



Cheboygan County Board of Commissioners

MISSION STATEMENT

Cheboygan County officials and staff will strive to provide public services in an open and courteous manner and will responsibly manage county resources.

Committee of the Whole/Planning Session Meeting

April 25, 2017

9:00 a.m.

Audie's Restaurant at Mackinaw City

Agenda

1. Call to Order
2. Roll Call
3. Invocation/Pledge of Allegiance
4. Approve Agenda
5. **CITIZENS COMMENTS**
6. **SCHEDULED VISITORS/DEPARTMENT REPORTS**
7. **ADMINISTRATOR'S REPORT**
8. **OLD BUSINESS**
9. **NEW BUSINESS**
 - A. FY 2018 NE MI Community Corrections Grant Application – Resolution 17-03
10. **BOARD PLANNING SESSION**
 - A. Review of Board Goals
 - B. Jail Expansion Project/Storage-County Building Improvements
 - C. CCE 911 Radio Project
 - D. Zoning Ordinance Update
 - E. Solid Waste Plan
 - F. Economic Development Corporation
 - G. Marina Discussion of Infrastructure Grant Award-Future Infrastructure Need
 - H. Airport
 - I. Fairgrounds
 - J. Budget
 - K. Pension Cost
11. **CITIZENS COMMENTS**
12. **BOARD MEMBER COMMENTS**
13. **ADJOURN TO THE CALL OF THE CHAIR**



Cheboygan County Board of Commissioners' Meeting

April 25, 2017

Title: Resolution 17-04 Approving the Fiscal Year 2018 Community Corrections Grant Application of the Northeast Michigan Council of Governments

Summary: Resolution of support for NMCOG's fiscal year 2018 Community Corrections Grant Application in the annual amount of \$307,200 to provide Community Correction programs in Alcona, Alpena, Cheboygan, Crawford and Otsego Counties.

Financial Impact: N/A

Recommendation: Approve Resolution 17-04 Fiscal Year 2018 Community Corrections Grant Application of the Northeast Michigan Council of Governments.

Prepared by: Jeffery B. Lawson

Department: Administrative

*County
of
Cheboygan*

BOARD OF COMMISSIONERS

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Cheboygan, Michigan 49721

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RESOLUTION 17-04

**Approval
of the
FY 2018 NE MI Community Corrections Grant Application
of the
Northeast Michigan Council of Governments**

Cheboygan County, MI

- WHEREAS,** the Northeast Michigan Council of Governments (NEMCOG) serves as the Fiscal Agent and Program Manager for the Northern Michigan Community Corrections Advisory Board (NMCCAB) and the Sunrise Side Community Corrections Advisory Board (SSCCAB), and
- WHEREAS,** the Office of Community Corrections (OCC) of the Department of Corrections (DOC) requested the NMCCAB and SSCCAB to be combined, and
- WHEREAS,** NMCCAB and SSCCAB agreed to combine and will now be called Northeast MI Community Corrections Advisory Board (NEMCCAB), and
- WHEREAS,** this County is a member of either the NMCCAB or SSCCAB and strongly desires to continue to participate with Community Correction's Programs and Services, and
- WHEREAS,** NEMCOG has worked with the OCC to develop a FY 2018 Community Corrections Grant Application for the NEMCCAB, and
- WHEREAS,** the FY 2018 Community Corrections Grant Application has been prepared by NEMCOG in the amount of \$307,200.00 for Community Corrections Programs and Services in the counties of: Alcona, Alpena, Cheboygan, Crawford, and Otsego, and,
- WHEREAS,** the Northeast Michigan Community Corrections Advisory Board, has approved this Grant Application and recommends its approval by the member counties,

District 1
Chris Brown
Vice-Chair

District 2
Richard B. Sangster

District 3
Michael Newman

District 4
Cal Gouine

District 5
Tony Matelsk
Chair

District 6
John B. Wallace

District 7
Robert R. Bolinger

THEREFORE BE IT RESOLVED, that _____ County hereby approves the Northeast Michigan Community Corrections Advisory Board, FY 18 Community Corrections Grant Application in the annual amount of 307,200 for Programs and Services.

Moved by _____, seconded by _____, to adopt the above Resolution at the _____ regular Meeting held _____ by a vote of

_____ Ayes

_____ Nays

Attested by: _____

Dated: _____

Witnessed by: _____

Dated: _____

STRATEGIC PLANNING- BUDGETING

PROCESS

Strategic planning-budgeting is a unified process of identifying the goals of an organization and allocating the resources necessary to work toward the outcomes that support the identified goals. The steps of strategic planning-budgeting are:

- **Develop goals**
- **Identify objectives and outcomes**
- **Appropriate funds to meet the objectives that are designed to produce the outcomes that support the goals of the organization**
- **Review, monitor and analyze**

The Cheboygan County Board of Commissioners has a sustained history of developing goals to promote a higher quality of life, a safe environment and to promote balanced growth and positive interaction with all citizens of the County. The board developed the County's County Vision and Mission Statements as well as Commission Goals with facilitation assistance from Michigan State University Extension Staff. The board then directed the administrator and management team to develop a plan of action to implement the mission, vision and goals. Each department then developed goals and objectives specific to their department to work toward achieving the mission, vision and overall goals of the County.

STRATEGIC PLANNING-BUDGETING

VISION-MISSION-GOALS

A VISION statement indicates how an organization views its ideal, or ultimate, goal. The Board of Commissioners has established the following vision statement:

The County of Cheboygan will strengthen its position as a diverse, family oriented community while promoting a higher quality of life, a safe environment, balanced growth and positive interaction with all citizens.

*A **MISSION** statement assists an organization in easily communicating to a variety of constituencies what it does, who it serves, and how it does so. The Board of Commissioners has established the following mission statement:*

Cheboygan County Officials and Staff efficiently provide public services with pride and in an ethical and courteous manner through responsible management of county resources.

GOAL

GOALS focus the direction of an organization's work, under the guidance from the vision and mission statement.

Goals are long term in nature and will not often change.

The five goals of the Board of Commissioners are:

- 1. PUBLIC SAFETY – To focus on providing services beneficial to the citizens of Cheboygan County in the areas of public health, safety and security.**
- 2. ECONOMIC DEVELOPMENT – To promote and encourage economic development through our continued efforts of collaborations with our partners.**
- 3. QUALITY COUNTY SERVICE – To work diligently to provide courteous, efficient, quality service.**
- 4. RECOGNIZING SOCIAL ISSUES-To work diligently to address social needs, recognizing the limited role of counties and working together with state and federal governments in their role.**
- 5. ADDRESSING MULTIPLE FACILITY NEEDS – To continue development of capital improvement schedules to maintain county assets.**
- 6. COLLABORATION-SERVICE – To explore continued expansion of collaborative activities.**

TO: Board of Commissioners

FROM: Jeffery B. Lawson

RE: Jail Study

DATE: 4-21-17

A copy of the Jail study report for the Planning Session was loaded to the cloud on 4-11-17. Under Sheriff Cook and I will review the plan at the meeting. Please find attached an estimated cost saving on meal cost by utilizing a food service vendor and help from the jail trustees. The savings would be placed back into the Tax Revolving Loan Fund to reimburse the fund for future projects.

Month	Year	Meal Count	\$ 3.40		Savings
			Current Cost	Proposed Cost	
April	2016	6236	\$ 21,202.40	\$ 10,913.00	\$ 10,289.40
May	2016	6390	\$ 21,726.00	\$ 11,182.50	\$ 10,543.50
June	2016	6707	\$ 22,803.80	\$ 11,737.25	\$ 11,066.55
July	2016	6237	\$ 21,205.80	\$ 10,914.75	\$ 10,291.05
August	2016	7168	\$ 24,371.20	\$ 12,544.00	\$ 11,827.20
September	2016	6795	\$ 23,103.00	\$ 11,891.25	\$ 11,211.75
October	2016	7021	\$ 23,871.40	\$ 12,286.75	\$ 11,584.65
November	2016	6632	\$ 22,548.80	\$ 11,606.00	\$ 10,942.80
December	2016	5914	\$ 20,107.60	\$ 10,349.50	\$ 9,758.10
January	2017	5910	\$ 20,094.00	\$ 10,342.50	\$ 9,751.50
February	2017	6202	\$ 21,086.80	\$ 10,853.50	\$ 10,233.30
March	2017	6738	\$ 22,909.20	\$ 11,791.50	\$ 11,117.70
		77950	\$ 265,030.00	\$ 136,412.50	\$ 128,617.50
Average Meals per Month					
		6496	\$ 22,086.40	\$ 11,368.00	\$ 10,718.40
Average Meals per Year					
		77952	\$ 265,036.80	\$ 136,416.00	\$ 128,620.80

Month	Year	Meal Count	\$ 3.40		Savings
			Current Cost	Proposed Cost	
April	2016	6236	\$ 21,202.40	\$ 9,665.80	\$ 11,536.60
May	2016	6390	\$ 21,726.00	\$ 9,904.50	\$ 11,821.50
June	2016	6707	\$ 22,803.80	\$ 10,395.85	\$ 12,407.95
July	2016	6237	\$ 21,205.80	\$ 9,667.35	\$ 11,538.45
August	2016	7168	\$ 24,371.20	\$ 11,110.40	\$ 13,260.80
September	2016	6795	\$ 23,103.00	\$ 10,532.25	\$ 12,570.75
October	2016	7021	\$ 23,871.40	\$ 10,882.55	\$ 12,988.85
November	2016	6632	\$ 22,548.80	\$ 10,279.60	\$ 12,269.20
December	2016	5914	\$ 20,107.60	\$ 9,166.70	\$ 10,940.90
January	2017	5910	\$ 20,094.00	\$ 9,160.50	\$ 10,933.50
February	2017	6202	\$ 21,086.80	\$ 9,613.10	\$ 11,473.70
March	2017	6738	\$ 22,909.20	\$ 10,443.90	\$ 12,465.30
		77950	\$ 265,030.00	\$ 120,822.50	\$ 144,207.50
Average Meals per Month					
		6496	\$ 22,086.40	\$ 10,068.80	\$ 12,017.60
Average Meals per Year					
		77952	\$ 265,036.80	\$ 120,825.60	\$ 144,211.20

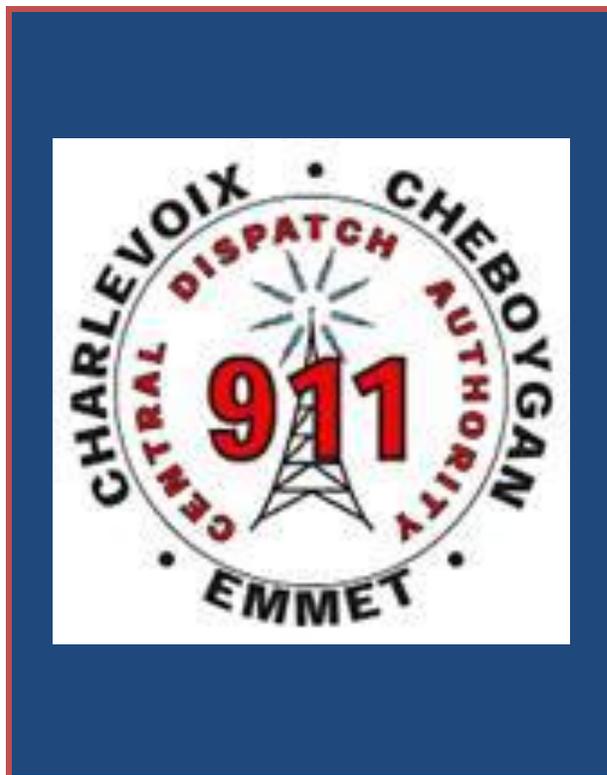
Based on Actual Counts the Last Twelve Months

Based on Average Counts the Last Twelve Months



Based on Last Twelve Months

Based on Average Counts the Last Twelve Months



3/15/2017

CCE Radio Study

BY: CCE 911

CCE-911 RADIO SUDY

UPDATING THE CURRENT RADIO SYSTEM IN THE TRI COUNTY (CCE) AREA FOR BETTER INTEROPERABILITY AND ADRESSING SAFETY CONCERNS

OVERVIEW

The purpose of this report is to conduct a radio system study to identify the best radio system technology to insure better communication interoperability and address safety concerns related to emergency communications for the Law Enforcement, Fire and EMS/First Responder agencies served by the 911 Central Dispatch Authority. The report will review the current VHF system utilized by the organization identifying the pros and cons of this system as compared to changing technology to an 800 MHz radio system to serve the agencies and the public.

PROBLEM:

In 1996 the new C.C.E. Central Dispatch Authority (CCE) system went operational with the latest in technology utilizing Very High Frequency (VHF) radio technology. Narrow banding was ordered by the FCC due to the limited availability of channels due to usage resulting in channel congestion. The FCC ordered the first round of narrow banding resulting in channel width being reduced from 25 kHz to 12.5 kHz which was completed in 2013. Narrow banding resulted in the loss of radio coverage in the C.C.E. service area requiring system upgrades to try and re-establish communication strength and reliability. Improvements since 2013 have resulted in improving limited areas within the service area. C.C.E. 911 has expended \$600,000.00 to upgrade the system to make it usable and account for FCC regulations (Clark, 2016). The FCC is again looking into another narrow banding requirement reducing channel width to 6.25kHz though the date has not been set (Bercovici, 2006). According to information obtained by Telerad, it appears probable that within four to seven years it could come to fruition (Kooyers,

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2016). This would require additional funds to be spent to comply with FCC regulations and again attempt to re-establish communications strength and reliability. Additional narrow banding is also projected to make portables, mobiles, and paging, base-station and repeater radios obsolete, resulting in a loss of additional coverage or capacity (Security, 2011). Even with projected future upgrades to the VHF system, interoperability among agencies in the CCE area is minimal at best and among regional and state agencies is non-existent.

The question is: With the reality of narrow banding being implemented in the near future do we transition to the 800MHz system or invest in upgrades to the VHF system.

BACKGROUND

CCE is the 9-1-1 Public Safety Answering Point, or PSAP, for the counties of Charlevoix, Cheboygan, and Emmet. CCE intakes both emergency and non-emergency 9-1-1 calls for service.

CCE dispatches for 13 law enforcement agencies, 25 fire departments, 6 EMS agencies, and 11 Medical First Responder squads across the tri-county region. In addition to these, CCE often works directly with other agencies including Hospitals, Utility Companies, Towing Services, the Office of Emergency Management, DNR, Alarm companies, other Dispatch Centers, etc.

The scope of coverage for CCE is three counties, with a land area of approximately 1,730 square miles, which includes Beaver Island, and covers approximately 4,500 miles of roadways. The estimated population is 85,000 permanent residents. This number typically triples during the summer months.

Mission of CCE

The mission of CCE Central Dispatch is to positively enhance the lives of people living in and traveling through our communities by processing and dispatching emergency and non-emergency calls for assistance, while providing primary critical support to our emergency service agencies by compiling, maintaining, and providing accurate information to assist their response to these calls.

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History of CCE

CCE was established in 1992 by the Counties of Charlevoix, Cheboygan, and Emmet, and their respective townships, cities, and villages to provide enhanced 9-1-1 and emergency dispatch services for its communities. Construction of the Dispatch Center was completed in 1995, and CCE began live operation in June 1996.

CCE is governed by a Board of Directors with representation from County Commissioners, Township Officials, and City or Village representative from each county. The Technical Advisory Committee (TAC) makes recommendations to the Board regarding operations and policy. The TAC is made up of public safety members from law, fire, and EMS services from each county.

Emergency Services

Currently there are 44 emergency service agencies in the three counties with most utilizing the VHF system as their main voice communications with CCE. Most departments have some form of 800MHz communications via prep radios for talk a round and events but not as a standard in voice communication. Because of this lack of interoperability, emergency services rely on third party communication from CCE in inter-departmental operations.

With the events of September 11, 2001 the national, state and local goal is interoperability between all emergency operations. Federal rulings through the Department of Homeland Security created a hierarchy within the emergency services which led to the creation of the ICS System (Incident Command System). This system allows for proper set up, coordination and management of an incident command center that relies on interoperability from one location among all emergency services (FEMA, 2016). On a local level we look at interoperability as the ability of field units and agencies to talk and share data in real time, when needed as authorized (Justice, 2006).

FACTS:

- The current VHF system will again be narrow banded resulting in more loss of coverage

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- Interoperability between agencies does not exist, especially outside of CCE with VHF
- Infrastructure will have to be developed with regard to towers and repeaters for VHF
- The 800MHz Tower coverage already exists but will need added channels
- CCE 911 is already set up for 800MHz communications through current consoles
- Do to narrow banding current VHF coverage in the three counties stands at 70% (911, 2015) (Annex A1-A4)
- Current 800MHz coverage stands at 98.4% (Michigan State Police, 2015) (Annex B1-B4)

ASSUMPTIONS:

- Lack of coverage with future narrow banding will occur which will result in officer safety concerns and reduced timeliness for first responders
- Lack of interoperability between agencies inside/outside of CCE will hamper coordination efforts on operations
- Inadequate service provided in the near future with the current VHF system
- Age of current system will result in expenditures for continuous upgrades and replacement of obsolete and/or maintaining of equipment

POSSIBLE COURSES OF ACTION

MAINTAIN EXSISTING VHF RADIO SYSTEM

Currently CCE operates the primary VHF radio system on twenty-two (22) separate tower sites located with the three counties of Charlevoix, Cheboygan and Emmet. Thirteen (13) of these towers are for full transmission of voice radio for emergency

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services. Nine of the towers are a mix of receive or transmit only to fill in gaps created by tower spacing and topography (Clark, 2016). The current VHF system only provides a 70% coverage average for the three counties.

➤ Pros

- Current system in use
- Emergency communication
- Dispatch services
- Pager capabilities
- Good data transmission capabilities

➤ Cons

- Narrow banding will affect the efficiency and reliability of the system
- Funding to maintain systems
- Upgrading current bases and field radios
- Upgrading existing towers
- Adding additional towers
- Patching network to attempt interoperability
- Lack of coverage
- Lack of interoperability
- Voice clarity issues
- Radio spectrum is becoming more congested
- Some current equipment is not P25 compliant

CHANGE TO STATE 800 MHz RADIO SYSTEM

Currently the MPSCS maintains twelve (12) tower sites providing 800 MHz coverage in the three counties. A study was completed by the Michigan State Police in October 2015 for coverage of the 800 MHz system in the three counties. CCE did a follow up study in July of 2016 and found the MSP study to be accurate which included better signal strength, clarity of voice, and reliability of coverage based on portable talkback as compared to the current VHF system (Clark, 2016). The 800 MHz system showed a coverage average of **98.4%** over the three counties. The MPSCS covers 59,000 square miles and is in operation in 61 counties and pending in three others. In addition there are 244 towers operated by the MPSCS in the State of Michigan (Annex C).

➤ Pros

- System security
- Mission critical communication
- Voice clarity
- Interoperability
- 98.4% coverage
- Continuity of communications in dispatch
- System upgrades by State
- P25 compliant
- Technical support/monitoring 24/7 by State
- No congestion issues (Narrow Banding N/A)

➤ Cons

- Funding to change systems
- Concerns of a state run system

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On October 24, 2016 stakeholders attended a conference at NCMC with MPSCS in order to obtain needed information to convert to the State 800 MHz system. This conference was conducted by Brad Stoddard, Director of MPSCS (Stoddard, 2016). Mr. Stoddard presented a power point outlining the MPSCS service to public safety and citizens, the operations of MPSCS, upgrades and costs (Annex D). MPSCS is a state function but not a State Police run organization. All towers in the CCE area be it state or local towers, are all used for voice communication and paging. According to Mr. Stoddard the MPSCS will provide continuous upgrades to all towers at no charge locally but rather from the State general fund. There will be however fees associated with local tower maintenance and tower monitoring. Along with costs associated with the 800 system there is a one-time \$250.00 per radio fee for initial set up.

Currently 68% of fire and law in the state operates on the MPSCS and 88% are local users. The system is recognized as one of the best in the world for interoperability (Stoddard, 2016). The system is set up to provide continuous operations throughout the state. As explained by Stoddard, the State is broken up into zones and if a zone goes down, the system re-routes to provide connectivity. This also includes cyber-attacks. Mr. Stoddard went on to explain that the MPSCS has multi-level protections in place for cyber-attacks and anti-virus updates are continuous. If one site goes down in the event of a cyber-attack, that zone is shut down and the system re-routed to keep service. Another advantage is because of the interoperability if CCE goes down, it allows for transfer to another agreed dispatch center to provide seamless transition for coverage.

Mr. Stoddard commented on CCE's current towers explaining that a study will need to be conducted to know exactly what upgrades in channels there will need to be to switch systems. Any channel upgrades will be at the cost of local stakeholders (CCE). Current estimates are there may need to be an additional 11 channels added to the tower systems. These channels are currently at a cost of \$133,000 each. (need to verify from state).

Mr. Stoddard also explained regarding the 800MHz radios that there is no limit on talk groups and no additional fees associated with talk groups. Credit from MPSCS was also explained. Credit is a percentage back to the stakeholders as a whole for MPSCS to utilize local towers. This credit may be as much as 5% of the costs associated with tower construction. These credits if applicable would be used to offset certain costs such as subscriber activation.

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Mr. Stoddard explained the MPSCS does monitor tower sites with a 24/7 service at a cost of \$5,500.00 annually; this would apply to the Topinabee tower site with 800 equipment to enhance Cheboygan County.

COST COMPARISON OF COURSES OF ACTION

CCE CENTRAL DISPATCH RADIO REPORT FINANCIAL SUMMARY

VHF System Infrastructure Upgrades

A thorough review of the current VHF radio system infrastructure and field testing of portable VHF radios have confirmed that there are areas of weak and unreliable signal coverage, most of this is with portable radios and the ability to “Talk Back” to dispatch or other units. There are a few areas where portable radio coverage is unreliable in “Receive” mode, meaning hearing transmissions from dispatch.

The task would be to enhance our current VHF radio system to duplicate as closely as possible the same portable radio coverage that is offered by the Michigan Public Safety Communication System 800 Radio system in all three Counties (Charlevoix, Cheboygan and Emmet Counties) which is approximately 98.4% coverage.

Areas identified as needing infrastructure upgrades, including new tower construction or leasing space on existing towers owned by other entities.

Budgetary numbers were compiled based on previous projects of similar scope in our three Counties or other known projects within our region or State. These budgetary numbers are presented below in Phases. It is recommended that all communications equipment upgrades should be replaced with equipment that is approved to be in Compliance with any future narrow banding that may be mandated by the FCC for VHF radio systems.

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Phase 1 – Additional Tower Construction costs

Phase 2 – Current and proposed Tower lease cost projections.

Phase 3 – Narrowband compliant upgrades to communication system equipment that is in place at current or proposed tower sites.

Phase 4 – Ongoing Maintenance Costs for VHF communications equipment at current and proposed tower sites (demonstration of 1 year, 5 year and 10 year costs).

Phase 5 – Replace existing agency's current field radios (portable and mobile) to be compliant with future narrow banding as mandated by the FCC.

Phase 1

Through radio tests and preliminary discussions with radio industry experts we determined that the following sites that were identified as needing new tower sites with both VHF radio send and receive voice and paging capabilities.

- Bliss area of Northwest Emmet County
- Boyne City area of Charlevoix County
- East Jordan area of Charlevoix County
- Forest Waverly area of Cheboygan County
- Melrose Township area of Charlevoix County

The above identified sites would require either new tower construction or a lease option on an existing tower site.

Anticipated new construction on five (5) towers at approximately 180 foot with equipment shelters, backup generators, site prep, FCC licensing and related costs is anticipated to be approximately \$500,000.00 to \$600,000.00 PER SITE. ** This does not include any land acquisition or communications equipment for in the tower shelter. Pricing estimates are based on previous projects and do not include any inflationary costs figures for tower steel or other components.*

Anticipated cost estimates for the necessary communications equipment for each tower site is approximately \$250,000.00 - \$300,000.00 PER SITE. ** This includes repeaters, receivers, mux, antennas, cables, programming, GPS clocks, etc. All of this equipment*

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*would be compliant with any future narrow banding as mandated by the FCC. **We are NOT guaranteed FCC approval for licensing our frequencies at any of these sites.*

A preliminary conservative estimate to build these five (5) new tower sites to fill in the VHF signal in the above mentioned areas is over Four Million (\$4,000,000.00) dollars.

** A preliminary engineering study was not completed for this report. A study would be conducted as part of final engineering for any future improvements at an estimated cost of \$25,000 to identify estimated coverage percentage of VHF system upgrades. It must be noted that an engineering study can provide estimated coverage but cannot guarantee VHF coverage at or above the 98% target.*

Phase 2

Proposed Leasing of Tower space for new sites for VHF

Using current tower lease costs provided for our current VHF radio system deployment, we took a median cost averaged out per our four (4) leased tower sites. This averaged cost is approximately \$1030.00 per month per site. Using this cost a projected long term lease of towers is shown below for all five (5) proposed sites.

New Tower Sites estimated lease cost per month	\$5150.00
New Tower Sites estimated lease cost per year	\$61,800.00
New Tower Sites estimated lease cost for 5 years	\$309,000.00
New Tower Sites estimated lease cost for 10 years	\$618,000.00

**We are NOT guaranteed FCC approval for licensing our frequencies at any of these sites.*

The following are current tower leases that are in place on our VHF radio system this information is needed to complete a total cost analysis for tower operations on a leased network. The following is a list of the Current Leased Tower sites being used for our VHF radio system; East Jordan Site, Hebron Site, Norwood Site, Wolverine Site.

