

**Harbor Commission**

**Regular Meeting Agenda**

**Tuesday, February 19, 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, Fred Jeffers, Cathy Pyle, Alan Silverman, Daniel Strong, Greg Sullivan.

2. Approval of Agenda

3. Approval of Minutes: January 15, 2012 Meeting

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

5. Marina Reports

6. Dredging

7. General Comments

Member and Staff Comments

Adjourn

RESPECTFULLY SUBMITTED,  
Paul VandenBosch  
Secretary, Harbor Commission

# Harbor Commission

## Regular Meeting Minutes

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



City of South Haven

### 1. Call to Order

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

Also present: Patti Montgomery, Michigan Maritime Museum; John Marple, Marina Manager

### 2. Approval of Agenda

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

All in favor. Motion carried.

### 3. Approval of Minutes: December 18, 2012 Meeting

Motion by Strong, second by Pyle to approve the December 18, 2012 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.

### 6. Dredging

VandenBosch updated the board on dredging activities. The Marina museum/barge work is done. A permit request for the north and south side marinas was sent to the Department of Environmental Quality and Army Corps of Engineers and is currently being reviewed.

January 15, 2013  
Harbor Commission Minutes  
DRAFT

Staff has been doing soundings and working on bid documents. VandenBosch asked if the board wants to add the turning basin to the dredging.

The board discussed various scenarios and combinations of areas to be dredged. VandenBosch noted that hydraulic dredging, which includes beach replenishment, is costlier than mechanical dredging which is what has been done this month. Since the permit is not in to the Army Corps and the Department of Environmental Quality, VandenBosch is not sure the city can dredge before July due to a prohibition on dredging in May and June. VandenBosch said his plan is to continue to move forward with a bid document but is still not sure the hydraulic dredging is possible in mid-July. VandenBosch suggested that staff have some soundings done so that perhaps some mechanical dredging/spot dredging can be done.

VandenBosch is only guessing at costs for dredging; not sure dredging will be possible at the pier head due to lack of funding and noted that the board has discussed the possibility of a special assessment to do the pier head dredging.

The board discussed doing a special assessment. VandenBosch explained the special assessment process, which includes public hearings and bringing dredging before council again. After a question regarding whether City Council has been made aware of the dredging need, VandenBosch said a recommendation has been sent to City Council but VandenBosch has not heard of any response.

Patti Montgomery, Michigan Maritime Museum. Explained the docking procedure of the Friends Good Will, noting that 90' of turning area is required and soundings in front of the museum dock are at 7'. Montgomery noted that there are other boats also that draw similar drafts. Montgomery requested some assistance from the board noting that the dredger has been very helpful; the Friends Good Will is presently not sitting on the bottom. Montgomery explained that the low water last year forced them to quit sailing three weeks early.

VandenBosch noted that at the Municipal Marina we tried to take the approach area down to 10', noting that there is the issue of timing and of funding with the current dredger.

Strong pointed out that "It doesn't do much good to be able to get in and out of the slips if you cannot get in and out of the lake." VandenBosch noted that he has seen breaking waves at the pier head which is kind of frightening; those breaking waves mean shallow water.

As Harbor Master, VandenBosch cannot authorize the kind of spending being requested by the Maritime Museum and the board cannot either; they could recommend help to the City Council.

VandenBosch pointed out the possibility of adding the turning basin to the north and south side dredging permit. Montgomery said the dredger is willing to do whatever dredging can be done but is limited by funding.

January 15, 2013  
Harbor Commission Minutes  
DRAFT

VandenBosch said he will get a report of what is available in the River Maintenance fund and the Marina fund.

Stephens asked if there is anything the board can do to speed up the process of getting the dredging done. VandenBosch reiterated the prohibition on dredging between May 1 and June 30, and noted that the current delay is the permitting process; VandenBosch thought we would have a bid the end of last week but it has not been received yet. It probably takes about sixty days for the Department of Environmental Quality, which brings us to March 15. Upper harbor bids will be started immediately but VandenBosch needs direction from this board, because the upper harbor needs to be done and the pier heads needs to be done.

Stephens asked what specific guidance is needed from the board. VandenBosch said the board needs to get the soundings before any recommendations can be made to Council. Stephens asked what the board can do to speed up the process, to which VandenBosch responded by providing guidance on how the funding should be spent.

Stephens asked if we knew the condition at the pier heads, we could make a better decision. VandenBosch said he will ask the engineer to do soundings on the main channel. VandenBosch explained that there is not much more the board can do; as soon as he has the soundings and a recommendation from the board, he will send the request off with a check to the Department of Environmental Quality.

Motion by Stephens, second by Pyle, that soundings be done in the entire main channel as soon as possible.

Sullivan asked what area that entails doing soundings to which VandenBosch said he would want soundings from the pier head to the city limits. Strong said the sandbar is not inside the pier heads, but outside the pier heads. VandenBosch said the biggest part is getting them out there to record that area. Stephens said usually on soundings reports an area outside the pier heads is shown.

Arnold called the question. All in favor. Motion carried.

There was discussion about timing, including if the river gets icy the soundings will have to be postponed.

Arnold said that with limited funds the board is trying to focus on the most immediate needs. Montgomery explained that if the pier heads are not dredged, they might need to find another port to call home for this season. Public safety was discussed, as well as this being an important year for the Friends Good Will with scheduled re-enactments and appearances. Montgomery noted that the pier heads are her big concern; also, noting that with the Lindy Lou they understand the need for some dredging upriver. Montgomery noted that the museum would contribute financially what they could.

Arnold assured that the board does not want to see the Friends Good Will leave so the museum's needs will be considered in any discussions.

January 15, 2013  
Harbor Commission Minutes  
DRAFT

## **7. Fish Cleaning Station**

VandenBosch has heard some concerns from the Council and others along with suggestions that the station be put outside the gates. There was also discussion regarding the grinder not being strong enough. VandenBosch said he is not sure what the needs are from the fisherman point of view. Strong noted that there are people that are not moored in the city marina who are told that they cannot use the fish cleaning station. VandenBosch explained why staff has had that policy.

Pyle said some of the bigger things that creates a problem is lack of lighting and hours of operation. Guys fish at night; some night fish only. Pyle noted that Grand Haven and Holland both have very nice facilities, noting that she has seen fishermen cleaning fish with their headlights providing the only light. VandenBosch asked if putting the station outside the gated area would be a good idea to which Pyle responded that she believes it would attract fisherman if there was a good fish cleaning station. VandenBosch noted that there would need to be water extensions. Possible alternative locations were discussed. VandenBosch said staff is looking for grants. Pyle said she thinks moving the station away from the gate would be helpful because of the congestion that happens in that area.

Stephens asked whether making the north side fish station more accessible would be good to which Strong replied in the affirmative. VandenBosch will get as much information as possible about the Holland fish cleaning station and their grant application.

Stephens asked about grants for dredging. VandenBosch said he heard recently at a meeting that there is grant money available for dredging transient marinas.

## **8. General Comments**

Strong requested an update on the North side project. VandenBosch said the project is on schedule according to the city's schedule; the contractor is two weeks behind by his own schedule, which is a mid-March completion.

## **Member and Staff Comments**

Stephens said St. Joe ran out of money and water; so they are closed to commercial traffic. VandenBosch pointed out that our marinas will be open for boating this year.

