina. Staff needs to put in place a process to evaluate the equipment that might prevent or reduce that surge.

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VandenBosch explained that a very expensive option, to cut an area out of the channel, make it wider and put rip rap along the side, is available. However there are other options using a fabric or material that might work.

**Adjourn**

Motion by Strong, second by Stephens to adjourn at 6:52 p.m.

All in favor. Motion carried.

RESPECTFULLY SUBMITTED,

Marsha Ransom  
Recording Secretary



Marina Fund Revenue

Marina Fund Revenue  
As of November 30, 2013

Fiscal Year Ending in	Revenue	Operational	Net
Seasonal	Transient	Total	Expense
			Revenue
2002	234,236	161,984	396,220
2003	259,840	166,084	425,924
2004	280,151	167,907	448,058
2005	282,245	170,944	453,189
2006	300,819	173,817	474,636
2007	343,171	170,869	514,040
2008	368,408	168,362	536,770
2009	377,955	166,674	544,629
2010	350,635	161,584	512,219
2011	314,270	140,546	454,816
2012	330,660	151,046	481,706
2013	377,199	89,267	466,466
2014	15,785	92,518	108,303

**NOTES ON OPERATIONAL EXPENSES:**

Operational Expense does not include depreciation of approximately \$133,000 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 \$21,080 annually.

**Operating Expense excludes reimbursable dredging costs**

	Seasonal Marina Revenue												Calendar Year Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
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
2012	31,810	178,650	44,840	14,750	31,795	-1,925	0	200	1,050	3,940	11,420	850	317,380
2013	29476	169,790	80,125	37555	28,362	14,431	0	0	750	7,735	7,300		375,524

	Transient Marina Revenue												Calendar Year Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
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
2012	0	0	0	4,684	12,448	31,740	40,344	21,935	4,392	0	-267	0	115,276
2013	0	706	3,502	2466	3,689	12,501	33,066	40,527	17,724	843	359		115,382



Black River Park Revenues

Black River Park Revenue  
As of November 30, 2013

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	73,619	10,711	55,134	10,097	149,561	129,949	19,613
2013	71,440	9,150	47,844	10,980	139,414	102,155	37,259
2014	6,540	9,132	35,002	1,300	51,974	34,209	17,765

Note: Operational Expense does not include depreciation of approximately \$50,000 per year.  
Operational Expenses do not include large construction expenses.

Transfer to River Maintenance Fund of approximately \$5,800 annually

Boat Launching & Parking Fees Revenue													Calendar Year
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	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
2012	0	0	0	0	7,000	10,050	19,667	9,346	4,702	2,376	1,031	112	54,285
2013	56	0	91	637	3,671	6,154	14,069	12,964	4,874	3,081	14		45,611

Launching - Seasonal Permit Revenue													Calendar Year
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	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
2012	0	0	0	600	6,620	1,580	1,200	0	0	-270	0	0	9,730
2013	0	100	400	2,400	3,900	3,250	1,050	200	50	0	0		11,350

Seasonal Dock Revenue													Calendar Year
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	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
2012	3,995	20,485	9,585	6,440	18,500	1,655	3,745	0	0	600	2,000	200	67,205
2013	3,070	24,760	11,180	6,850	17,300	1,735	55	985	0	800	4,700		71,435

Transient Dock Revenue													Calendar Year
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	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
2012	0	0	0	0	604	2,221	3,567	2,325	1,125	98	0	0	9,939
2013	0	0	0	0	163	1,873	3,815	4,435	808	74	0		11,168

City of South Haven  
River Maintenance Fund - Fund 296  
For the period ended November 30, 2013

<i>Revenues:</i>	<i>Month Actual</i>	<i>YTD Actual</i>	<i>2013-14 Adopted Budget</i>
Assessments	\$ -	\$ -	\$ -
Interest and Rents	863	863	-
Other Revenue	-	-	-
Operating Transfers In	3,073	15,367	36,880
<b>Total Revenues</b>	<b>\$ 3,936</b>	<b>\$ 16,229</b>	<b>\$ 36,880</b>

<i>Expenditures:</i>	<i>Month Actual</i>	<i>YTD Actual</i>	<i>2013-14 Adopted Budget</i>
Operating Supplies	\$ -	\$ -	\$ 500
Contractual Services	-	13	-
Repairs and Maintenance	-	-	-
Capital Outlay	2,000	6,240	10,000
<b>Total Expenditures</b>	<b>\$ 2,000</b>	<b>\$ 6,253</b>	<b>\$ 10,500</b>

Net Fund Change	\$ 1,936	\$ 9,977	\$ 26,380
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Prior Year End Fund Balance	June 30	\$ 25,506
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Estimated YTD Fund Balance	<u>\$ 35,482</u>
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<b>Cash &amp; Investments Balance at month end</b>	<b><u>\$ 35,482</u></b>
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<b>Projected Cash Balance at Fiscal Year End</b>	<b>\$ 51,886</b>
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Terrie Hazekamp <tw.terrie@gmail.com>

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## MI CRS Occupied Slip Nights 2002-2012.xlsx

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**Fleming, Jason (DNR)** <FlemingJ@michigan.gov>  
To: "terrie@towermarine.com" <terrie@towermarine.com>

Tue, Nov 19, 2013 at 2:14 PM

Message for RJ,

The first attachment is the report over the last 11 years (excluding this year). We do not have the 2013 incorporated yet, but the second snapshot talks about this year.

This does not represent all the marina as we do not collect that information anymore, but require the marinas to keep their own logs.

Don't worry if the numbers do not match up accordingly between 2011, 2012. They numbers in the second list are simply a snapshot at that time.

Thanks,

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### 2 attachments

 **MI CRS Occupied Slip Nights 2002-2012.xlsx**  
16K

 **marina 2013 snapshot.xlsx**  
11K

	14	A	B	C	D	E	F	G	H	I	J	K	L	M
1	MI CRS Occupied Slip Nights 2002 - 2012													
2														
3														
4	Note: These numbers were compiled using the Occupancy Reports in the End of Year package.													
5	Note: These numbers are compiled in a calendar year format.													
6	Note: - = Facility was not open in that year.													
7	Note: Information for 2012 is current as of 12/5/2012 for all nights through 12/31/2012													
8														
9	<b>Harbor/Marina</b>	<b>Totals</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	
10	ARCADIA VETERANS MEMORIAL MARINA	3,258	393	425	601	298	354	269	409	150	127	120	112	
11	AU GRES HARBOR OF REFUGE	477	196	65	22	75	38	22	17	34	8	0	-	
12	CASEVILLE MARINA	4,855	-	-	0	857	773	765	682	417	484	431	446	
13	CEDAR RIVER STATE HARBOR	3,005	-	-	-	228	293	489	459	404	421	390	321	
14	CHARLEVOIX HARBOR	25,244	-	-	-	-	-	-	4,279	5,113	5,321	5,275	5,256	
15	CHEBOYGAN CITY MARINA	430	52	51	74	19	42	52	32	27	74	7	0	
16	CHEBOYGAN COUNTY MARINA	11,387	1,719	1,665	1,460	1,215	1,251	1,056	957	392	581	505	586	
17	CITY OF ALPENA MARINA	2,349	-	722	414	146	471	373	173	15	26	6	3	
18	COPPER HARBOR	2,462	-	278	270	295	258	267	198	253	208	213	222	
19	DETOUR STATE HARBOR MARINA	17,169	1,766	2,213	1,911	1,668	1,320	1,798	1,405	1,441	1,280	1,169	1,198	
20	DUNCAN L CLINCH MARINA	20,740	-	-	2,105	2,297	2,285	2,678	2,241	2,200	2,209	2,209	2,516	
21	EAST JORDAN CITY MARINA	4,413	-	0	540	610	626	417	414	376	526	489	415	
22	EAST TAWAS STATE DOCK	27,122	3,114	3,029	2,830	2,628	2,172	2,537	2,055	2,143	2,240	2,197	2,177	
23	ELMWOOD TOWNSHIP MARINA	2,917	-	-	-	-	-	-	-	-	-	1,444	1,473	
24	ERMA HENDERSON MARINA	55	-	-	-	-	-	-	40	2	8	5	0	
25	FAYETTE HARBOR	4,412	-	-	343	559	609	534	508	520	451	434	454	
26	GEORGE KEMP DOWNTOWN MARINA SAULT ST. MARIE MI	5,039	727	838	624	577	381	470	256	266	205	345	350	
27	GRAND HAVEN MARINA	30,129	-	-	3,549	2,913	3,344	3,393	3,355	3,561	3,465	3,276	3,273	
28	HAMMOND BAY STATE HARBOR	561	-	-	-	89	113	85	62	51	89	40	32	
29	HARBOR BEACH MARINA	735	-	243	272	115	16	39	7	-	19	14	10	
30	HARRISVILLE HARBOR OF REFUGE	126	-	-	-	-	24	2	13	4	19	39	25	
31	LAKE ST CLAIR METROPARK (METRO BEACH MARINA)	6,077	-	-	-	-	-	-	-	-	883	1,739	3,455	
32	LEXINGTON STATE DOCK	36,950	4,820	4,612	4,285	3,895	3,168	2,823	2,395	2,772	3,090	2,599	2,491	
33	MACKINAC ISLAND STATE HARBOR	55,107	5,568	5,253	5,147	5,484	5,142	5,106	4,946	4,755	4,634	4,395	4,677	
34	MACKINAW CITY MARINA	28,128	4,505	3,970	3,808	4,170	3,469	3,685	2,523	642	644	417	295	
35	MANISTEE MUNICIPAL MARINA	8,275	-	-	-	-	-	1,803	1,409	1,464	1,168	1,210	1,221	
36	MARQUETTE AREA MARINAS	909	-	-	-	235	77	98	185	86	64	72	92	
37	MUSKEGON HARTSHORN MARINA	2,089	-	373	313	283	217	209	181	160	165	112	76	
38	NEW BUFFALO MUNICIPAL MARINA	14,206	1,413	1,361	1,348	1,423	1,365	1,278	1,284	1,144	1,197	1,182	1,211	
39	ONTONAGON VILLAGE MARINA	444	-	-	-	83	105	68	58	39	61	4	26	
40	PENTWATER MUNICIPAL MARINA	5,371	-	-	-	-	939	879	893	922	885	433	420	
41	PETOSKEY MARINA	20,569	-	-	-	2,843	2,920	2,673	2,159	2,310	2,241	2,742	2,681	
42	PORT AUSTIN STATE HARBOR	8,371	1,529	1,216	1,218	994	724	580	508	527	418	468	189	
43	PORT HURON RIVER STREET MARINA	9,021	896	1,550	1,419	1,327	966	969	660	396	621	168	49	
44	PORT HURON WATER STREET MARINA	3,821	-	-	632	1,341	666	1,182	-	-	-	-	-	
45	PORT SANILAC HARBOR	1,957	196	404	266	282	206	172	48	81	111	108	83	
46	PRESQUE ISLE STATE HARBOR	18,346	812	3,148	2,680	2,216	1,683	1,732	1,232	1,281	1,319	1,119	1,124	
47	ROGERS CITY MARINA	7,837	-	-	1,284	1,249	1,009	872	703	671	725	600	724	
48	SOUTH HAVEN MUNICIPAL MARINA	3,116	-	-	-	-	-	-	-	-	-	-	3,116	
49	ST. CLAIR BOAT HARBOR	26,066	2,034	2,592	2,456	2,189	2,005	2,571	2,256	2,491	2,815	2,457	2,200	
50	ST. IGNACE MUNICIPAL MARINA	20,023	788	2,211	2,727	2,964	2,268	2,595	1,701	1,322	1,013	1,265	1,169	
51	STRAITS STATE HARBOR MACKINAW CITY	6,218	-	-	-	-	-	-	-	599	2,208	1,874	1,537	
52	WEST BASIN MARINA	347	-	-	-	-	56	56	38	24	103	26	44	
53	WHITE LAKE MUNICIPAL MARINA	7,117	787	929	986	920	773	619	486	549	400	400	268	
54	WILLIAM G. MILLIKEN HARBOR	5,580	-	-	427	495	598	582	664	712	852	589	661	
55	<b>State Total:</b>	<b>457,250</b>	<b>31,315</b>	<b>37,148</b>	<b>43,584</b>	<b>46,487</b>	<b>42,128</b>	<b>45,216</b>	<b>41,227</b>	<b>39,604</b>	<b>42,526</b>	<b>41,998</b>	<b>46,017</b>	