Current Tower Leased Sites cost per month	\$4115.00
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Current Tower Leased Sites cost per year	\$44,580.00
Current Tower Leased Sites cost for 5 years	\$222,900.00
Current Tower Leased Sites cost for 10 years	\$445,800.00

Total Projected costs of Leased Tower sites for VHF radio operations are as follows;

Annual Lease Costs	\$106,380.00
Five Year Lease Costs	\$531,900.00
Ten Year Lease Costs	\$1,063,800.00

**The above pricing does not reflect any increases or changes in lease costs as provided by the tower owners.*

Phase 3

The following is an estimated price summary of the cost to upgrade all current radio communications equipment that is NOT compliant with future narrow banding as may be mandated by the FCC. These are estimated costs provided by radio industry experts based on current equipment pricing. These costs are highlighted to show the cost of upgrading existing radio equipment and does not include above pricing for the equipment list for new tower locations (either tower construction or leasing on existing tower sites).

Replace approximately 60 repeaters at a cost of \$15,000.00 each
\$900,000.00

Replace approximately 15 Mux (channel mixers) at a cost of \$35,000.00 each
\$525,000.00

FCC licensing, project development and system programming
\$300,000.00

Estimated Total costs of upgrading equipment for Narrowbanding
\$1,725,000.00

Phase 4

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The below is an estimate of ongoing and future costs to maintain/support our VHF radio system to including the following items;

Estimated Radio maintenance for current and proposed equipment per year
\$108,000.00

Estimated Radio maintenance for current and proposed equipment for 5 years
\$540,000.00

Estimated Radio maintenance for current and proposed equipment for 10 years
\$1,080,000.00

Estimated Insurance costs for current and proposed tower sites per year
\$6750.00

Estimated Insurance costs for current and proposed tower sites for 5 years
\$33,750.00

Estimated Insurance costs for current and proposed tower sites for 10 years
\$67,500.00

Estimated Tower expenses for current and proposed tower sites per year
\$20,000.00

Estimated Tower expenses for current and proposed tower sites for 5 years
\$100,000.00

Estimated Tower expenses for current and proposed tower sites for 10 years
\$200,000.00

Estimated Utility expenses for current and proposed tower sites per year
\$30,000.00

Estimated Utility expenses for current and proposed tower sites for 5 years
\$150,000.00

Estimated Utility expenses for current and proposed tower sites for 10 years
\$300,000.00

Total Tower Expenses for towers that are owned by CCE per year
\$164,750.00

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Total Tower Expenses for towers that are owned by CCE for 5 years

\$823,750.00

Total Tower Expenses for towers that are owned by CCE for 10 years

\$1,647,500.00

Total Tower Expenses for towers that are leased by CCE per year

\$144,750.00

Total Tower Expenses for towers that are leased by CCE for 5 years

\$673,750.00

Total Tower Expenses for towers that are leased by CCE for 10 years

\$1,347,500.00

Phase 5 – Subscriber Radios

The VHF radios that are currently in use by the various Public Safety agencies will continue to work on our VHF system. It should be noted that VHF radios may need to be P25 compliant to be eligible for various grant funds. VHF radios will need to be P25 compliant to meet future narrow banding requirements as mandated by the FCC. This includes all portable radios, mobile radios and pagers.

The estimated cost to upgrade all agencies to a P25/Narrowband compliant radio is as follows;

All Law Enforcement Agencies

Portable VHF Radios \$1,181,520.00

Mobile VHF Radios \$520,460.00

Base Stations \$78,400.00

Marine Radios \$57,993.00

Total Law Enforcement VHF \$1,838,373.00

All Fire Departments

Portable VHF Radios \$2,338,100.00

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Mobile VHF Radios	\$1,130,800.00
Base Stations	\$142,000.00
VHF/800 Pagers	\$560,280.00
Total for Fire VHF	\$4,171,180.00

All EMS Agencies

Portable VHF Radios	\$383,150.00
Mobile VHF Radios	\$157,500.00
VHF/800 Pagers	\$125,120.00
Total EMS VHF	\$665,770.00

**The above pricing reflects State of Michigan pricing on radios and does not include any special offers, discounts, rebates, etc. The above pricing does not include vehicle installation costs.*

COST ESTIMATE TO CHANGE RADIO SYSTEM TECHNOLOGY TO 800 MHz RADIO SYSTEM

The coverage study conducted by the MPSCS and confirmed by 911 staff through a follow up field study identifies coverage of 98.4% in the CCE service area by the existing MPSCS 800 MHz system. The study graded the reliability of coverage of the MPSCS 800 radio system along with the voice quality and signal reliability of the system. The Michigan State Police radio testing team and 911 team spent several days in Charlevoix, Cheboygan and Emmet Counties doing field tests to confirm coverage results. Although the study identified 98.4% coverage, there are areas of weak and unreliable signal coverage that were identified during the field test that will require infrastructure investment to improve coverage. These areas were primarily in the City of Charlevoix (mostly in buildings), areas around the Village of Alanson and points along Interstate I-75 North of the Wolverine area caused by topography. There were relatively few areas where portable radio coverage was unreliable in "Receive" mode, meaning hearing transmissions from dispatch, the weaknesses occurred in the "Talk Back" mode when trying to communicate with dispatch or other field units. Infrastructure upgrades

CCE-911

projected to be needed to address coverage gaps in the identified area consist of new tower construction or leasing space on existing towers owned by other entities and adding necessary equipment.

The following information provides budgetary numbers based on State of Michigan pricing provided to CCE 911 from the regional Motorola Manufacturer Representative and the Motorola Regional Sales Representative to address coverage issues. It is noted that a detail engineering study would need to be conducted to provide estimated coverage improvement projections prior to construction. It is also noted that a study provides a projection of coverage improvements and cannot guarantee coverage correction under all circumstances. Budgetary numbers are presented below in Phases. It is recommended that all communications equipment upgrades should be replaced with equipment that is approved to be in Compliance with any future Narrowbanding that may be mandated by the FCC for 800 radio systems.

Phase 1.A, 1.B, – Additional 800 MHZ Communications equipment of new Tower Construction to enhance coverage

Phase 2 – Ongoing Maintenance Costs for 800 communications equipment at current MPSCS Tower sites and proposed additional 800 Tower sites (demonstration of 1 year, 5 year and 10 year costs).

Phase 3 – Additional 800 MHz channel resources will need to be added to the MPSCS tower system to accommodate the increase radio and paging communication traffic throughout Charlevoix, Cheboygan and Emmet County areas.

Phase 4 – Replace existing agency's current field radios (portable and mobile) with 800 MHz radio system.

Phase 1.A

Through radio tests and preliminary discussions with radio industry experts it has been determined that the following geographic sites will require new tower sites/radio system infrastructure with both 800 radio send and receive voice and paging capabilities.

CCE-911

- City of Charlevoix, Charlevoix County

The above identified site would require either adding 800 MHz communications gear to existing Tower sites, the construction of new Tower sites or a lease option on an existing tower site.

Option 1.

Presented in discussion was the addition of what is called a "Tower in a Box", it is considered a self-contained site that is fully integrated complete 800 MHz site with extra channel resources in the City of Charlevoix area. While this has not been deployed in Michigan it was presented to staff as an alternative solution to provide 800 MHz coverage in the City of Charlevoix area. While we have not received an official quote, the estimated budgetary cost of this is approximately \$750,000.00.

Option 2.

Addition of a Tower Top Amplifier (TTA) to be located on the existing MPSCS East Jordan Tower site (7809) to provide improved 800 MHz coverage over the City of Charlevoix and area. The cost of adding the TTA to site 7809 is approximately \$35,000.00. Along with adding the TTA to 7809 it would be recommended to add Bi-Directional 800 MHz antennas into the City of Charlevoix administrative building and to the Charlevoix County administrative building at a cost of approximately \$50,000.00 for each building site for a total of \$100,000.00.

Based on the information we have received at this time, we believe that this site would offer the best coverage and resources for 800 MHz in the City of Charlevoix area.

Phase 1.B

Through radio tests and preliminary discussions with radio industry experts it has been determined that the following geographic sites will require new tower sites/radio system infrastructure with both 800 radio send and receive voice and paging capabilities.

CCE-911

- Village of Alanson area
- Interstate I-75 North of the Wolverine area

Anticipated cost estimates for the necessary 800 MHz communications equipment for the CCE owned Topinabee Tower site is approximately \$900,000.00. ** This includes repeaters, receivers, mux, antennas, cables, programming, GPS clocks, etc. All of this equipment would be compliant with the Michigan Public Safety Communications as required.*

It is possible (and has been proposed) that the above identified site would require adding 800 MHz communications gear to the existing CCE owned Tower site and that this communication gear could utilize CCE's current microwave system from tower to tower. If this is an approved application, it is possible that approximately \$150,000.00 would be realized in cost savings on Phase 1.B.

Phase 2

Below is an estimate of ongoing and future costs to maintain/support the 800 MHz communications equipment for fully integrated monitoring by the MPSCS as part of their system network.

Estimated Radio maintenance for current and proposed equipment per year

\$5500.00

Estimated Radio maintenance for current and proposed equipment for 5 years

\$27,500.00

Estimated Radio maintenance for current and proposed equipment for 10 years

\$55,000.00

Phase 3 – Additional 800 MHz Channel Resources

Transitioning from our current VHF radio platform to the MPSCS 800 will require additional 800 MHz channel resources to be added to the current MPSCS tower system within Charlevoix, Cheboygan and Emmet Counties. The MPSCS updated the number of channels needed to support the system from six (6) to eleven (11) in March of 2017. M

CCE-911

The estimated budgetary expense numbers for eleven (11) additional channel resources totals \$1,465,000.00.

CCE Channel Requirements for MPSCS	
Date: 3/17/2017	
Site	Number of Channels
7202	0
7203	1
7205	1
7802	1
7803	1
7804	2
7805	1
7806	0
7808	1
7809	1
7901	1
7206	0
7304	1
Total	11

Phase 4 – Subscriber 800 MHz Radios

The 800 radios that are currently being recommended for use by the various Public Safety agencies will work on the existing Michigan Public Safety Communication System (MPSCS).

It should be noted that 800 MHz radios being proposed are fully digital and P25 compliant by FCC standards to be eligible for various grant funds. This includes all portable radios, mobile radios and pagers.

The estimated cost to switch all agencies to an 800 MHz radio that is P25 FCC compliant is as follows;

All Law Enforcement Agencies

Portable 800 MHz Radios	\$1,181,520.00
Mobile 800 MHz Radios	\$520,460.00
800 MHz Base Stations	\$78,400.00
800 MHz Marine Radios	\$57,993.00
Total Law Enforcement Radios	\$1,838,373.00

All Fire Departments

Portable 800 MHz Radios	\$2,338,100.00
Mobile 800 MHz Radios	\$1,130,800.00
800 MHz Base Stations	\$142,000.00
VHF/800 Pagers	\$560,280.00
Total for Fire Department Radios	\$4,171,180.00

All EMS Agencies

Portable 800 MHz Radios	\$383,150.00
Mobile 800 MHz Radios	\$157,500.00

CCE-911

VHF/800 Pagers

\$125,120.00

Total EMS Agency Radios

\$665,770.00

**The above pricing reflects State of Michigan pricing on radios and does not include any special offers, discounts, rebates, etc. The above pricing does not include vehicle installation costs.*

REVIEW OF FUNDING OPTIONS

FINAL SUMMARY

RECOMMENDATION

- **It is recommended by the Radio Study Committee that the CCE Board of Directors recommend to the Board of County Commissioners in Charlevoix, Cheboygan and Emmet Counties to implement a technology change to the 800 MHz Radio System and approve a funding option to implement this project.**

REVIEW OF FUNDING OPTIONS

ANALYSIS OF SURCHARGE OR MILLAGE REQUIRED TO RETIRE PROJECTED BONDING DEBT.

OTHER- MUST ADDRESS HOW DATA TRANSMISSION WILL BE MAINTAINED

CCE-911

NOTE: Recommendation page to Board to be added when report complete....

DRAFT

CCE-911

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Executive Summary

UPDATING THE CURRENT RADIO SYSTEMS IN THE TRI COUNTY (CCE) AREA FOR BETTER INTEROPERABILITY AND ADDRESSING SAFETY CONCERNS

PROBLEM:

In 1996 the new C.C.E. Central Dispatch Authority (CCE) system went operational with the latest in technology utilizing Very High Frequency (VHF) radio technology. Narrow banding was ordered by the FCC due to the limited availability of channels due to usage resulting in channel congestion. The FCC ordered the first round of narrow banding resulting in channel width being reduced from 25 kHz to 12.5 kHz which was completed in 2013. Narrow banding resulted in the loss of radio coverage in the C.C.E. service area requiring system upgrades to try and re-establish communication strength and reliability. Improvements since 2013 have resulted in improving limited areas within the service area. C.C.E. 911 has expended \$600,000.00 to upgrade the system to make it usable and account for FCC regulations (Clark, 2016). The FCC is again looking into another narrow banding requirement reducing channel width to 6.25 kHz though the date has not been set (Bercovici, 2006). According to information obtained by Telerad, it appears probable that within four to seven years it could come to fruition (Kooyers, 2016). This would require additional funds to be spent to comply with FCC regulations and again attempt to re-establish communications strength and reliability. Additional narrow banding is also projected to make portables, mobiles, and paging, base-station and repeater radios obsolete, resulting in a loss of additional coverage or capacity (Security, 2011). Even with projected future upgrades to the VHF system, interoperability among agencies in the CCE area is minimal at best and among regional and state agencies is non-existent.

The question is: With the reality of narrow banding being implemented in the near future do we transition to the 800MHz system or invest in upgrades to the VHF system.

POSSIBLE SOLUTIONS:

- Transition to the 800MHz radio system
- Keep and maintain the current VHF system which will include network patching, future towers, and a transition to new VHF radio systems equipment

CCE-911

RECOMMENDATIONS:

- It is recommended the CCE Board of Directors to allow contract discussions with the MPSCS and to request Motorola through Telerad issue a quote for the necessary equipment to transition to an 800 MHz system in Charlevoix, Emmet and Cheboygan Counties and all emergency responders within.
- It is also recommended the CCE Board of Directors to enter into discussion the funding opportunities available to proceed.

Approved Not Approved

Chair CCE Board of Directors

Total Proposed Project Costs \$ **10,021,000**

\$0.61
2017

Restricted Local Surcharge **Budget**

Local Surcharge - Charlevoix	\$	175,000	\$459,016.39	\$490,573.77	\$530,737.70	\$579,508.20	\$648,360.66	\$740,163.93
Local Surcharge - Cheboygan	\$	175,000	\$459,016.39	\$490,573.77	\$530,737.70	\$579,508.20	\$648,360.66	\$740,163.93
Local Surcharge - Emmet	\$	265,000	\$695,081.97	\$742,868.85	\$803,688.52	\$877,540.98	\$981,803.28	\$1,120,819.67
Total Local Surcharge - Restricted	\$	615,000	\$1,613,114.75	\$1,724,016.39	\$1,865,163.93	\$2,036,557.38	\$2,278,524.59	\$2,601,147.54

Proposed Surcharge Increase

\$0.99 \$1.10 \$1.24 \$1.41 \$1.65 \$1.97

Proposed Surcharge

\$1.60	\$1.71	\$1.85	\$2.02	\$2.26	\$2.58
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Projected Additional Revenue

\$	998,115	\$	1,109,016	\$	1,250,164	\$	1,421,557	\$	1,663,525	\$	1,986,148
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Projected Payback Period in Years

10.0	9.0	8.0	7.0	6.0	5.0
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CCE911			
Radios			
Law	\$	1,687,690.00	
Fire	\$	4,651,545.00	
EMS	\$	889,675.00	
Total Radio Costs			100.00%
	\$	<u>7,228,910.00</u>	

CCE911			
Radios			
Law	\$	1,687,690.00	
Fire	\$	4,651,545.00	
EMS	\$	889,675.00	
Total Radio Costs			100.00%
	\$	<u>7,228,910.00</u>	

Required Channel Resources

Phase 1.A - Improves Charlevoix County

Option 1	Charlevoix County		
	Infrastructure		
	Tower in a Box		
		\$	<u>345,000.00</u>
Option 2	Charlevoix County		
	Infrastructure		
	Tower Top Amplifiers	<i>EI Site 7809</i>	\$ 35,000.00
	Tower Top Amplifiers	<i>NEW - City Admin</i>	\$ 35,000.00
	Bi-Directional Antennas	<i>City Admin Bldg</i>	\$ 50,000.00
	Bi-Directional Antennas	<i>County Admin Bldg</i>	\$ 50,000.00
		\$	<u>170,000.00</u>

Phase 1.B - Improves Cheboygan County

Cheboygan County			
Infrastructure			
Retrofit Existing Topinabee Tower to MPSCS Specs			
	Up to		
	\$	750,000.00	
	\$	150,000.00	
	\$	<u>900,000.00</u>	

Required MPSCS Monitoring of CCE 911 Owned Site

Cheboygan County		<i>Topinabee Site</i>	
\$ 5,500.00	Annually	5yr	\$ <u>27,500.00</u>

Option 1

Assumes High End of Construction Costs

Phase 1 - Improves Charlevoix County - Owns Towers

Boyer City Area			
Tower Build		\$	600,000.00
Equip		\$	300,000.00
East Jordan Area			
Tower Build		\$	600,000.00
Equip		\$	300,000.00
Melrose Township Area			
Tower Build		\$	600,000.00
Equip		\$	300,000.00
Total Charlevoix County		\$	<u>2,700,000.00</u>

Phase 1 - Improves Cheboygan County - Owns Tower

Forest Waverly Area			
Tower Build		\$	600,000.00
Equip		\$	300,000.00
Total Cheboygan County		\$	<u>900,000.00</u>

Phase 1 - Improves Emmet County - Owns Tower

Bliss Area			
Tower Build		\$	600,000.00
Equip		\$	300,000.00
Total Emmet County		\$	<u>900,000.00</u>
Phase 1 - Total - Owns Towers		\$	<u>4,500,000.00</u>

Option 2

Phase 1 - Improves Charlevoix County - Leases Towers

Boyer City Area			
Tower Lease	5yr	\$	61,800.00
Equip		\$	300,000.00
East Jordan Area			
Tower Lease	5yr	\$	61,800.00
Equip		\$	300,000.00
Melrose Township Area			
Tower Lease	5yr	\$	61,800.00
Equip		\$	300,000.00
Total Charlevoix County		\$	<u>1,085,400.00</u>

Phase 1 - Improves Cheboygan County - Leases Tower

Forest Waverly Area			
Tower Lease	5yr	\$	61,800.00
Equip		\$	300,000.00
Total Cheboygan County		\$	<u>361,800.00</u>

Phase 1 - Improves Emmet County - Leases Tower

Bliss Area			
Tower Lease	5yr	\$	61,800.00
Equip		\$	300,000.00
Total Emmet County		\$	<u>361,800.00</u>
Phase 1 - Total - Leases Towers		\$	<u>1,809,000.00</u>

Phase 2 - Costs Related to Future Narrowbanding

Phase 2 - Total		\$	<u>1,810,000.00</u>
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Total Infrastructure Costs			
Assuming Option 1 - Tower in a Box	\$	<u>2,737,502.00</u>	

Total Infrastructure Costs			
Assuming Option 2 - TTA/BDAs	\$	<u>2,562,502.00</u>	

Total Infrastructure Costs			
Assuming Option 1 - Owns Towers	\$	<u>6,310,000.00</u>	

Total Infrastructure Costs			
Assuming Option 2 - Leases Towers	\$	<u>3,619,000.00</u>	

Total 800 Project Costs			
Assuming Option 1 - Tower in a Box	\$	<u>9,966,412.00</u>	

Total 800 Project Costs			
Assuming Option 2 - TTA/BDAs	\$	<u>9,791,412.00</u>	

Total VHF Project Costs			
Assuming Option 1 - Own Towers	\$	<u>13,538,910.00</u>	

Total VHF Project Costs			
Assuming Option 2 - Lease Towers	\$	<u>10,847,910.00</u>	

Leased Sites

Charlevoix County			
Norwood Tower Lease	5yr	\$	39,180.00
East Jordan Tower Lease	5yr	\$	93,480.00
Tower Expenses	5yr	\$	336,875.00
Cheboygan County			
Hebron Tower Lease	5yr	\$	62,340.00
Wolverine Tower Lease	5yr	\$	51,960.00
Tower Expenses	5yr	\$	336,875.00
		\$	<u>920,710.00</u>
CCE911 Owned Sites			
VHF Radio Maintenance	5yr	\$	540,000.00
Insurance Costs	5yr	\$	33,750.00
Tower Expenses	5yr	\$	100,000.00
Utility Expenses	5yr	\$	150,000.00
		\$	<u>823,750.00</u>
Total Existing Tower Costs	5yr	\$	<u>1,744,460.00</u>



CHEBOYGAN COUNTY COMMUNITY DEVELOPMENT DEPARTMENT

CHEBOYGAN COUNTY BUILDING ■ 870 S. MAIN STREET, PO BOX 70 ■ CHEBOYGAN, MI 49721
PHONE: (231)627-8489 ■ FAX: (231)627-3646
www.cheboygancounty.net/planning/

Cheboygan County Solid Waste Management Plan (SWMP)

Upon recent review of the Solid Waste Management Plan it has become clear that some limited updates could be made. This requires an amendment process should the county choose to make changes to the plan.

At the next County Board of Commissioners meeting we will outline the process for a plan amendment and discuss the proposed amendments.

We provide you now with the list of proposed amendment topics, a Frequently Asked Questions document on the SWMP amendment process, flow chart, and draft Notice of Intent document that would be filed with the state should the County choose to amend the plan.

Although the last plan amendment was coordinated by NEMCOG, the County can undertake the amendment process and would keep NEMCOG involved and would have to appoint someone from NEMCOG on the SWMP committee. We'll discuss this more on Tuesday.

Proposed amendment topics

1. Decide how to treat Type B Transfer Stations
2. Make correction to list of criterion that disposal area must comply with (p. 85), possibly make different review processes for transfer stations. Existing criteria appear to be more appropriate for landfills.
3. Clarify the "two-part" siting review process (p. 72, A. and B.). There doesn't seem to be a two-part process in the plan.
4. Review *Processing Facilities* and choose how they are to be reviewed. They are not currently listed.
5. Updates
 - a. Verify locations of existing transfer stations approved in the 2000 plan.
 - b. Possible siting review fee update
 - c. Verify the list of responsible parties (p. 93-94)
6. Enforcement

**FREQUENTLY ASKED QUESTIONS:
COUNTY SOLID WASTE MANAGEMENT PLAN AMENDMENTS**

1. Is there a limit to the number of changes I can make to the Plan in an amendment?

Answer: No, you may make as many changes as needed. However, if you are amending the Plan close to a five-year update, the amendment will not serve as a substitute for a full Plan update.

2. Does the amendment approval process differ from the Plan update approval process?

Answer: No, an amendment follows the same approval process and steps as a full Plan update (see attached flowchart).

3. How long does it take for a DEQ decision to be made on an amendment?

Answer: In most cases a decision will be made within 6 months of the submittal date.

4. Does a 14 member Solid Waste Management Planning Committee (SWMPC) need to be appointed in order to develop an amendment?

Answer: Yes, unless a Solid Waste Management Planning Committee is already established.

5. Who are the 14 members of the SWMPC?

Answer: The 14 member SWMPC consists of the following: 4 shall represent the solid waste management industry, 2 shall represent environmental interest groups, 1 shall represent county government, 1 shall represent city government, 1 shall represent township government, 1 shall represent the regional solid waste planning agency, 1 shall represent industrial waste generators, and 3 shall represent the general public.

(Please note that Part 115 does not provide definitions for each of the SWMPC member positions. Therefore, the county must be able to demonstrate how each member meets the position it holds, if challenged.)

6. How is the public notified of the Public Hearing that is required during the 90-day public comment period? Is there a timeframe required for the notice?

Answer: The Public Hearing shall be published in a newspaper having a majority circulation within the county. The notice shall indicate a location where copies of the plan are available for public inspection and shall indicate the time and place of the public hearing. Yes, a notice shall be published not less than 30 days before a hearing.

7. How long does a Designated Planning Agency have to revise the amendment once the 90-day public comment period has ended?

**FREQUENTLY ASKED QUESTIONS:
COUNTY SOLID WASTE MANAGEMENT PLAN AMENDMENTS**

Answer: The Designated Planning Agency has 30 days to revise the amendment, get SWMPC approval, and recommend the amendment to the County Board of Commissioners (BOC).

8. Does the BOC have to approve or disapprove the amendment in a specified timeframe?

Answer: No.

9. If the BOC disapproves the amendment, how long does the SWMPC have to revise it and send it back to the BOC for approval?

Answer: 30 days.

10. Does a BOC have to provide objections when disapproving the amendment?

Answer: Yes, the BOC must provide objections when disapproving the amendment. The DEQ prefers to have written objections. However, if verbal objections were provided and contained in the meeting minutes, that is acceptable.

11. Is there a statutory time frame in which the BOC has to make a decision on the amendment?

Answer: No.

12. What happens if the BOC does not take formal action on the amendment?

Answer: The amendment process is stopped until the BOC either approves or disapproves the amendment with objections.

13. If the BOC disapproves the amendment a second time, what happens to the amendment?

Answer: If the amendment was required by the DEQ and is not approved by the BOC a second time, the BOC may prepare its own amendment. If the BOC chooses not to prepare its own amendment, the DEQ will prepare the amendment for the County.