Pyle asked whether staff is marketing the marinas to reflect that. John Marple, Marina Manager stated he is receiving one or two phone calls a day with people looking for a place to dock their boats. Marple is starting a waiting list for one year only people; "I want to fill up every slip we have this year one way or another." The transient marina worries Marple but he informed that other port cities are experiencing the same problems. Marple saw an island in the Kalamazoo River up by Saugatuck/Douglas. Some boaters are worried that they might not be able to get their boats here due to where they stored their boats for the winter. Marple acknowledged that we are in a difficult situation, however the City is

January 15, 2013  
Harbor Commission Minutes  
DRAFT

responding quite well. Marple is worried about allocating the money; "So many things are important, where do you decide to put your money?"

Marple will get a feel for the market at the sail only show, where he hopes to listen to boaters and what they have to say.

VandenBosch. March 1, 2013 at 10:30 am there will be a Webinar and he will have it going here for those who are interested.

VandenBosch. Was interviewed by the Free Press. So you may see an article mentioning South Haven in the Detroit Free Press.

## **9. Adjourn**

Motion by Strong, second by Stephens to adjourn at 6:38 p.m.

RESPECTFULLY SUBMITTED,

Marsha Ransom  
Recording Secretary



## Marina Fund Revenue

Marina Fund Revenue  
As of January 31, 2013

Fiscal Year Ending in	Revenue		Operational Expense	Net Revenue	
	Seasonal	Transient			Total
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	330,660	151,046	481,706	427,390	54,316
2013	46,936	66,404	113,340	382,344	-269,005

**NOTES ON OPERATIONAL EXPENSES:**

Operational Expense does not include depreciation of approximately \$88,000 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												Calendar Year	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	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	
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	29,476												29,476	

	Transient Marina Revenue												Calendar Year	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	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	
2012	0	0	0	4,684	12,448	31,740	40,344	21,935	4,392	0	-267	0	115,276	
2013													0	



Black River Park Revenues

Black River Park Revenue  
As of January 31, 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	9,615	7,114	37,290	930	54,949	62,345	-7,396

Note: Operational Expense does not include depreciation of approximately \$46,000 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												56

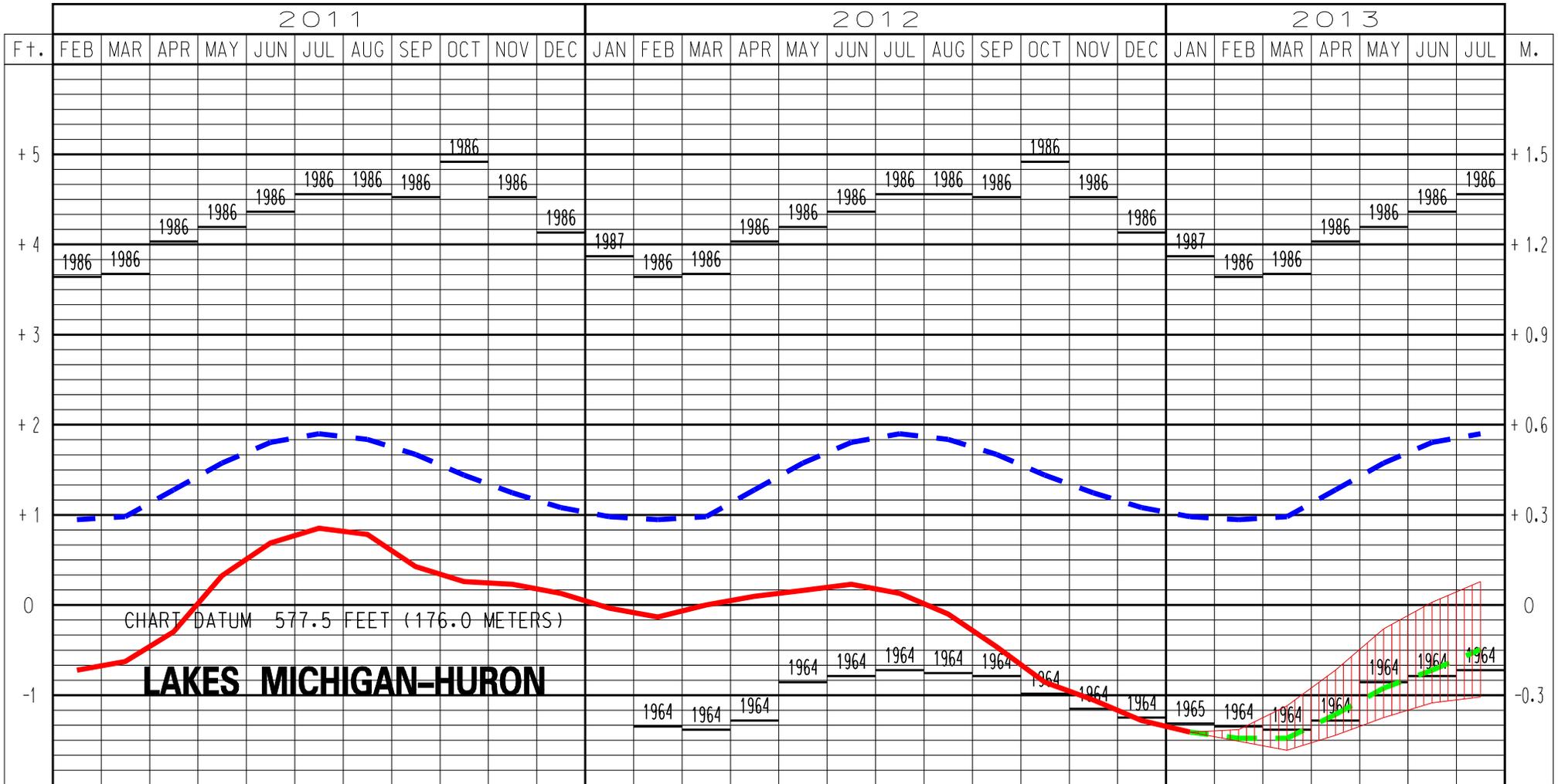
Launching - Seasonal Permit Revenue													Calendar Year
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2007	0	0	0	2,261	4,157	2,749	1,453	0	0	0	0	0	10,620
2008	0	0	0	1,885	3,743	2,972	1,620	0	0	0	0	0	10,220
2009	0	0	0	2,770	4,924	2,608	640	0	0	0	0	0	10,942
2010	0	0	0	1,370	7,158	1,015	1,546	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												0

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												3,070

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



# LAKES MICHIGAN-HURON WATER LEVELS - FEBRUARY 2013



February 12, 2013

TO: Harbor Commission

FR: Paul VandenBosch

RE: Main Channel and Turning Basin Dredging Funding and Proposal

I received a verbal statement from the State of Michigan that emergency dredging funding in the amount of \$436,050 will be made available to the City of South Haven for projects which were identified in the December 3, 2012 report to the DNR.

South Haven Harbor Dredging Needs for 2013

Municipal Marinas

Museum Marina 3,400 cubic yards, \$109,050 (bid)  
South Side, North Side 3,000 cubic yards, \$100,000 rough estimate  
Black River Park 500 cubic yards, \$17,000 rough estimate

Upper Harbor

Spot Dredging 2,000 cubic yards, \$70,000 rough estimate

Federal Harbor

Pierheads and Channel 4,000 cubic yards, \$140,000

Total: \$436,050

State Funding Breakdown

Marina Fund Dredging: \$226,050

Main Channel Dredging: \$210,000

The River Maintenance Fund has approximately \$100,000 available for dredging work.