Facility Type	Camping Type	Net Reservation Totals				
		2 Years Previous	Previous Year	Current Year	Change 2 Years Previous to Current	Change Pre
Harbors	Harbors	17894	19223	17534	-360	-1689
Harbors Totals:		17894	19223	17534	-360	-1689

## Net Nights Totals

% Change	% Change	F 2 Years Previous	Previous Year	Current Year	Change 2 Years Previous to Current	Change Previous to Current
-2.01%	-8.79%	39367	42322	38680	-687	-3642
-2.01%	-8.79%	39367	42322	38680	-687	-3642

% Change 2 Years Previous to Current	% Change Previous to Current
-1.75%	-8.61%
-1.75%	-8.61%

Michigan Central Reservation System Occupied Slip Nights 2002-2012

Harbor/Marina	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Arcadia	393	425	601	298	354	269	409	150	127	120	112
Charlevoix							4,279	5,113	5,321	5,275	5,256
Duncan L. Clinch			2,105	2,297	2,285	2,678	2,241	2,200	2,209	2,209	2,516
Grand Haven			3,549	2,913	3,344	3,393	3,355	3,561	3,465	3,276	3,273
Muskegon Hartshorn		373	313	283	217	209	181	160	165	112	76
New Buffalo	1,413	1,361	1,348	1,423	1,365	1,278	1,284	1,144	1,197	1,182	1,211
Pentwater					939	879	893	922	885	433	420
Petoskey				2,843	2,920	2,673	2,159	2,310	2,241	2,742	2,681
South Haven											3,116
White Lake	787	929	986	920	773	619	486	549	400	400	268

Harbor/Marina	2008	2009	2010	2011	2012
Arcadia	409	150	127	120	112
Charlevoix	4,279	5,113	5,321	5,275	5,256
Duncan L. Clinch	2,241	2,200	2,209	2,209	2,516
Grand Haven	3,355	3,561	3,465	3,276	3,273
Muskegon Hartshorn	181	160	165	112	76
New Buffalo	1,284	1,144	1,197	1,182	1,211
Pentwater	893	922	885	433	420
Petoskey	2,159	2,310	2,241	2,742	2,681
(South Haven)					removed
White Lake	486	549	400	400	268
<b>TOTAL</b>	<b>15,287</b>	<b>16,109</b>	<b>16,010</b>	<b>15,749</b>	<b>15,813</b>

South Haven						
Transient	169,065	166,800	145,418	139,930	115,276	115,023
Revenue					131,415	131,126 (Additional 14%)
					Implemented	
					State Reservation	
					System in 2012	

December 9, 2013

TO: Harbor Commission

FR: Paul VandenBosch

RE: Fish Cleaning Station Project

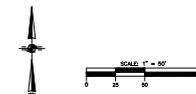
The City Council approved the Black River Park Master Plan, which is included in this agenda.

In order to proceed with the Fish Cleaning Station project, staff is requesting discussion on what parts of the project should be included in a grant application.

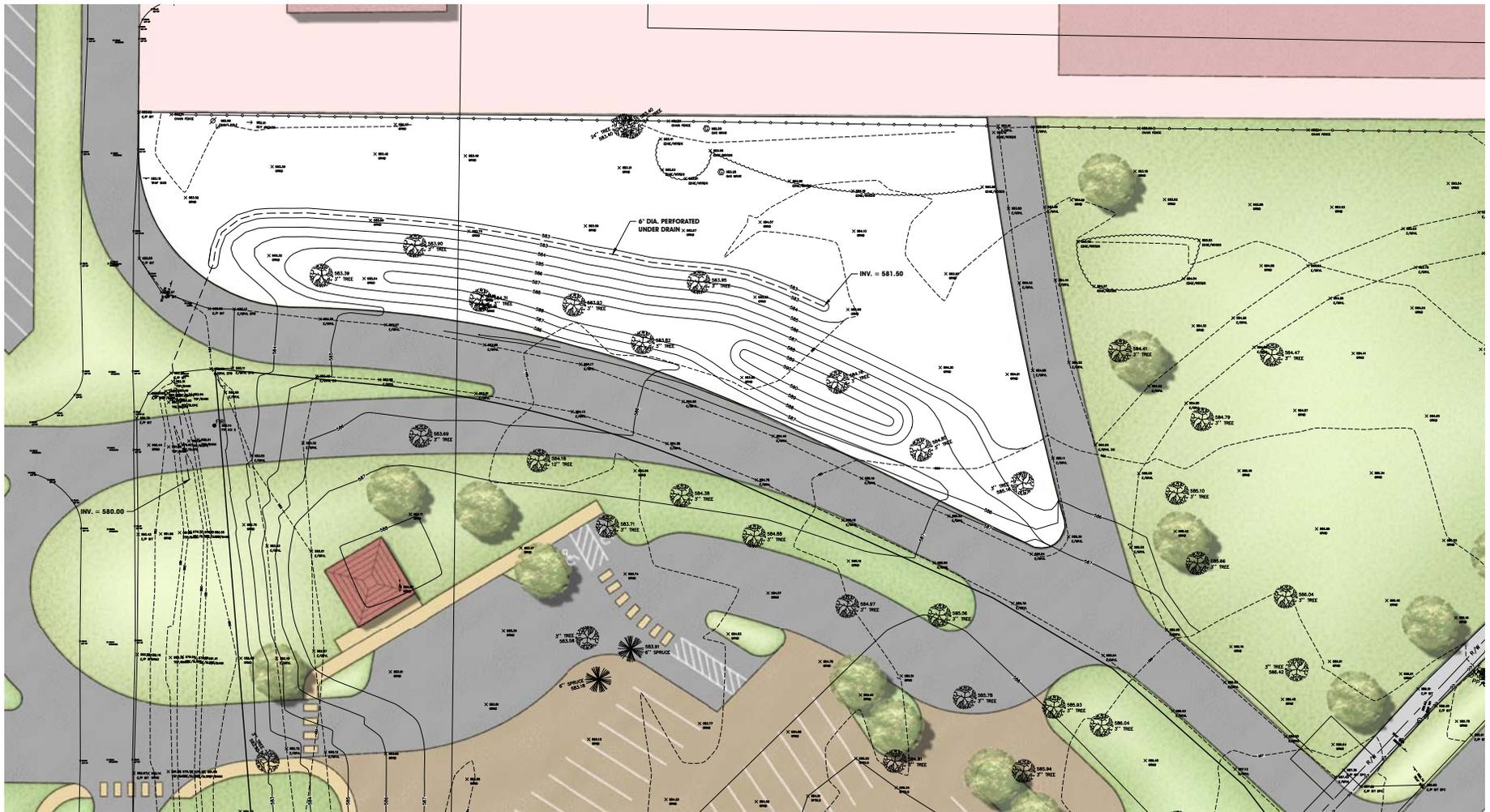
The goal of the discussion is to provide Abonmarche with enough information to start putting together a concept plan and preliminary cost estimate for the project. This will be used for budgeting and preparing a grant application.



# MASTER PLAN BLACK RIVER PARK



DATE: 9-27-13 ACI JOB #: 13-030 SHEET: 1 of 1  
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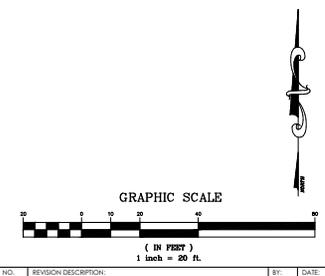


PROJECT  
**CITY OF SOUTH HAVEN  
 SOUTH HAVEN, MICHIGAN**

**BERM GRADING PLAN**

SHEET TITLE  
 DRAWN BY: **DL**  
 DESIGNED BY: **CK/KB**  
 PM REVIEW:  
 QA/QC REVIEW:  
 DATE: **11-08-13**  
 SCALE:

SIGNATURE:  
 DATE:  
 HARD COPY IS INTENDED TO BE 24" X 36" WHEN PLOTTED. SCALES INDICATED AND GRAPHIC QUALITY MAY NOT BE ACCURATE FOR ANY OTHER SIZE.  
 SCALE:  
 HORZ: 1"=20'  
 VERT: N/A  
 ACI JOB # **13-0003**  
 SHEET NO.