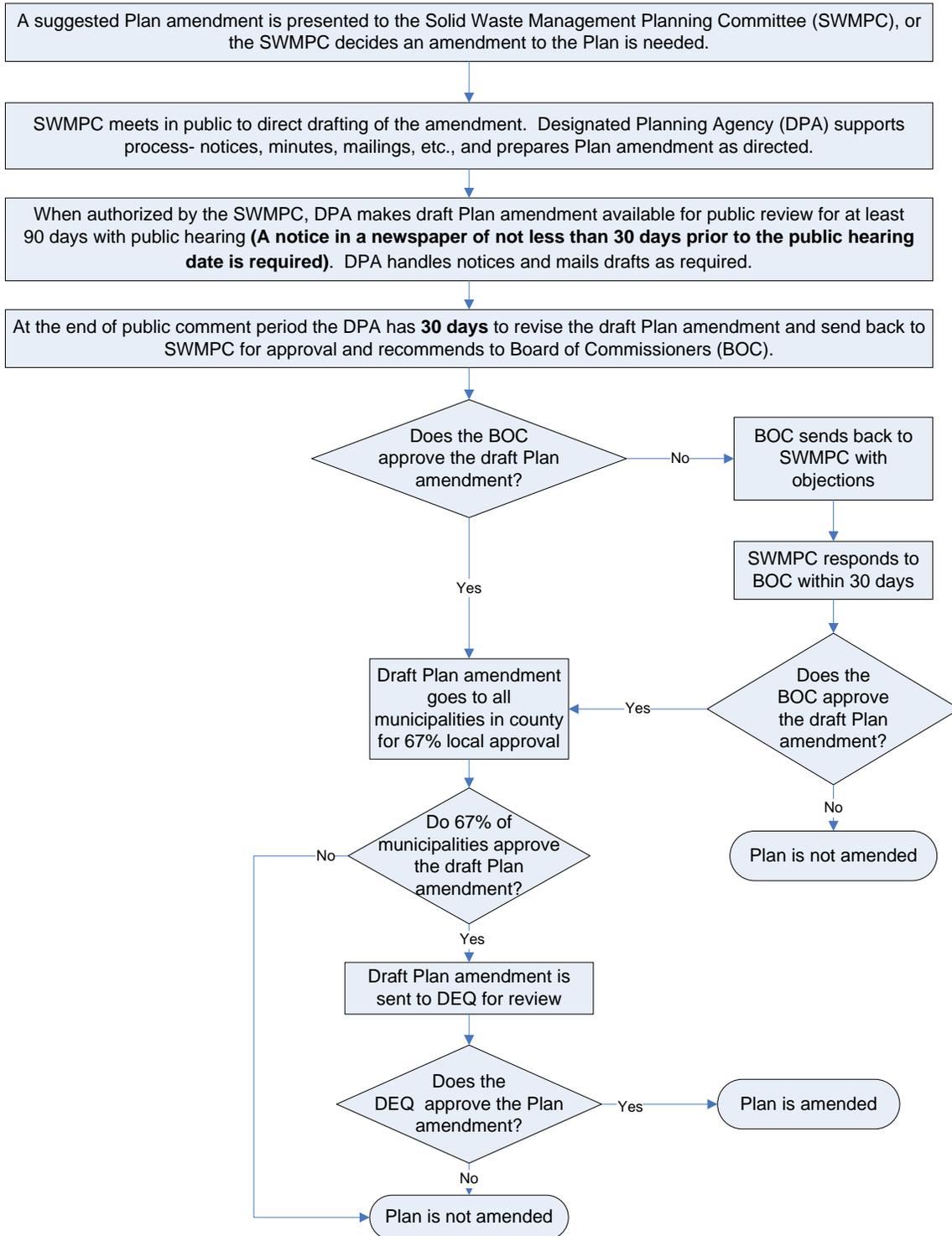
If the amendment that is being pursued was not required by the DEQ and is not approved by the BOC a second time. The amendment pursued will not be completed and the process will be done. Any new amendment must start at the beginning of the process.

14. Will the DEQ assume responsibility for and prepare the amendment if it has been disapproved by the BOC or municipalities?

Answer: The DEQ only assumes responsibility for and prepares Plan updates that were initiated by the DEQ Director; unless the amendment was required by the DEQ, then it would prepare the amendment.

FREQUENTLY ASKED QUESTIONS: COUNTY SOLID WASTE MANAGEMENT PLAN AMENDMENTS

Amendment Approval Process





Michigan Department of Environmental Quality,
Office of Waste Management and Radiological Protection

**COUNTY'S NOTICE OF INTENT TO PREPARE
COUNTY SOLID WASTE MANAGEMENT PLAN AMENDMENT**

Authorized by Section 11533, Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Section 11533 indicates that the County, Municipalities, or Regional Planning Agency (as appropriate) shall notify the State as to their intent with regard to preparation of a County Solid Waste Management Plan Amendment.

The County of Cheboygan does hereby serve notice that it:

will

prepare and file with the State of Michigan, Department of Environmental Quality, Office of Waste Management and Radiological Protection an amendment of its County Solid Waste Management Plan as provided by Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Such amendment plan shall fulfill all the requirements of Part 115, as well as all applicable administrative rules.

Signed by: _____
Anthony Matelski, Chairperson, Board of Commissioners

Complete the following only if preparing plan amendment:

The Northeast Michigan Council of Governments (NEMCOG) is designated by the above named County as the agency responsible for preparation of the Solid Waste Management Plan Amendment. The address, contact person, and phone number for the County's designated planning agency is:		
Name of Contact Person: Diane Rekowski		
Name of Designated Planning Agency: Northeast Michigan Council of Governments		
Address of Agency: 80 Livingston Blvd, Suite U-108		
City: Gaylord	State: MI	Zip Code: 49734
Telephone: 989-705-3734	Fax: 989-732-5578	
E-mail Address: drekowski@nemcog.org		

Please attach a copy of the Resolution or meeting minutes of the Board of Commissioners agreeing to prepare a plan amendment.

When completed, submit this form to: SUSTAINABLE MATERIALS MANAGEMENT UNIT
SOLID WASTE SECTION
OFFICE OF WASTE MANAGEMENT AND RADIOLOGICAL PROTECTION
DEPARTMENT OF ENVIRONMENTAL QUALITY
PO BOX 30241
LANSING MI 48909-7741

County Notice of Intent received by Department of Environmental Quality, Office of Waste Management and Radiological Protection	
By: _____	Date: _____

Economic Development Report

Cheboygan County EDC Update

The County's EDC has been learning a lot from partner agencies about what they do for economic development in the county. They started meeting in September of last year and have met 4 times not including the April 20th scheduled meeting.

Generally, the EDC is researching other partner agencies in economic development and determining where they fit in, what their specific tools as granted them in the Economic Development Corporations Act (PA 338 of 1974), and what they may want to take action on.

Their meeting agendas have included the following:

- Introduction to EDC, public act, history of County EDC, election of officers, review of draft goals and objectives
- Discussion with Northern Lakes Economic Alliance
- Continued discussion of EDC Goals and Objectives, prioritizing
- Discussion with young professionals/millennials
- 4/20 will be discussion with Northeast Regional Council of Governments re: Regional Prosperity

Economic Development Partners

Successful economic development efforts involve a variety of partners working in close coordination. There are a number of public and non-profit organizations which work toward assisting businesses and entrepreneurs within Cheboygan County and the region. Local partners include cities, townships, villages, school districts, colleges, chambers of commerce's, local DDA's, EDC's and state organizations.

The following pages include summaries provided by economic development partners serving Cheboygan County of their programs and initiatives:

Northern Lakes Economic Alliance (NLEA)

The Northern Lakes Economic Alliance was established in 1984 to provide economic and community development expertise for our region.

Out of necessity the NLEA was formed as a cooperative/collaborative organization. Recognizing the value of pooling limited funds both public sector and private sector entities joined together to have a resource much better and more effective than any entity could have done individually.

Little did the leadership know back in 1984, what a groundbreaking approach this would become. The NLEA today is considered one of the "best practices" in the state of Michigan and regularly gets requests from others to explain our approach.

We are a 501c3 organization and refer to ourselves as a "regional public/private partnership organization".

The NLEA is governed by a 28 member Board of Directors with representatives from both public and private sector. Each of our four "Member Counties" appoints five members to the Board, one of which must be a County Commissioner. (See attached annual report for complete list)

- The Board approves the plan of work, the annual budget and hires the NLEA President. The President provides leadership to the staff to implement the plan of work within the approved budget.

Funding comes from a variety of places; however it falls into three basic categories: public sector, private sector and fees for services.

- Member Counties: Antrim, Charlevoix, Cheboygan and Emmet Counties each invest an annual amount towards operations based on a taxable value formula. This was devised as a fair approach to spread the costs. By design, the funding from the four Counties makes up 50% of the NLEA budget.
- The remaining 50% is generated from core partners, private sector members, fees for services and local units of government (city, village, and township).

The mission of the NLEA is to “provide resources and assistance for communities and entrepreneurs to create and retain jobs in our four county service area”. To accomplish this we implement programs and services on two fronts.

- We assist businesses and entrepreneurs and have a variety of tools and resources targeting new and existing businesses that possess the desire and potential to create family supporting jobs (base jobs)
- We assist communities in finding the most effective approach to meet their needs to support business and industry retention and growth.

The NLEA staff is made up of six full-time economic/community development professionals that work regularly throughout the many communities that make up the four county NLEA region. We approach our work as a “team sport” and it is not unusual to have more than one staff engaged in different aspects of the same project. Our work areas of responsibility fall into four focus areas:

- Business Retention & Growth. Retaining and growing existing companies.
- Business Attraction & Growth. Assisting communities to “be prepared” for new business attraction as well as having a solid foundation and support services for new and start-up businesses.
- Community Development. Assisting with a wide range of community projects ranging from place-making to infrastructure. Designed to make a community attractive for company retention, employee recruitment, etc.
- Grant writing & Administration. Identifying grant opportunities (public and private), assisting with the application process and administration of the grant to insure compliance with state and federal regulations.

Results and impacts. The NLEA provides expertise during the due diligence process for many projects and provides a place for people to turn when needing assistance. Often times this may result in a business/entrepreneur or a community deciding not to move forward. We believe this to be a valuable service. Much better than a project moving forward with little or no chance for success, and as a result leaving a wake of ill-will and lost capital.

Completed projects. Since Cheboygan County joined the NLEA in 2007, we have assisted in the completion of the following:

16 community development projects, totaling almost \$14 million in investment

- \$12,430,686 Grants/Loans
- \$1,985,888 Local match dollars
- \$143,084 in “Other funds”
- \$13,948,014 Total investment

274 different business clients served, resulting in over \$31 million in investment and direct financial support

- 28 Business start-ups
- 40 Business expansions
- 431 Jobs created/retained
- \$28,344,500 Private investment

- \$2,777,534 in skilled trades training funds (7 companies)
- \$24,000 in small business technical assistance from service providers
- Established 3 Cheboygan County Business Resources Centers (Mackinaw City, Indian River, Cheboygan) as part of a 10 BRC network throughout our region to assist pre-startup entrepreneurs
- Conduct annual “retention visits” to large companies and base job providers to deepen relationships, express gratitude for their investment in the County and to discuss wants, needs and/or challenges. All important in our retention and growth strategy.

For a copy of NLEA’s 2016 Activity Report visit our website: www.northernlakes.net

Northeast Michigan Council of Governments (NEMCOG)

Mission Statement: NEMCOG is committed to facilitating the development of intergovernmental cooperation and coordination within the 8-county region of Northeast Michigan. The agency is also committed to providing for a controlled growth policy; to preserve and improve the environment, to pursue greater efficiency and responsiveness of local units of governments, and to improve the ecological, social, and economic well-being of citizens within the region. NEMCOG is governed by a policy board that includes elected officials, business leaders and citizen representatives from throughout the eight-county region. Services are supported by local government appropriations, special services contracts, and state and federal grants.

NEMCOG is a catalyst for strategic planning and, in this role, has assisted local governments in obtaining millions of dollars in federal and state grants for vital local projects and services. In addition to planning, NEMCOG also sponsors many other programs, including Community Correction and Watershed Projects.

Regional Prosperity Initiative

Our vision is to provide current and future generations a vibrant, sustainable, and prosperous Northeast Michigan region that:

1. **Promotes innovation** across the economy and supports entrepreneurs with connections and resources.
2. **Tells the world** that we are an interconnected network of great places.
3. **Sustains excellence in education** from early childhood through all stages of life.
4. **Provides the skills needed by employers** through education and training that results in a continuously transforming and responsive workforce.
5. Utilizes our **natural resources** in a **sustainable** way.
6. Fulfills the current and future needs of the region through **strong collaboration and leadership**.

Services Provided: NEMCOG offers a variety of services to Northeast Michigan. Primarily it offers Technical Assistance to communities and the region for:

- ◆ Regional Planning - Energy Audits, Broadband plans, vertical asset inventories, coordinated regional targeted market analysis
- ◆ Community Planning
- ◆ Economic Development – Primary agency maintaining properties on the MEDC Zoom Prospector website
- ◆ Data Distribution
- ◆ Transportation
- ◆ Grant Writing Assistance

Programs

- ◆ Recycling & Solid Waste Management Planning
- ◆ Tourism
 - US 23 Heritage Route
 - Sunrise Coast Birding Trail
- ◆ Transportation
- ◆ Planning & Community Development
- ◆ Economic Development
- ◆ Local Government
- ◆ GIS Mapping
- ◆ Local Foods
- ◆ Housing
- ◆ Environment & Natural Resources
- ◆ Community Corrections

Cities, townships and counties in rural areas often cannot afford the staff to do grant writing, comprehensive land use, zoning, transportation planning, digital mapping, economic & community development, integrated environmental planning, & the coordination of other services. The Northeast Michigan Council of Governments (NEMCOG) was established in 1968 as a multi-county organization to pool resources for the assistance of local governments in the region. NEMCOG is governed by a policy board that includes elected officials, business leaders and citizen representatives from throughout the eight-county region. Services are supported by local government appropriations, special services contracts and state and federal grants.

NEMCOG Region (8-county): Alcona County, Alpena County, Cheboygan County, Crawford County, Montmorency County, Oscoda County, Otsego County, and Presque Isle County (Emmet County is in the NW region but is also a member of NEMCOG).

Michigan Economic Development Corporation (MEDC)

Mission

We market Michigan and provide the tools and environment to drive job creation and investment.

Vision

We will transform the Michigan economy by growing and attracting business, keeping talented residents here, and revitalizing our urban centers.

A Top 10 State For:

- Low unemployment
- Per capita income
- GDP growth
- Young adult population growth

The **Michigan Economic Development Corporation** (MEDC) is a public-private partnership agency and economic development corporation dedicated to job creation in the U.S. state of Michigan. Operating under the slogan "Pure Michigan", the MEDC attempts to encourage the tourism potential of the state and foster business relocations to Michigan.

The Michigan Economic Development Corporation is the successor-in-interest of the Michigan Jobs Commission, created in 1993. The Commission was translated into the Development Corporation in 1999. Its growth and operations during the following twenty years reflected the urgency of moving away from Michigan's perceived standing as a one-industry state dependent on fluctuating conditions in the motor vehicle industry.

Lydia Murray, Business Development Manager
murrayl1@michigan.org
(517) 930-4969

SCORE (Tip of the Mitt Chapter)

SCORE Tip of the Mitt is part of SCORE "Counselors to America's Small Business," a national nonprofit association dedicated to entrepreneur education and the formation, growth and success of the nation's small businesses. We provide professional counseling, education, and mentoring for the diverse business community of Northern Michigan.

SCORE Tip of the Mitt provides free and confidential business advice and counseling tailored to meet the needs of your business and your personal objectives. SCORE Tip of the Mitt also offers workshops, for a modest fee, for both start-up and in-business entrepreneurs.

SCORE counselors are real-world professionals with time-tested knowledge who donate thousands of hours to help small businesses succeed. Counselors are experts in such areas as accounting, finance, marketing, retail, manufacturing, management and business plan advisory & strategy review.

CAPITAL CONNECT SERVICES

Michigan Economic Development Corporation's (MEDC) Capital Access team works to increase the availability of capital for growth stage and mature commercial and industrial companies operating in Michigan. MEDC programs can assist a company in obtaining financing for real estate, equipment, working capital, growth capital, and acquisition financing.

Connect with CAPITAL CONNECT SERVICES: CHRIS COOK—Director, Capital Access 300 N. Washington Square, Lansing, MI 48913 E cookc@michigan.org · P 517.373.8089

MICHIGAN SMALL BUSINESS DEVELOPMENT CENTER (SBDC)

The SBDC enhances Michigan's economic well-being by providing counseling, training, secondary market research for new ventures, existing small businesses and advanced technology companies. With offices statewide, the SBDC positively impacts the economy by strengthening existing companies, creating new jobs, retaining existing jobs, and assisting companies in defining their path to success.

Connect with MSBDC: ANNIE OLDS—Regional Director, Northwest MI 1209 S. Garfield Ave. · Traverse City, MI 49686 E annieolds@networksnorthwest.org · P 231.922.6912 PURE MICHIGAN

BUSINESS CONNECT (PMBC)

PMBC is a resource to connect Michigan buyers and sellers. Through their digital network www.puremichiganb2b.com, the unique matchmaking technology links companies with collaborators and private sector procurement opportunities. Businesses registered in the database can post procurement opportunities, purchasing needs, collaboration requests, and more. Companies registered in puremichiganb2b.com can be both buyers and sellers in a truly dynamic online B2B marketplace.

Connect with PMBC: SAM SEDLECKY—PMBC Services Specialist 300 N. Washington Square · Lansing, MI 48913 E sedleckys@michigan.org · P 517.373.3032

Michigan Department of Agriculture Rural Development (MDARD)

MDARD assists Michigan food and Agribusiness companies in both rural and urban communities, achieve economic growth through supply chain connectivity, regulatory assistance, funding, project and partner facilitation, trade and policy issues. MDARD's International Marketing program works with these companies to develop trade opportunities by entering new markets or expanding existing markets to increase international market reach.

Connect with MDARD: JODI GRUNER—Economic/Community Development 525 W. Allegan · Lansing, MI 48909 E dacourtd2@michigan.gov · P 517.614.5518

Northeast Michigan Food

The purpose of this website is to provide information to Northeast Michigan on how to access local foods and also to provide resources to local food producers in the region.

This website provides support for local growers and their businesses as well as trip planning for those who are enjoying agri-tourism in our area. A list of events, news about new food products as well as links to food incubators and economic development assistance for food-based entrepreneurs.

The website is: www.nemichiganfood.com

Michigan Works! Cheboygan County

Mission Statement: The mission of the Michigan Works! Association is to provide leadership and services, and promote quality and excellence for the advancement of Michigan's Workforce Development System and its customers and professionals.

About Us: Michigan Works! Association was established in 1987 to foster high-quality employment and training programs serving employers and workers by providing support activities and a forum for information exchange for Michigan's Workforce Development System. The Association's members are the workforce development board chairs, local-elected officials, and Michigan Works! agencies which cover twenty-five workforce areas.

Michigan Works! Association also offers associate membership to organizations with a vested interest in workforce development. Through the Association's three pronged approach to organizational development, members are able to:

- access professional development opportunities to ensure high-quality programs and service delivery to all customers;
- receive logistical support as a way to network and share best practices;
- partake in education and promotion of the Michigan Works! System, through special events and;
- keep legislators and others informed on workforce development issues.

Northeast Michigan Community Service Agency (NEMCSA)

Mission Statement: Our mission at Northeast Michigan Community Service Agency, Inc., (NEMCSA), is to provide quality planning, programs, and services to individuals, families, and communities through the best use of human and financial resources.

About Us: Northeast Michigan Community Service Agency, Inc. (NEMCSA) is a private, non-profit Community Action Agency - part of a state and national network of Community Action Agencies. The basic service area of the agency is eleven northeast Michigan counties covering 6,300 square miles. The counties are Alcona, Alpena, Arenac, Cheboygan, Crawford, Iosco, Montmorency, Ogemaw, Oscoda, Otsego, and Presque Isle. Other counties are included in several program areas. The agency is governed by a 33 member Board of Directors. This Board, in compliance with P.A. 230, brings together equal representation of the public and private sectors and the clients who receive services. In this manner, policy and fiscal matters as well as program and service issues are reviewed by those who have the insights to provide meaningful guidance to NEMCSA.

NEMCSA brings together federal and state grant funds as well as dollars from local private and public sources. These resources are then directed into programs which aid the poor and otherwise disadvantaged throughout the age spectrum, from preschoolers to the elderly of northeast Michigan. The funds include targeted dollars aimed at very specific problems as well as dollars which are more flexible in nature.

In addition, the agency provides assistance to local governments and other non-profit agencies in securing funding for a range of projects which benefit communities and individuals within the NEMCSA service area.

Service Programs:

- Area Agency on Aging
- Client Services
- Care Management/Community Based Care
- Community Development
- Head Start / Early Head Start
- Michigan Works!
- School Success
- Volunteers

Northern Initiatives

Mission Statement: Northern Initiatives is a private, non-profit community development corporation that provides tailored business solutions to advance and connect rural communities and their economies.

Programs:

- Business Loans
- Business Consulting Services
- Trees and Tourism
- Entrepreneurial Education

Their description

Northern Initiatives is a Community Development Financial Institution. We're in business to provide loans and business services to small business owners and entrepreneurs who create jobs and enable the communities of Northern rural Michigan and neighboring Wisconsin to thrive.

Being mission-driven sets us apart, positioning us to enhance offerings of traditional lending institutions. Our loan programs and special business services empower our organization to more aggressively find funding for business owners and entrepreneurs whose ideas and dreams benefit our communities.

What's a CDFI?

A Community Development Financial Institution (CDFI) is a private financial institution that provides loans to small business owners, entrepreneurs, and community organizations that might not qualify for loans from traditional banks for a variety of reasons. Many times, lending is focused on low-income, disadvantages, and undeserved communities.

CDFIs are certified by the Community Development Financial Institution Fund (CDFI Fund) and the U.S. Department of the Treasury, which provides funds to CDFIs through a variety of programs.

In February of 2016, we reached a major milestone – \$50 million in loans to small businesses. Since 1992, we have helped hundreds of small businesses, many of them startups, from a variety of key industry sectors, including: retail, breweries and vineyards, light manufacturing, salons and spas, tourism, restaurants, professional services, and value-added food producers – primarily in underserved communities.

We've made over 860 loans to entrepreneurs and small business owners that might not qualify for financing from traditional banks for a variety of reasons.

Recognizing small business owners need more than just capital to grow, we provide every loan customer complimentary access to online money, marketing, and management support. Business owners also have the opportunity to connect with a business coach to help them reach their goals and navigate their everyday challenges and opportunities.

Northern Shores Loan Fund

Mission Statement: Northern Shores Loan Fund, Inc., a nonprofit corporation assists entrepreneurs of Northern Michigan with training, business incubation, and access to capital that fosters economic development for the Northern Michigan community.

Statement of Purpose: The Corporation was formed for charitable and educational purposes to promote economic and social development for the Little Traverse Bay Bands of Odawa Indians (LTBB). This will include training, technical assistance, business incubation and a loan fund for potential and existing entrepreneurs who may or may not be tribal citizens of LTBB.

Services

Meeting small business loan needs in N. Michigan

Do you have a successful small business that is growing and struggling to obtain the financial assistance to take it to the next level? Have you always wanted to start a business but didn't know where to begin? Northern Shores Loan Fund, Inc. is here to help!

Northern Shores Loan Fund, Inc. is a new nonprofit corporation established to assist entrepreneurs of Northern Michigan with education, training, business incubation and access to capital that fosters economic development for the Northern Michigan community. We offer a variety of loan products including micro-loans and larger small business loans.

Northern Shores Loan Fund, Inc. is an emerging Community Development Financial Institution (CDFI) providing loans to those businesses that have found it difficult to meet conventional lending institution requirements. CDFI's bridge the gap between the economic mainstream and economically disadvantaged people and communities.

Assistance for New & Existing Businesses

Whether you have an idea for a new business and are unsure of where to begin, or you are an established business and feel you are missing the tools to take it to the next level, Northern Shores Loan Fund, Inc. has the resources available to help entrepreneurs succeed through lending and technical assistance.

Technical Support Areas:

- Web-based Marketing
- Business Plan Development
- Credit Counseling
- Accounting Principles
- Business Structuring
- Business Tax Preparation
- Business Software Education

Energy Efficient Loans

If you are in need of a new appliance and need to build your credit this is a great way to do both along with saving the environment through purchasing Energy Star rated appliances.

Cheboygan Economic Development Group

Mission

The Cheboygan Economic Development Group (CEDG) is a private sector organization of Cheboygan County business people, community leaders, and volunteers to help create economic growth and educational opportunities.

Their website states:

We identify projects which have the potential to create good jobs. We identify businesses which need assistance in achieving their goals for creating jobs. The CEDG is a catalyst organization that interfaces with local elected officials, administrations, local and regional economic development organizations, and entrepreneurs to facilitate success in turning our economy around and helping it grow.

And the CEDG always advocates for *greater educational and health care advantages in Cheboygan County* because without those assets creating good paying jobs would be impossible and because it's the right thing to do.

Our board, our project leaders and their teams, and people at many levels all over Cheboygan County are diligently striving to help create good paying jobs which come from economic development.

Not all projects bear fruit and move forward. Sometimes they sit on the shelf until conditions favor reintroduction. We are, however, pleased at the progress over this last year. Please visit our website for an overview of ongoing projects.