I have asked Abonmarche to prepare a number of options for dredging with cost estimates. I am requesting that the Harbor Commission review the options and recommend a priorities for preparing a bid document for dredging.



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## To combat record low Great Lakes water levels, Michigan Waterways Commission creates emergency dredging plan

**Contact:** Ron Olson, 517-243-1477 or [Ed Golder](#), 517-335-3014  
**Agency:** Natural Resources

Feb. 8, 2013

With current water levels in Lake Michigan and Lake Huron at all-time lows - and levels in lakes Michigan, Huron and St. Clair expected to continue dropping - the Department of Natural Resources (DNR) today announced that the Michigan State Waterways Commission has adopted an emergency dredging plan that will provide zero-match grant funding opportunities for harbors of refuge, recreational boating harbors, marinas and boat launches most affected by the low water levels.

As part of the plan, the DNR Parks and Recreation Division announced it will redirect nearly \$8.8 million of Waterways funding from existing appropriations; allocate \$0.7 million of uncommitted Waterways funding; and receive \$11.5 million from the FY 2013 General Fund, as recommended in Gov. Rick Snyder's just-released budget. In total, nearly \$21 million would be dedicated toward keeping Michigan's waterways operational.

According to Ron Olson, DNR Parks and Recreation Division chief, dredging involves the removal of accumulated bottom sediments in waterways to maintain adequate depth for navigation.

"Such dredging is needed in the most critically affected areas in order to allow safe access to harbors," added Olson. "Without this action, some harbors are in real danger of closing."

To streamline the grant-funding process, the state of Michigan will:

- Waive the regular local-match requirement for 2013 emergency dredging projects;
- Immediately contact communities that have been identified to receive zero-match Waterways grant emergency-dredging monies
- Not accept 2013 grant applications because of the decision to redirect funding; and
- Facilitate coordination and involvement with the U.S. Army Corps of Engineers.

According to DNR Director Keith Creagh, quickly and creatively solving the challenge of low water levels is important on many fronts.

"The safety of Great Lakes boaters, as well as the economies of local communities, urgently demands dredging work in the hardest-hit areas," said Creagh. "Because federal money for dredging of harbors is uncertain, we have found our own solution. The emergency dredging plan helps address the problem for this year. We must still seek a long-term solution to this continuing challenge."

Creagh added that in addition to boater safety and the health of local economies, the swift actions laid out in the emergency dredging plan will preserve broad access to the Great Lakes and improve recreational boating opportunities statewide. The DNR will redirect staff toward dredging at state facilities with no extra funding.

To estimate the cost of the emergency dredging plan, the DNR surveyed all 83 public recreational boating harbors (63 local municipal harbors; 19 state harbors; and one federal harbor) in December 2012 and January 2013, with a response rate of 82 percent.

With more than 800,000 registered boats in 2011, ranking third highest in the nation, the health and sustainability of Michigan's waterways are vital to the state's economy. Water levels will continue to be monitored throughout the year.

The emergency dredging plan was developed in collaboration with the DNR, the Michigan State Waterways Commission and the Department of Environment Quality, including the Office of the Great Lakes.

The Michigan State Waterways Commission was created by Public Act 451 of 1994. The commission is an advisory group for the DNR on overall recreational boating facilities, policies and funding. To follow progress and get more information about the Michigan State Waterways Commission, visit the DNR website at [www.michigan.gov/dnr](http://www.michigan.gov/dnr) and choose Boards, Committees and Commissions from the left side of the page.

The Michigan Department of Natural Resources is committed to the conservation, protection, management, use and enjoyment of the state's natural and cultural resources for current and future generations. For more information, go to [www.michigan.gov/dnr](http://www.michigan.gov/dnr).

[Michigan.gov Home](#) | [Report All Poaching 1-800-292-7800](#) | [Contact DNR](#) | [DNR Home](#) | [State Web Sites](#) | [Office of Regulatory Reinvention](#)  
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Project Name: Northside & Southside Dredging Project  
 Project Number: 12-0712  
 Calculated by: Corey A. Kandow, P.E.  
 Date: 2/11/2013

### Engineer's Cost Estimates

Northside Marina					- 8' LWD
Item #	Description	Quantity	Unit	Unit Price	Total
1	Mobilization, Max. \$5,000	1	LS	\$5,000.00	\$5,000.00
2	Soil Erosion & Sedimentation Control Measures	1	LS	\$4,000.00	\$4,000.00
3	Excavation / Dredging and Disposal	7,500	CYD	\$40.00	\$300,000.00
<b>TOTAL =</b>					<b>\$309,000.00</b>

Southside Marina					- 8' LWD
Item #	Description	Quantity	Unit	Unit Price	Total
1	Mobilization, Max. \$5,000	1	LS	\$5,000.00	\$5,000.00
2	Soil Erosion & Sedimentation Control Measures	1	LS	\$3,500.00	\$3,500.00
3	Excavation / Dredging and Disposal	1,500	CYD	\$40.00	\$60,000.00
<b>TOTAL =</b>					<b>\$68,500.00</b>

Restoration Work					
Item #	Description	Quantity	Unit	Unit Price	Total
1	Slope Restoration	6,500	SYD	\$2.50	\$16,250.00
2	Geotextile Separator Fabric	11,600	SYD	\$1.00	\$11,600.00
3	Aggregate Surface Course, 6 inch	11,600	SYD	\$4.00	\$46,400.00
<b>TOTAL =</b>					<b>\$74,250.00</b>

**NORTHSIDE MARINA = \$309,000.00**  
**SOUTHSIDE MARINA = \$68,500.00**  
**RESTORATION WORK = \$74,250.00**  
  
**TOTAL = \$451,750.00**

Item Description	Unit	Quantity
Mobilization, Max. \$10,000	LS	1
Soil Erosion and Sedimentation Control Measures	LS	1
Excavation / Dredging and Disposal	Cyd	7,500

**NOTES:**

MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2012 EDITION SHALL PREVAIL, UNLESS INDICATED OTHERWISE.  
 ANY EXCESS/UNSUITABLE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND THEY SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF THIS MATERIAL.  
 DEWATERING, IF REQUIRED, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA PAYMENT SHALL BE MADE THEREFORE.