NO.	REVISION DESCRIPTION	BY	DATE

December 9, 2013

TO: Harbor Commission

FR: Paul VandenBosch

RE: Weather Buoy Grant

Recently the South Haven Steelheaders made the City aware of an opportunity for placing of a near shore weather buoy in Lake Michigan, near South Haven.

The benefits of a near shore buoy are more accurate, real time wind and wave height data, and improved local weather data sent to NOAA for more accurate forecasting, which is essential for boaters and fishermen. Beach safety flagging can be improved with better forecasting and reporting of rip currents and wave conditions on the beach. Better information about currents and water temperatures may help the water treatment plant operators understand how different weather conditions affect water quality.

A grant may be available to cover some of the initial cost to purchase the buoy. The purchase cost is estimated at \$72,000. If the buoy is placed in Lake Michigan, there will be operation and maintenance costs estimated at \$25,000.

The City of South Haven is considering supporting the buoy with a commitment of \$5,000 per year for operating and maintenance costs. Van Buren County has committed \$5,000 per year toward operating and maintenance cost. Louis Padnos Iron and Metal Company has offered to donate the buoy anchor (train wheels).

Currently there have been letters of support from Van Buren County, Louis Padnos Iron and Metal Company, SHAES, Rotary and South Haven Steelheaders, South Haven Township and South Haven Public Schools.

In order to apply for the grant, a preproposal is due on December 18, with a full proposal due on March 21. Submitting a preproposal does not commit the City to applying for the grant in March.

The attached resolution of support includes a commitment line for operation and maintenance expenses. The amount of the commitment has been left open for discussion.

Recommendation:

Approve the resolution with an amount for annual operation and maintenance.

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

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**RESOLUTION NO. 01-2013**

**A RESOLUTION SUPPORTING A WEATHER BUOY**

Minutes of a regular meeting 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 December 17, 2013, at 5:30 p.m., local time.

Present, Boardmembers: \_\_\_\_\_

Absent, Boardmembers: \_\_\_\_\_

The following preamble and resolution were offered by Boardmember \_\_\_\_\_ and supported by Boardmember \_\_\_\_\_.

WHEREAS, a near shore weather buoy will provide accurate wind and wave height data for the South Haven area; and,

WHEREAS, improved reporting and forecasting of Lake Michigan conditions will benefit boaters in South Haven Harbor; and,

WHEREAS, the South Haven City Council has committed to funding operation and maintenance expenses of the weather buoy.

NOW, THEREFORE, BE IT RESOLVED THAT:

The Harbor Commission of the City of South Haven hereby supports the grant application for a weather buoy.

AYES: \_\_\_\_\_

NAYS: \_\_\_\_\_

RESOLUTION DECLARED ADOPTED.

\_\_\_\_\_





**Project Title:** Developing a sustainable nearshore buoy network in West Michigan and Northwest Indiana through stakeholder engagement and outreach

**Lead investigator:** Edward Verhamme, Project Engineer, LimnoTech

**Co-investigator:** Paul VandenBosch, Project Manager, City of South Haven

**Project Objectives:** Improving weather observations and access to information by engaging citizens, safety groups, and community organizations.

#### **Project Narrative**

The major objective of this project is to increase access to nearshore real-time marine observations in West Michigan and Northwest Indiana. This objective will be accomplished through two major components. The first

component is working with community groups in South Haven, MI to acquire a real-time weather buoy to complete the network of nearshore buoys along the stretch of the Lake Michigan shoreline from Muskegon, MI to Michigan City, IN. The second component of the project is developing and implementing an outreach plan to reach critical decision makers, residents, and tourists of eight coastal and three other counties that are served by five nearshore buoys and deployed by three different organizations.

The stretch of Lake Michigan shoreline from Muskegon, MI to Michigan City, IN contains some of the most popular beaches in the Great Lakes and is home to a very large community of sport fishermen and pleasure boaters. The population of the eleven county region is 2.5 million people. In 2011, the first nearshore real-time buoy was deployed near Bridgeman, MI (10 miles south of St. Joseph, MI). By 2012 nearshore buoys were added in Muskegon (MI), Port Sheldon (MI), and Michigan City (IN). Each of these buoys is funded by different organizations and for a different primary purpose. However, each buoy measures basic marine conditions and reports them in real-time to NOAA and the public. Presently the largest gap in marine observations is a 70 mile stretch between Bridgman, MI and Port Sheldon, MI. The map to the right (Figure 1) shows the location of the buoys and the distance between each buoy along with the proposed buoy in South Haven, MI.

This project would provide funds to purchase a buoy to fill this gap. The buoy would be capable of measuring basic marine conditions such as air temp, relative humidity, pressure, wind speed & direction, wave height, period, and direction. The City of South Haven, MI, working in cooperation with other local groups, has committed to working with LimnoTech to fund the costs to deploy, retrieve, and maintain the buoy for the foreseeable future. In addition, other organizations within the region would like to expand the number of instruments on the buoy to measure water temperature at depth (10 node thermistor string), water speed and direction (ADCP), and to add a webcam to capture high definition video clips and images. These organizations include local fishing clubs, a nuclear power plant, and a local TV station in Grand Rapids.

The second part of this project is focused on reaching out to critical decision makers, residents, and tourists of eight coastal (Muskegon, Ottawa, Allegan, Van Buren, and Berrien counties in Michigan and Lake, Porter, and LaPorte counties in Indiana) and three interior counties (Kent, Kalamazoo, and Cass in Michigan) to show them how the buoy network can be used to increase safety and preparedness.

The first step of the outreach plan is identifying relevant agencies and contacts in each of the eleven counties. The first group that will be targeted includes critical decision makers such as forecasters from the National Weather Service offices in Northern Indiana and Grand Rapids, US Coast Guard & Auxiliary personnel, County Sheriff marine patrol, other county emergency personnel, and other critical personnel. A special set of outreach activities will be directed at these individuals such as a webinar and/or a workshop to allow these agencies to get familiar with the equipment and to meet the owners/operators of the buoys.

The second group that will be targeted by the outreach effort includes relevant community organizations and individuals with interests in beaches and boating in the eleven counties previously identified. This includes fishing clubs, yacht clubs, tourism agencies, beach owners, marina owners, and others. We will develop a set of common outreach tools that can use to engage the local stakeholders to educate them how to access and interpret data from the buoys. A brochure or rack card will be created describing the nearshore buoys, where they are located, who owns/operates them, and how to obtain up to date conditions. This will be distributed regionally. Relevant safety information will also be included highlighting local resources and information.

### **Matching & Leveraged Funds**

The first part of this project involves working directly with the City of South Haven to raise the funds required to deploy, retrieve, and maintain a nearshore buoy off of South Haven in Lake Michigan. The City of South Haven is committed to contributing at least \$5,000 annually to support this effort. In addition, the City will commit in house resources to coordinate the solicitation of the remaining funds required to deploy, retrieve, and maintain the buoy from other community groups and businesses. This is estimated at an additional \$21,000 per year for a total of \$26,000 per year. The Louis Padnos Iron and Metal Company has agreed to provide the mooring anchor for the buoy. This consists of two train wheels (700lbs ea) and the labor required to weld the wheels together into a solid anchor. This is valued at approximately \$3,000. A local TV station, WOODTV 8, out of Grand Rapids, MI has also agreed to support the project by doing news stories on the buoy's launch and donating \$5,000 in air-time that can either be used by the project team or sold to raise funds for the buoy. A public meeting was held on November 21, 2013 in South Haven, MI and representatives from 10 local organizations were present and expressed interest in contributing financially to the project. A more definitive listing of these organizations and their support level will be described in the full proposal.

We also have the support of local Convention and Visitors Bureau's in West Michigan that have offered in-kind labor to design and distribute education and outreach materials throughout the region.

### **Letters of Support**

*City of South Haven*

*Convention and Visitors Bureau – Grand Haven, Holland, Saugatuck/Douglas, South Haven, and St. Joseph*

*State Representatives***Budget Narrative**

Task 1 – Completion of Northern Indiana/West Michigan nearshore buoy network - \$40,000

Funds from this task would be used to acquire a buoy hull equipped with batteries and solar panels, a cellular modem, data logger, and sensors capable of measuring wind speed and direction, air temperature and relative humidity, air pressure, wave height, period, and direction. Local matching funds will be used to add on additional sensors to measure water temperature at depth, a webcam, and

Task 2 – Outreach to coastal counties key partners in Northern Indiana/West Michigan - \$10,000

This task will be used to support outreach and education activities within Northwest Indiana and West Michigan. We plan to coordinate outreach activities with local Sea Grant extension educators and have been in contact with Dan O'Keefe of Michigan Sea Grant and Carolyn Foley of Illinois-Indiana Sea Grant as well as with NOAA-GLERL, Steve Ruberg, as they own/operate the buoy in Muskegon.

**Timeline**

June 2014 - Acquire buoy

July 2014 – Deploy buoy with open invitation to public

Summer 2014 – Coordinate outreach activities with other buoy owners

Fall/Winter 2014 - Develop information packets/rack cards and distribute locally

Spring 2015 – hold workshop with critical personnel. Distribute brochures

## Paul Vandenbosch

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**From:** T S <tstegg@yahoo.com>  
**Sent:** Monday, October 21, 2013 8:05 PM  
**To:** Brian Dissette  
**Cc:** Paul Vandenbosch  
**Subject:** Re: Interest in South Haven Buoy

Agreed.

an FYI, might not even be a major issue of funding the capital portion as NOAA may be the major grant supplier. Also, there are some Marine Sheriff grants available for operating. I think Escanaba is an example of utilizing that particular grant.

I will draw up an invitation for the parties I mentioned earlier and that you suggested to attend the November 21st South Haven Steelheaders meeting 7pm at the Moose Lodge. Ed the buoy man will be there to do a presentation.