MEMO

TO: BOARD OF COMMISSIONERS

FROM: Jeffery B. Lawson

RE: MARINA WATERWAYS GRANT AGREEMENT

DATE: 4-20-17

The County completed a Marina Facility Study in 2008 (attached) which identified the need for the marina to begin replacing capital assets at the facility. The total estimated cost of upgrades identified in the study was approximately 3.5 million dollars. The recommended projects identified in the report consist of upland building improvements and bottomland dock improvements. The improvements are scheduled to be made based on financial capability and need. From this report, the first project recommended by staff is the replacement of the 27 year old fuel tanks and upland piping as well as replacement of the floating fuel dock and fuel building on the main pier. The project would also provide a new ADA compliant ramp to the pier as well as sidewalk replacement and landscaping restoration. This project was recommended due to the age of the fuel tanks as well as the deteriorated condition of the floating fuel dock and fuel building. The estimated cost of the project is \$800,000. The County applied for and has received a DNR Waterways grant in the amount of \$400,000 and is required to provide a \$400,000 local match. Please find attached the Waterways Grant Agreement from the State of Michigan for this project.

During the Boards last planning session there was discussion concerning completing these improvements as related to the Marina's ability to pay for the matching funds for the project. As identified during the last planning session, the Marina is one of Cheboygan County's primary recreation facilities providing recreational docking facilities for transient and seasonal boaters as well as boat launch access to Lake Huron. The facility has historically made enough revenue to pay its yearly cash operational cost but similar to many marinas and recreational assets in northern Michigan, has not made enough revenue to provide funds for capital improvement cost.

Attached you will find a report identifying that for several years the Marina's net cash position decreased. In 2016 the Marina's operations were restructured to reverse this trend. Due to these changes, the Marina was able to improve its net position by approximately \$43,000 in 2016. Projections identify that revenue for the Marina will be lower in 2017 due to less seasonal boaters but are projected to produce a positive net gain in 2017. These funds can be used to repay a portion of the \$400,000 match back to the County's Tax Revolving Loan Fund but should not be relied on in the long run.

The following is a summary of the grants received for the Marina and matching cost since the original construction of the facility in 1989.

Original Harbor

Construction 1989- County received a DNR Waterways Grant in the amount of \$632,425. Grant was 50% of project cost. County issued a bond in the amount of \$400,000 through the County Building Authority. The City of Cheboygan paid \$200,000 of the bond cost. The remaining \$432,425 was paid with monies from the County Tax Revolving Fund.

Emergency

Dredging Grant- County received a DNR Emergency Dredging Grant in the amount of \$270,899 in 2000. The grant covered 100% of the project cost.

Engineering

Grant- County received a DNR Waterways Grant in the amount of \$16,110 to complete a Facility Study of the Marina in 2007. Grant was 50% of the report cost. Remaining \$16,110 paid from marina funds.

Electrical

Upgrades- County received a DNR Waterways Grant in the amount of \$75,968 for electrical upgrades in 2008. Grant was 50% of the project cost. Remaining \$75,968 of project cost paid by marina funds.

Emergency

Dredging Grant- County received a DNR Grant in the amount of \$527, 816 in 2013. The grant covered 100% of the project cost.

The County has received a total of \$1,523,218.00 in DNR Waterways grant funds since 1989. The grant agreements state that the County must operate the marina as a recreational boating facility in perpetuity. If the County were to break the grant agreements the County could be liable to repay up to the total of grant awards. The State would also have the option to purchase the Marina from the County minus the cost of grant awards.

WATERWAYS GRANT AGREEMENT

Harbors and Docks – Mooring Construction

THIS WATERWAYS GRANT AGREEMENT (the "Agreement") is made as of _____, 2017, between the County of Cheboygan, CHEBOYGAN COUNTY, MICHIGAN (the "County") and the MICHIGAN DEPARTMENT OF NATURAL RESOURCES, a principal department of the State of Michigan (the "Department").

WHEREAS, the County is an important center of recreational boating activity and serves as a refuge point for shallow-draft recreational vessels;

WHEREAS, the County has asked that the Department assist the County in the replacement of harbor fuel tanks and piping, sidewalk, landscaping a disturbed upland area, a new fifty foot (50') ADA gangway. A complete replacement of the floating fuel dock area including the fuel service building, pumps, dock, all utilities and piping within the dock as well as the pump out system, and ice suppression system installation around the new floating fuel dock at the Cheboygan County Marina (the facilities);

WHEREAS, the Department is willing to assist the County to construct the facilities, which are estimated to cost Eight Hundred Thousand dollars (\$800,000.00), with the Department agreeing to pay 50% of the estimated cost, and is not to exceed Four Hundred Thousand dollars (\$400,000.00).

NOW, THEREFORE, in consideration of the Agreement's mutual promises and undertakings, the parties agree as follows:

1. The Department shall:

(a) grant to the County a sum of money equal to 50% of the cost of construction of the facilities called for by the plans and specifications, including final engineering costs, but not to exceed Four Hundred Thousand dollars (\$400,000.00). The words "plans and specifications" shall mean the plans and specifications developed for the County for the facilities prepared by a consulting firm duly licensed to perform professional services within the State of Michigan (the "State").

(b) release State funds as reimbursement according to the following:

Acceptance by the County of this Agreement, written
Department approval of final plans and specifications

(bidding documents), receipt of all necessary permits, award of contract to a competent contractor (licensed in the State of Michigan) to accomplish the work called for by the plans and specifications following bidding procedures acceptable to the Department and County, and receipt of payment reimbursement requests.

The final ten (10) percent shall be paid upon completion of work and receipt of progress payment requests from the contractor that are approved for payment by the designated project manager. The final ten (10) percent of State funds shall be paid upon completion of the project and 60 days after receipt of project cost documentation to the Department by the County or completion of an audit of the expenditures for the facilities by the Department, whichever occurs first.

(c) make the resources of the Department and the experience gained by the Department operating similar boating projects available to the County.

(d) provide for the routine inspection of the facilities, including all equipment and buildings.

2. The County shall:

(a) immediately appropriate the sum of Four Hundred Thousand dollars (\$400,000.00) for the project, which represents fifty (50) percent of the total cost of the project work called for by this Agreement. Any additional funds needed to complete this work, called for in this Agreement, shall be provided by the County.

(b) construct the facilities to the satisfaction of the Department, and to provide the funds, services, and materials necessary to satisfy this Agreement. There shall be no deviation from the plans and specifications without the express written consent of Chief of the Parks and Recreation Division. Proceeding with unauthorized changes shall result in excluding the work from State fund eligibility. Upon completion of the project, a final set of "as built" plans shall be submitted to the Department on a CD in an appropriate format.

(c) use all funds granted by the Department to this Agreement solely for the conduct and completion of the project work within three (3) years from the date of this Agreement. The County shall maintain satisfactory financial accounts, documents and records, and shall make them available to the Department for auditing at reasonable times. The County shall retain all accounts, documents, and records for the facilities for not less than three (3) years following completion of construction.

(d) permit Department review and approval of all professional services agreements, project contracts, bidding documents, specifications and final engineering drawing plans before being sent out to bid. The final engineering drawings shall provide, or conduct, soil boring data for any projects below the waterline. The Department must approve all change orders before being initiated. The Department shall have a representative on the selection panel for all contracts.

(e) ensure that all premises, buildings, and equipment-related procedures comply with all applicable State and Federal regulations for employee and public safety and with all applicable construction codes. All facilities shall comply with the barrier free design requirements of the Utilization of Public Facilities by Physically Handicapped Act, MCL 125.1351 *et seq.* The County shall submit a written report to the Department annually in which any safety issues, identified through Department inspections, are listed and compliance procedures are outlined. If the Department determines the County has failed to correct any safety issues, the Department will have the necessary work completed and the County shall pay 105% of the cost of the work.

(f) construct the facilities authorized under this Agreement, and the land and water access ways to those facilities, only in accordance with the plans and specifications approved by the Department.

(g) certify to the best of its knowledge and belief that the County and any principal, agent, contractor, and subcontractor of the County:

(1) are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any State or Federal agency.

(2) have not been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction, as defined in 45 CFR 1185; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property within a three-year period preceding this Agreement.

(3) are not presently indicted or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses.

(4) have not had one or more public transactions (Federal, State, or local) terminated for cause or default within three years preceding this Agreement.

(5) will comply with all applicable requirements of all Federal and State laws, rules, executive orders, regulations, and policies governing this program.

3. After the facilities are constructed, the County shall:

(a) establish or assign a competent and proper agency of the County to operate the facilities, to regulate the use of the facilities, and to provide for maintenance for the facilities to the satisfaction of the Department.

(b) provide to the Department for approval, a complete tariff schedule containing all charges to be assessed against watercraft utilizing the facilities and to provide any amendment to the schedule to the Department for approval before becoming effective. Any fee schedule adopted by the County shall provide for sufficient income to defray operating and maintenance expenses of the project exclusive of depreciation. The County shall not impose fees for the use of the facilities unless they have been specifically approved by the Department in writing. Any net revenues accruing from the operation of the facilities shall be separately accounted for and reserved in a restricted fund by the County for the future maintenance or expansion of the facility or, with the Department's approval, for the construction of other recreational boating facilities. The County shall request, no more than once annually, approval to vary from fee rates set by the Department.

(c) enforce all State statutes and local ordinances pertaining to marine safety, licensing of watercraft, and the dispensing of marine fuel within the County.

(d) furnish the Department, upon request, detailed statements covering the annual operation of the facilities, including boat traffic, income, and expenses for the 12 months ending December 31 of each year.

(e) hold the State of Michigan and the Department harmless from damages or any suits brought against the County due to construction, maintenance or operation of the facilities.

(f) maintain throughout the life of this Agreement suitable signs for both land and water approaches designating this project as having been constructed by the County and the Department. The size, color, and design of these signs shall be approved by the Department before being constructed.

(g) adopt the ordinances or resolutions as required to effectuate this Agreement. The County shall forward certified copies of all the ordinances and resolutions to the Department before their effective date.

(h) participate in the State Harbor Reservation System for the life of facilities.

(i) provide, upon the Department's request, one seasonal boat slip at no cost for Department-owned vessels.

4. Facility improvements are held in perpetuity. Perpetuity is defined as life of facilities. Life of facilities is defined as a minimum of 20 years from latest grant award. The County may request release from grant obligations after 20 years from date of last executed grant agreement.

5. The County shall comply with all State and Federal statutes applicable to the facilities.

6. The County must submit all reports, documents, or actions required by this Agreement to the Chief of the Parks and Recreation Division, Department of Natural Resources, P.O. Box 30257, Lansing, Michigan 48909. The County must submit invoices for reimbursement within ninety (90) days of invoice date.

7. Nothing in this Agreement shall be in any way construed to impose any obligation of whatsoever nature, financial or otherwise, upon the Department for the operation or maintenance of any recreational boating facilities.

8. All of the facilities constructed pursuant to this Agreement, or pursuant to any amendments or extensions of this Agreement, shall be reserved in perpetuity by the County for the exclusive use and/or rental, on a daily basis, by the operations of transient recreational watercraft, unless otherwise authorized in writing by the Department.

9. Commercial operations of any type shall not be permitted to regularly use any of the facilities or to be located on the facilities without the prior written approval of both the County and the Department.

10. The facilities and the land and water access ways to the facilities shall be open to the public at all times on equal and reasonable terms, and that no individual shall be denied access to, or the use of, the facilities on the basis of race, color, religion, national origin, or ancestry contrary to the Elliott-Larsen Civil Rights Act, 1976 PA 453, MCL 37.2101 *et seq.* or the Persons with Disabilities Civil Rights Act 1976 PA 220, MCL 37.1101 *et seq.*, and any violation of this requirement shall be a material breach of contract, subject to penalties as provided in this Agreement.

In connection with this Agreement, the County shall:

(1) comply with the Elliott-Larsen Civil Rights Act, 1976 PA 453, MCL 37.2101 *et seq.*, the Persons with Disabilities Civil Rights Act, 1976 PA 220, MCL 37.1101 *et seq.*, and all other Federal, State and local fair employment practices and equal opportunity laws and covenants that it shall not discriminate against any employee or applicant for employment, to be employed in the performance of this Agreement, with respect to his or her hire, tenure, terms, conditions, or privileges of employment, or any matter directly or indirectly related to employment, because of his or her race, religion, color, national origin, age, sex, height, weight, marital status, or physical or mental disability that is unrelated to the individual's ability to perform the duties of a particular job or position. The County agrees to include this covenant, not to discriminate in employment, in every subcontract entered into for the performance of this grant agreement. A breach of this covenant is a material breach of this Agreement.

(2) send, or its collective bargaining representative shall send, to each labor union representative of workers with which he/she has a collective bargaining agreement or other contract or understanding, a notice advising the labor union or workers' representative its commitments under this Agreement.

11. The County represents that it possesses good and clear title to all lands involved in this project, and that it will defend any suit brought against either party which involves title, ownership, or specific rights, including appurtenant riparian rights of any lands connected with or affected by this project.

12. The facilities constructed under this Agreement shall not be wholly or partially conveyed, either in fee or otherwise, or leased for a term of years or for any other period, nor shall there be any whole or partial transfer of the title, ownership, or right of maintenance or control by the County without the Department's prior written approval.

13. Any failure by the County to abide by any of the conditions, promises, or undertakings contained in this Agreement shall constitute a material breach of this Agreement. A material breach of this Agreement could result in an "ineligibility" status with all Department-administered grant programs until the breach is corrected. Once a non-compliance issue(s) has been documented, the Department shall notify the [local unit of government]. The [local unit of government] has a right and an obligation to cure, and shall collaborate with the Department to

develop an acceptable plan to remedy any and all non-compliance issue(s), with the primary goal to continue to provide long term recreational waterway access to the boaters of Michigan. Further, a material breach of this Agreement by the County shall entitle the Department to the following options:

(a) To purchase the facilities and the right of access over County property to the facilities at the existing value of the facilities, less any financial contribution made by the Department. The value of the facilities shall be determined by three competent appraisers; one to be selected by the County, one to be selected by the Department, and the third to be selected by the first two appraisers. The Department and the County shall equally share the total fees of these appraisers, including expenses. The appraisal shall be limited to the value of the facilities for the construction, repair, or rehabilitation in which the facilities are located. No value shall be assigned to the right of access to the facilities over County property. The Department shall have ninety (90) days from the date of receipt of the appraisals within which to exercise its option. If the Department does not exercise the option within that period, the County shall pay to the Department a sum equal to the total financial contribution made by the Department towards the construction or maintenance of the facilities.

(b) To accept from the County a sum equal to the total financial contribution made by the Department for the construction or maintenance of the facilities.

14. This Agreement shall not be effective until the Michigan Legislature appropriates the State funds for the facilities and the State Administrative Board approves their release.

15. The Department's rights under this Agreement shall continue in perpetuity.

16. Failure of either party to insist on the strict performance of this Agreement shall not constitute waiver of any breach of the Agreement.

17. This Agreement represents the entire agreement between the parties and supersedes all proposals or other prior agreements, oral or written, and all other communications between the parties.

18. No amendment to the Agreement shall be binding upon the parties unless it is in writing and signed by a duly authorized representative of both parties.

IN WITNESS WHEREOF, the parties execute this Agreement by the signatures of their duly authorized representatives.

WITNESSES:

COUNTY OF CHEBOYGAN

By: _____

Title: _____

**MICHIGAN DEPARTMENT OF
NATURAL RESOURCES**

By: _____

Ronald A. Olson, Chief
Parks and Recreation Division

REVENUE & EXPENDITURE REPORT FOR CHEBOYGAN COUNTY
 Quarter Ended 12/31/2016 With Comparables for the Quarter Ended 12/31/2015

Prepared by Dawn Wregglesworth on 4/6/16

ACCOUNT	DESCRIPTION	ACTIVITY FOR QUARTER ENDED 12/31/2015	YEAR-TO-DATE THRU 12/31/15	ACTIVITY FOR QUARTER ENDED 12/31/2016	YEAR-TO-DATE THRU 12/31/16	ACTIVITY FOR QUARTER ENDED DIFFERENCE \$	YEAR-TO-DATE DIFFERENCE \$	ACTIVITY FOR QUARTER ENDED DIFFERENCE %	YEAR-TO-DATE DIFFERENCE %
Revenues									
Dept 400: REVENUE CONTROL									
509-400-640.00	PUMP OUT - MARINA	70.00	1,840.00	20.00	1,680.00	(50.00)	(160.00)	-71.43%	-8.70%
509-400-646.00	GENERAL MERCHANDISE	0.00	1,519.64	0.00	1,000.73	0.00	(518.91)	0.00%	-34.15%
509-400-646.01	GASOLINE/FUEL	1,858.45	158,625.23	1,088.07	156,085.53	(770.38)	(2,539.70)	-41.45%	-1.60%
509-400-646.02	OIL	0.00	86.77	0.00	47.76	0.00	(39.01)	0.00%	-44.96%
509-400-646.11	DIESEL / FUEL	2,765.73	164,052.22	1,823.02	108,698.52	(942.71)	(55,353.70)	-34.09%	-33.74%
509-400-652.01	SEASONAL SLIP - MARINA	0.00	82,978.00	1,978.50	91,695.67	1,978.50	8,717.67	100.00%	10.51%
509-400-652.02	TRANSIENT SLIP - MARINA	(314.68)	20,878.20	(610.46)	20,223.96	(295.78)	(654.24)	93.99%	-3.13%
509-400-652.03	PARKING	50.00	3,885.00	15.00	3,661.00	(35.00)	(224.00)	-70.00%	-5.77%
509-400-665.00	INTEREST EARNED	110.10	329.27	0.00	26.18	(110.10)	(303.09)	-100.00%	-92.05%
509-400-688.00	REFUNDS - GENERAL	0.00	100.00	0.00	0.00	0.00	(100.00)	-100.00%	-100.00%
509-400-690.00	INS & SURETY PREMIUM REFUND	722.00	722.00	1,455.00	1,455.00	733.00	733.00	101.52%	101.52%
509-400-695.00	CASH OVER/SHORT	0.00	0.79	0.00	312.71	0.00	311.92	0.00%	39483.54%
509-400-698.00	MISC	527.03	527.03	185.63	226.13	(341.40)	(300.90)	-64.78%	-57.09%
Total - Dept 400		5,788.63	435,544.15	5,954.76	385,113.19	166.13	(50,430.96)	2.87%	-11.58%

Total Revenues		5,788.63	435,544.15	5,954.76	385,113.19	166.13	(50,430.96)	2.87%	-11.58%
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Expenditures									
Dept 752: COUNTY MARINA									
509-752-705.81	HARBOR MASTER	11,722.97	45,174.48	0.00	0.00	(11,722.97)	(45,174.48)	-100.00%	-100.00%
509-752-706.00	PER DIEM	1,120.00	1,120.00	1,320.00	1,320.00	200.00	200.00	17.86%	17.86%
50-752-711.00	RETIREMENT EXPENSE	1,373.00	1,373.00	0.00	0.00	(1,373.00)	(1,373.00)	-100.00%	-100.00%
509-752-712.00	FRINGE	3,024.35	17,362.56	437.46	6,256.17	(2,586.89)	(11,106.39)	-85.54%	-63.97%
509-752-720.00	SEASONAL	560.00	33,594.89	3,806.25	43,649.77	3,246.25	10,054.88	579.69%	29.93%
509-752-722.00	YEAR END SALARY ADJ	850.52	(1,936.83)	0.00	0.00	(850.52)	1,936.83	-100.00%	-100.00%
509-752-727.00	OFFICE SUPPLIES	109.46	1,044.65	6.33	310.42	(103.13)	(734.23)	-94.22%	-70.28%
509-752-730.00	POSTAGE	0.00	140.00	0.00	92.26	0.00	(47.74)	0.00%	-34.10%
509-752-744.00	OTHER SUPPLIES	112.37	1,949.49	0.00	1,197.93	(112.37)	(751.56)	-100.00%	-38.55%
509-752-747.10	FUEL/OIL	0.00	211.09	0.00	72.27	0.00	(138.82)	0.00%	-65.76%
509-752-799.00	GENERAL MERCHANDISE PURCHASE	0.00	1,019.48	0.00	781.40	0.00	(238.08)	0.00%	-23.35%
509-752-799.01	GASOLINE/FUEL PURCHASE	9,633.24	281,460.52	5,800.41	214,689.46	(3,832.83)	(66,771.06)	-39.79%	-23.72%
509-752-799.02	OIL PURCHASE	0.00	154.66	0.00	0.00	0.00	(154.66)	0.00%	-100.00%
509-752-827.00	MEMBERSHIP & SUBSCRIPTIONS	0.00	250.00	0.00	0.00	0.00	(250.00)	0.00%	-100.00%
509-752-852.00	TELEPHONE	1,145.30	3,345.77	299.88	2,077.28	(845.42)	(1,268.49)	-73.82%	-37.91%

REVENUE & EXPENDITURE REPORT FOR CHEBOYGAN COUNTY
 Quarter Ended 12/31/2016 With Comparables for the Quarter Ended 12/31/2015

Prepared by Dawn Wregglesworth on 4/6/16

ACCOUNT	DESCRIPTION	ACTIVITY FOR QUARTER ENDED 12/31/2015	YEAR-TO-DATE THRU 12/31/15	ACTIVITY FOR QUARTER ENDED 12/31/2016	YEAR-TO-DATE THRU 12/31/16	ACTIVITY FOR QUARTER ENDED DIFFERENCE \$	YEAR-TO-DATE DIFFERENCE \$	ACTIVITY FOR QUARTER ENDED DIFFERENCE %	YEAR-TO-DATE DIFFERENCE %
509-752-863.10	TRAVEL/LODGING/MEALS ETC	116.43	1,521.27	64.80	393.31	(51.63)	(1,127.96)	-44.34%	-74.15%
509-752-872.00	LICENSING FEES	0.00	300.00	0.00	300.00	0.00	0.00	0.00%	0.00%
509-752-900.00	ADVERTISING	0.00	1,810.00	0.00	1,933.90	0.00	123.90	0.00%	6.85%
509-752-910.05	INSURANCE	243.12	948.94	279.00	1,068.16	35.88	119.22	14.76%	12.56%
509-752-920.00	UTILITIES	2,486.94	14,332.68	2,760.78	12,676.32	273.84	(1,656.36)	11.01%	-11.56%
509-752-934.00	BLDG REPAIRS & MAINT	180.21	481.45	(131.91)	3,613.33	(312.12)	3,131.88	-173.20%	650.51%
509-752-935.00	EQUIPMENT REPAIRS	0.00	174.50	0.00	110.50	0.00	(64.00)	0.00%	-36.68%
509-752-938.00	REPAIRS AND MAINTENANCE - DOCKS	596.00	8,559.49	1,149.90	9,152.60	553.90	593.11	92.94%	6.93%
509-752-938.02	REPAIRS AND MAINTENANCE - LAUNCH RAMP	0.00	0.00	0.00	353.25	0.00	353.25	0.00%	100.00%
509-752-938.03	REPAIRS AND MAINTENANCE - FISH CLEANING	94.41	291.21	19.53	296.58	(74.88)	5.37	-79.31%	1.84%
509-752-949.00	EQUIP RENTAL	272.30	1,001.20	60.20	690.10	(212.10)	(311.10)	-77.89%	-31.07%
509-752-950.00	EQUIPMENT	0.00	0.00	0.00	449.95	0.00	449.95	0.00%	100.00%
509-752-954.00	ALLOCATED COST	22,589.00	22,589.00	33,600.00	33,600.00	11,011.00	11,011.00	48.74%	48.74%
50-752-957.00	EMPLOYEE TRAINING	0.00	0.00	0.00	260.00	0.00	260.00	0.00%	100.00%
509-752-959.12	MC/VISA FEES	1,204.69	10,186.07	899.59	6,445.22	(305.10)	(3,740.85)	-25.33%	-36.73%
509-752-968.01	DEPRECIATION	19,286.72	77,147.00	19,358.28	77,313.56	71.56	166.56	0.37%	0.22%
509-752-977.00	OFFICE EQUIP & FURNITURE	0.00	0.00	0.00	398.00	0.00	398.00	0.00%	100.00%
509-752-977.10	INTERNET WIRELESS ACCESS	0.00	0.00	0.00	734.67	0.00	734.67	0.00%	100.00%
Total - Dept 752		76,721.03	525,606.57	69,730.50	420,236.41	(6,990.53)	(105,370.16)	-9.11%	-20.05%
Total Expenditures		76,721.03	525,606.57	69,730.50	420,236.41	(6,990.53)	(105,370.16)	-9.11%	-20.05%

NET OF REVENUES AND EXPENDITURES	(70,932.40)	(90,062.42)	(63,775.74)	(35,123.22)	7,156.66	54,939.20
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OPERATING INCOME / (LOSS)	(90,062.42)	(35,123.22)
LESS DEPRECIATION	77,147.00	77,313.56
NET OF OPERATING REVENUES AND EXPENDITURES ADJUSTED FOR DEPRECIATION	<u>(12,915.42)</u>	<u>42,190.34</u>
OPERATING INCOME / (LOSS)	(90,062.42)	(35,123.22)
LESS DEPRECIATION AT 50%	38,573.50	38,656.78
NET OF OPERATING REVENUES AND EXPENDITURES ADJUSTED FOR DEPRECIATION	<u>(51,488.92)</u>	<u>3,533.56</u>