MAX. CUT	MIN. CUT	COLOR
3.00'	2.00'	
2.00'	1.00'	
1.00'	0.00'	

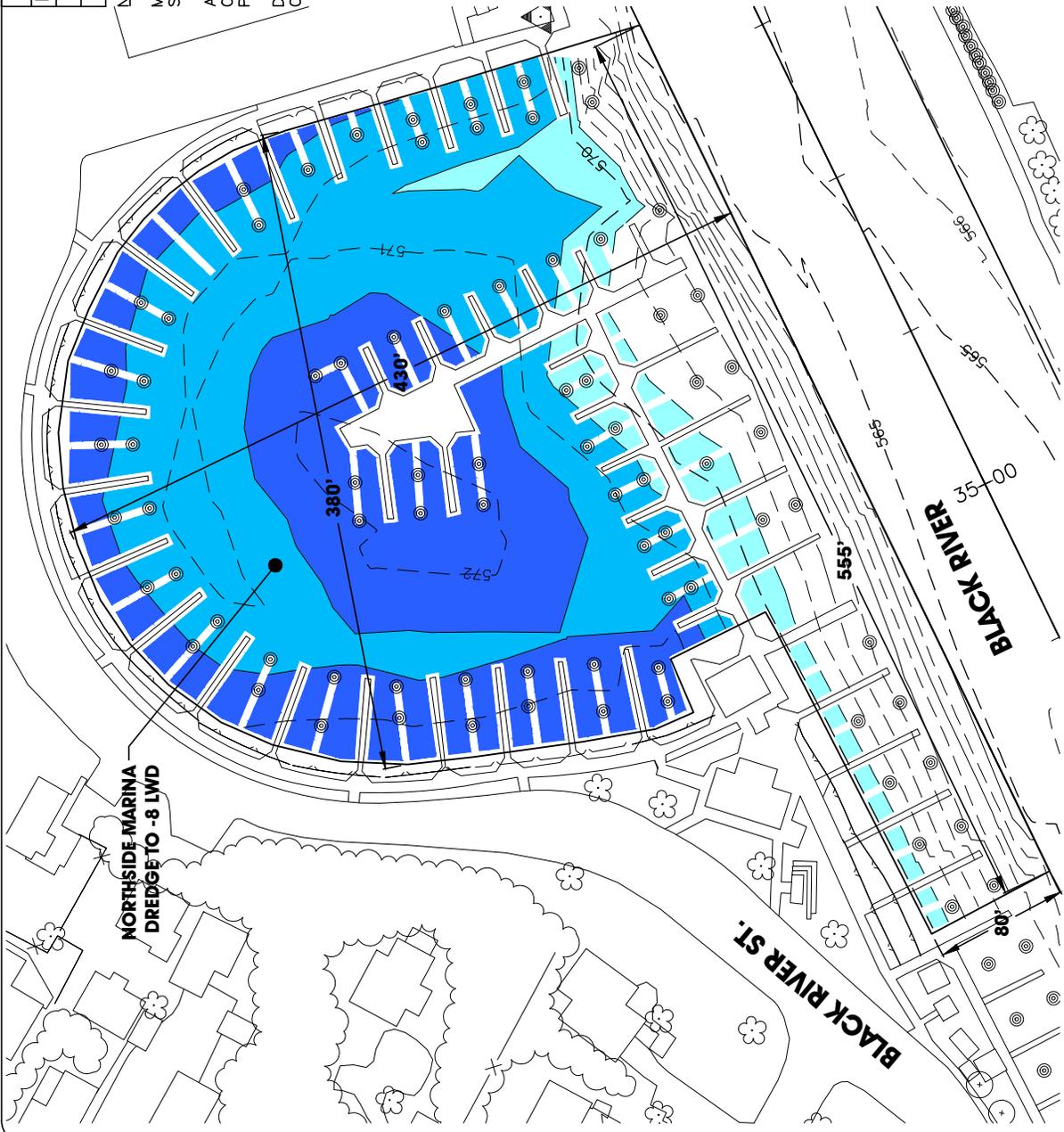
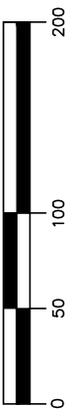
OHWM = 581.50  
 LWD = 577.50

**NOTE:**  
 ALL ELEVATIONS SHOWN REFERENCE VERTICAL DATUM IGLD 85.

**DATUM CONVERSIONS:**

(NGVD 29 - 0.48 = NAVD 88)  
 (NGVD 29 - 0.95 = IGLD 85)  
 (NAVD 88 - 0.47 = IGLD 85)

SCALE: 1" = 100'



Engineering  
 Architecture  
 Land Surveying  
 Marina/Waterfront  
 Community Planning  
 Landscape Architecture  
 Development Services

PREPARED FOR:  
**CITY OF SOUTH HAVEN**  
**MARINA MAINTENANCE DREDGING**

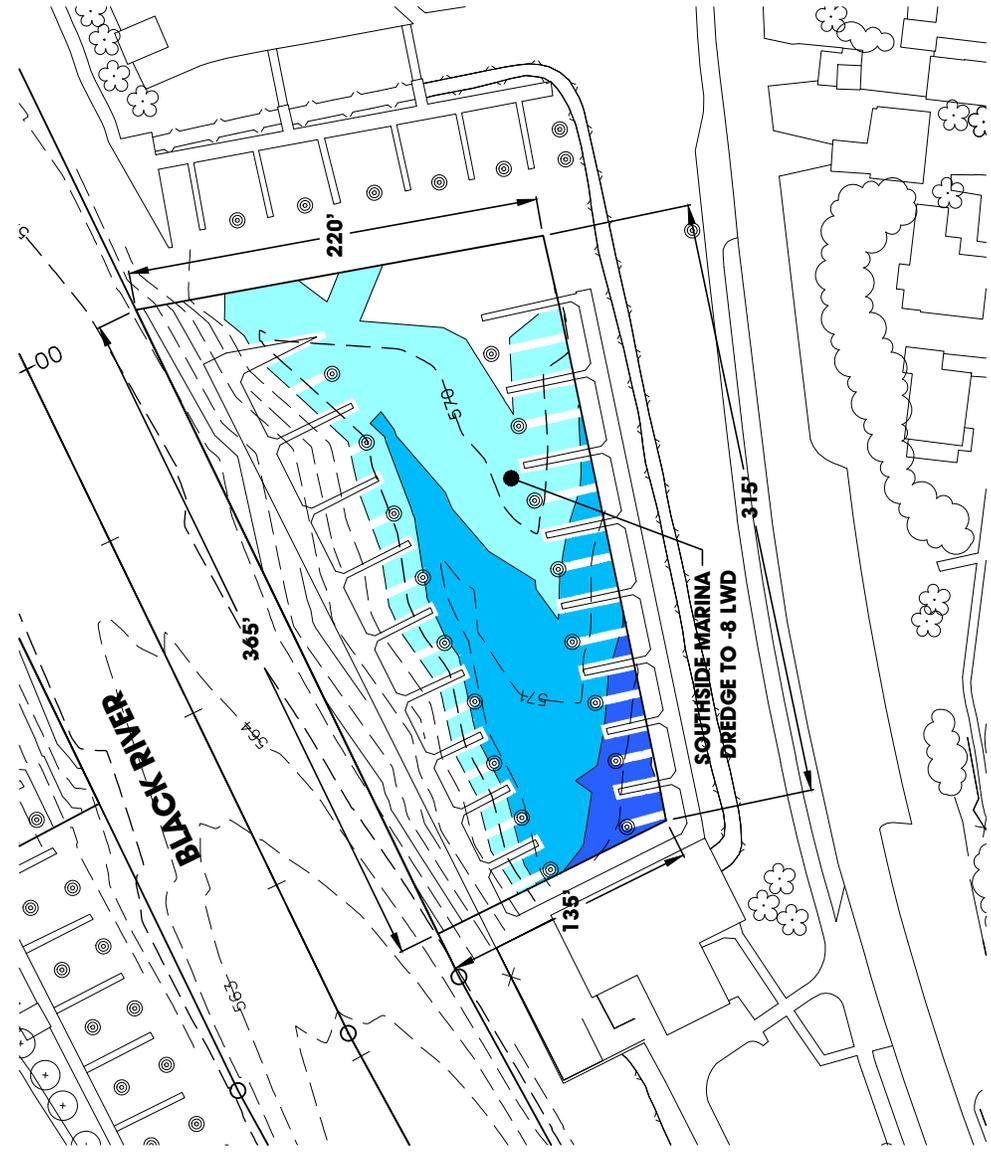
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Item Description		Unit	Quantity
Soil Erosion and Sedimentation Control Measures		LS	1
Excavation / Dredging and Disposal		Cyd	1,500

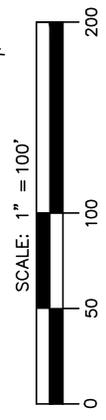


MAX. CUT	MIN. CUT	COLOR
3.00'	2.00'	<span style="color: blue;">■</span>
2.00'	1.00'	<span style="color: cyan;">■</span>
1.00'	0.00'	<span style="color: lightblue;">■</span>

OHWM = 581.50  
LWD = 577.50

NOTE:  
ALL ELEVATIONS SHOWN REFERENCE  
VERTICAL DATUM IGLD 85.