Thanks for your help...you too Paul.

Tim

**From:** Brian Dissette <bdissette@south-haven.com>  
**To:** T S <tstegg@yahoo.com>  
**Cc:** Paul Vandenbosch <pvandenbosch@south-haven.com>  
**Sent:** Monday, October 21, 2013 7:37 PM  
**Subject:** RE: Interest in South Haven Buoy

Tim,

I think that there will be interest in helping to make the project a reality. With that said, we will have to speak with the Harbor Commission to see if there's a willingness to fund the annual O&M. The fund is somewhat depressed at this time, but should rebound after a couple of years. The fund has been active this year with the North Marina construction costs and the dredging costs. We had a lot of grant funds, but we still spent down the fund to a much lower level than normal.

I can see this item being something that a lot of groups would be interested in helping with. With that said, if we're going to do this, it would seem natural to have the city act as the equipment owner/lease holder for the unit.

Brian

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**From:** T S [mailto:tstegg@yahoo.com]  
**Sent:** Monday, October 21, 2013 6:39 PM  
**To:** Brian Dissette  
**Subject:** Re: Interest in South Haven Buoy

Brian,

I contacted the buoy man requesting more specific info on yearly O&M and the specific grant(s).

Now, let's just say the capital costs are easily solicited and it just comes down to yearly O&M.

If Palisades/Co-Gen will not fund it, is it possible the City of South Haven can become the "go-to" entity? By this, I mean that if we generate enough interest from the short list pledging a yearly \$ amount, the City offers, for example, a 5 year contract and bills those entities for the amount they pledge and sign a contract for?

Just a thought about spreading the cost so that it may be more enticing for the various entities. Let me know what you think.

Tim

**From:** Brian Dissette <[bdissette@south-haven.com](mailto:bdissette@south-haven.com)>  
**To:** T S <[tstegg@yahoo.com](mailto:tstegg@yahoo.com)>  
**Sent:** Monday, October 21, 2013 5:54 PM  
**Subject:** RE: Interest in South Haven Buoy

I'm amazed how difficult it is to get funding from Palisades. We should talk with them, but should also make a point to approach Albemarle. They're giving large sums of cash to SHAES and SHPS. Might be another option.

---

**From:** T S [<mailto:tstegg@yahoo.com>]  
**Sent:** Monday, October 21, 2013 5:53 PM  
**To:** Brian Dissette  
**Subject:** Re: Interest in South Haven Buoy

Brian, LMC is a good suggestion. Also, I see that FOX 17 has a stake in the Port Sheldon buoy. Maybe WWMT 3 would be interested too.

The Saint Joseph buoy is really covered by I&M (Cook Nuclear Plant).

**From:** Brian Dissette <[bdissette@south-haven.com](mailto:bdissette@south-haven.com)>  
**To:** T S <[tstegg@yahoo.com](mailto:tstegg@yahoo.com)>  
**Sent:** Monday, October 21, 2013 5:46 PM  
**Subject:** RE: Interest in South Haven Buoy

Tim,

It's an interesting idea...The capital costs and annual O&M costs are pretty high. I agree with you that getting the purchase covered is pretty feasible, but the O&M costs will be another issue.

Have you thought about contacting MSU, WMU, or possibly LMC to see if there's interest in the project? I know the LMC president, and would be happy to help organize a conversation.

Let me know what you think.

Brian

---

**From:** T S [<mailto:tstegg@yahoo.com>]  
**Sent:** Monday, October 21, 2013 2:51 PM  
**To:** Brian Dissette  
**Subject:** Interest in South Haven Buoy

Hi Brian,

I am sending you some attachments regarding data buoys. It is my hope to gain support for this project from various sources, including the City and County. Here is my short list:

1. Entergy/Palisades - use for data power generation
2. Covert Generating - use for data power generation
3. City of South Haven - use for data, water plant, transient boaters, beach/flag system as data is updated every 10 minutes
4. Van Buren County - use for data, at least 3 marine sheriff boats plying our waters
5. South Haven Marina's - especially Barney with his work boat to deploy the buoy
6. Steelheaders Organization

7. Maybe some of the local clubs (SHYC, RBBC, etc)
8. Contact various people: Middaugh, Nezbit, Proos, Shuitmaker, Mike Henry

There are capital cost I think we can easily raise and some can also be negated with things like installation costs. The annual maintenance funding will be the trickier portion. Not sure if the grants available are for capital, yearly or both.

Ed Verhamme (I'll just refer to him as buoy man) is scheduled to come to the next Steelheader's meeting in November to discuss.

Let me know if you can think of any other contacts that should be added to the short list to request to attend the November Steelheader meeting. Also a FYI heads-up, I think my Dad will meet tomorrow at the Mayor's request regarding this topic and thought you would like some data.

Regards,  
Tim Stegeman

## Paul Vandenbosch

---

**From:** Ed Verhamme <everhamme@limno.com>  
**Sent:** Thursday, December 05, 2013 3:40 PM  
**To:** T S (tstegg@yahoo.com)  
**Cc:** Paul Vandenbosch  
**Subject:** South Haven Buoy Proposal

Tim,

I've been reviewing the grant description more and trying to think of ways to increase our odds of being funded. I think that we should only be asking the grant to fund the basic marine sensors. See the table below for the plan to fund the various pieces of the buoy. The grant would be covering \$40,000. Other partners would be funding the individual components that are important to them. I already have commitments from Padnos and WOODTV8.

I am planning to also utilize an additional \$10,000 of grant funds to support outreach and education activities across Northwest Indiana and West Michigan (from Muskegon to Michigan City). This effort would be used to promote the buoy network as a regional resource. I'm getting support from Michigan Sea Grant, Illinois-Indiana Sea Grant, and NOAA for this component of the project. The outreach component I believe will push our project to the top of the list.

Table 1. Capital cost breakdown

Buoy Component	Cost	Source
Buoy Hull, Mast, Ballast, Solar Panels, Batteries	\$25,000	Grant
Air Temperature & Wind Speed/Direction Sensor	\$2,500	Grant
Wave Height, Period, Direction Sensor	\$5,000	Grant
Data Logger & Cellular Modem	\$5,000	Grant
Mooring Line & Shackles	\$2,500	Grant
Anchor	\$2,500	Padnos
Water Temperature Sensors (10 depths)	\$2,500	Fishing Club (?)
Permits from USACE, MDEQ, USCG	\$2,000	LimnoTech
Web Camera (Video Clips/photos)	\$5,000	WOODTV8
Velocity Meter	\$20,000	Palisades (?)
Total	\$72,000	

As far as getting commitments for funds to support annual operation and maintenance costs what were you thinking? The city believes it can contribute \$5,000. We don't need commitments for this pre-proposal that's due in two weeks, but we do need to mention the potential organizations that might later commit. Engaging the folks from Palisades again would be great. If they provided \$20,000 in capital and \$10,000 annually that would be a huge boost.

Ed

---

Ed Verhamme  
 Project Engineer

32

501 Avis Drive, Ann Arbor, MI 48108  
Office: 734-332-1200 Direct/Cell: 734-681-0577  
Email: [everhamme@limno.com](mailto:everhamme@limno.com)

**LimnoTech**      [www.limno.com](http://www.limno.com)

Water Environment | Scientists Engineers

## TOTAL INTEGRATED DATA ACQUISITION SYSTEMS [TIDAS] S2 YACHTS — 900 BUOY

### STANDARD FEATURES AND EQUIPMENT

- < Composite construction — Hull, deck, electronics housing, ballast tube
- < 900 pounds buoyancy capacity
- < Foam-filled hull/deck for buoyancy preservation
- < Solar panel power — 45 watts total, with 24 amp/hour sealed lead acid battery pack and solar charge controller
- < Compact, easy-to-deploy, with integrated lifting points (3) for easy launch/retrieval
- < Removable electronics housing/mast — Quick, easy updating/maintenance/service
- < Sealed NEMA enclosure compartments — Open, expandable architecture
- < NDBC compatible
- < Integrated wire harnessing — Fully sealed marine connectors and components, designed and built to NEMA specifications
- < Serviceable ballast
- < Self contained, sealed LED strobe — USCG approved two nautical mile rated navigation light
- < Integrated radar reflector
- < Single point mooring with integrated mooring tackle

### DATA ACQUISITION CAPABILITIES

- < Sensors to measure:
  - Solar radiation
  - Wind speed, direction, and gust magnitudes
  - Air temperature
  - Relative humidity
  - Barometric pressure
  - Precipitation
  - Current direction and velocities at chosen depths
  - Water temperature at chosen depths
- < Inertial Wave Sensor (IWS):
  - Wave direction
  - Wave height
  - Wave period
- < Water Quality:
  - Dissolved oxygen
  - Blue-green algae
  - Turbidity
  - Chlorophyll
  - pH
  - Salinity
  - Temperature
  - Depth
  - Conductivity
- < Near-real-time reporting capability
- < Data Telemetry Options — Nexsens™ Acquisition Systems (with 2mb memory):
  - Data logger (no telemetry)
  - Data logger with radio telemetry
  - Data logger with cellular telemetry
  - Data logger with WiFi connection
- < Custom trailer for easy transport and deployment

### 900 BUOY OPTIONAL INERTIAL WAVE SENSOR (IWS)

- The Inertial Wave Sensor is designed to resolve details of the directional spectral wave field — First 5 Standard
- Engineered specifically for the 900 buoy to maximize accuracy
- Fully sealed environmental packaging for long service life
- Surface mount PCB technology for advanced durability
- Produces a serial output capable of integrating with all forms of data logger systems

### SPECIFICATIONS

- Buoy diameter - 3'8" (1.12m)
- Height above waterline - 9'10" (3m)
- Buoy draft/depth below waterline - 6'6" (1.97m)
- Weight (buoy, hull, deck, etc.) - 350 lbs (158.76kg)
- Weight, modular ballast - 100 lbs (45.36kg)
- Weight, suspended ballast - 160 lbs (72.57kg)
- Total weight - 610 lbs (276.69kg)
- 20' polypropylene mooring pennant

### SERVICE AND WARRANTY

- < Service support provided through dedicated brand representatives
- < Five-year warranty coverage on all S2 Yachts manufactured components
- < Other component warranty coverage equal to supplier warranty policies