Gl Number	Description	12/31/12	12/31/13	12/31/14	12/31/15	12/31/16
Fund 509 - COUNTY MARINA						
*** Assets ***						
509-000-001.00	CASH	14,646.27	14,985.27	16,605.27	16,605.27	16,605.27
509-000-001.01	PAYROLL CASH ACCT	0.00	0.00	0.00	0.00	0.00
509-000-002.00	RESERVED CASH	55,419.10	4,467.03	8,596.27	15,982.33	49,346.39
509-000-004.04	IMPREST ACCOUNT	0.00	0.00	0.00	0.00	0.00
509-000-040.00	ACCOUNTS RECEIVABLE	224.00	478.00	0.00	0.00	0.00
509-000-065.00	GRANTS RECEIVABLE	0.00	293,566.03	13,870.00	0.00	0.00
509-000-101.00	PREPAID INSURANCE	307.16	313.08	300.60	324.16	372.00
509-000-102.00	INVENTORY - FUEL	15,174.39	29,217.95	28,377.77	17,703.60	21,910.03
509-000-103.00	INVENTORY - GENERAL MERCHANDISE	0.00	0.00	0.00	0.00	0.00
509-000-131.00	LAND IMPROVEMENTS	995,961.57	1,289,527.60	1,519,259.18	1,519,259.18	1,519,259.18
509-000-131.01	ACCUM DEP RE - LAND IMPROVEMENTS	(459,202.04)	(484,014.08)	(516,457.08)	(554,351.08)	(592,245.04)
509-000-136.00	BUILDINGS	550,294.98	551,914.98	560,956.67	560,956.67	560,956.67
509-000-137.00	ACCUM DEP RE - BUILDINGS	(357,194.04)	(373,632.00)	(390,337.00)	(407,306.00)	(424,276.04)
509-000-138.00	MACHINERY AND EQUIPMENT	44,765.56	44,765.56	44,765.56	44,765.56	44,765.56
509-000-139.00	ACCUM DEP RE - MACHINERY AND EQUIPMENT	(44,600.00)	(44,600.00)	(44,600.00)	(44,600.00)	(44,765.56)
509-000-146.00	OFFICE EQUIPMENT	6,186.79	6,186.79	6,186.79	6,186.79	6,186.79
509-000-147.00	ACCUM DEP RE - OFFICE EQUIP	(6,186.79)	(6,186.79)	(6,186.79)	(6,186.79)	(6,186.79)
509-000-162.00	DOCKS	691,940.11	691,940.11	691,940.11	691,940.11	691,940.11
509-000-163.00	ACCUM DEP RE - DOCKS	(320,583.99)	(343,395.99)	(365,798.99)	(388,082.99)	(410,366.99)
509-000-195.00	DEFERRED OUTFLOWS - PENSION RELATED	0.00	0.00	0.00	10,475.00	10,475.00
	Total Assets	1,187,153.07	1,675,533.54	1,567,478.36	1,483,671.81	1,443,976.58
*** Liabilities ***						
509-000-202.00	ACCOUNTS PAYABLE	393.22	266,234.94	1,808.85	513.55	549.90
509-000-205.00	DUE TO STATE	0.00	0.00	0.00	0.00	0.00
509-000-334.00	NET PENSION LIABILITY	0.00	0.00	0.00	56,141.00	56,141.00
509-000-214.00	DUE TO OTHER FUNDS	0.00	0.00	0.00	0.00	0.00
509-000-228.13	DUE TO STATE	0.00	0.00	0.00	0.00	0.00
509-000-228.27	MESC - UNEMPLOYMENT	0.00	0.00	0.00	0.00	0.00
509-000-230.00	DUE TO OTHER GOVERNMENTAL UNITS	0.00	0.00	6,220.00	0.00	0.00
509-000-257.00	ACCRUED WAGES	1,770.64	1,936.76	2,141.32	669.88	0.00
509-000-258.00	ACCRUED FRINGE	577.76	601.48	646.03	180.64	0.00
509-000-339.00	DEFERRED REVENUE	0.00	3,660.00	272,433.18	0.00	102.16
	Total Liabilities	2,741.62	272,433.18	10,816.20	61,365.07	56,793.06
	Net Position	83,029.30	70,594.18	56,933.71	45,391.29	87,581.63
	NET PENSION LIABILITY	0.00	0.00	0.00	(56,141.00)	(56,141.00)
*** Fund Balance ***						
509-000-350.00	PRIOR PERIOD ADJUSTMENT	660,326.59	660,326.59	660,326.59	660,326.59	660,326.59
509-000-353.00	CONTR CAPITAL - STATE OF MI	510,615.59	510,615.59	510,615.59	510,615.59	510,615.59
509-000-390.00	FUND BALANCE	(291,010.92)	(370,439.85)	(151,750.94)	(42,482.14)	(132,544.56)
509-000-395.00	RETAINED EARNINGS	197,252.64	197,252.64	197,252.64	197,252.64	197,252.64
509-000-396.00	RESTRICTED EARNINGS	186,656.48	186,656.48	186,656.48	186,656.48	186,656.48
	Total Fund Balance	1,263,840.38	1,184,411.45	1,403,100.36	1,512,369.16	1,422,306.74
	Beginning Fund Balance	1,263,840.38	1,184,411.45	1,403,100.36	1,512,369.16	1,422,306.74
	Net of Revenues VS Expenditures - Current Year	(79,428.93)	218,688.91	153,561.80	(90,062.42)	(35,123.22)
	Ending Fund Balance	1,184,411.45	1,403,100.36	1,556,662.16	1,422,306.74	1,387,183.52
	Total Liabilities And Fund Balance	1,187,153.07	1,675,533.54	1,567,478.36	1,483,671.81	1,443,976.58

PRELIMINARY ENGINEERING STUDY

FOR
REPAIRS AND UPGRADE AT THE
CHEBOYGAN COUNTY
MOORING AND LAUNCHING FACILITY
1080 NORTH HURON STREET
CHEBOYGAN, MICHIGAN, 49721

PREPARED FOR:

THE COUNTY OF CHEBOYGAN
AND
CHEBOYGAN COUNTY WATERWAYS COMMISSION
870 SOUTH MAIN STREET
CHEBOYGAN, MICHIGAN 49721

PREPARED BY:

UNITED DESIGN ASSOCIATES, INC.
111 NORTH MAIN STREET, SUITE 3
CHEBOYGAN, MICHIGAN 49721

OCTOBER 2008

JOB NUMBER: 2006-35

PRELIMINARY ENGINEERING STUDY REPORT

SYLLABUS

The following Preliminary Engineering Study for the Cheboygan County Mooring and Launching Facility repairs and upgrading project includes detailed topographic and hydrographic surveys, previous soil boring information and on-site condition inspection of the site. This Preliminary Engineering Study and the accompanying drawings include the existing site plans; existing floating pier systems and utilities including fuel system condition analysis; comfort station and site condition analysis; and proposed plans and details for repairs and upgrading of the site, the floating pier systems, and the comfort station and site structures. This Preliminary Engineering Study includes detailed cost estimates for financial planning and scheduling for the repairs and upgrading at the existing Cheboygan County Mooring and Launching Facility, 1080 North Huron Street, Cheboygan, Michigan 49721. Cost estimates included in this Preliminary Engineering Study are for a single project construction at one time and/or several phased projects over several years depending upon funding availability.

PROJECT LOCATION AND SITE FEATURES

The Cheboygan County Mooring and Launching Facility is located in the City of Cheboygan on the West side of the Cheboygan River near the mouth of the Cheboygan River which flows into the Straits of Mackinac. The facility is adjacent to the City of Cheboygan Gordon Turner Park which includes parking, picnic area, playground equipment, nature walkway, swimming area, restrooms, and soccer fields.

The existing mooring facility contains 2 floating pier systems for a total existing mooring capacity for 83 craft. The mooring facility is located in an excavated basin off of the edge of the Cheboygan River. The mooring facility has boater services which include parking, shelter picnic area, showers, restrooms, laundry, fuel (gasoline and diesel), sanitary pump out, boater craft service/power centers, potable water and electrical services.

There is an existing Launching Ramp facility immediately adjacent to the mooring facility that includes restrooms, vehicle and trailer parking areas, fish cleaning station, and 2 each two lane launching ramps which are located on the Cheboygan River immediately across from the U.S. Coast Guard Cutter Mackinaw Mooring facility.

The project site is on the Cheboygan River which has a vast headwater system and is the main entrance to the Cheboygan County Inland Waterway System used by pleasure craft and recreational fishing craft. This waterway system reaches several large inland lakes, Mullett Lake, Black Lake, Burt Lake, Crooked Lake and Pickeral Lake through an extensive river system with navigable channels and lock systems which extends almost to Lake Michigan near Petoskey, Michigan.

The Cheboygan River, upstream, into the heart of the City of Cheboygan is used by recreational craft, commercial craft, and commercial freighter craft with U.S. Army Corps of Engineers navigable river channel depths of approx -26' below low water datum. The Cheboygan River Area has bulk fuel storage tanks, pleasure craft boat storage and repair facilities, U.S. Coast Guard Cutter Mackinaw Mooring Facility, U.S. Department of the Interior Fish and Wildlife Research Vessel mooring facility, two private marine contractor facilities with tugs and barges, commercial ferry boat facility operations to and from Bois Blanc Island, commercial ferry storage in the river for winter months, various numbers of pleasure craft mooring storage areas, launching facilities for recreational fishing and recently constructed riverbank bulkhead walkways and fishing platforms for public use.

PROJECT DESCRIPTION

This Preliminary Engineering Study addresses and analyzes the conditions of the existing facilities and the economic and practical feasibility and extent of the need for the repairs and upgrades at the Cheboygan County Mooring and Launching Facility in the City of Cheboygan, Michigan. A Preliminary Engineering Study for the repairs and upgrades for the existing mooring, site, and shore facility for this project was completed and is included herein. This study also focuses on upgrading the facility in order to comply with current ADA (Americans with Disabilities Act) requirements and ADAAG (Americans with Disabilities Accessibility Guidelines), State of Michigan Bureau of Construction Codes, Local Construction Code requirements and the State of Michigan Department of Natural Resources Floating Pier System requirements especially for mooring slip spacing and increased mooring slip electrical requirements. This study also includes a detailed construction cost estimate for the repair work which is itemized into various groups and items for construction repairs and upgrading.

Current technological design guidelines, construction codes, various agencies requirements, and the deteriorated condition of the facility were taken into consideration in determining the necessary need for the repairs and upgrades, including the safety and liability issues for the various structures and site facilities. These were utilized along with the physical, natural, and geological features of the site. All of these factors were analyzed to arrive at the recommendations of this Preliminary Engineering Study for this facility. Recommended guidelines used in this study were furnished by the State of Michigan, Department of Natural Resources; State of Michigan, Department of Environmental Quality; State of Michigan, Department of Public Health; State of Michigan Bureau of Construction Codes; ADA (Americans with Disability Act) and ADAAG (Americans with Disabilities Act Accessibility Guidelines); and the U.S. Army Corps of Engineers.

This study's proposed repairs and upgrade to the existing facility was determined subsequent to a series of on-site inspections, reviews and various meetings and/or discussions with the mooring facility's Harbor Master, Cheboygan County Waterways Commission, Cheboygan County, City of Cheboygan, and State of Michigan, Department of Natural Resources, Parks and Recreation Boating Programs Personnel.

The mooring facility repair and upgrade project is outlined as follows and includes repairs and upgrades to the existing comfort station building including upgrade of the ventilation and lighting systems and the addition of boater restrooms and shower facilities in order to comply with current construction codes, ADA (Americans with Disabilities Act) requirements and ADAAG (Americans with Disabilities Act Accessibility Guidelines). The project also includes repairs, renovations, and upgrades to the existing site use and mooring and launching areas including, lighting and electrical systems; water, sanitary, and fuel systems, floating pier systems and service building in order to meet the new State of Michigan, Department of Natural Resources Mooring and Launching Facility Requirements, and all other agencies' codes, and requirements as previously listed. The mooring area repair and upgrade project recommendations include removal of the existing floating pier systems and replacement with a new floating pier system, including the service pier area and mooring utilities which include renovations and upgrades to the fuel system, comfort station, other site buildings, and site use amenity upgrades and additions.

PROJECT BENCH MARK:

The project bench mark which has been located and used for this project was established during prior construction projects at the site and is defined as follows:

The project bench mark on site is a painted square on top of the steel sheet piling cap on the South side of the steel sheet piling of the Northerly sheet piling wall of the North launching ramp at the Launching facility. This bench mark location is 48.3' East of the Westerly shore end of the steel sheet pile wall. The top of the cap elevation at this location is 583.30 and refers to 1955 International Great Lakes Datum.

This project bench mark for this study and the topographic and hydrographic surveys on the accompanying drawings are based upon 1955 International Great Lakes Datum (in lieu of 1985 Datum). In order to avoid confusion during cross referencing of this sites previous construction projects 1955 IGLD was used because all existing drawings and documents from prior construction at this site refer to 1955 IGLD. The conversion from 1955 IGLD to the 1985 datum is the addition of 0.70 feet.

TOPOGRAPHIC AND HYDROGRAPHIC DATA

The topographic and hydrographic features which exist at the site as shown on the Preliminary Engineering Study drawings were compiled from reference material supplied by the Owner, past site construction drawings and documents, the State of Michigan, Department of Natural Resources, and the U.S. Army Corps of Engineers with substantiating data from topographic and hydrographic surveys completed by United Design Associates, Inc., for prior projects and from on-site field work investigation performed specifically for this current proposed repair and upgrade project at this site. Horizontal control was tied into existing control, and property survey points. The Cheboygan River U.S. Army Corps of Engineers Navigable channel line was identified by utilizing the U.S. Army Corps of Engineers channel point and reference data for the Cheboygan River.

Water depth soundings were taken specifically for this project on September 19, 2008 and are shown on the Preliminary Engineering Study drawings mooring area plan. As previously noted, this Hydrographic sounding survey is based upon 1955 International Great Lakes Datum. Water surface elevation on September 19, 2008 was 577.30 or +0.5' above the low water datum elevation of 576.8 (based upon 1955 IGLD).

References to hydrographic information were also taken from previous water depth soundings performed at this site and adjacent sites, and from the U.S. Army Corps of Engineers river channel location and river channel soundings.

PROPERTY INFORMATION

A property survey of the site was furnished by the Owner specifically for a prior Preliminary Engineering Study for this site. Pertinent property corners of this site were field located for this project. Property Corner and property line information is shown on the site plans of the Preliminary Engineering Study drawings.

This repair and upgrade project construction does not affect any shore areas near the property lines. The existing mooring system is located within the confines of the existing facilities excavated inland basin from the adjacent rivers water edge line. The proposed main floating pier system mooring layout is recommended to remain within the same mooring area confines as the existing main floating pier system.

SOIL BORING INFORMATION

Soil boring information used for this Preliminary Engineering Study was taken from soil borings specifically done for the original construction of this facility.

The Cheboygan area including this sites sub soils are red clay of varying strengths and consistencies. At this location, approximately 30' below the surface is hard pan clay/gravel materials consisting of hard packed deposits of glacial outwash gravel and till with the red clay.

No soil borings have been specifically taken for this current proposed repair and upgrade project. If soil borings are deemed necessary for final design, the Owner will be requested for authorization for the taking of such soil borings in the final design of this project.

WAVE/ICE DATA AND CONDITIONS

Design water surface elevation for 100-year frequency water surface elevation is 582.5 as taken from the 1988 Great Lakes Open Coast Flood Level Publication. These elevations are based upon 1955 IGLD. Recorded wind speeds in the area have been recorded at the 100-year wind speed velocity of 81 MPH as taken from the Nuclear Regulatory Publication "Historical Extreme Winds for the United States" published by the National Climate Center. The nearest winter recording site used for this analysis is Mackinaw City, Michigan. The yearly average water surface elevation for the Straits of Mackinac and Lake Huron varies from between +1' LWD to +2' LWD. Low water datum for Lake Huron is elevation 576.8. The facilities mooring area basin has basically good protection from wind caused wave action.

Boating activity ceases during the winter months of ice freeze-up which usually lasts from mid to late December until early to mid April. The Cheboygan River has commercial marine traffic, fuel barges and U.S. Coast Guard Cutter traffic all year long. The river in front of the Cheboygan County Marina usually remains open during the winter due to the U.S. Coast Guard Cutter Mackinaw leaving and entering their moorings, however, the mooring basin area of this facility usually freezes over during the winter with varying amounts of ice.

The Cheboygan Area and the Straits Area ice conditions are such that ice depths in the winter can reach depths of 36" or more.

ICE SUPPRESSION SYSTEM

The existing facility's floating pier mooring system does not have an ice suppression system. It is recommended in this study that the new repair and upgrade project include an ice suppression system to protect the floating pier mooring system.

Ice suppression systems energy costs for other regional mooring facilities have ranged from \$17 to \$22 per month per slip. This will vary with current energy costs, specific mooring and ice suppression system layout, the number of motor/blower units required for ice suppression, and the systems annual run time depending upon the degree of winter weather (coldness) and ice conditions from year to year. These costs are offered only as a general guideline and are referenced from other facilities.

PREVIOUS DREDGING AND UNCONSOLIDATED SEDIMENT SOIL SAMPLE TESTING

In the original construction of this facility in the late 1980's the mooring facility basin was dredged to a depth of 6' below low water datum. With the recent (and continuing) low water levels, an emergency dredging project was completed in 2000 which lowered the South, middle, and outer end of the North fairway to a dredge depth of 9' below low water datum. The Southerly head pier was not moved during this emergency dredging project and the water depth under the head pier is still 6' below low water datum. During the emergency dredging project in 2000, the Michigan Department of Environmental Quality required that unconsolidated sediment soil sample testing to be performed

throughout the mooring basin. The basin area that was dredged to a deeper depth had satisfactory test results and the dredged material was disposed of at an upland location approved by the permitting agencies for that project.

The Westerly shore portion of the North fairway mooring basin area was left at 6' below low water datum due to certain element concentration problems encountered during the unconsolidated sediment soil sample testing results that were above the allowable concentration upper levels. If dredging is considered in the future for this area additional unconsolidated sediment soil sample testing will be required in order to determine where this material will be disposed of (a upland landfill or to a licensed hazardous materials landfill).

In the Cheboygan area it appears from unconsolidated sedimentation soil sample testing on other area projects that the existing clay soils contain concentrations of chromium that occurs naturally above the testing allowable concentration limit. The State of Michigan at this point requires testing and determinations on a project by project basis in the Cheboygan area, and it is their determination that dictates the types and locations of allowable disposal.

PREVIOUS REPAIR AND UPGRADE PROJECTS

Including the annual maintenance repairs at this facility, the Owner has over the past years completed several major repair and upgrade projects at the facility for various reasons including age deterioration and repairs for safety, and liability reasons. A general listing of these projects and the approximate year the work was completed are as follows:

<u>Project</u>	<u>Year</u>
Launching Ramp upgrade and repairs	1996
Launching Ramp restroom building total rebuild new	1999
Marina Emergency dredging	2000
Launching Ramp upgrade and repairs	2001
Marina Fuel system upgrade and repairs	various years
Shelter buildings (2) - added	2003
Fish Cleaning Station at Launching Ramp - added	2005
Launching Ramp resurfacing and repairs	2006
Flotation Unit Repairs in mooring service pier area	2007
Several electrical box replacements on head piers	2008

With the recent Launching Ramp area repairs and resurfacing, the Launching Ramp restroom building replacement and the recent addition of a Fish Cleaning Station, the Launching Ramp area is in relative good condition in accordance with current standards the exception being the site lighting which is addressed in this report.

EXISTING SITE - SHORE AREA

The existing facility location in the City of Cheboygan, Michigan has approximately 800 lineal feet of frontage along the Cheboygan River. The facilities mooring basin is approximately 420 feet square and was excavated inland and has a perimeter protection of pre-cast concrete plank (2' wide x 12' long) that are bolted together in rows.

The site is relatively flat with an elevation of 585' in the launching area to the top of the river and basin bank plank top which is approximately elevation 582.3'. The mooring area of this site is relatively flat being an average elevation of 582.3' to 584' except for a partial earthen berm area situated along the North side of the basin which contains the facilities buried fuel tanks with a top

ground elevation of approximately 590'. The shore area of this facility includes a mooring facility comfort station with restroom and shower areas for boaters, a harbor master office with check in area, laundry room and vending area, and utility chases. The utility chases house the electrical panels and water supply backflow and meter for the site and mooring area. Behind the comfort station, there is an area of curbed and asphalt parking along the street with vehicle parallel parking for approximately 30 vehicles.

Two each roofed over shelter buildings (24'x24') located one on each side of the comfort station were constructed in 2003 and are located at the head of each of the two floating pier systems.

The narrow lawn area along the West side of the mooring basin and along the North side of the morning basin has a lawn irrigation system which draws its water supply out of the mooring basin in the Northwest and Southwest corners.

The Launching Ramp area contains a restroom building with men and women restrooms and was newly reconstructed in 2001. The Launching Ramp curbed parking area was resurfaced in 2006. The parking area has a capacity for approximately 65 vehicle/trailers and car parking for approximately 28 vehicles. The parking area has a series of 30' high light poles and fixtures that were installed during the original construction of the launching facility. The facility has two each two lane launching ramps with center skid piers and steel sheet piled sides. Both launching ramps have reinforced concrete slab tops and concrete planks extending into the Cheboygan river below datum. The ramps have been extended (due to low water levels) and updated with increased slopes as part of the repair and upgrade projects in 1996 and 2001 at the Launching Ramp site. In 2005 a fish cleaning station with grinder table, cleaning area and utility room was constructed on the Launching Ramp Site. This fish cleaning station is located near the South launching ramp.

Existing site condition photographs are included in this Preliminary Engineering Study report. These photographs were taken on November 26, 2007. The photographs display the existing conditions of the mooring facility as explained in this report.

EXISTING UTILITIES

Immediately adjacent to the site are existing public utility telephone and electric services, and City of Cheboygan municipal water and sanitary services as indicated on the plan sheets and briefly described in this section. The numerous utility lines (piping and conduits) to this mooring facilities systems are buried underground.

Water:

The potable water for this facility is supplied by the City of Cheboygan municipal water system. There is a 6" diameter municipal water line extending along the West side of North Huron Street adjacent to this site. Also, there are two fire hydrants along the West side of North Huron Street near the facility. There is a 4" diameter water line extending from Huron Street to the mooring facility comfort station which is connected to a meter and a back flow preventor above the floor in the pipe chase. There are shut-off and drain valves in pits for the 4" water lines going into and out of the comfort station structure. This water line service extends out of the comfort station building and then tees to two 3" diameter water lines connected to each of the two shore connection abutments. The two shore connection abutments each contain a water valve that connects the 3" diameter water line to the 2-1/2" diameter waterlines of the two each floating head pier systems and reduces down to a 2" water line approximately half the distance of the length of each head pier.

There is a separate City of Cheboygan municipal water service extending and connected to the Launching Ramp Area restroom building which has a valve and drain manhole outside of the

building. There is also a separate City of Cheboygan municipal water service extending and connected to the fish cleaning station. The fish cleaning station water line is located between the Launching Ramp facility's South parking lot Southerly curb and the property line

Sanitary:

An existing 8" City of Cheboygan municipal gravity sanitary sewer line extends along North Huron Street and has a connecting manhole in the street from where the gravity sanitary sewer line runs to the comfort station sanitary sewer connection. The sanitary sewer force main for the floating service pier area pump-out connects to a separate City of Cheboygan municipal sanitary system manhole located in the middle of North Huron street adjacent to the mooring facility. The service pier has one Jonny Trap sanitary boater pump out on the service pier.

There is a separate City of Cheboygan municipal gravity sanitary sewer service that extends and connects to the Launching Ramp restroom building and there is also a separate City of Cheboygan municipal gravity sanitary sewer service that extends and connects to the fish cleaning station. This sanitary sewer service is located between the Launching Ramp facility's South parking lot Southerly curb and the property line.

Electrical/Power:

Existing electrical power lines and telephone lines extend down North Huron Street to the mooring facility site. There is an electrical transformer and metering system located at the back corner of the comfort station. From this transformer power is distributed to two existing 1,200 amp Square D I-line electrical panels in the comfort station that feed the comfort station and feed each of the two floating pier systems.

There is a separate electrical service and metering service to both the launching ramp restroom building and to the fish cleaning station.

Communication Systems:

There is a telephone service in the comfort station and at the floating service pier. There are existing public pay telephones on shore near the mooring facility head pier and also near the comfort station.

Fuel:

Located to the North and adjacent to the marina basin is a mound area that contains two underground fuel storage tanks (gasoline and diesel) that are used for craft fueling services which are available at the mooring area on a separate floating fueling/service pier. This mooring fuel tank area has a drive that extends East from Huron Street to the mound area for fuel truck access and fuel tank refueling. The existing fuel tanks were installed during the original construction of the marina in 1988 and consist of one 6,000 gallon gasoline fuel tank and one 6,000 gallon diesel fuel tank. Recently remote fills have been added and over the years the fuel piping to the service pier has been upgraded.

EXISTING MOORING FACILITIES

The existing floating pier systems main mooring area was constructed and installed under the original mooring facility project in 1988. The site has a limited ice suppression system with only propeller driven submerged electrical units placed each winter at the shore end ramp connections to the floating pier units. This makes the age of both of these systems approximately 20 years old

respectively. The typical life expectancy of a floating pier system is generally anticipated to be approximately 20 years to 25 years.

The floating service pier with fuel is located at the outer end of the Southerly floating pier system. This floating service pier contains water, sanitary, fueling services, telephone service and a small sized service pier building. The existing ramps at the shore connections for the floating pier systems are 24' long and do not meet the current ADA (Americans with Disabilities Act) requirements and ADAAG (Americans with Disabilities Act Accessibility Guidelines). The existing service pier building does not meet the current State of Michigan, Building code requirements, current ADA (Americans with Disabilities Act) requirements and ADAAG (Americans with Disabilities Act Accessibility Guidelines) for dimension clearances.

The existing main floating head pier structures are over 400' long and are 8' wide and the existing floating finger piers are 4' wide. The existing main floating head pier is over 400' long and does not meet the current State of Michigan, Department of Natural Resources requirement of 10' wide for floating head piers over 400' long. The center to center existing finger pier spacing dimensions do not meet the new State of Michigan, Department of Natural Resources finger pier width spacing requirement for increment sizes for various slip lengths. It is also to be noted that this original floating pier system was not constructed with a present day "monocoque" cross bulkhead design system that is now being built.