DATUM CONVERSIONS:  
(NGVD 29 - 0.48 = NAVD 88)  
(NGVD 29 - 0.95 = IGLD 85)  
(NAVD 88 - 0.47 = IGLD 85)



SCALE: 1"=100'
JOB #: 12-0712
SHEET 4 OF 6

PREPARED FOR:  
**CITY OF SOUTH HAVEN**  
**MARINA MAINTENANCE DREDGING**

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Project Name: South Haven Dredging Projects  
 Project Number: 12-0712  
 Calculated by: Corey A. Kadow, P.E.  
 Date: 2/11/2013

### Engineer's Cost Estimates

LOWER BLACK RIVER (DYCKMAN AVE. BRIDGE - LAKE MICHIGAN PIER HEADS)					-12' LWD
Item #	Description	Quantity	Unit	Unit Price	Total
1	Mobilization, Max. \$25,000	1	LS	\$25,000.00	\$25,000.00
2	Soil Erosion & Sedimentation Control Measures	1	LS	\$15,000.00	\$15,000.00
3	Excavation / Dredging and Disposal	4,220	CYD	\$40.00	\$168,800.00
<b>TOTAL =</b>					<b>\$208,800.00</b>

LOWER BLACK RIVER (DYCKMAN AVE. BRIDGE - LAKE MICHIGAN PIER HEADS)					-14' LWD
Item #	Description	Quantity	Unit	Unit Price	Total
1	Mobilization, Max. \$25,000	1	LS	\$25,000.00	\$25,000.00
2	Soil Erosion & Sedimentation Control Measures	1	LS	\$15,000.00	\$15,000.00
3	Excavation / Dredging and Disposal	27,860	CYD	\$40.00	\$1,114,400.00
<b>TOTAL =</b>					<b>\$1,154,400.00</b>

UPPER BLACK RIVER (CITY LIMITS - DYCKMAN AVE. BRIDGE)					-5.85' LWD
Item #	Description	Quantity	Unit	Unit Price	Total
1	Mobilization, Max. \$10,000	1	LS	\$10,000.00	\$10,000.00
2	Soil Erosion & Sedimentation Control Measures	1	LS	\$10,000.00	\$10,000.00
3	Excavation / Dredging and Disposal	3,200	CYD	\$40.00	\$128,000.00
<b>TOTAL =</b>					<b>\$148,000.00</b>

TURNING BASIN AREA					-8' LWD
Item #	Description	Quantity	Unit	Unit Price	Total
1	Mobilization, Max. \$5,000	1	LS	\$5,000.00	\$5,000.00
2	Soil Erosion & Sedimentation Control Measures	1	LS	\$5,000.00	\$5,000.00
3	Excavation / Dredging and Disposal	300	CYD	\$40.00	\$12,000.00
<b>TOTAL =</b>					<b>\$22,000.00</b>

FRIENDS GOODWILL CHANNEL					-10' LWD
Item #	Description	Quantity	Unit	Unit Price	Total
1	Mobilization, Max. \$5,000	1	LS	\$5,000.00	\$5,000.00
2	Soil Erosion & Sedimentation Control Measures	1	LS	\$5,000.00	\$5,000.00
3	Excavation / Dredging and Disposal	482	CYD	\$40.00	\$19,280.00
<b>TOTAL =</b>					<b>\$29,280.00</b>

FRIENDS GOODWILL CHANNEL					-11' LWD
Item #	Description	Quantity	Unit	Unit Price	Total
1	Mobilization, Max. \$5,000	1	LS	\$5,000.00	\$5,000.00
2	Soil Erosion & Sedimentation Control Measures	1	LS	\$5,000.00	\$5,000.00
3	Excavation / Dredging and Disposal	1,275	CYD	\$40.00	\$51,000.00
<b>TOTAL =</b>					<b>\$61,000.00</b>

FRIENDS GOODWILL CHANNEL					-12' LWD
Item #	Description	Quantity	Unit	Unit Price	Total
1	Mobilization, Max. \$5,000	1	LS	\$5,000.00	\$5,000.00
2	Soil Erosion & Sedimentation Control Measures	1	LS	\$5,000.00	\$5,000.00
3	Excavation / Dredging and Disposal	2,285	CYD	\$40.00	\$91,400.00
<b>TOTAL =</b>					<b>\$101,400.00</b>



**LOWER BLACK RIVER CORRIDOR  
DREDGE TO -12 LWD**

**DREDGE AREA (TYP.)  
565.00 (-12 LWD WITH -0.5 OVERDREDGE)**

**DREDGE VOLUME = 4,220 CYDS**



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MARINA MAINTENANCE DREDGING**