NAVIGATION LIGHT

INTEGRATED RADAR REFLECTOR

CONFIGURABLE ALUMINUM MAST

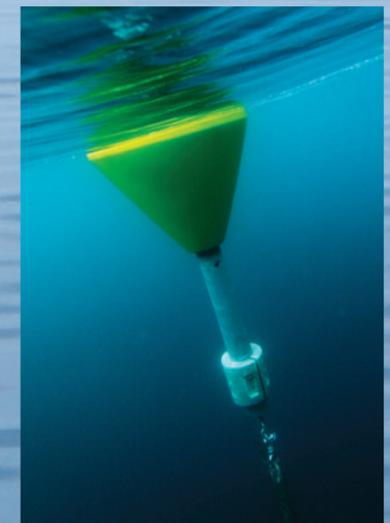
FIELD-REMOVABLE ELECTRONICS HOUSING SUPERSTRUCTURE FOR EASY MAINTENANCE/SERVICE

EXPANDABLE, OPEN ARCHITECTURE

6 STANDARD SOLAR PANELS, 45 WATTS TOTAL POWER

COMPOSITE FOAM-FILLED DECK/HULL WITH INTEGRATED LIFTING POINTS (3)

COMPOSITE BALLAST TUBE WITH COUNTERWEIGHT AND TETHER ATTACHMENT, 100# INTEGRATED BALLAST AND 160# SUSPENDED BALLAST, SINGLE POINT MOORING



**MEDIA CONTACTS:****Ed Verhamme**

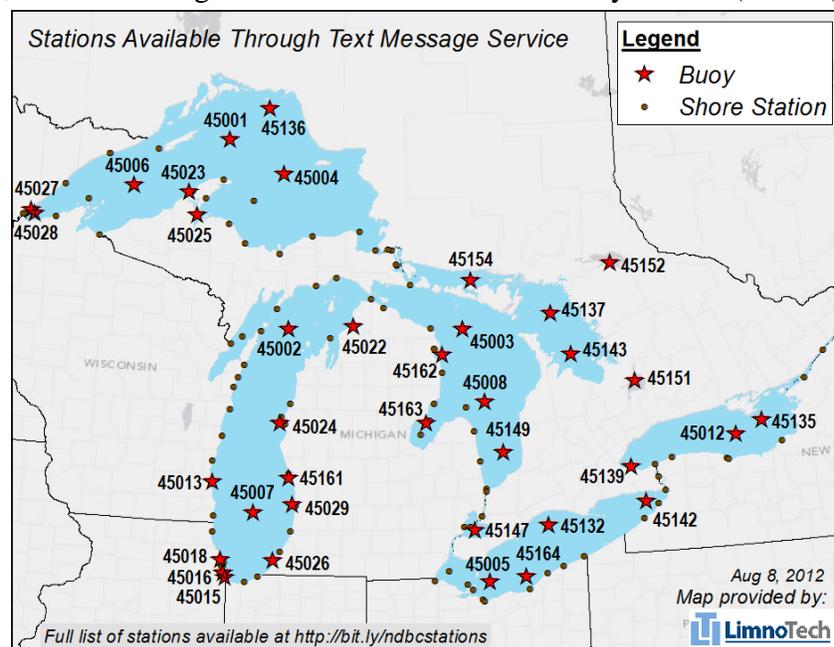
LimnoTech

(734) 332-1200

[everhamme@limno.com](mailto:everhamme@limno.com)**FOR IMMEDIATE RELEASE****August 8, 2012****Buoy Data Available Through New Text Message Service**

**Ann Arbor, Michigan** – A new text message service is now available to boaters, fishermen, and others to access the latest weather observations from buoys and other shoreline stations around the Great Lakes. The text message service accesses the latest observations of wind speed, air temperature, water temperature, and wave height from the National Data Buoy Center (NDBC)

operated by the National Oceanic and Atmospheric Administration and relays it back to the user in a simplified text format. This new service allows for instant access to observations from approximately 40 buoys and 100 shoreline stations from all five Great Lakes and Lake St. Clair from any cell phone with text message capability. The beta service can be accessed by sending a text message to (734) 418-7299 with only the station id in the body of the message. A full list of available stations can be accessed at <http://bit.ly/ndbcstations>



and a map version is also available at <http://ndbc.noaa.gov>. Station id's for buoys contain all numbers and shoreline stations begin with a letter. For example, the buoy located off of St. Joseph, Michigan has a station id of 45026.

The service is provided free of charge. However, users may be charged a fee by their cell phone provider to send and receive a text message. Check with your cell phone provider for more information. LimnoTech, an environmental engineering consulting firm located in Ann Arbor, Michigan, developed the beta service to increase access to marine weather conditions for the Great Lakes boating and fishing community. LimnoTech has been involved with the recent deployment of weather buoys in both St. Joseph and Holland, Michigan and is working on other projects around the Great Lakes to increase access to real-time observations. Visit LimnoTech on the web at [www.limno.com](http://www.limno.com) to find out more about other projects around the Great Lakes.

501 Avis Drive  
 Ann Arbor, MI 48108  
 734-332-1200  
 fax 734-332-1212  
[www.limno.com](http://www.limno.com)

# Buoy Information Session

## Holland, Michigan

Ed Verhamme  
Project Engineer  
LimnoTech  
Ann Arbor, MI



Holland, MI  
Agenda Page 35  
May 1, 2012

# Overview

- Background
- Project Example – “Cook Buoy”
- Holland Buoy Details & Cost
- Plans for 2012
- How can you help?

# Background

- Prior to 2008, only NOAA NDBC was deploying real-time buoys on the open waters of the Great Lake
- Boaters relied on the NOAA forecast, NOAA mid lake buoy, and NOAA shoreline weather stations for up to date information.
- Improvements in technology and work by UM & S2 Yachts (and others) lead to development of smaller, lower cost data buoys.
- In recent years there has been an “explosion” in the number of nearshore data buoys. Most buoys are funded by federal research dollars and deployed by universities (a few exceptions).
- LimnoTech’s goal is to deploy additional “operational” buoys to serve a wide range of users.

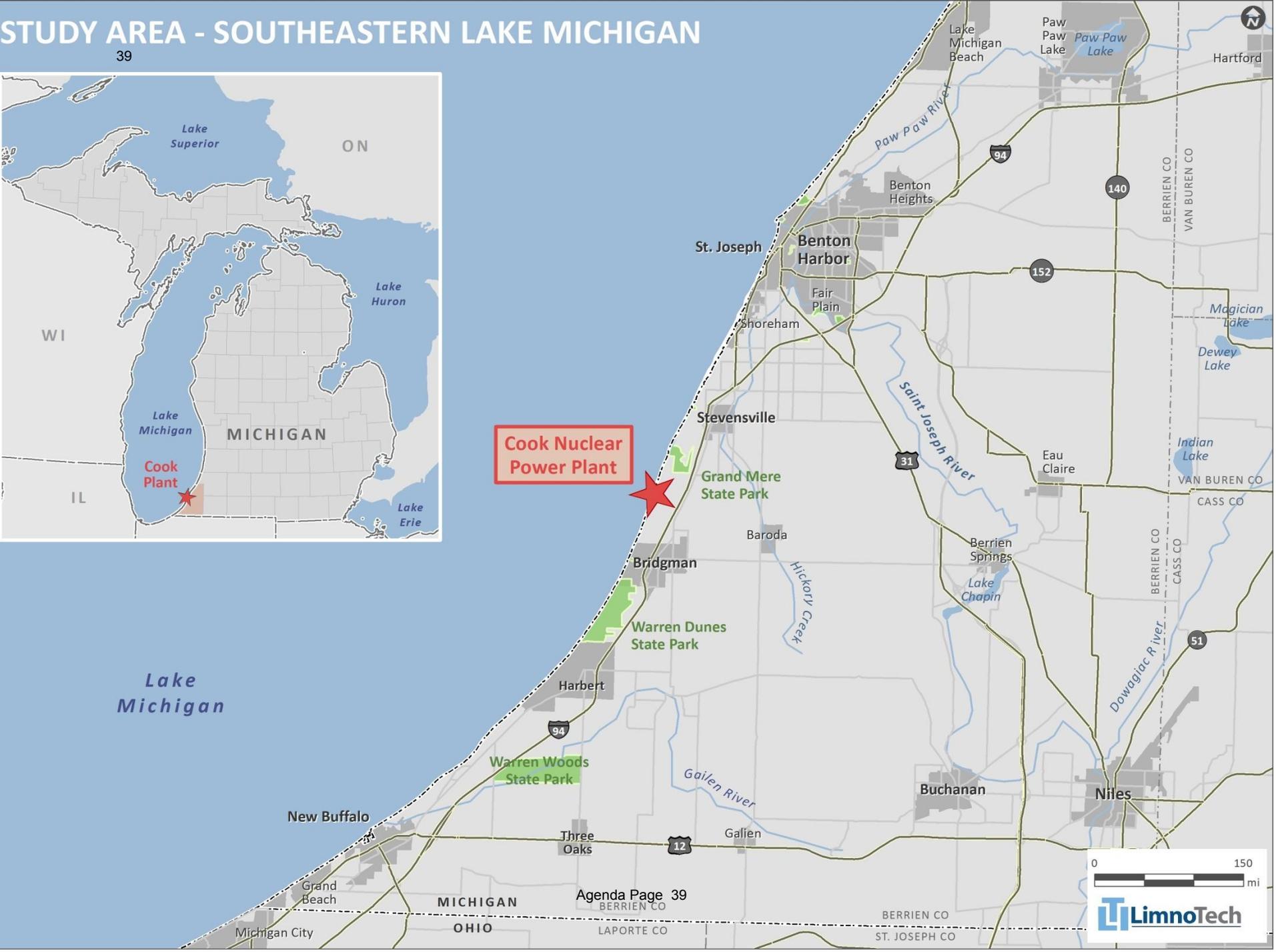
# Project Example: Cook Nuclear Power Plant