The existing mooring slip sizes and center to center spacing are as follows:

30 foot slips	(4' wide)	34' c/c
40 foot slips	(4' wide)	36' c/c
44 foot slips	(4' wide)	40' c/c
60 foot slips	(5' wide)	51.5' c/c

Since the construction of this facility in 1988, the Michigan Department of Natural Resources has increased the center to center spacing of the various slip size widths and these current requirements are as follows:

30 foot slips	(4' wide)	34' c/c
38 foot slips	(4' wide)	39' c/c
44 foot slips	(4' wide)	43' c/c
60 foot slips	(5' wide)	51' c/c

Therefore, the mid range sizes of existing slips at this facility do not meet the State of Michigan, Department of Natural Resources current center to center spacing for various slip size widths.

The existing mooring facility slip sizes and numbers are as follows:

Existing Floating System Mooring Slip Numbers

<u>Size</u>	<u>Number and Percentage</u>
30' slip	24 (29%)
38' slip	22 (27%)
44' slip	29 (35%)
60' slip	7 (8%)
large slip	1 (1%)
	<hr/> 83 (100%)

The existing craft spacing, head pier widths, and electrical receptacle requirements at this facility do not meet the current State of Michigan, Department of Natural Resources requirements. These issues along with the deteriorated condition of the existing floating pier system warrants complete replacement of the main floating pier system. This is shown on this study's 24" x 36" Preliminary Engineering Study Drawings.

Also in the summer of 2008 several junction boxes located under the main head pier were replaced due to their rusted and deteriorated condition.

EXISTING COMFORT STATION

This facilities comfort station was constructed during the original mooring facility project in 1988. The condition of the comfort station and dimension inspection conclusions are noted on the existing building floor plan drawings included with this Preliminary Engineering Study.

Since the 1980's construction of the comfort station, ADA (Americans with Disabilities Act) requirements and ADAAG (Americans with Disabilities Act Accessibility Guidelines) for dimensions for fixtures, building layouts and accesses have changed. Certain existing restroom fixtures do comply with current ADA (Americans with Disabilities Act) requirements and ADAAG (Americans with Disabilities Act Accessibility Guidelines), however, the comfort station does have shower and toilet fixtures that do not comply with current ADA (Americans with Disabilities Act) requirements and ADAAG (American with disabilities Act Accessibility Guidelines) for dimensions. Also, the existing entrance doors do not meet the current ADA (Americans with Disabilities Act) requirements and ADAAG (Americans with Disabilities Act Accessibility Guidelines) for access dimensional clearances required on each side of these doors.

In order to meet the current ADA (Americans with Disabilities Act) requirements and ADAAG (Americans with Disabilities Act Accessibility Guidelines) which are dimensionally larger than the existing dimensions, major building structural changes would be required. Currently there is no additional space within the existing comfort station building to absorb the additional space which is required for these changes.

The following is a listing of the existing number of comfort station restroom fixtures in comparison with the current State of Michigan, Department of Public Health Table for Fixture Types and Numbers required for this facility's 83 existing slips. As shown, the existing fixture numbers do not meet the current State of Michigan, Department of Public Health fixture types and numbers required for various sizes of Marinas. The dimensional layouts of the fixture areas specifically for the toilets and the showers do not meet the current ADA (Americans with Disabilities Act) requirements and ADAAG (Americans with Disabilities act Accessibility Guidelines).

Existing Boaters Restroom Fixtures (men and women)

	women	men	total
Toilets	3	2	5
Urinals	0	1	1
Lavs	3	3	6
Showers	2	2	4

With this facility's existing mooring capacity of **83** slips the following lists the minimum Michigan Department of Public Health table fixture types and numbers required for this 83 slip facility.

CURRENT MICHIGAN DEPARTMENT OF PUBLIC HEALTH TABLE FOR FIXTURE TYPES AND NUMBERS REQUIRED FOR VARIOUS SIZES OF MARINAS						
Number of Boat Slips	Number Toilets		Number Urinals	Number Lav's		Number Showers
	M	F	M	M	F	TOTAL
10 - 25	1	1	0	1	1	2
26 - 50	2	2	0	2	2	2
51 - 80	2	3	1	3	3	4
** 81 – 125	2	4	2	4	4	4
126 – 200	3	5	2	5	5	6
201 – 250	3	6	3	6	6	8
251 – 300	4	7	3	7	7	8

**** = this existing layout**

During this Preliminary Engineering Study, and on-site inspections and reviews of the existing comfort station including comments from Owner personnel, it was determined that the existing ventilation system and light fixture systems in the comfort station require upgrading.

UTILITIES CONDITION AND SITE AREA PROPOSED REPAIRS AND UPGRADE

The specific results of the on-site condition inspection of this facility are shown on the mooring system plan included with the Preliminary Engineering Study Drawings.

Water:

There is a need for repairs to the water lines and connections that extend from the shore abutments across the rotating floating ramps that connects to the floating pier system. These lines are worn and are disconnecting with movement. More flexibility and movement with new connections is required for these utility lines in order to alleviate this problem. Easy to use and effective winter drainage systems installation is recommended with the new utility repairs and upgrades.

The State of Michigan, Department of Labor and Economic Growth, Bureau of Construction Codes requires individual hot water mixing valves at the fixtures. The Owner should look at recirculation system lines for the hot water system (with small inline circulation pumps) especially if the hot water takes too long to activate after the shower water or sink water is turned on. Insulating water lines is definitely recommended.

Sanitary:

There is a need for repairs to the sanitary lines and connections that extend from the shore abutments across the rotating floating ramps that connects to the floating pier system. These lines are worn and disconnecting with movement. More flexibility and movement with new connections is required for these utility lines in order to alleviate this problem. Easy to use and effective winter drainage systems installation is recommended with the new utility upgrades.

The existing Jonny Trap sanitary pump-out on the floating service pier does not function properly at times and needs to be replaced.

The State of Michigan, Department of Labor and economic Growth, Bureau of Construction Codes requires trap primers in any new building floor drains and individual hot water mixing valves at the fixtures.

Electrical/Power and site lighting:

The Launching Ramp site light poles and fixtures were installed during the projects original construction. The poles are rusted, and many poles are bent or damaged from impact. Several of the concrete bases of the light poles are cracking and show deterioration, and one light pole base has shifted out of plumb and the pole is leaning. The site mooring area bollards have cracked lenses and moisture inside of the fixture areas. There is a definite need to upgrade the existing Launching Ramp site lighting with new poles and fixtures not only from a damaged and deterioration need, but also from a safety and liability standpoint.

The existing mooring system electrical panels (2 each) 1,200 amp I-line panels for the mooring system are inside of a pipe chase in the existing comfort station which has one access in and out the chase.

The existing craft numbers and sizes of receptacles at the various sizes of finger piers do not meet the current State of Michigan Department of Natural Resources electrical requirements for the various sizes of slips. This electrical upgrade requirement was established with the upgrade of the State of Michigan Department of Natural Resources Floating Pier System performance specification dated 1999. Therefore, the existing electrical service and distribution system capacity is insufficient for the new electrical receptacle requirements for the craft sizes as specified by the State of Michigan, Department of Natural Resources. Therefore new higher capacity electrical service lines and transformers are required, along with an increase in the number and capacities of the electrical supply panels for the mooring system.

Also, the 2002 National Electrical Code includes a new electrical datum plane requirement for connections and receptacles. This eliminates junction boxes that are located below the deck that this existing system has. The current electrical system has larger size wires along the head piers and junction box tap connections under the deck that feed the power pedestals with smaller size tap electrical wires. The new electrical code requires electrical connections to be located above the deck of both fixed and floating pier systems. This has made the need for the craft service/power centers with their connections to be above the deck to act as junction boxes. Because of the limiting existing manufactured sizes of the craft service/power center bases and bus bars, the wire size for circuits has to be less, thus increasing the number of circuits on a head pier system for a given length and number of power centers. The current electrical requirement for electrical I-line panels that ingress and egress is required from a room each side of the electrical panels as per National Electrical Code Section 110.

There is an ongoing repair problem with the wiring, conduit and connections that extend from the electrical panels across the rotating floating ramp that connects the floating pier system to the shore abutment. More flexibility and movement is required for these utility lines in order to alleviate this problem. Some critically deteriorated electrical junction boxes have recently been replaced under the decking in the utility area of the floating units due to the extreme deterioration and for safety and insurance reasons. The remaining electrical junction boxes have been found to be rusted and deteriorated to the point that they need immediate replacement at this time.

Fuel:

Due to the location of the Cheboygan County Mooring and Launching Facility being situated at the entrance of the Cheboygan River which is the main entrance of the Inland Waterway System, this facility historically has a significant amount of fuel sales. The fuel tanks were installed with the original project construction and are now twenty years old. Fuel tanks typically have a thirty year warranty. The existing tanks are 6,000 gallon each for both gasoline and diesel fuel service to the boaters. Because of the current fuel demand from the boaters and fuel users of the facility, the Owner believes that large capacity fuel tanks are needed to better handle capacity demand. With this project the Owner should review the need to install new larger fuel tanks with this repair project. With the age of the existing system and the new fuel system equipment and products on the market which include double wall containment and fuel leak detection systems, it appears the upgrade of the entire fuel system would be advantageous. Also, from a safety standpoint we would recommend spring hose reel rewinds instead of electric rewinds.

Site and sidewalks:

The existing site sidewalks specifically adjacent to the existing building entrances and at various locations on the site, have a vertical separation (settlement) of greater than ½" which does not meet existing ADA (Americans with Disabilities Act) requirements and ADAAG (Americans with Disabilities Act Accessibility Guidelines) for the site sidewalks. With the extent of the utility site work to be constructed and the existing condition of the sidewalks, specifically at the comfort station and shelter buildings, it is recommended to replace the existing site sidewalks around the existing comfort station and shelter buildings along with the brick paver sidewalks.

As noted on the existing site condition plan, other specific repairs are required for flag pole, garbage enclosure, irrigation system, and shore protection reinforced concrete plank sections.

The shore protection reinforced concrete plank sections throughout the basin are in relatively stable and satisfactory condition except for two locations as noted on the existing site condition plan. It is recommended to replace these concrete planks with new ones in these two areas. Otherwise, the planks do have some minor deficiencies such as cracks and broken bolts, etc., however it is recommended to replace those as needed in the future when the deficiencies cause stability, liability and safety issues.

MOORING AREA CONDITION AND PROPOSED MOORING AREA REPAIRS AND UPGRADE

An on-site underwater condition inspection was completed on the entire floating pier and service pier system within the last two years. This inspection was performed with the assistance of personnel from Floatation Docking Systems, Inc. of Cedarville, Michigan. The specific results of this on-site underwater condition inspection are summarized as follows and are also shown on the floating pier mooring system plan included with the Preliminary Engineering Study drawings.

Generally, the main mooring area floating head pier bottom galvanized steel sheet system that protects the bottom of the flotation area was found to be in a deteriorated condition.

Numerous areas of the underside of the head piers and finger piers were deteriorated to the point that the galvanized sheeting is gone. This deteriorated condition has jeopardized the structural integrity of the floating system. Since this situation was noted, the Owner has had repairs done to the floating service pier area. Flotation Docking Systems of Cedarville Michigan has thus attached a new supplemental floating skin with framing to the underside of the service pier floating units. Numerous bottom galvanized sheeting of the entire systems floating units specifically the head piers are in bad condition with numerous other areas where the galvanized sheeting is either rusted completely away or partially rusted away to where the structural integrity is gone.

There are several locations where the lower pressure treated timber side boards are split horizontally, and where the flotation free board height is different over both long and short distances and the sloping of the surface deck area is visually noticeable. These areas are also noted on the existing conditions site plan. These conditions are typically caused by ice expansion and ice force pressures both horizontal and vertical to the sides of the floating pier units. This is also noticeable in the service pier area which has recently undergone underside repairing.

The floating service pier building that is located on the service pier area is in need of repairs and renovations and the existing building does not comply with current State of Michigan, Building Code requirements, ADA (Americans with Disabilities Act) requirements and ADAAG (Americans with Disabilities Act Accessibility Guidelines).

Also at several locations, the unit's usable flotation free board appears to be non-existent. The State of Michigan, Department of Natural Resources performance specification for floating piers has specified ranges for free board heights for live and dead loads. There are also specific live load capacities in the floating pier performance specification. Also, the existing additional flotation that had been provided under the ramp areas, beneath the floating units, is also ineffective or non-existent and it is especially noted on the South floating head pier system.

The timber decking is extremely weather checked and is deteriorating in places to the point where there is a loss of surface.

As noted there are some locations where the timber fenders are damaged and out of plumb, and are not properly secured to the head piers side board system. This is typically caused by craft impact. If areas have been repeatedly damaged, the side board structure is in need of repair.

The existing low water condition that has been prevalent for the last several years is such that the bottom of the ramp structure is resting on the shoreline protection section reinforced concrete plank. This is affecting the ramp structure and has caused damage to the ramp railing at several locations.

At the Northerly floating pier system T-pier end, the system is out of alignment to the point that some of the telescoping spuds are jammed together causing a noticeable difference in the head pier flotation and slope.

The shore connections for the floating pier systems utilities have their flexible connections disconnected and/or damaged.

It should be noted that with this floating pier system's age and existing deteriorated condition, certain potential ice force conditions and impact could damage the existing floating pier system to the point

of affecting the safety of public usage and liability of the Owner, and/or could render a portion of the floating system unusable.

The specific results of this on-site condition inspection are shown on a mooring system plan included with the Preliminary Engineering Study drawings. Due to the age of the floating pier system being at the end of its life expectancy, the deteriorating condition areas of the mooring structures floating units, the age and condition of the electrical system, the current State of Michigan, Department of Natural Resources requirements for electrical boat receptacle types, requirements for electrical receptacle numbers, increased electricity supply required, changes in electrical code requirements, non-compliance of the existing system with required State of Michigan, Department of labor and Economic Growth, Bureau of Construction Codes, ADA (Americans with Disabilities Act) requirements and ADAAG (Americans with Disabilities Act Accessibility Guidelines), and the current State of Michigan, Department of Natural Resources increased requirements for mooring slip spacing and pier width dimensions, it is recommended to install an entire new floating pier system at this facility.

With the recommended replacement of the floating pier system, it is also definitely recommended that an ice suppression system be installed at this facility which would perimeter the entire floating pier system in order to protect and help minimize potential ice force damage to the system during the winter months. The ice suppression system as recommended to be designed would be a submerged copper piping system with air injection blower motor units mounted on the fixed pier structure deck. The copper pipe which would completely perimeter the floating head piers and finger piers would be suspended by wire cable from the floating structure units. Maintenance costs for operating this system will need to be budgeted for yearly energy costs. Frequent winter monitoring of the floating pier system and ice suppression is highly recommended. Locating and solving problems before they are allowed to escalate will save on maintenance repair costs and will increase the floating pier systems life span expectancy.

Included in the Preliminary Engineering Study drawings is a new proposed mooring layout site plan which has been developed through a series of meetings with the Owners personnel. With the new larger required slip spacing dimensions, more space is required in order to maintain the existing total number of slips in this facility; therefore there is a loss of slips for the new mooring layout.

If the Owner requires at least the same number of existing slips, an additional floating pier system could be installed in the Southwest corner of the mooring facility basin. This will require excavation, dredging and a new segment of shoreline protection. This addition is shown on the proposed Preliminary Engineering Study plan and is separately cost estimated in this study for the Owners review and possible consideration.

A new shore connection is also recommended. The ramp connecting the floating systems to the shore is recommended to be 50' long in order to meet the current ADA (Americans with Disabilities Act) requirements and ADAAG (Americans with Disabilities Act Accessibility Guidelines). In order to meet the current ADA (Americans with Disabilities Act) requirements and the ADAAG (Americans with Disabilities Act Accessibility Guidelines) it is recommended for a facility this size to have one of each size finger pier wider to meet the minimum 5' finger pier width ADA (Americans with Disabilities Act) requirements and ADAAG (Americans with disabilities Act Accessibility Guidelines).

The following summary of the recommended number of slips for this facility repair and upgrade project represents the number of proposed 30, 38, 45 and 60 foot craft slips and dimensions of the proposed expansion that are in accordance with or exceed the State of Michigan, Department of Natural Resources requirements.

Proposed Floating Pier System Mooring Slip Numbers

<u>Size</u>	Systems A & B <u>Slip Numbers</u>	Southwest basin corner NEW MAIN FLOATING PIER SYSTEM ADDITION <u>Slip Numbers</u>
24' slip	5	2
30' slip	9	9
34' slip	2	
38' slip	4	
40' slip	28	
44' slip	22	
60' slip	7	
larger slip (up to 100')	<u>1</u>	<u> </u>
	78	11

Grand total including New
Main Floating Pier System Addition = 89

Note: existing floating pier system facility mooring slips = 83

PROPOSED UTILITIES FOR THE FLOATING PIER SYSTEM

Present day design standards recommend 240/120v electric services for mooring facilities. In order to meet the recommended standards will require new electrical service receptacles of single phase 240/120v in conjunction with one water spigot per slip. The electrical power for slips would be single phase and as shown on the Preliminary Engineering Study drawings and have electrical and water combinations for the various lengths of slips/crafts in order to meet the State of Michigan, Department of Natural Resources requirements.

It is recommended to update the floating pier mooring system electrical system at the boat slips with the following required power receptacle and water combinations required by the State of Michigan, Department of Natural Resources for each slip

32' or shorter slips	2 ea. 30 amp, 125v. 1 ea. water hose bib
33' – 44' slips	1 ea. 30 amp., 125v. 1 ea. 50 amp., 240/125v. 1 ea. water hose bib
45' or longer slips	2 ea. 50 amp., 240/125v. 2 ea. 30 amp., 125v (not required, but recommended) 1 ea. water hose bib

This update will require an increase in the electrical service to the mooring facility and increase the number of main power distribution panels for this facility to approximately 4 each 1,200 amp I-line panels with single phase power 120/240v. This mooring facility currently has no telephone service available to individual slips. Telephone service has not been included as part of our Preliminary Engineering Study for this repair and update project. There are existing pay phones on shore near the head pier and also near the comfort station. Individual personnel cell phones have reduced the need for telephone service to the individual slips.

The water and sanitary service line sizes connected to the comfort station from Huron street are recommended to remain as they currently exist. The water and sanitary services for the proposed new floating pier system would be connected as required from an existing connection location to the floating pier abutment connection location. All new piping would be placed on the new floating pier system to the slip and service pier locations as required.

PROPOSED MOORING FACILITY DREDGING

United Design Associates, Inc. completed an on-site Hydrographic sounding survey for this project on September 19, 2008. The soundings are shown on the Preliminary Engineering Study drawing mooring area site plans. From the review of these soundings, there should be no dredging required at this time for the existing main use mooring area with its existing water depths and proposed craft size uses.

The only dredging recommended at this time for this repair and upgrade project would be dredging the areas not included in the year 2000 emergency dredge project said areas being located under the existing head piers (system A and outer end of system B. These areas should be dredged for safety reasons and for better operation of the telescoping spud system. This area can be dredged after the old floating pier system is removed and the new floating pier system is installed. The year 2000 emergency dredge projects unconsolidated sediment sample testing results should be able to be used for this. If dredging is requested to be completed in the West portion of the North fairway, we believe that additional unconsolidated sediment sample testing will be required by the permit agencies in order to define a permitted disposal location for dredge material. If contamination is found with the results of the required unconsolidated sediment sample testing, the cost for the project dredging will increase significantly.

PROPOSED COMFORT STATION REPAIR, UPGRADE/ADDITION

The existing comfort station other than the recommended ventilation and lighting upgrade is in structurally good condition with no noticeable cracking of the existing masonry, tile wall or floor tile. The ceiling drywall is cracked in various locations in each restroom and these ceiling areas should be repaired.

In order to avoid major reconstruction to the existing comfort station restroom and shower areas, the recommendation is to construct a building addition or additions to the existing comfort station that would include men's and women's or unisex restroom/shower areas for boaters to comply with the State of Michigan, Bureau of Construction Codes, ADA (Americans with Disabilities Act) requirements, ADAAG (Americans with Disabilities Act Accessibility Guidelines), and the State of Michigan, Department of Public Health required fixture numbers. During this study there have been various discussions on different approaches for the addition of the restrooms with shower areas. Discussions included the construction of a separate building or additions to each end of the existing comfort station. Either of these options can be used and they do have their individual pros and cons. In this Preliminary Engineering Study the drawings and the cost estimate for the addition of restrooms with shower areas is based on the construction of 1 addition on the North end of the existing comfort station and 1 addition on the South End of the existing comfort station to house these facilities. The total number of each type of fixtures will be required in order to comply with the State of Michigan, Department of Public Health requirements for the number of fixtures required for the facilities total number of slips as listed in the Table on page 10 of this study. It is recommended to install a utility hallway between the existing building and the new unisex restroom(s) for piping and conduits required. This will allow for easily accessible and drainable piping for winter shut-down.

The interpretation of The State of Michigan, Department of Labor and Economic Growth, Bureau of Construction Codes should be verified by the local code officials before the design of these restroom and shower areas begin. The interpretation of codes is critical. United Design Associates, Inc. has recently received preliminary approval on a similar project for the State of Michigan where the intention is to leave the existing restrooms and shower areas as they currently exist and construct a building addition which will comply with the State of Michigan, Department of labor and Economic Growth, Bureau of Construction Code, ADA (Americans with Disabilities Act) requirements and ADAAG (Americans with Disabilities Act Accessibility Guidelines) for fixtures for lavatory, shower, and water closet to meet or exceed the required fixture numbers.

The building addition(s) is/are recommended to be of masonry construction to match the existing building for durability and increase in life expectancy.

PROPOSED FUEL SYSTEM REPAIR AND UPGRADE

This study's cost estimate includes the removal of the existing underground fuel tanks, the installation of new larger capacity underground fuel tanks, and a completely new fuel system. The existing fuel tanks are twenty years old and the warranty for fuel tanks is typically 30 years. The head piers when replaced are recommended to have new fuel piping and the shore fuel piping is also recommended to be new. The service pier new dispenser hose rewinds are recommended to be spring rewind type and not the electrical rewind types that currently exist. The fuel dispensers on the service pier should also have new sumps and dispensers. This facility can still use the existing tanks and dispensers, but the existing ones are already twenty years old, and more than likely there will be increased maintenance costs to maintain and use the existing equipment.

ADA (AMERICANS WITH DISABILITIES ACT) REQUIREMENTS AND ADAAG (AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES) FOR FACILITY ACCESS

ADA (Americans with Disabilities Act) requirements and ADAAG (Americans with Disabilities Act Accessibility Guidelines) for facility access will be incorporated into all plans and specifications for new site construction and new building construction.

SECURITY

Recently constructed marina mooring installation projects are including surveillance camera systems for operational usage, site security, and homeland security usage. The owner should determine whether or not a surveillance camera system should be required at this facility. This surveillance camera system is not included with the Preliminary engineering Study cost estimates at this time. The cost to furnish and install a small surveillance camera system is approximately \$10,000.00 for equipment plus installation and wiring costs. Concerns are public privacy issues and would need to be addressed by the Owner. Signage indicating that a surveillance camera system has been installed at this facility for security purposes may have to be posted at the facility.

CONSTRUCTION PHASING AND SCHEDULE

After several meetings with the Owner, and the State of Michigan Department of Natural Resources indications are, as stated by the Owner, that Owner matching funds in order to obtain State of Michigan, Department of Natural Resources Waterways Grand Funding are not available at this time for the construction of the entire proposed repair and upgrade project. The State of Michigan, Department of Natural Resources Waterways Funding Grant Agency has indicated that once funding request applications are filed that it is usually several years before funding cycle moneys would possibly become available.

If needed, this repair and upgrade project could be phased for each main type of construction specialty. This would also separate the projects into areas of construction company's expertise.

1. One phase category recommendation is the floating pier system with utilities.
2. Another phase recommendation is the building expansion and the related shore work.

If funding limits and funds availability are limited, the site construction could be phased into smaller construction segments, and should be phased according to main work categories and or work areas. These phases would be dependent upon available funds. Construction phasing could be as follows:

1. Floating Pier System A with related utilities including shore utility connections and new shore side electrical panels.
2. Floating Pier System B with related utilities including shore utility connections and new shore side electrical panels.
3. Site shore work and building work including new restroom and shower area addition(s).
4. New main floating pier system separate addition in the Southwest corner of the basin including all related site work.

The phases could be broken down into smaller increments depending on funding availability from year to year. The more work that can be done at one time the better and more cost effective the construction costs will be. If the repair and upgrade project is to be phased there will be added mobilization and subcontractor costs and the further apart time wise the repairs and upgrades are completed leaves the potential for increased inflation and project construction item and category costs as time goes on.

During the summer of 2008, due to the extreme deteriorated condition of the head piers electrical systems, several under deck junction boxes were replaced due to electrical safety issues caused by the rusting electrical junction boxes. Also encountered were safety issues with some existing craft service/power centers that have been addressed. It appears that the deteriorated electrical junction boxes and craft service/power center issues will need to be substantially addressed before a typical project construction funding cycle becomes available for this facility. For this reason, the Owner is applying for emergency matching funds from the State of Michigan Department of Natural Resources, Waterways Grant Agency for the needed critical electrical repairs. Craft service/power centers, if installed now, will be able to be reused (if manufactured with replaceable specific receptacle plate configurations) on the future funded floating pier system replacement project.