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JOB #: 12-0712

SHEET 1 OF 1





**UPPER BLACK RIVER CORRIDOR  
DREDGE TO -5.85 LWD**



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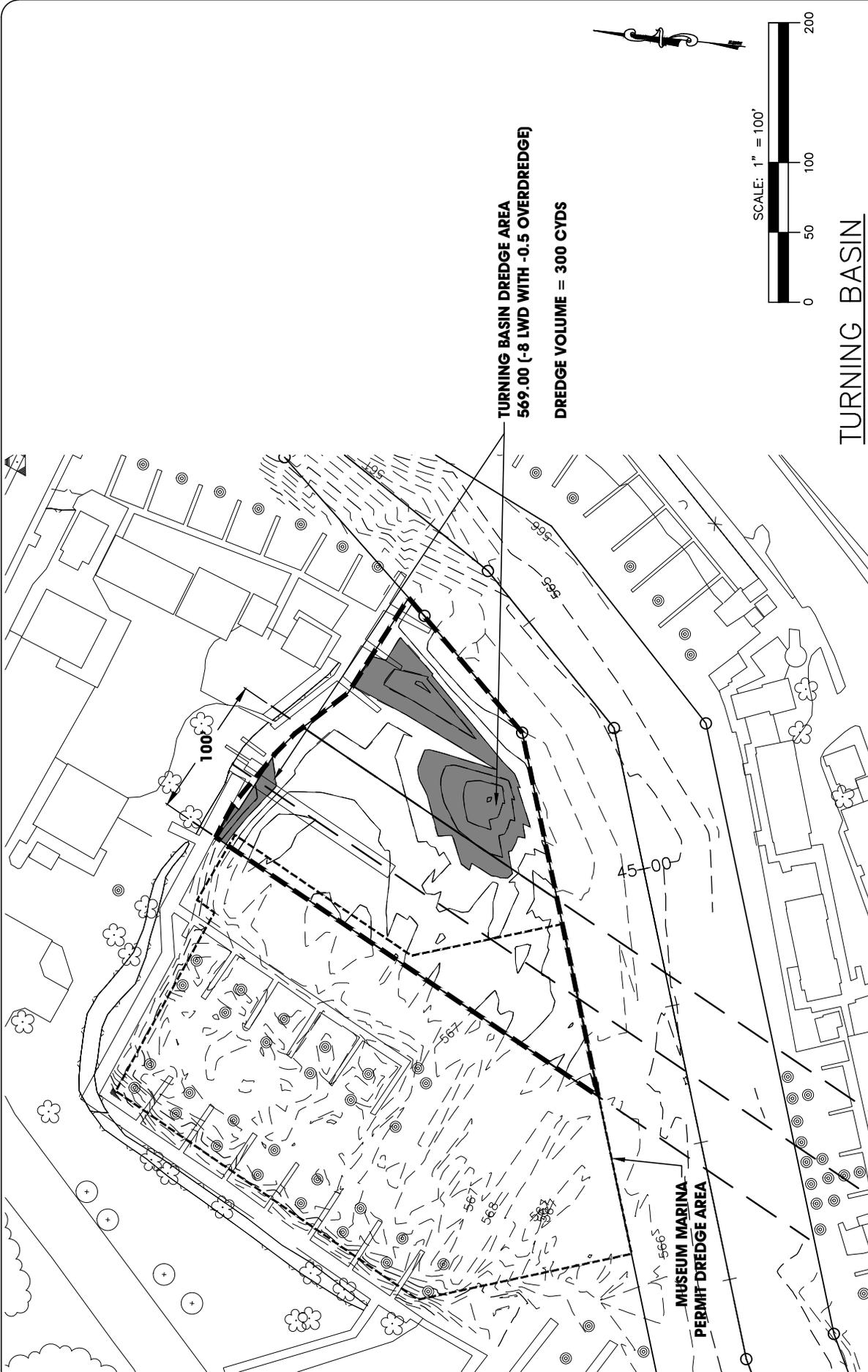
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SHEET 1 OF 1



**TURNING BASIN DREDGE AREA**  
**569.00 (-8 LWD WITH -0.5 OVERDREDGE)**  
**DREDGE VOLUME = 300 CYDS**

**TURNING BASIN**  
**DREDGE TO -8 LWD**

SCALE: 1" = 100'

SCALE: 1"=100'
JOB #: 12-0712
SHEET 1 OF 1

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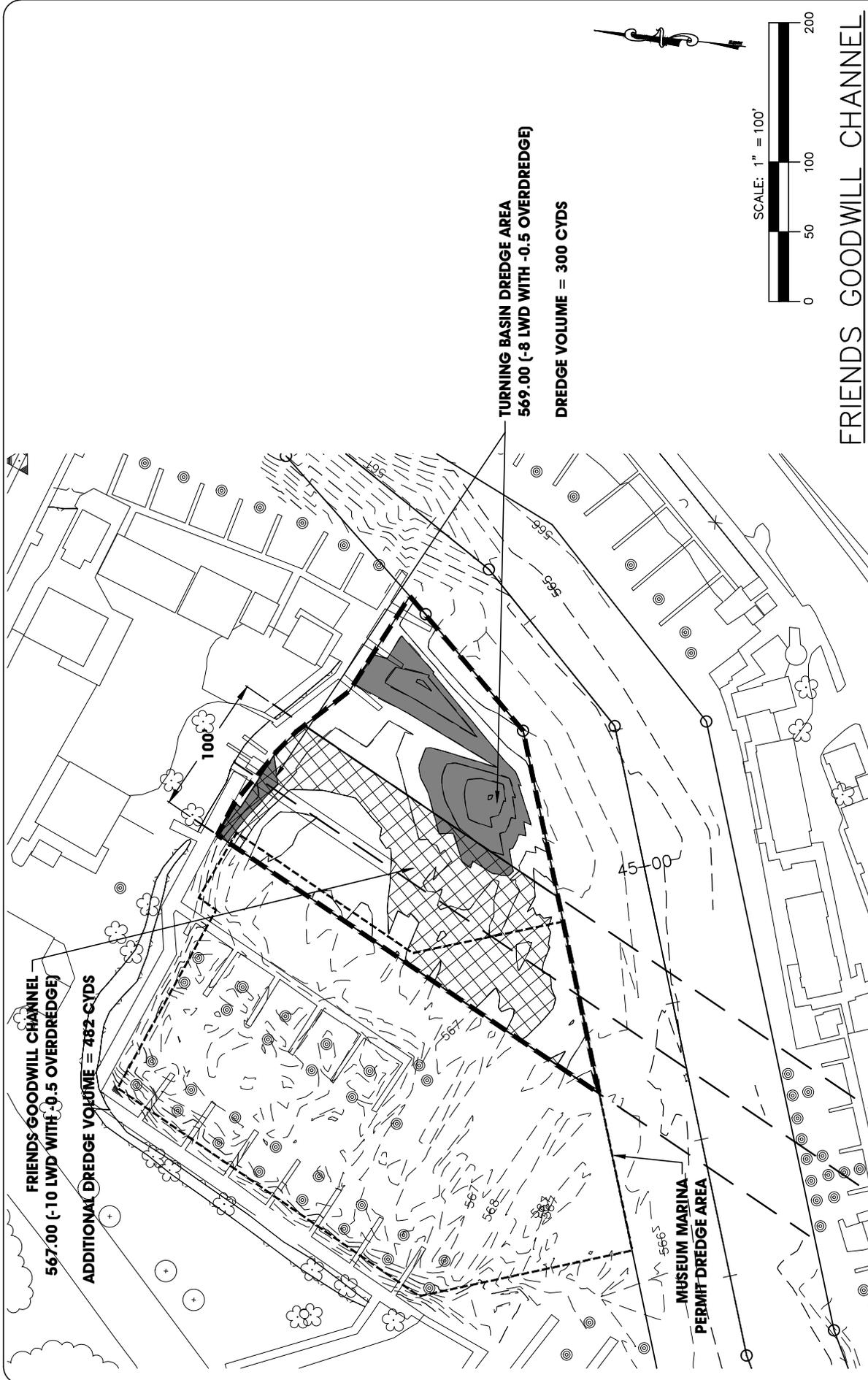
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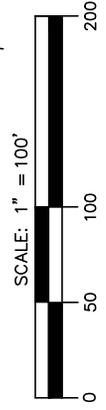
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**FRIENDS GOODWILL CHANNEL**  
**567.00 (-10 LWD WITH -0.5 OVERDREDGE)**  
**ADDITIONAL DREDGE VOLUME = 782-CYDS**