- Purpose:
  - Understand physical environment
  - Support health and safety data
  - Share data with public
- Approach:
  - Deploy S2 Yachts TIDAS 900 buoy
  - Data streamed live to internet every 10 min to NDBC, GLOS, & UGLOS (U of M)

# STUDY AREA - SOUTHEASTERN LAKE MICHIGAN



**Cook Nuclear Power Plant**



# Real Time Monitoring Buoy

- Deployed 2.5 miles from shore in 70 ft of water
- Sensors
  - Air Temp, RH, wind speed & dir, solar radiation
  - Water Temperature (9 depths)
  - Wave height, period, direction
  - Water speed & dir (1 m bins)
- Reports every 10 min (compared with hourly for NDBC buoys)

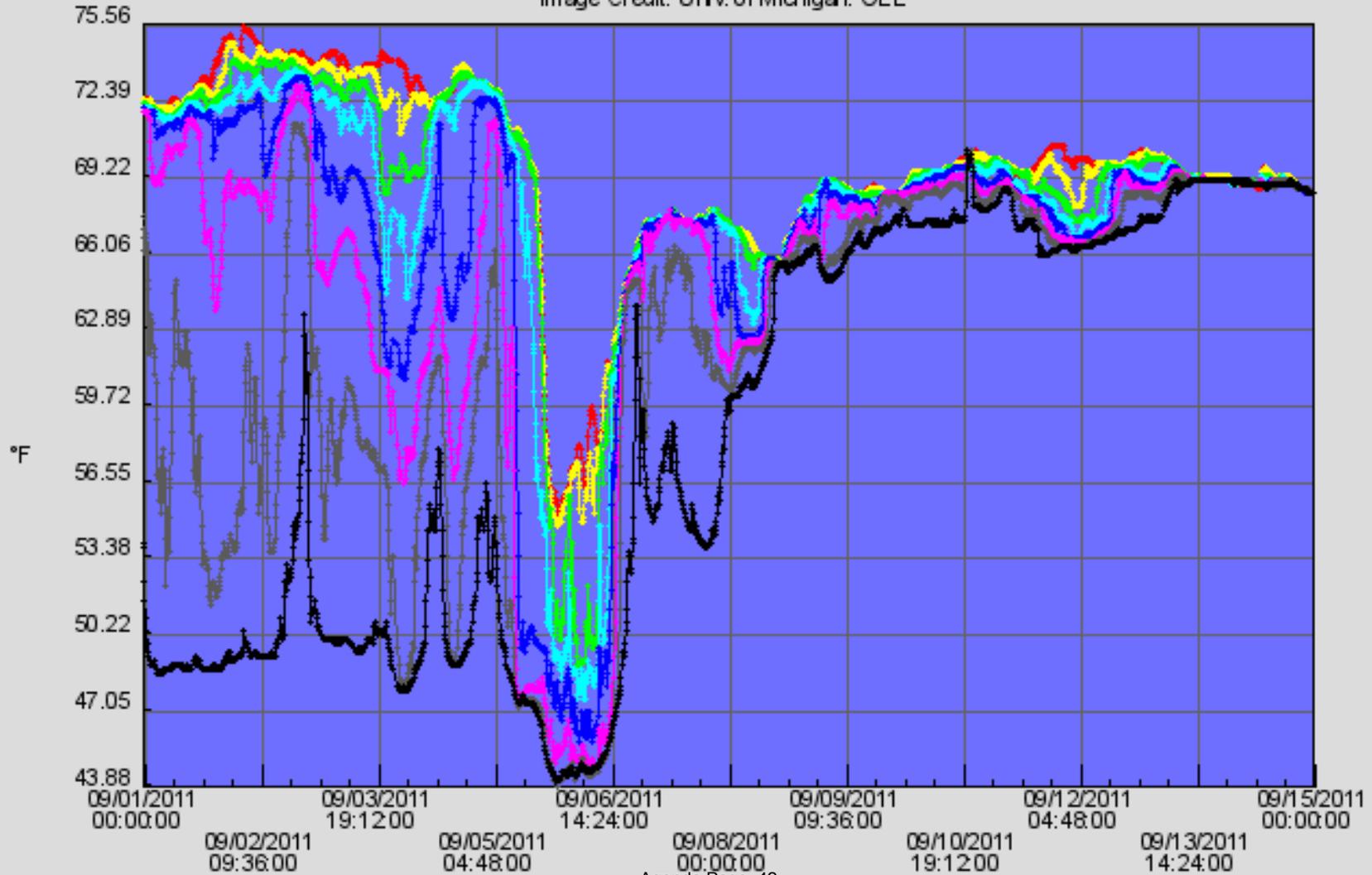




# Water Temperature

**STRING at 45026**

Image Credit: Univ. of Michigan: OEL



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All times in GMT

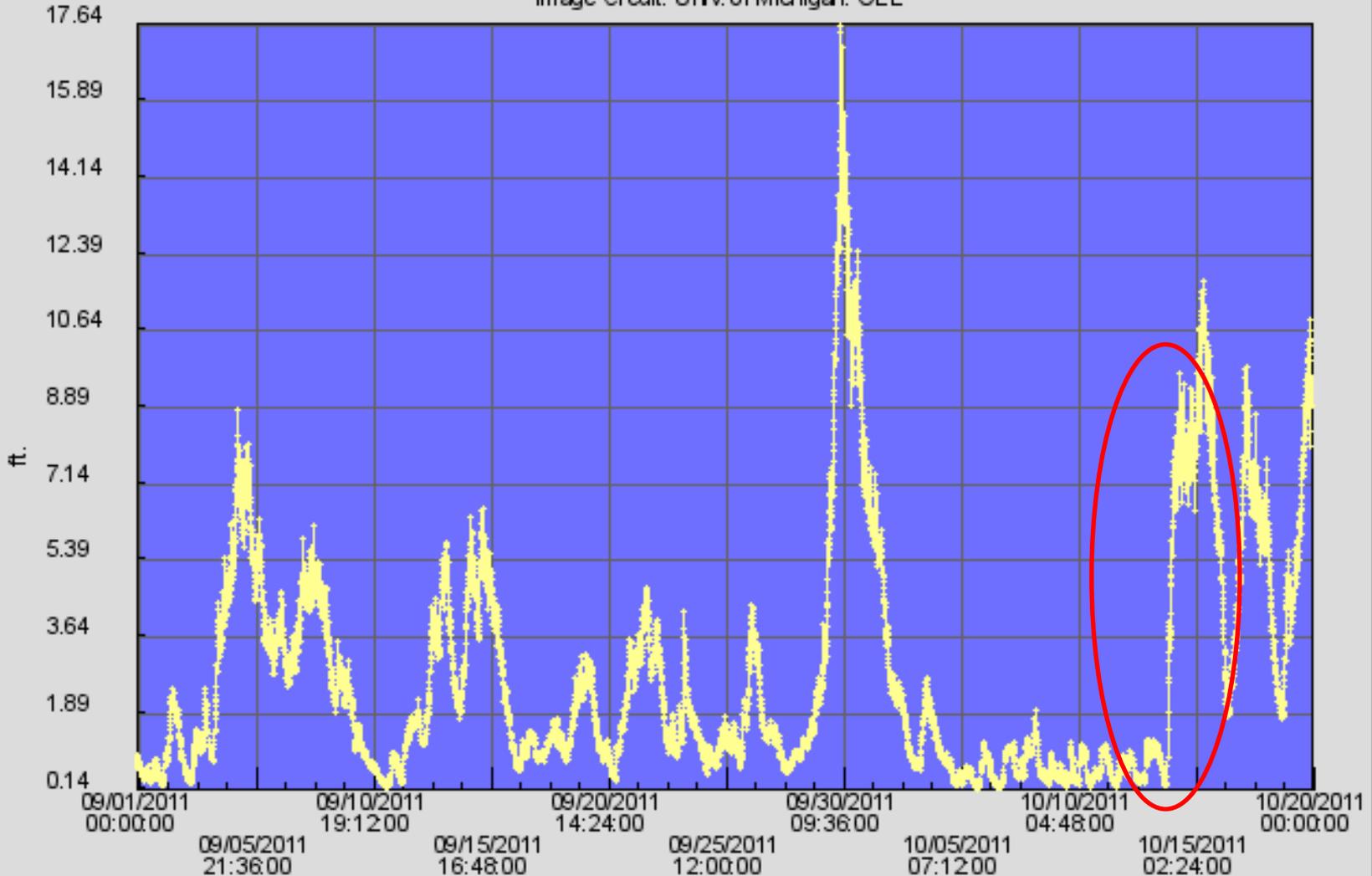
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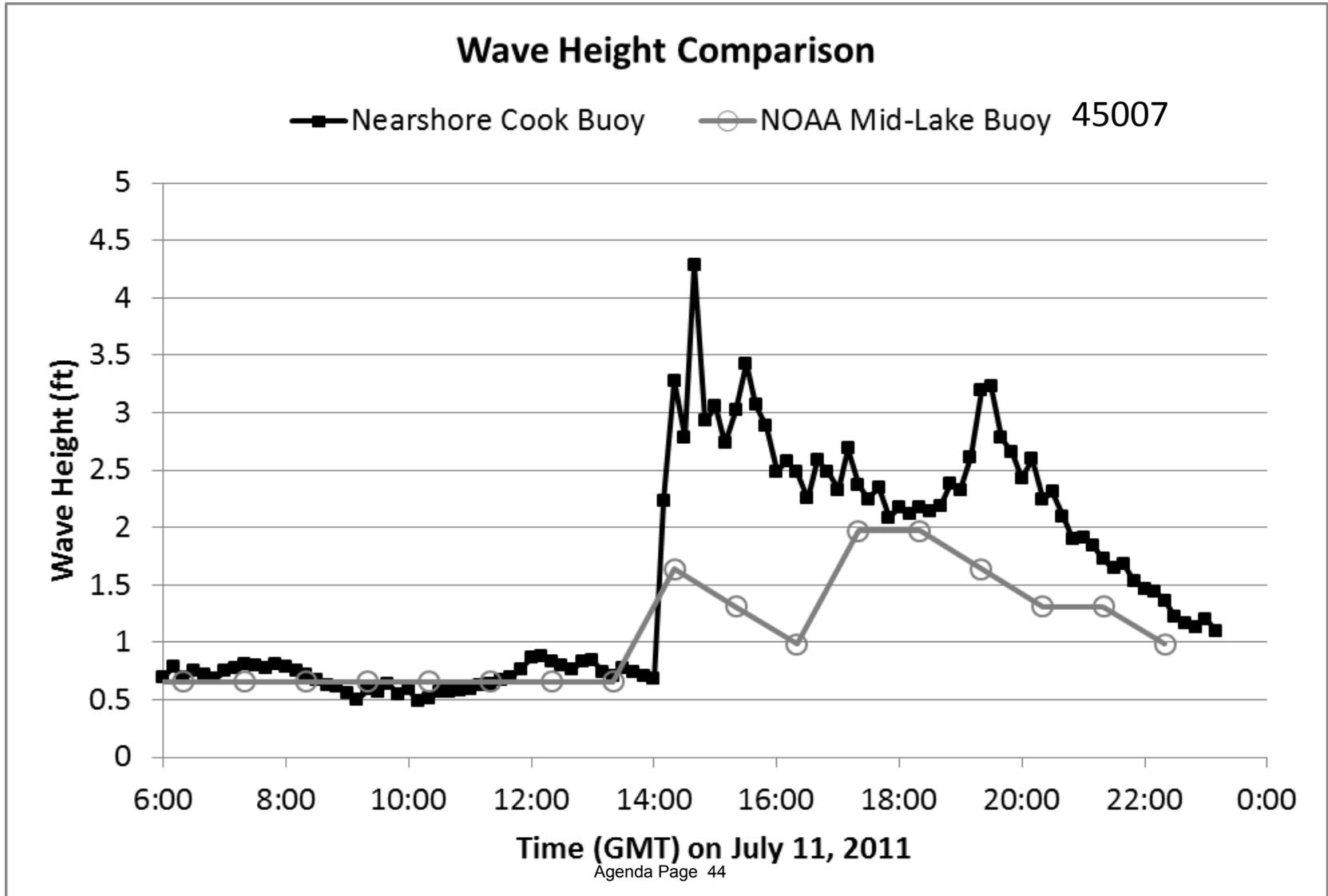
# Wave Height