With the size of the project, the scheduling of work could be accomplished with the facility being closed in mid-August (without affecting major revenue and use time) and the construction of the repair and upgrade project would be completed over the Fall, Winter, and Spring months and have the facility operational during the month of June (without affecting major revenue and use time). The repair and upgrade project should be designed and so scheduled that contracts for construction can be awarded during the mid-summer to allow adequate time for shop drawing reviews and approvals and the ordering of materials so materials can be on-site when construction is scheduled to begin. The building(s) will be framed-in and roofed-over before the cold winter weather sets in so that the inside construction can be accomplished over the winter. The floating systems can be installed in the spring and made operational during the month of June

CONSTRUCTION PERMITS

Upon approval of this Preliminary Engineering Study and at the direction of the Owner, United Design Associates, Inc., will prepare the Joint U.S. Army Corps of Engineers and Michigan Department of Environmental Quality permit application and required detailed drawings. Applications will be signed, filed, and all fees paid for by the Owner. A list of other agency plan review and permits that may be required for project construction is as follows:

- a) State of Michigan, Department of Natural Resources, Parks and Recreation Division Waterways Planning/Funding
- b) Owner and operator personnel
- c) Cheboygan County, soil Erosion and Sedimentation Permit
- d) State of Michigan, Bureau of Construction Codes, Plan Review and Permit (all division reviews
- e) State of Michigan, Bureau of Construction Codes, Underground Storage Tank division
- f) State of Michigan, Department of Public Health (as necessary)
- g) City of Cheboygan as required
- h) Cheboygan County as required
- l) State of Michigan bottom Lands Lease

It is highly recommended to apply for the Joint U.S. Army Corps of Engineers and Michigan Department of Environmental Quality Permit well in advance of final design of this project. These permits and the permit administration schedule are at the sole discretion of the permitting agencies and experience indicates that for larger marina facility projects this process can take up to two years or longer. The determination of permit acceptability is at the sole discretion of the permit agencies. Often, the permit agencies by the permit review process require changes in plan layout, construction types and construction methods. There also may be permit time frame restrictions that could affect the construction schedule. The recommendation is not to proceed with final design of this project until these permits are received.

During the final design process the Owner will need to schedule sufficient time for all required code and agency reviews and permits to be obtained.

CONTRACT SPECIFICATIONS

Specifications shall be in consonance with the final design Engineering and/or Architectural drawings and shall be prepared in the Construction Specifications Institute (C.S.I.) format for Divisions 1 through 16. The Project final design Engineering and/or Architectural specifications shall clearly define the Project design and construction requirements indicating the type and quality of materials, products, and workmanship required for the Project scope of work. A list of technical specification sections which could be used is as follows:

TECHNICAL SPECIFICATIONS:

01620	Storage and Protection
02009	Site Conditions
02010	Subsurface Investigation
02070	Removals
02215	Erosion and Sedimentation Control
02220	Excavation, Filling and Grading
02500	Site Drainage
02660	Water Distribution System

02730	Wastewater Disposal
02800	Landscaping
02812	Irrigation System
02915	Ice Suppression System
02921	Floating Pier System
03200	Concrete Reinforcement
03300	Cast-in-place Concrete
03604	Grout
04220	Concrete Unit Masonry
05120	Structural Steel
05123	Structural Steel Welding
05127	Repair Work
06101	Wood framing, Carpentry and Roofing
06102	Timber, Lumber and Pressure Treatment
07951	Sealants and Caulking
08110	Hollow Metal Doors
09331	Floor and Wall Covering
09900	Painting
10160	Specialties
15010	Mechanical General Provisions
15460	Plumbing Fixtures
15610	Fuel Handling System
16250	Mooring Service Center
16400	Electrical

SUSTAINABLE BEST PRACTICES

Sustainable Best Practices shall be utilized wherever possible by United Design Associates, Inc. in the design of the repairs and upgrade project. Sustainable Best Practices is defined in this Preliminary Engineering Study as United Design Associate's use of project design resources, processes and products with no negative impact to the natural ecosystems and when possible, achieving a net enhancement of the project scope of work requirements.

ANNUAL MAINTENANCE BUDGET

Upon completion of this projects construction, the County of Cheboygan and the Cheboygan County Waterways Commission will need to establish and maintain an adequate operation, maintenance and repair budget for the facility. No matter what type of structure is constructed there is always the potential for wave, wind, and ice damage, and the cost for annual maintenance and repairs is a necessary budget item. Anticipated costs should include the annual operational and energy costs for the ice suppression system. The experience record for a period of over 40 years in the Great Lakes area clearly has established the need for anticipating an annual maintenance repair budget of approximately 3% to 5% of the initial construction cost of those parts that are exposed to weather conditions of ice, wind, waves, or combinations thereof. These costs may not be required every year, but experience indicates that these costs are what are usually needed averaged over a period of years for the life expectancy of the facility and its components.

PRELIMINARY ENGINEERING STUDY CONSTRUCTION COST ESTIMATE

The Preliminary Engineering Study cost estimate furnished in this study is for the entire repair and upgrade project to be completed as one project. Also included are cost estimates broken down into phases as listed above for individual pier systems with related site work and building structures

depending on funds available. Project scope of work and phases will need to be logically adjusted to funds available at any one time.

The preliminary cost estimates attached herewith and included in this study are for:

This projects entire repair and renovation cost estimate

and

Individual cost estimates for segmented funding (1, 2, 3 & 4 individually) for repairs and upgrading over a period of years as follows:

- 1. Floating Pier System A with related utilities including shore utility connections and new shore side electrical panels.**
- 2. Floating Pier System B with related utilities including shore utility connections and new shore side electrical panels.**
- 3. Site shore work and building work including new restroom and shower area addition(s).**
- 4. New main floating pier system separate addition in the Southwest corner of the basin including all related site work.**

The emergency electrical repair estimated cost and justification is also included in this report. This emergency electrical estimated repair cost is contained in the projects entire repair and renovation cost estimate. If and when emergency funds are received and construction takes place, the entire projects work items and costs estimates will have to be adjusted at that time.

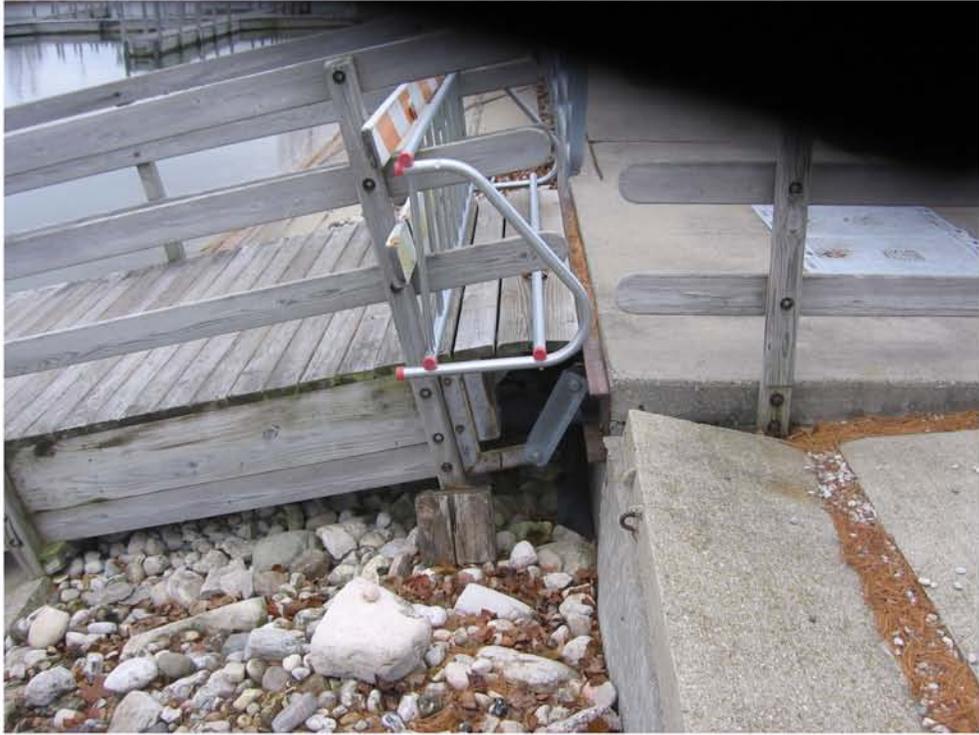
Cost estimate breakdowns and summaries are included as noted. The estimates are broken down into major construction headings with material and work itemizations, quantities, unit cost, cost totals and summary.

Fees for Engineering design, permit fees, construction code fees, etc. are not included in these estimates. State inspection/code plan review fees are unknown at this time. When Applying for grant funding the Owner will need to include adequate amounts for engineering design fees, permit fees, construction code fees, etc. with the grant funding application.

An adequate contingency amount to fund changes in the work that are foreseeable but are either uncertain (i.e may not happen) or are of indeterminate scope (i.e. quantities are not known or detailed in the contract documents), or both, has been included in this estimate, and should be used in the project funding amount. Additional adjustment factors should be added annually to this estimate for inflation and cost increases.

















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APPENDIX A

**PRELIMINARY ENGINEERING STUDY COST ESTIMATE
FOR
ONE SINGLE PROJECT**

PRELIMINARY ENGINEERING STUDY COST ESTIMATE
 CHEBOYGAN COUNTY MARINA
 REPAIRS AND UPGRADE
 1080 NORTH HURON STREET
 CHEBOYGAN, MICHIGAN 49721

UDA job no.: 2006-35
 10/1/2008

ENTIRE REPAIR AND UPGRADE PROJECT AS ONE COST

NOTE: ADA REFERS TO AMERICANS WITH DISABILITIES ACT AND ADAAG REFERS TO AMERICANS WITH DISABILITIES ACT ACCESSIBILITIES GUIDELINES

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
MOBILIZATION/DEMobilIZATION GENERAL CONDITIONS				
Mobilization-Demobilization general conditions				
Mobilization/Demobilization-Dredging work	1	Lump Sum	12,000.00	\$ 12,000.00
Mobilization/Demobilization- Floating	1	Lump Sum	7,000.00	\$ 7,000.00
Mobilization/Demobilization-Shore work	1	Lump Sum	8,000.00	\$ 8,000.00
General Conditions	1	Lump Sum	60,000.00	\$ 60,000.00
Testing (during construction)	1	Lump Sum	5,000.00	\$ 5,000.00
Temporary Fencing/Barricades	1	Lump Sum	5,000.00	\$ 5,000.00
Temporary Soil Erosion and Sedimentation	1	Lump Sum	10,000.00	\$ 10,000.00
Stakeout	1	Lump Sum	3,000.00	<u>\$ 3,000.00</u>
Total Mobilization/Demobilization General Conditions				\$ 110,000.00
REMOVALS				
Remove and Dispose of Existing Shore Concrete, etc.	1	Lump Sum	7,000.00	\$ 7,000.00
Remove and Dispose of Existing Floating Pier System	1	Lump Sum	38,000.00	\$ 38,000.00
Remove Existing Concrete rip-rap plank	1	Lump Sum	5,000.00	\$ 5,000.00
Remove and Dispose of Existing Light Poles	1	Lump Sum	2,000.00	\$ 2,000.00
Remove and Dispose of Existing Utilities	1	Lump Sum	8,000.00	<u>\$ 8,000.00</u>
Total Removals				\$ 60,000.00
DREDGING				
Silt Curtain (relocate to areas as needed)	450	Lin. Ft.	28.00	\$ 12,600.00
Dredge Basin Area Under Floating Piers to -9' Low Water Datum (from barge)	1,350	Cubic Yard.	30.00	\$ 40,500.00

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
Dredge New Main Floating Pier System Area to -9' Low Water Datum (from shore)	4,400	Cubic Yard.	18.00	\$ <u>79,200.00</u>
Total Dredging				\$ 132,300.00
MAIN FLOATING PIER SYSTEM "A"	(35 slips)			
Shore Abutment and Connection	1	Each	5,500.00	\$ 5,500.00
8' Wide x 50' Long ADA and ADAAG Accessible Floating Ramp	400	Sq. Feet	55.00	\$ 22,000.00
Additional Floatation for Floating Ramp and Floating Pier Service Building	1	Lump Sum	3,000.00	\$ 3,000.00
10' Wide Floating Main Pier with Utilities (405 lineal feet + 40 lineal feet) includes Building Area (800 square feet)	5,250	Sq. Feet	49.00	\$ 257,250.00
4' Wide x 44' Long Floating Finger Pier (11 each)	2,112	Sq. Feet	42.00	\$ 88,704.00
6' Wide x 38' Long ADA and ADAAG Accessible Floating Finger Pier (1)	244	Sq. Feet	42.00	\$ 10,248.00
4' Wide x 38' Long Floating Finger Pier (2 each)	336	Sq. Feet	42.00	\$ 14,112.00
5' Wide x 60' Long Floating Finger Pier (3 each)	942	Sq. Feet	42.00	\$ 39,564.00
16' Wide x 114' Long Service Pier	1,840	Sq. Feet	49.00	\$ 90,160.00
8 x 8 Timber Fenders (large craft)	15	Each	500.00	7,500.00
Power Pedestal	23	Each	3,000.00	\$ 69,000.00
Cabinet with Fire Extinguisher and Life Ring	3	Each	350.00	1,050.00
Ladders	11	Each	900.00	\$ 9,900.00
Fire Protection System	1	Each	15,000.00	\$ 15,000.00
Floating Service Pier Building	1	Each	28,000.00	\$ 28,000.00
Potable Water Stanchion	2	Each	1,300.00	\$ 2,600.00
Sanitary Pump-out	2	Each	13,000.00	\$ 26,000.00
Pump-out Stanchion	2	Each	1,300.00	\$ 2,600.00

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
Fuel Dispensers with Rewinds	4	Each	12,000.00	\$ 48,000.00
Fuel Lines to Shore (2 runs @ 450')	900	Lin. Ft.	65.00	\$ 58,500.00
Fuel Monitor System on Piers	500	Lin. Ft.	25.00	\$ 12,500.00
Fuel System Comfort Station Monitor Panel New in Comfort Station and Connects to Fuel Monitor System on Pier	1	Each	6,000.00	\$ 6,000.00
Service Pier Light Poles	2	Each	2,200.00	\$ 4,400.00
Service Pier Signage	1	Each	600.00	<u>\$ 600.00</u>
TOTAL-Main Floating Pier System "A"	11,124 SF			\$ 822,188.00
MAIN FLOATING PIER SYSTEM "B"	(43 slips)			
Shore Abutment and Connection	1	Lump Sum	5,500.00	\$ 5,500.00
8' Wide x 50' ADA and ADAAG Accessible Floating Ramp	400	Sq. Feet	55.00	\$ 22,000.00
Additional Floatation for Floating Ramp	1	Lump Sum	1,200.00	\$ 1,200.00
10' Wide Floating Main Pier with Utilities (430 lineal feet + 50 lineal feet)	4,800	Sq. Feet	49.00	\$ 235,200.00
4' Wide x 24' Long Floating Finger Pier (1 each)	112	Sq. Feet	42.00	\$ 4,704.00
6' Wide x 24' Long ADA and ADAAG Accessible Floating Pier (1)	160	Sq. Feet	42.00	\$ 6,720.00
4' Wide x 30' Long Floating Finger Pier (4 each)	544	Sq. Feet	42.00	\$ 22,848.00
4' Wide x 34' Long Floating Finger Pier (1 each)	152	Sq. Feet	42.00	\$ 6,384.00
6' Wide x 34' Long ADA and ADAAG Accessible Floating Pier (1)	220	Sq. Feet	42.00	\$ 9,240.00
4' Wide x 40' Long Floating Finger Pier (13 each)	2,288	Sq. Feet	42.00	\$ 96,096.00
8' Wide x 90' Long Floating End T-Pier Floating Pier (1)	736	Sq. Feet	46.00	\$ 33,856.00
8 x 8 Timber Fenders (large craft)	12	Each	500.00	6,000.00
Ladders	12	Each	900.00	10,800.00

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
Craft Service/Power Centers	16	Each	3,000.00	\$ 48,000.00
Cabinet with Fire Extinguisher and Life Ring	3	Each	350.00	1,050.00
Fire Protection System	1	Lump Sum	15,000.00	<u>\$ 15,000.00</u>
TOTAL-Main Floating Pier System "B"	9,412 SF			\$ 524,598.00

NEW MAIN FLOATING PIER SYSTEM SEPARATE ADDITION

(11 slips)

Shore Abutment and Connection	1	Each	5,500.00	\$ 5,500.00
8' Wide x 50' Long ADA and ADAAG Accessible Floating Ramp	400	Sq. Feet	55.00	\$ 22,000.00
Additional Floatation for Floating Ramp	1	Lump Sum	1,000.00	\$ 1,000.00
8' Wide Floating Main Pier with Utilities (190 lineal feet + 30 lineal feet) includes Building Area (800 square feet)	1,760	Sq. Feet	48.00	\$ 84,480.00
4' Wide x 24' Long Floating Finger Pier (1 each)	112	Sq. Feet	42.00	\$ 4,704.00
4' Wide x 30' Long Floating Finger Pier (5 each)	680	Sq. Feet	42.00	\$ 28,560.00
Ladders	4	Each	900.00	3,600.00
Craft Service/Power Centers	6	Each	1,200.00	\$ 7,200.00
Cabinet with Fire Extinguisher and Life Ring	2	Each	350.00	700.00
Fire Protection System	1	Lump Sum	6,000.00	<u>\$ 6,000.00</u>
TOTAL-New Main Floating Pier System Separate Addition		2,952.00 SF		\$ 163,744.00

ICE SUPPRESSION SYSTEM FOR FLOATING PIERS

Ice Suppression for Floating Pier Systems "A" and "B"	78	Slips	1,200.00	93,600.00
Ice Suppression for New Main Floating Pier System Separate Addition	11	Slips	1,200.00	13,200.00
Additional Motor/blower Unit	1	Lump Sum	5,500.00	<u>\$ 5,500.00</u>
Total Ice Suppression System				\$ 112,300.00

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
CONCRETE PLANK SECTION FOR NEW MAIN <u>FLOATING PIER ADDITION</u> - 300 LF				
Grading	3	Station	900.00	2,700.00
MDOT 6a Base - 6" Layer	288	Cubic Yard.	23.00	\$ 6,624.00
Geotextile Filter Fabric	1,040	Sq. Yard	5.00	\$ 5,200.00
4" - 6" Cobbles - 12" Layer	288	Ton	45.00	\$ 12,960.00
5" thick, 12' Long x 2' Wide Reinforced Concrete Plank	260	Each	160.00	<u>\$ 41,600.00</u>
Total Added Concrete Plank Section				\$ 69,084.00
SITE WORK				
Existing Concrete Plank Repairs (2 areas)	1	Lump Sum	13,000.00	\$ 13,000.00
Excavation (Estimate)	300	Cubic Yard.	8.00	\$ 2,400.00
MDOT 6A Aggregate Fill (Estimate)	120	Cubic Yard.	23.00	\$ 2,760.00
MDOT Granular Fill (Estimate)	250	Cubic Yard.	14.00	\$ 3,500.00
Grading	1	Lump Sum	1,000.00	\$ 1,000.00
4" Reinforced Concrete Sidewalk	5,000	Sq. Feet	7.00	\$ 35,000.00
4" Reinforced Concrete Shelter Building Slab (2 each)	1,320	Sq. Feet	7.00	\$ 9,240.00
Concrete Curb Repairs - Asphalt Parking Area	40	Lin. Ft.	28.00	\$ 1,120.00
Brick Pavers -Sidewalk	1	Lump Sum	2,500.00	\$ 2,500.00
New Flag pole Base and Reset Pole	1	Lump Sum	1,000.00	\$ 1,000.00
Repairs to Existing Garbage Enclosure	1	Lump Sum	2,600.00	\$ 2,600.00
3" Layer MDOT Topsoil and Sod	1,800	Sq. Yard	8.00	\$ 14,400.00
Landscaping (trees and shrubs)	1	Lump Sum	3,000.00	\$ 3,000.00
Irrigation System Repairs	1	Lump Sum	7,500.00	\$ 7,500.00
Storm Outfall Repairs (2 each)	1	Lump Sum	1,600.00	\$ 1,600.00
Parking Area Asphalt Patching and Surface Repairs	1	Lump Sum	7,000.00	\$ 7,000.00

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
ADA Signage	1	Lump Sum	800.00	<u>\$ 800.00</u>
TOTAL SITE WORK				\$ 108,420.00
STRUCTURES WITH UTILITIES				
Existing Comfort Station/Restroom Repairs				
Building Repairs (ceiling, etc.)	1	Lump Sum	10,000.00	\$ 10,000.00
Building Ventilation	1	Lump Sum	8,000.00	\$ 8,000.00
Building Lighting	1	Lump Sum	9,000.00	\$ 9,000.00
Miscellaneous Repairs	1	Lump Sum	9,000.00	\$ 9,000.00
Painting	1	Lump Sum	4,000.00	\$ 4,000.00
Outside Free Standing Enclosures to house Electrical Panels	2	Lump Sum	8,000.00	\$ 16,000.00
Addition to Building for ADA and ADAAG 22'-8"x16'8" Restrooms (2 each)	756	Sq. Feet	180.00	<u>\$ 136,080.00</u>
TOTAL STRUCTURES WITH UTILITIES				\$ 192,080.00
SITE ELECTRICAL				
Contractor Work for Power Company Service does not include Power Company Connection Fees	1	Lump Sum	4,000.00	\$ 4,000.00
Transformer, Service, Cabinetry	1	Lump Sum	10,000.00	\$ 10,000.00
1200 amp Electric I-line Panels for Piers	4	Each	14,000.00	\$ 56,000.00
Electrical Conduit and Wire transformer to Panels through Distribution Panel	800	Lin. Ft.	30.00	\$ 24,000.00
Grounding for I-line Panels and System	1	Lump Sum	3,500.00	\$ 3,500.00
Electric Panels	1	Lump Sum	5,500.00	\$ 5,500.00
Electric Revisions for Existing Building Panels	1	Lump Sum	6,000.00	\$ 6,000.00
Launching Area Parking Lights	8	Each	3,500.00	\$ 28,000.00
Bollard Lights	6	Each	1,800.00	\$ 10,800.00
Telephone Service to Floating Service Pier Building	1	Lump Sum	2,500.00	\$ 2,500.00
Computer Wiring to Floating Service Building	1	Lump Sum	2,500.00	\$ 2,500.00
Electrical Conduit and Wire Panels to Pier Abutment (26 each @ 50' + 3 each @ 180')	1840	Lin. Ft.	30.00	\$ 55,200.00

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
Type G cable at Ramp (31 each @ 15')	465	Lin. Ft.	80.00	\$ 37,200.00
Quazite Electrical Boxes for Floating Pier System	3	Each	8,000.00	<u>\$ 24,000.00</u>
TOTAL SITE ELECTRICAL				\$ 269,200.00

SITE WATER

New Site Water Line Revisions-Building Addition and New Abutment for Floating Pier Addition	1	Lump Sum	18,000.00	\$ 18,000.00
New Drain Manhole North Side of Building	1	Lump Sum	4,500.00	\$ 4,500.00
New Water Lines in Building Additions	1	Lump Sum	8,000.00	\$ 8,000.00
Replace Existing Water Heater	2	Each	5,000.00	\$ 10,000.00
New Water Line Connection to Floating Piers at Abutment	2	Each	400.00	\$ 800.00
Valves	4	Each	800.00	\$ 3,200.00
Drains	3	Each	500.00	<u>\$ 1,500.00</u>
TOTAL WATER				\$ 46,000.00

SITE SANITARY

New Gravity Sanitary Service for Building Additions	160	Lin. Ft.	35.00	\$ 5,600.00
New Venting and Sanitary Drainage in Additions	1	Lump Sum	8,000.00	\$ 8,000.00
Cleanout at New Additions	2	Lump Sum	300.00	\$ 600.00
Building Connection to Sanitary Manhole does not include Fees	1	Lump Sum	700.00	\$ 700.00
New Fixtures for Building Additions	1	Lump Sum	12,000.00	\$ 12,000.00
New Sanitary Force Main	120	Lin. Ft.	33.00	<u>\$ 3,960.00</u>
TOTAL SANITARY				\$ 30,860.00

SHORE FUEL SYSTEM REPAIRS AND UPGRADES

New Larger Fuel Tanks (2 each @ 10,000 gallons)	1	Lump Sum	140,000.00	\$ 140,000.00
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Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
New Fuel Lines - Tanks to Abutment (2 @ 320')	640	Lin. Ft.	75.00	\$ 48,000.00
Fuel Monitor Sensor Wiring Replace at Tanks	1	Lump Sum	8,000.00	\$ 8,000.00
Fuel Electrical Adjustments at Tanks	1	Lump Sum	4,000.00	\$ 4,000.00
Fuel Line Adjustments at Tanks	1	Lump Sum	4,000.00	\$ 4,000.00
Emergency Mushroom Shut-off on Floating Service Pier	1	Lump Sum	5,000.00	\$ 5,000.00
New Transition Sump at Abutment	1	Lump Sum	5,000.00	\$ 5,000.00
Overflow Alarm at Fuel Tank	1	Lump Sum	5,000.00	<u>\$ 5,000.00</u>
TOTAL SHORE FUEL SYSTEM REPAIRS				\$ 219,000.00

PRELIMINARY ENGINEERING STUDY ESTIMATED CONSTRUCTION COST **\$ 2,859,774.00**

ESTIMATED CONTINGENCIES (10%) **\$ 285,977.40**

ENGINEERING (see note below)

PRELIMINARY ENGINEERING STUDY TOTAL PROJECT ESTIMATED COST WITHOUT ENGINEERING **\$ 3,145,751.40**

Special Notes:

Project estimated cost should be adjusted annually for cost of living and inflation increases.