**TURNING BASIN DREDGE AREA**  
**569.00 (-8 LWD WITH -0.5 OVERDREDGE)**  
**DREDGE VOLUME = 300 CYDS**

**MUSEUM MARINA**  
**PERMIT DREDGE AREA**



**FRIENDS GOODWILL CHANNEL**  
**DREDGE TO -10 LWD**



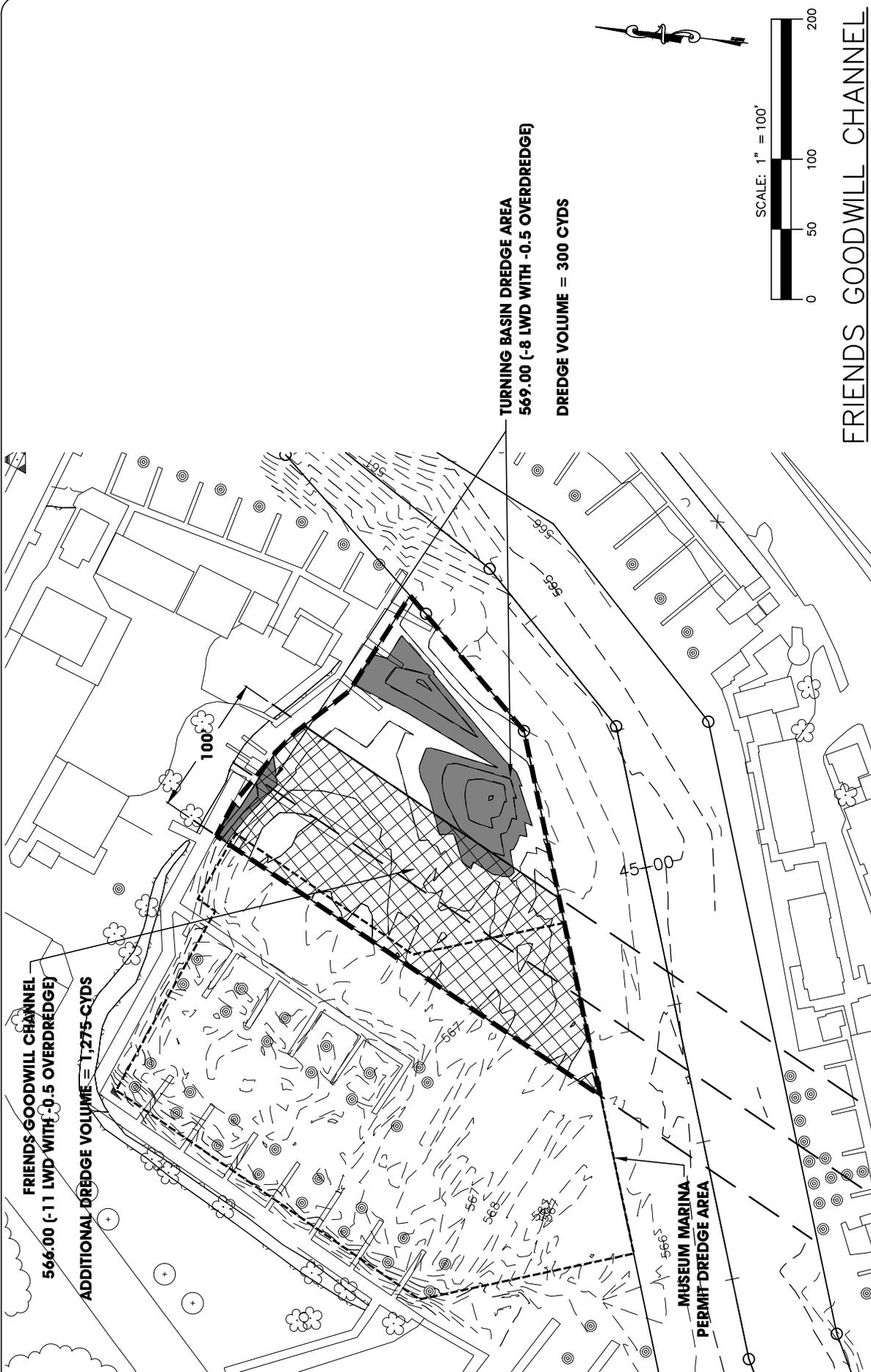
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 SCALE: 1"=100'  
 JOB #: 12-0712  
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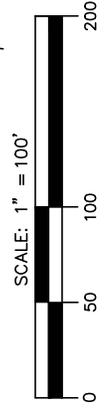
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**FRIENDS GOODWILL CHANNEL**  
**566.00 (-11 LWD WITH -0.5 OVERDREDGE)**  
**ADDITIONAL DREDGE VOLUME = 1,275-CYDS**

**TURNING BASIN DREDGE AREA**  
**569.00 (-8 LWD WITH -0.5 OVERDREDGE)**  
**DREDGE VOLUME = 300 CYDS**

**MUSEUM MARINA**  
**PERMIT DREDGE AREA**



**FRIENDS GOODWILL CHANNEL**  
**DREDGE TO -11 LWD**



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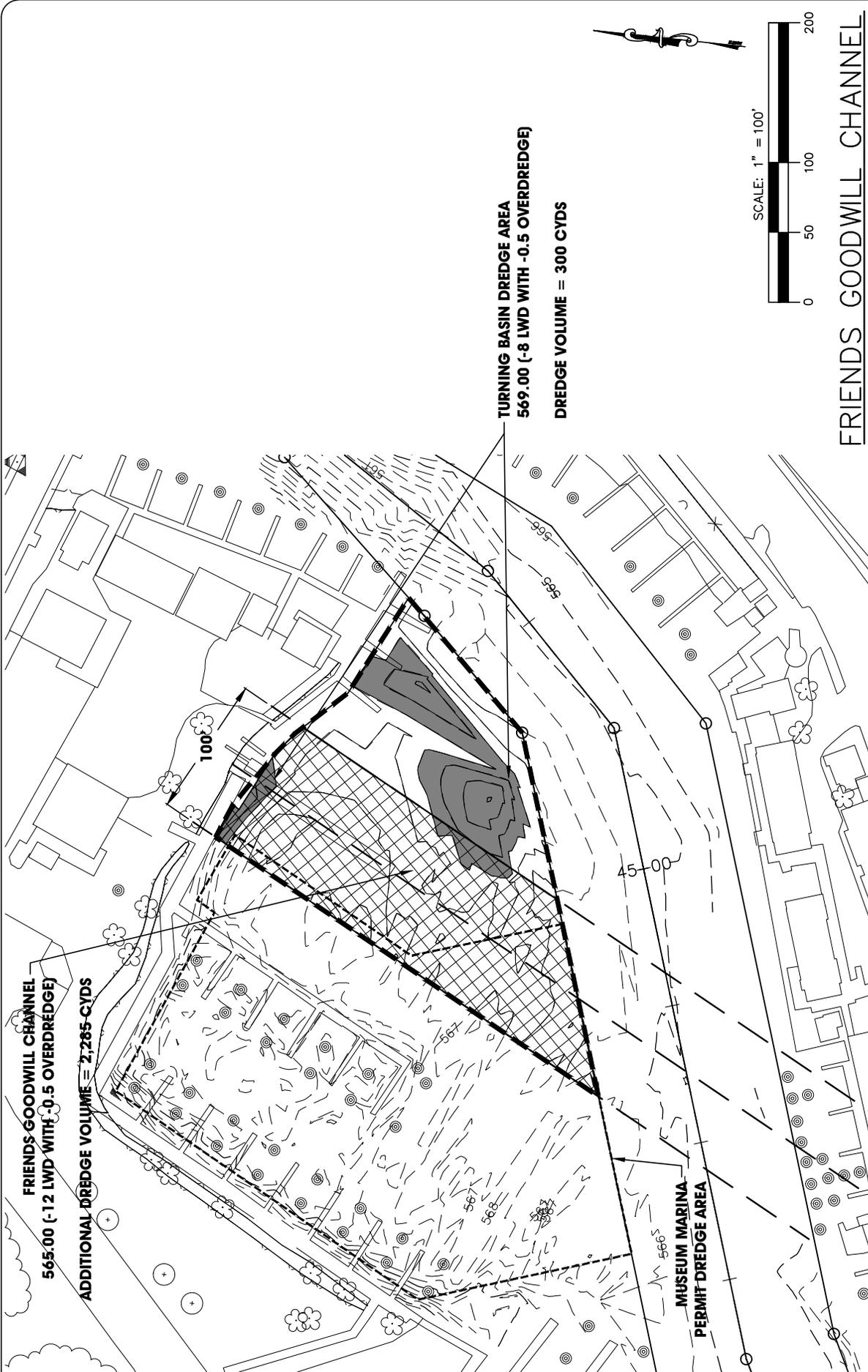
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SCALE: 1"=100'