## WVHGT at 45026

Image Credit: Univ. of Michigan: OEL



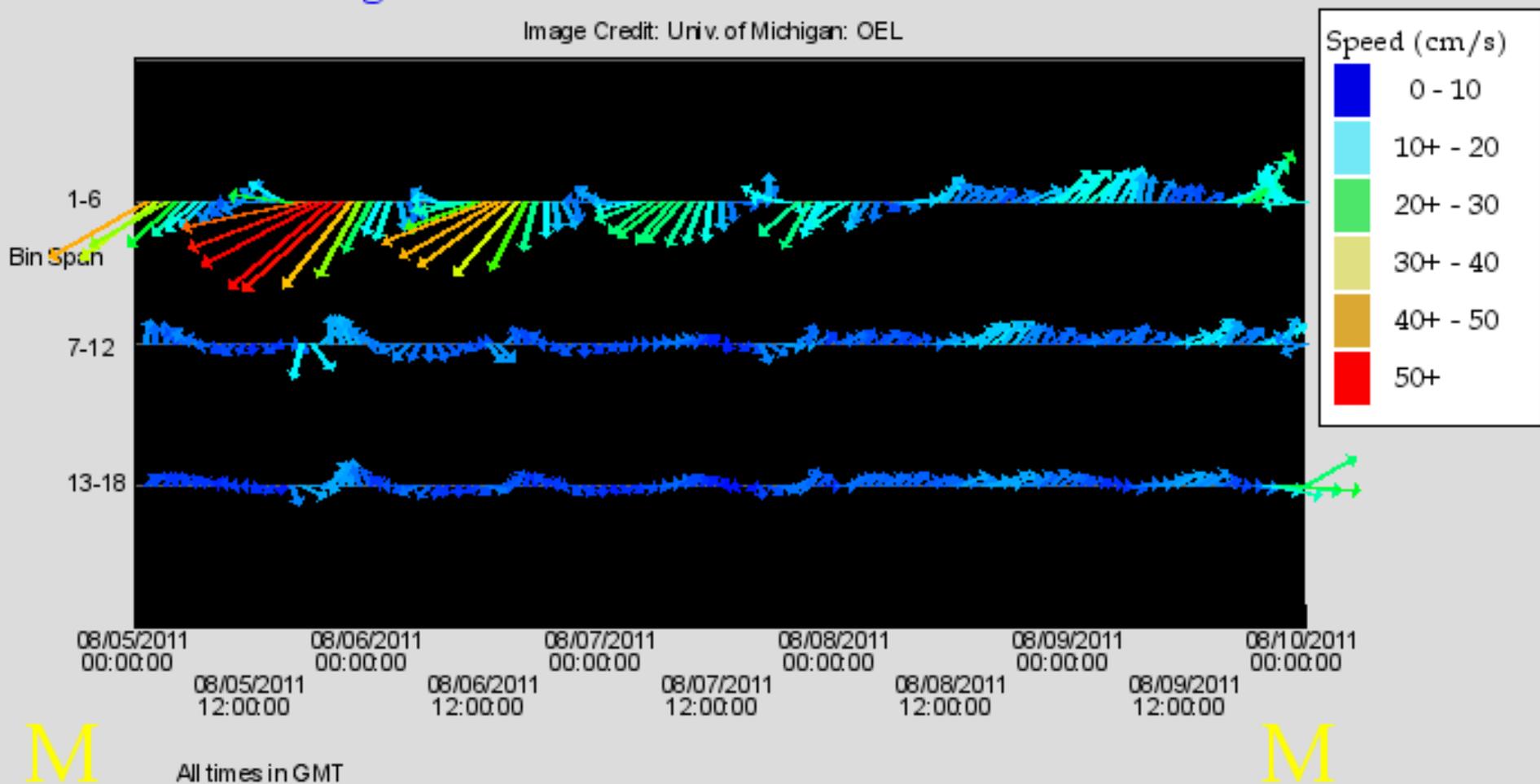
# NDBC Buoy vs. Local Buoy



# Water Velocity

## Average Ocean Current Stick Plot for Station 45026

Image Credit: Univ. of Michigan: OEL



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All times in GMT

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# Lessons Learned

- If you build it...they will come
  - NOAA (NWS, NDBC, GLERL)
  - Boaters & Fishermen (forums, word of mouth)
  - Others (surfers, shoreline property owners, TV, Radio, etc..)
- Local real-time observations **trump** other sources of information
  - NDBC mid lake buoys (hourly and less reliable)
  - NWS Forecasts (cover large areas over long time)
  - Wind and Wave Models (hard to find/interpret)
- Capital costs and O & M costs are reasonable
  - Capital cost is significantly lower than NOAA buoys
  - Benefits are quantifiable and outweigh costs

# Holland Buoy

- Goal: Provide lake condition data to a variety of users in real-time
- Buoy Location
  - Preliminarily sited off of the BPW water intake (2.5 miles from shore in 80 ft of water)
  - Permits from MDEQ, USACE, and USCG are in process (can be changed in later years)
- Parameters
  - Wind speed, gust, and direction
  - Air temperature & relative humidity
  - Barometric pressure
  - Water temperature (9 depths)
  - Wave height, period, and direction
- Data availability (every 10 min)
  - Great Lakes Observing System ([www.glos.us](http://www.glos.us))
  - NOAA National Data Buoy Center ([www.ndbc.noaa.gov](http://www.ndbc.noaa.gov))
  - U of M & Michigan Tech Portal (<http://uglos.engin.umich.edu/>)

# Buoy Costs

- Capital Costs: \$45,000
  - \$40,000 buoy hull + sensors
  - \$5,000 mooring
- Operation and Maintenance: ~\$20,220 /yr
  - \$15,000 deployment, retrieval, & setup
  - \$4,000 data management & quality control
  - \$720 cellular modem
  - \$500 sensor calibration & storage
  - NOTE: This cost is an estimate and is likely to decrease as we move forward and identify cost savings this year.
- 5-year lease option also available

# How can you help?

- Spread the word!!
- Promote availability of data and identify local sponsors/groups to fund buoy deployment in 2013.
- Encourage groups who use data from the buoy to support it financially (collect funds, apply for grant, etc..)
- Deploy a mooring for the buoy (2,000 lb weight or ~\$5,000 to install hydraulic driven anchor)
- Need financial support to cover basic costs (cell phone data plan, gas for trucks/boat, food, chain & shackles for mooring, etc..)
- Help coordinate communication
- Attend buoy launch (early June)

# Questions

Ed Verhamme

[everhamme@limno.com](mailto:everhamme@limno.com)

(734) 332-1200

**Thanks to  
Boatwerks for providing  
the room for today's  
meeting**



## Field Services and Operational Support: Nearshore Real-Time Monitoring Buoys in the Great Lakes

### Value Added

Monitoring buoys deployed in nearshore waters of the Great Lakes provide stakeholders with access to critical, real-time observations for use in managing, safeguarding, and understanding local conditions.



Technological advances make it more feasible for private organizations and other interested parties to deploy a buoy to serve their needs while contributing to the larger observing system. Nearshore monitoring buoys are a cost-effective way to provide real-time data on local conditions such as water temperature, wind speed, and wave height over the internet.

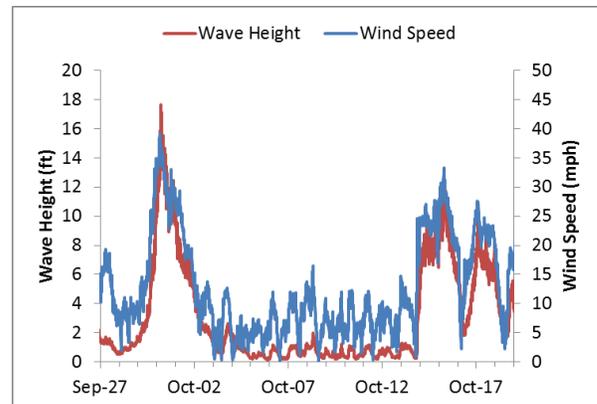
### Project Example

LimnoTech has been involved with designing, deploying, maintaining, and managing state-of-the-art monitoring buoys in the Great Lakes for the last several years. In June 2011, LimnoTech deployed a data buoy in Lake Michigan to collect real-time environmental information including air temperature, wind speed and direction, water speed and direction, wave height and period, and water temperatures at several depths.