JOB #: 12-0712

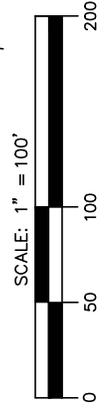
SHEET 1 OF 1



**FRIENDS GOODWILL CHANNEL**  
**565.00 (-12 LWD WITH -0.5 OVERDREDGE)**  
**ADDITIONAL DREDGE VOLUME = 2,285-CYDS**

**TURNING BASIN DREDGE AREA**  
**569.00 (-8 LWD WITH -0.5 OVERDREDGE)**  
**DREDGE VOLUME = 300 CYDS**

**MUSEUM MARINA**  
**PERMIT DREDGE AREA**



**FRIENDS GOODWILL CHANNEL**  
**DREDGE TO -12 LWD**



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 SHEET 1 OF 1

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December 3, 2012

TO: Paul Peterson, Waterways Division, MDNR

FR: Paul VandenBosch, Harbormaster

RE: Dredging Issues in South Haven Harbor

South Haven Harbor is currently affected by low Lake Michigan water levels, and by gradual siltation in the Black River. South Haven Harbor is divided into the federal harbor, established by the U.S. government in 1910, and the Upper Harbor which has been maintained by the City of South Haven. The dividing line is roughly the Dyckman Bridge. There are approximately 1,000 slips in South Haven Harbor, the majority of which are in the Upper Harbor.

#### Federal Harbor

In May 2011, the Army Corps of Engineers performed soundings of the federal harbor. These soundings are very accurate and useful, showing actual depths in the Army Corps maintenance area and the proposed maintenance depth of 14 feet.

In the federal harbor, I am concerned with the pierhead area and the approach to the pierheads in Lake Michigan. A sandbar is forming which causes breaking waves during high wave conditions in the channel entrance at the lighthouse. I have not done soundings in this area but I believe the depth is about 10 feet in flat water, and in wave troughs, the depth is reduced. I am also concerned with the area where sand from North Beach is blown into the channel. There is a shoaling area formed there which appears to boaters to be a safe channel, but in fact depths are reducing each year as northwest winds blow beach sand over the channel wall. This shoaling area is roughly at the south end of Lake Shore Drive.

We do not know if the Army Corps of Engineers will continue to provide sounding services in the federal harbor. We have heard that it is unlikely that any harbor maintenance dredging will be done in South Haven Harbor, but perhaps funding will be found. While South Haven was once a very busy commercial harbor, it no longer has any freighter shipping. We do have passenger vessels such as the tall ship Friends Goodwill, with a 9 foot draft. We are in the process of preparing a dredging permit application to the MDEQ and Army Corps of Engineers for the federal channel. If the U.S. government will no longer fund maintenance of the federal harbor, the City of South Haven will likely be required to maintain the harbor. A rough estimate of dredging needs is \$250,000 every five years. This is based on a comparable capital improvement plan in place for the City maintained harbor area. There is no City of South Haven funding currently budgeted to dredge the federal harbor.

#### Upper Harbor Channel

The City of South Haven does soundings in the Upper Harbor Channel. These soundings are taken using a fishfinder, and are hand drawn onto the map, which results in less accuracy than a more automated system. There are currently some shoaling areas, based on 2012

season soundings. These areas are typically where streams or storm drains enter the river, depositing silt, or in the inner bends of the river, which is a natural deposition area.

The City is currently applying for a dredging permit for the Upper Harbor channel as part of the same permit application for the federal harbor.

The Upper Harbor is strongly affected by Lake Michigan levels. There are underground utilities under the river bottom which limit the depth to which the bottom may be removed. The South Haven Harbor Commission has established a dredging depth of 572.6 NGVD (571.8 ILGD85) in order to maintain a minimum of three feet cover above water, sanitary and electrical underground structures. At current Lake Michigan water levels (576.3 IGLD85), this means that a dredging contractor would be required to dredge to a depth of no more than 4.5 feet below current water levels. This impacts deep draft vessels, especially sailboats, however, as we approach a depth of four feet, even motor boat captains start to be concerned.

The City of South Haven has a capital improvement plan for dredging. The plan has a funding source from Municipal Marina transfers, special assessments (past), and a transfer from the Downtown Development Authority. The plan estimates a major dredging of the Upper Harbor every 5 years for \$250,000, and spot dredging to deal with minor problem areas as they occur.

#### Municipal and Private Marinas

The City of South Haven operates four marina facilities under its Municipal Marina. The City has bid out dredging of the Museum Marina, and has received a bid of 3,400 cubic yards of material for \$109,050. This is about \$32 per cubic yard. The City is providing a spoil disposal location. The spoil material is contaminated with low levels of arsenic, manganese and lead. Arsenic is likely related to old pesticides used in orchards in the watershed. The metals may be related to historic metal casting industry, or they may be naturally occurring.

The City is currently applying for a dredging permit for the North Side, South Side and Black River Park Municipal Marinas. Both the North Side and South Side marinas have arsenic, manganese and lead contamination.

The City plans to bid out dredging of the North Side, South Side and Black River Park Marinas. While no estimate of volume has been done yet, the three marinas together will likely be about 3,000 cubic yards, which will likely result in a bid of around \$100,000. We plan to complete this work by April 30, assuming we are successful in obtaining a dredging permit.

It is unknown to what extent private marinas are preparing to dredge their facilities. I have seen many marinas where you can see the bottom of the slips, which means that even motor boats with shallow draft may not be able to use the slip. There are roughly 750 private slips in South Haven Harbor.

#### South Haven Harbor Dredging Needs for 2013

##### Municipal Marinas

Museum Marina	3,400 cubic yards, \$109,050 (bid)
South Side, North Side	3,000 cubic yards, \$100,000 rough estimate
Black River Park	500 cubic yards, \$17,000 rough estimate
Upper Harbor	
Spot Dredging	2,000 cubic yards, \$70,000 rough estimate

Federal Harbor  
Pierheads and Channel 4,000 cubic yards, \$140,000

Total: \$436,050

This amount does not include permitting, bidding and oversight engineering services, which might run about \$100,000.

Some things which the State of Michigan could do to help with dredging issues:

Review dredging permit process to streamline it.

Review the requirement that spoil be placed in the watershed from which it was taken. This is a problem in small watersheds.

Review the environmental levels which require special disposal of spoil, for example, should drinking water criteria be used to establish contamination levels?

Consider allowing spoil under industrial criteria levels to be placed on industrial sites.

Consider allowing dredging during the spawning period if the area being dredged is not a spawning area.

Allow easy and quick renewal of 5 year maintenance permits without going through the whole procedure again.