Data collected from the buoy were used by a power plant to support feasibility studies and health and safety planning. Data were also shared with other users through the Great Lakes Observing System and the NOAA National Data Buoy Center. Data from the buoy were used by the National Weather Service to improve predictions of high waves and rip currents, aid the Coast Guard and local law



enforcement agencies in responding to emergencies on the lake, and offer a recreational planning resource to boaters, swimmers, and fishermen. A sample of the monitoring data from 2011 is shown below in Figure 1.



**Figure 1. Measured wind speed and wave height.**

LimnoTech has also been involved with defining the future of remote observations and ecosystem modeling in the Great Lakes through ongoing projects with the NOAA Great Lakes Environmental Research Lab, the Great Lakes Commission, and the Great Lakes Observing System. Together these services represent a complete package of field services and operational support to address a wide range of user needs.

### Services and Expertise

LimnoTech has experience with the following services below and can work with you to meet your specific needs.

- Observing system design and specification
- Equipment selection based on user needs
- Sensor testing and calibration
- Custom data logger programming
- Site specific mooring design and installation
- On-site training
- Buoy deployment and retrieval
- Equipment operation and maintenance
- On-call trouble shooting
- Continuous data quality assurance
- Data management and communication (DMAC)

**For more information on the projects or services mentioned above please contact Ed Verhamme at 734.332.1200 or at [everhamme@limno.com](mailto:everhamme@limno.com)**

November 20, 2013

TO: Harbor Commission

FR: Paul VandenBosch

RE: Charter Fishing Boat at the South Side Marina

Chad Bard has requested that he be allowed to operate a charter fishing boat out of the South Side Marina again in 2014. This would be the second year of operation for It'll Do Charters.

The attached license agreement provides for insurance requirements, operational requirements, and a provision for termination in case of breach of agreement.

The marina slip fee has been doubled for this commercial use and the boater will be charged \$5,830 for the season as a commercial rate.

Staff Recommendation:

Recommend the Charter Fishing License Agreement to City Council for approval.

## LICENSE AGREEMENT

This License Agreement is made as of \_\_\_\_\_, 2013, between the City of South Haven, a Michigan municipal corporation, the principal business address of which is 539 Phoenix Street, South Haven, MI 49090 (the “City”), and IT-IL-DO Charters, LLC, a Michigan Limited Liability Company, the principal business address of which is 46379 Leedy Point Road, Bloomingdale, MI 49026 (the “Licensee”).

### RECITALS

- A. The City owns and operates the Southside Municipal Marina (“Marina”) as is described and depicted on the attached Exhibit A.
- B. The Licensee wishes to provide a charter fishing boat operation on Lake Michigan to be operated primarily from the Marina during fishing season.
- C. The City wishes to accommodate the Licensee’s request in accordance with the terms and conditions of this Agreement.

### TERMS AND CONDITIONS

In exchange for the consideration in and referred to by this Agreement, the parties agree as follows:

1. License. The City licenses to the Licensee for commercial use, seasonal slip number 26 in the South Side Marina (the “Marina Slip”), for its use in operating a charter fishing boat business, subject to the terms and conditions of this Agreement and for no other purpose or use.
2. Term. Unless terminated earlier pursuant to this Agreement, the term of the license shall commence at 5:45 a.m. on April, 15, 2014 and expire at 9:30 p.m. on October 15, 2014.
3. License Fee. Within 30 days of the execution of this Agreement the Licensee shall pay to the City a nonrefundable license fee of \$1 and Marina Seasonal Slip Fee of \$5,830.
4. Property Rights. This Agreement grants only a license to use and does not grant or convey to the Licensee any rights, title, or interest in the Marina Slip. The City retains all property rights in the Marina Slip. Except as otherwise provided by this Agreement, no changes may be made to the Marina Slip, including no modifications or additions, without the City’s prior written consent. At the expiration of this Agreement, or any renewal, the Licensee shall return the Marina Slip to the condition it was in prior to the effective date of this Agreement. The Licensee shall pay any costs incurred by the City to repair or restore the Marina Slip to its pre-Agreement condition.
5. Parking. No parking will be provided specifically for the Licensee’s charter fishing boat operation. Customers must use the general public parking area provided at the Marina. Customers may also use the Marina loading area on Water Street for a maximum of 15 minutes.
6. Nonexclusive License. This license is not exclusive to the Licensee. The City may license other charter fishing boat operations at its marinas.
7. Requirements of Licensee. This license is subject to the following terms and conditions:
  - (a) The Licensee’s charter fishing boat business shall consist only of offering chartered fishing excursions on Lake Michigan to the public for a fee. No other use is permitted by this license.

- (b) The Licensee may advertise its charter fishing boat business at the Marina by displaying the Licensee's name, phone number and other contact information on a dock box near the Marina Slip, by placing advertising literature in a flier box on or near the southwest side of the Marina, and by displaying a flag or banner flown on its vessel. All advertising is subject to City of South Haven Zoning Ordinance regulations and subject to approval of the Marina Manager.
- (c) The Licensee shall ensure that its operation of the charter fishing boat business, and the use and operation of its vessel complies at all times with applicable local, state and federal laws, rules, regulations, ordinances, orders, permits, and licenses.
- (d) The Licensee may operate its business from the licensed Marina slip from 5:45 a.m. to 9:30 p.m., seven days per week, during the term of this Agreement.
- (e) The Licensee understands and acknowledges that, from time to time, its vessel may be required to be relocated from the Marina to accommodate special events. At the time of the execution of this Agreement, there are no such events scheduled. If an event is scheduled that requires the Licensee to remove its vessel, the City shall notify the Licensee in writing at least 60 days in advance.
- (f) The Licensee understands and acknowledges that from time to time, its ability to access the Marina slip licensed under this Agreement may be affected by festivals and other events.
- (g) The Licensee shall make no representations to any person or entity as to any affiliation with, endorsement by, or sponsorship with the City. The City is in no way and at no time during the term of this Agreement affiliated with the City. The Licensee shall not use the City's logo at any time for any purpose.
- (h) The Licensee shall remove and dispose of all fish and fish remains, including bait, offsite.

8. Indemnification. The City shall not be responsible for any loss, damage or injury from the Licensee's operation of the charter fishing boat business or its use of the Marina Slip under this Agreement. The Licensee shall hold the City (defined for purposes of this paragraph to include the City's officers and employees) harmless from, indemnify it for and defend it (with legal counsel reasonably acceptable to the City) against any demands, claims or causes of action arising from the Licensee's operation of the charter fishing boat business or its use of the Marina Slip under this Agreement.

9. Insurance. Throughout the term of this Agreement, or any renewals thereof, the Licensee shall obtain and maintain commercial general liability insurance with limits of not less than \$1,000,000.00 dollars per occurrence and \$3,000,000.00 dollars in the aggregate. All policies shall name the City (including its officers and employees) as an additional insured and certificate holder. Copies of certificates of insurance showing the coverage to be in place, that the premiums are fully paid, and that coverage cannot be terminated or modified except after 30 days prior written notice to the City, shall be provided to the City. Upon request, the Licensee shall provide the City with copies of the policies of insurance and all endorsements.

10. Assignment or Use by Others Prohibited. The Licensee may not assign this Agreement or its rights, privileges, duties or obligations under this Agreement and may not allow any other

person or entity to use the Licensed Property for any purpose without the City’s prior written consent.

11. Termination. The license granted pursuant to this Agreement is terminable at the will of either the City Council or the Licensee. The City Manager may, upon a reasonable belief that a breach of this Agreement has occurred suspend the license granted by this Agreement, effective immediately. In case of suspension, Licensee may appeal such suspension to the City Council in writing. Upon receipt of the written appeal, the City shall give the Licensee written notice of the date and time of the next City Council meeting at which such appeal will be considered so that the Licensee may address the City Council. Upon the early termination of this Agreement, the Licensee shall, unless the City otherwise consents by resolution of the City Council, without cost to the City, remove any advertising dock box and restore the Marina Slip to the condition it was in prior to the date of this Agreement.

12. Miscellaneous.

(a) This is the entire agreement between the parties regarding its subject matter. There are no prior or contemporaneous agreements. It may not be modified or amended except in writing, signed by all parties. It shall not be affected by any course of dealing. The captions are for reference only and shall not affect its interpretation. This Agreement shall be construed as though it was mutually drafted.

(b) Any notices shall be made in writing to the addresses first written above or such other addresses as indicated by notice and shall be made by personal delivery or by postage prepaid United States first-class mail and shall be deemed completed when actually received or, if by first-class mail, three business days after mailing.

The parties have signed this Agreement as of the date first above written.

CITY OF SOUTH HAVEN

IT-IL-DO Charters, LLC

By: \_\_\_\_\_  
Robert Burr, Mayor

By: \_\_\_\_\_  
Chad Bard, Co-Owner

Date Signed: \_\_\_\_\_, 2013

By: \_\_\_\_\_  
Amanda Morgan, Clerk

Date Signed: \_\_\_\_\_, 2013

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

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**RESOLUTION NO. 2013-2**

**A RESOLUTION SETING MEETING DATES FOR 2014**

Minutes of a regular meeting 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 December 17, 2013, 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 21
- February 18
- March 18
- April 15
- May 20
- June 17
- July 15
- August 19
- September 16
- October 21
- November 18
- December 16

AYES: \_\_\_\_\_

\_\_\_\_\_

NAYS: \_\_\_\_\_

\_\_\_\_\_

RESOLUTION DECLARED ADOPTED.

\_\_\_\_\_  
Paul VandenBosch, Secretary

**CERTIFICATION**

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

I, Paul VandenBosch, the duly qualified and acting Secretary of the Board of the Local Development Finance Authority 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 December 17, 2013, the original of which is on file in the office of the Local Development Finance Authority. 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 December 17, 2013.

\_\_\_\_\_  
Paul VandenBosch, Secretary