This costs includes upgrade and new larger fuel tanks with estimated cost of tanks only of \$140,000.00

The above preliminary engineering cost estimate does not include any costs for engineering design, permits, fees and etc. Costs for engineering design, permits, fees and etc. should be included in costs when applying for grant funding.

APPENDIX B

**PRELIMINARY ENGINEERING STUDY COST ESTIMATE
FOR
SYSTEM "A" FLOATING PIER SYSTEM
AND
RELATED SITE WORK – PORTION ONLY**

PRELIMINARY ENGINEERING STUDY COST ESTIMATE
 CHEBOYGAN COUNTY MARINA
 REPAIRS AND UPGRADE
 1080 NORTH HURON STREET
 CHEBOYGAN, MICHIGAN 49721

UDA job no.: 2006-35
 10/1/2008

PRELIMINARY COST ESTIMATE FOR SYSTEM "A" FLOATING PIER SYSTEM AND RELATED SITE WORK - PORTION ONLY

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
MOBILIZATION/DEMOBILIZATION GENERAL CONDITIONS				
Mobilization-general conditions				
Mobilization/Demobilization-Dredging work	1	Lump Sum	\$ 9,000.00	\$ 9,000.00
Mobilization/Demobilization - Floating	1	Lump Sum	\$ 6,000.00	\$ 6,000.00
Mobilization/Demobilization - Shore work	1	Lump Sum	\$ 3,000.00	\$ 3,000.00
General Conditions	1	Lump Sum	\$ 20,000.00	\$ 20,000.00
Testing (during construction)	1	Lump Sum	\$ 2,000.00	\$ 2,000.00
Temporary Fencing/Barricades	1	Lump Sum	\$ 2,000.00	\$ 2,000.00
Temporary Soil Erosion and Sedimentation	1	Lump Sum	\$ 2,000.00	\$ 2,000.00
Stakeout	1	Lump Sum	\$ 1,500.00	<u>\$ 1,500.00</u>
Total Mobilization/Demobilization - General Conditions				\$ 45,500.00
REMOVALS				
Remove and Dispose of Existing Shore Concrete, etc	1	Lump Sum	\$ 2,000.00	\$ 2,000.00
Remove and Dispose of Existing Floating Pier System	1	Lump Sum	\$ 20,000.00	\$ 20,000.00
Remove Existing Concrete Rip-Rap Plank	1	Lump Sum	\$ 1,800.00	\$ 1,800.00
Remove and Dispose of Existing Utilities	1	Lump Sum	\$ 2,500.00	<u>\$ 2,500.00</u>
Total Removals				\$ 26,300.00
DREDGING				
Silt Curtain (relocate to areas as needed)	450	Lin. Ft.	28.00	\$ 12,600.00
Dredge Basin Area under Floating Piers to -9' Low Water Datum (from barge)	800	Cubic Yard.	30.00	<u>\$ 24,000.00</u>
Total Dredging				\$ 36,600.00

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
MAIN FLOATING PIER SYSTEM "A"	(35 slips)			
Shore Abutment and Connection	1	Each	5,500.00	\$ 5,500.00
8' Wide x 50' Long ADA and ADAAG Ramp	400	Sq. Feet	55.00	\$ 22,000.00
Additional Floatation for Ramp and Service Building	1	Lump Sum	3,000.00	\$ 3,000.00
10' Wide Floating Main Pier with Utilities (405 lineal feet + 40 lineal feet) includes Building Area (800 Square Feet)	5,250	Sq. Feet	49.00	\$ 257,250.00
4' Wide x 44' Long Floating Finger Pier (11 each)	2,112	Sq. Feet	42.00	\$ 88,704.00
6' Wide x 38' Long ADA and ADAAG Accessible Floating Finger Pier (1)	244	Sq. Feet	42.00	\$ 10,248.00
4' Wide x 38' Long Floating Finger Pier (2 each)	336	Sq. Feet	42.00	\$ 14,112.00
5' Wide x 60' Long Floating Finger Pier (3 each)	942	Sq. Feet	42.00	\$ 39,564.00
16' Wide x 114' Long Service Pier	1,840	Sq. Feet	49.00	\$ 90,160.00
8 x 8 Timber Fenders (large craft)	15	Each	500.00	7,500.00
Craft Service/Power Center	23	Each	3,500.00	\$ 80,500.00
Cabinets with Fire Extinguisher and Life Ring	3	Each	350.00	1,050.00
Ladders	11	Each	900.00	\$ 9,900.00
Fire Protection System	1	Each	15,000.00	\$ 15,000.00
Service Pier Building	1	Each	28,000.00	\$ 28,000.00
Potable Water Stanchion	2	Each	1,300.00	\$ 2,600.00
Sanitary Pump-out	2	Each	13,000.00	\$ 26,000.00
Pump-out Stanchion	2	Each	1,300.00	\$ 2,600.00
Fuel Dispensers with Rewinds	4	Each	12,000.00	\$ 48,000.00
Fuel Lines to Shore (2 runs @ 450')	900	Lin. Ft.	65.00	\$ 58,500.00
Fuel Monitor System on Piers	500	Lin. Ft.	25.00	\$ 12,500.00
Fuel System Comfort Station Monitor Panel New in Comfort Station and Connect to Floating Pier System	1	Each	6,000.00	\$ 6,000.00

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
Service Pier Light Poles	2	Each	2,200.00	\$ 4,400.00
Service Pier Signage	1	Each	600.00	<u>\$ 600.00</u>
TOTAL-Main Floating Pier System "A"	9,012 SF			\$ 833,688.00

ICE SUPPRESSION SYSTEM FOR FLOATING PIER SYSTEM "A"

Ice Suppression System for Floating Pier System "A"	35	Slips	1,300.00	45,500.00
Additional Motor/Blower Unit	1	Lump Sum	5,500.00	<u>\$ 5,500.00</u>
Total Ice Suppression System				\$ 51,000.00

SITE WORK

Existing Concrete Plank Repairs (2 areas)	1	Lump Sum	2,000.00	\$ 2,000.00
Excavation (Estimate)	30	Cubic Yard.	8.00	\$ 240.00
MDOT 6A Aggregate Fill (Estimate)	20	Cubic Yard.	23.00	\$ 460.00
MDOT Granular Fill (Estimate)	10	Cubic Yard.	14.00	\$ 140.00
Grading	1	Lump Sum	1,000.00	\$ 1,000.00
4" Thick Reinforced Concrete Sidewalk	440	Sq. Feet	7.00	\$ 3,080.00
3" Layer MDOT Topsoil and Sod	300	Sq. Yard	8.00	\$ 2,400.00
ADA Signage	1	Lump Sum	350.00	<u>\$ 350.00</u>
TOTAL SITE WORK				\$ 9,670.00

STRUCTURES WITH UTILITIES

Outside Free Standing Enclosure with 2 each 1,200 amp I-Line Electrical Panels	1	Lump Sum	12,000.00	\$ 12,000.00
TOTAL STRUCTURES WITH UTILITIES				\$ 12,000.00

SITE ELECTRICAL

Contractor Work for Power Company Service does not include Power Company Connection Fees	1	Lump Sum	3,000.00	\$ 3,000.00
Transformer, Service, Cabinetry	1	Lump Sum	10,000.00	\$ 10,000.00

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
Electric I-line Panels for Piers	2	Each	14,000.00	\$ 28,000.00
Electrical Conduit and Wire Transformer to Panels through Distribution Panel	200	Lin. Ft.	30.00	\$ 6,000.00
Grounding for I-line Panels and System	1	Lump Sum	2,000.00	\$ 2,000.00
Phone Service to Floating Service Pier Building Adjustments	1	Lump Sum	2,000.00	\$ 2,000.00
Computer Wiring to Floating Service Pier Building Adjustments	1	Lump Sum	2,000.00	\$ 2,000.00
Electrical Conduit and Wire Panels to Pier Abutment (13 each @ 50')	650	Lin. Ft.	30.00	\$ 19,500.00
Type G cable at Ramp (13 each @ 15')	195	Lin. Ft.	80.00	\$ 15,600.00
Quazite Electrical Boxes for Floating Pier System Connections	1	Each	8,000.00	<u>\$ 8,000.00</u>
TOTAL SITE ELECTRICAL				\$ 96,100.00
SITE WATER				
New Water Line Connection to Floating Pier System at Abutment	1	Lump Sum	600.00	\$ 600.00
Valves	1	Each	800.00	\$ 800.00
Drains	1	Each	500.00	<u>\$ 500.00</u>
TOTAL WATER				\$ 1,900.00
SITE SANITARY				
Building Connection to Sanitary Manhole does not include City of Cheboygan Municipal System Connection Fees	1	Lump Sum	700.00	\$ 700.00
New Sanitary Force Main	120	Lin. Ft.	33.00	<u>\$ 3,960.00</u>
TOTAL SANITARY				\$ 4,660.00
SHORE FUEL SYSTEM REPAIRS				
Fuel Line Adjustments at Abutment	1	Lump Sum	4,000.00	\$ 4,000.00
Emergency Mushroom Shut-off on Floating Service Pier	1	Lump Sum	4,000.00	\$ 4,000.00

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
New Sensor Sump at Abutment	1	Lump Sum	5,000.00	\$ 5,000.00
TOTAL SHORE FUEL SYSTEM REPAIRS				\$ 13,000.00
PRELIMINARY ENGINEERING STUDY ESTIMATED CONSTRUCTION COST FOR SYSTEM "A" FLOATING PIER SYSTEM AND RELATED SITE WORK - PORTION ONLY				\$ 1,130,418.00
ESTIMATED CONTINGENCIES (10%)				\$ 113,041.80
ENGINEERING		(see note below)		
PRELIMINARY ENGINEERING STUDY - SYSTEM "A" FLOATING PIER SYSTEM AND RELATED SITE WORK - PORTION ONLY TOTAL ESTIMATED COST WITHOUT ENGINEERING				\$ 1,243,459.80

Special Notes:

Project estimated cost should be adjusted annually for cost of living and inflation increases.

The above costs estimate does not include the replacement of the existing fuel tanks and the shore fuel system. New larger fuel tanks with piping from the tanks to the pier would have an estimated cost of \$200,000.00. If the Owner decides to replace the existing tanks and shore fuel system an amount of \$200,000.00 needs to be added to the grant fund application.

The above preliminary engineering cost estimate does not include any costs for engineering design, permits, fees and etc. Costs for engineering design, permits, fees and etc. should be included when applying for grant funding.

APPENDIX C

**PRELIMINARY ENGINEERING STUDY COST ESTIMATE
FOR
SYSTEM “B” FLOATING PIER SYSTEM
AND
RELATED SITE WORK – PORTION ONLY**

PRELIMINARY ENGINEERING STUDY COST ESTIMATE
 CHEBOYGAN COUNTY MARINA
 REPAIRS AND UPGRADE
 1080 NORTH HURON STREET
 CHEBOYGAN, MICHIGAN 49721

UDA job no.: 2006-35
 10/1/2008

PRELIMINARY COSTS ESTIMATE FOR SYSTEM "B" FLOATING PIER SYSTEM AND RELATED SITE WORK - PORTION ONLY

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
MOBILIZATION/DEMOBILIZATION - GENERAL CONDITIONS				
Mobilization/Demobilization - General Conditions				
Mobilization/Demobilization - Dredging work	1	Lump Sum	\$ 9,000.00	\$ 9,000.00
Mobilization/Demobilization - Floating	1	Lump Sum	\$ 6,000.00	\$ 6,000.00
Mobilization/Demobilization - Shore Work	1	Lump Sum	\$ 3,000.00	\$ 3,000.00
General Conditions	1	Lump Sum	\$ 20,000.00	\$ 20,000.00
Testing (during construction)	1	Lump Sum	\$ 2,000.00	\$ 2,000.00
Temporary Fencing/Barricades	1	Lump Sum	\$ 2,000.00	\$ 2,000.00
Temporary Soil Erosion and Sedimentation	1	Lump Sum	\$ 2,000.00	\$ 2,000.00
Stakeout	1	Lump Sum	\$ 1,500.00	\$ <u>1,500.00</u>
Total Mobilization/Demobilization - General Conditions				\$ 45,500.00
REMOVALS				
Remove and Dispose of Existing Shore Concrete, etc	1	Lump Sum	\$ 2,000.00	\$ 2,000.00
Remove and Dispose of Existing Floating Pier System	1	Lump Sum	\$ 22,000.00	\$ 22,000.00
Remove Existing Concrete Rip-Rap Plank	1	Lump Sum	\$ 2,200.00	\$ 2,200.00
Remove and Dispose of Existing Utilities	1	Lump Sum	\$ 2,500.00	\$ <u>2,500.00</u>
Total Removals				\$ 28,700.00
DREDGING				
Silt Curtain (relocate to areas as needed)	450	Lin. Ft.	28.00	\$ 12,600.00
Dredge Basin Area under Floating Piers to -9' Low Water Datum (from barge)	550	Cubic Yard.	30.00	\$ <u>16,500.00</u>
Total Dredging				\$ 29,100.00

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
MAIN FLOATING PIER SYSTEM "B"	(43 slips)			
Shore Abutment and Connection	1	Lump Sum	5,500.00	\$ 5,500.00
8' Wide x 50' Long ADA and ADAAG Accessible Floating Ramp	400	Sq. Feet	55.00	\$ 22,000.00
Additional Floatation for Floating Ramp	1	Lump Sum	1,200.00	\$ 1,200.00
10' Wide Floating Main Pier with Utilities (430 lineal feet + 50 lineal feet)	4,800	Sq. Feet	49.00	\$ 235,200.00
4' Wide x 24' Long Floating Finger Pier (1 each)	112	Sq. Feet	42.00	\$ 4,704.00
6' Wide x 24' Long ADA and ADAAG Accessible Floating Pier (1)	160	Sq. Feet	42.00	\$ 6,720.00
4' Wide x 30' Long Floating Finger Pier (4 each)	544	Sq. Feet	42.00	\$ 22,848.00
4' Wide x 34' Long Floating Finger Pier (1 each)	152	Sq. Feet	42.00	\$ 6,384.00
6' Wide x 34' Long ADA and ADAAG Accessible Floating Pier (1)	220	Sq. Feet	42.00	\$ 9,240.00
4' Wide x 40' Long Floating Finger Pier (13 each)	2,288	Sq. Feet	42.00	\$ 96,096.00
8' Wide x 90' Long Floating End T-Pier Floating Pier (1)	736	Sq. Feet	46.00	\$ 33,856.00
8 x 8 Timber Fenders (large craft)	12	Each	500.00	6,000.00
Ladders	12	Each	900.00	10,800.00
Craft Service/Power Centers	16	Each	3,500.00	\$ 56,000.00
Cabinet with Fire Extinguisher and Life Ring	3	Each	350.00	1,050.00
Fire Protection System	1	Lump Sum	15,000.00	<u>\$ 15,000.00</u>
TOTAL-Main Floating Pier System "B"	9,012 SF			\$ 532,598.00
ICE SUPPRESSION SYSTEM FOR FLOATING PIER SYSTEM "B"				
Ice Suppression System for Floating Pier System "B"	43	Slips	1,300.00	55,900.00
Additional Motor/Blower Unit	1	Lump Sum	5,500.00	<u>\$ 5,500.00</u>
Total Ice Suppression System				\$ 61,400.00

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
SITE WORK				
Existing Concrete Plank Repairs (2 areas)	1	Lump Sum	2,000.00	\$ 2,000.00
Excavation (Estimate)	30	Cubic Yard.	8.00	\$ 240.00
MDOT 6A Aggregate Fill (Estimate)	20	Cubic Yard.	23.00	\$ 460.00
MDOT Granular Fill (Estimate)	10	Cubic Yard.	14.00	\$ 140.00
Grading	1	Lump Sum	1,000.00	\$ 1,000.00
4" Thick Reinforced Concrete Sidewalk	440	Sq. Feet	7.00	\$ 3,080.00
3" Layer MDOT Topsoil and Sod	300	Sq. Yard	8.00	\$ 2,400.00
ADA Signage	1	Lump Sum	350.00	<u>\$ 350.00</u>
TOTAL SITE WORK				\$ 9,670.00
STRUCTURES WITH UTILITIES				
Outside Free Standing Enclosures to house 2 each 1,200 amp I-Line Panels	1	Lump Sum	12,000.00	<u>\$ 12,000.00</u>
TOTAL STRUCTURES WITH UTILITIES				\$ 12,000.00
SITE ELECTRICAL				
Contractor Work for Power Company Service does not include Power Company Connection Fees	1	Lump Sum	1,000.00	\$ 1,000.00
Transformer, Service, Cabinetry	1	Lump Sum	10,000.00	\$ 10,000.00
Electric I-line Panels for Piers at Additions	2	Each	14,000.00	\$ 28,000.00
Electrical Conduit and Wire Transformer to Panels through Distribution Panel	600	Lin. Ft.	30.00	\$ 18,000.00
Grounding for I-line Panels/System	1	Lump Sum	2,000.00	\$ 2,000.00
Electrical Conduit and Wire Panels to Pier Abutment (13 each @ 50' + 3 each @ 180')	1190	Lin. Ft.	30.00	\$ 35,700.00
Type G Cable at Ramp (13 each @ 15')	195	Lin. Ft.	80.00	\$ 15,600.00
Quazite Electrical Boxes for Connections	1	Each	8,000.00	<u>\$ 8,000.00</u>
TOTAL SITE ELECTRICAL				\$ 118,300.00

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
SITE WATER				
New Water Line Connection to Floating Piers at Abutment	1	Lump Sum	800.00	\$ 800.00
Valves	1	Each	800.00	\$ 800.00
Drains	1	Each	500.00	\$ 500.00
TOTAL WATER				\$ 2,100.00
PRELIMINARY ENGINEERING STUDY ESTIMATED CONSTRUCTION COST FOR SYSTEM "B" FLOATING PIER SYSTEM AND RELATED SITE WORK - PORTION ONLY				\$ 839,368.00
ESTIMATED CONTINGENCIES (10%)				\$ 83,936.80
ENGINEERING	(see note below)			
PRELIMINARY ENGINEERING STUDY - SYSTEM "B" FLOATING PIER SYSTEM AND RELATED SITE WORK - PORTION ONLY TOTAL ESTIMATED COST WITHOUT ENGINEERING				\$ 923,304.80

Special Notes:

Project estimated cost should be adjusted annually for cost of living and inflation increases.

The above preliminary engineering cost estimate does not include any costs for engineering design, permits, fees and etc. Costs for engineering design, permits, fees and etc. should be included in costs when applying for grant funding.

APPENDIX D

**PRELIMINARY ENGINEERING STUDY COST ESTIMATE
FOR
SITE WORK – PORTION ONLY**

PRELIMINARY ENGINEERING STUDY COST ESTIMATE
 CHEBOYGAN COUNTY MARINA
 REPAIRS AND UPGRADE
 1080 NORTH HURON STREET
 CHEBOYGAN, MICHIGAN 49721

UDA job no.: 2006-35
 10/1/2008

PRELIMINARY ENGINEERING STUDY COST ESTIMATE FOR SITE WORK - PORTION ONLY

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
MOBILIZATION/DEMOBILIZATION - GENERAL CONDITIONS				
Mobilization/Demobilization - General Conditions				
Mobilization/Demobilization - Dredging Work	1	Lump Sum		
Mobilization/Demobilization - Floating	1	Lump Sum		
Mobilization/Demobilization - Shore Work	1	Lump Sum	\$ 3,500.00	\$ 3,500.00
General Conditions	1	Lump Sum	\$ 20,000.00	\$ 20,000.00
Testing (during construction)	1	Lump Sum	\$ 2,000.00	\$ 2,000.00
Temporary Fencing/Barricades	1	Lump Sum	\$ 2,000.00	\$ 2,000.00
Temporary Soil Erosion and Sedimentation	1	Lump Sum	\$ 4,000.00	\$ 4,000.00
Stakeout	1	Lump Sum	\$ 2,500.00	\$ <u>2,500.00</u>
Total Mobilization/Demobilization - General Conditions				\$ 34,000.000
REMOVALS				
Remove and Dispose of Existing Shore Concrete, etc	1	Lump Sum	\$ 4,000.00	\$ 4,000.00
Remove and Dispose of Existing Light Poles	1	Lump Sum	\$ 2,000.00	\$ 2,000.00
Remove and Dispose of Existing Utilities	1	Lump Sum	\$ 2,500.00	\$ <u>2,500.00</u>
Total Removals				\$ 8,500.00
SITE WORK				
Existing Concrete Plank Repairs (2 areas)	1	Lump Sum	10,000.00	\$ 10,000.00
Excavation (Estimate)	250	Cubic Yard.	8.00	\$ 2,000.00
MDOT 6A Aggregate Fill (Estimate)	100	Cubic Yard.	23.00	\$ 2,300.00
MDOT Granular Fill (Estimate)	230	Cubic Yard.	14.00	\$ 3,220.00
Grading	1	Lump Sum	1,000.00	\$ 1,000.00
4" Thick Reinforced Concrete Sidewalk	4,000	Sq. Feet	7.00	\$ 28,000.00

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
4" Thick Reinforced Concrete Shelter Slab (2 each)	1,320	Sq. Feet	7.00	\$ 9,240.00
Concrete Curb Repairs - Asphalt Area	40	Lin. Ft.	28.00	\$ 1,120.00
Brick Pavers -Sidewalk	1	Lump Sum	2,500.00	\$ 2,500.00
New Flag pole Base and Reset Pole	1	Lump Sum	1,000.00	\$ 1,000.00
Repairs to Existing Garbage Enclosure	1	Lump Sum	2,600.00	\$ 2,600.00
3" Layer MDOT Topsoil and Sod	1,300	Sq. Yard	8.00	\$ 10,400.00
Landscaping (trees and shrubs)	1	Lump Sum	3,000.00	\$ 3,000.00
Irrigation System Repairs	1	Lump Sum	7,500.00	\$ 7,500.00
Storm Outfall Repairs (2 each)	1	Lump Sum	1,600.00	\$ 1,600.00
Asphalt Patching and Surface Repairs	1	Lump Sum	7,000.00	\$ 7,000.00
ADA Signage	1	Lump Sum	800.00	<u>\$ 800.00</u>
TOTAL SITE WORK				\$ 93,280.00

STRUCTURES WITH UTILITIES

Existing Comfort/Restroom Repairs				
Building Repairs (ceiling, etc.)	1	Lump Sum	10,000.00	\$ 10,000.00
Building Ventilation	1	Lump Sum	8,000.00	\$ 8,000.00
Building Lighting	1	Lump Sum	9,000.00	\$ 9,000.00
Miscellaneous Repairs	1	Lump Sum	9,000.00	\$ 9,000.00
Painting	1	Lump Sum	4,000.00	\$ 4,000.00
Addition to Building for ADA and ADAAG Accessible Restrooms (2 each)	756	Sq. Feet	180.00	<u>\$ 136,080.00</u>
TOTAL STRUCTURES WITH UTILITIES				\$ 176,080.00

SITE ELECTRICAL

Contractor Work for Power Company Service does not include Power Company Connection Fees	1	Lump Sum	4,000.00	\$ 4,000.00
Transformer, Service, Cabinetry	1	Lump Sum	10,000.00	\$ 10,000.00
Electric I-line Panels for Piers at Additions	4	Each	14,000.00	\$ 56,000.00
Electrical Conduit and Wire Transformer to Panels through Distribution Panel	50	Lin. Ft.	30.00	\$ 1,500.00

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
Electric Panels for Building Additions	1	Lump Sum	5,500.00	\$ 5,500.00
Electric Revisions for Existing Building Panels	1	Lump Sum	6,000.00	\$ 6,000.00
Parking Lights	8	Each	3,500.00	\$ 28,000.00
Bollard lights	6	Each	1,800.00	\$ 10,800.00
Telephone Service to Floating Service Pier Building Adjustments	1	Lump Sum	500.00	\$ 500.00
Computer Wiring to Service Building Adjustments	1	Lump Sum	500.00	<u>\$ 500.00</u>
TOTAL SITE ELECTRICAL				\$ 122,800.00
SITE WATER				
New Site Water Line Revisions-Building Addition(s)	1	Lump Sum	14,000.00	\$ 14,000.00
New Drain Manhole North Side of Building	1	Lump Sum	3,500.00	\$ 3,500.00
New Water Lines in Building Addition	1	Lump Sum	8,000.00	\$ 8,000.00
New Water Heater - Replace Existing	2	Lump Sum	4,000.00	\$ 8,000.00
Valves	1	Each	800.00	\$ 800.00
Drains	1	Each	500.00	<u>\$ 500.00</u>
TOTAL WATER				\$ 34,800.00
SITE SANITARY				
New Gravity Sanitary Sewer Line for Building Additions	160	Lin. Ft.	33.00	\$ 5,280.00
New Venting and Sanitary Drainage in Addition	1	Lump Sum	8,000.00	\$ 8,000.00
Cleanout at New Additions	2	Lump Sum	300.00	\$ 600.00
Building Connection to Sanitary Manhole does not include City of Cheboygan Municipal Connection Fees	1	Lump Sum	700.00	\$ 700.00
New Fixtures for Building Additions	1	Lump Sum	12,000.00	\$ 12,000.00
New Sanitary Sewer Force Main	120	Lin. Ft.	33.00	<u>\$ 3,960.00</u>
TOTAL SITE SANITARY				\$ 30,540.00

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
SHORE FUEL SYSTEM REPAIRS AND UPGRADING				
New Larger Fuel Tanks (2 each @ 10,000 gallons)	1	Lump Sum	140,000.00	\$ 140,000.00
New Fuel Lines - Tanks to Abutment (2 at 320')	640	Lin. Ft.	75.00	\$ 48,000.00
Fuel Monitor Sensor Wiring Replace at Tanks	1	Lump Sum	8,000.00	\$ 8,000.00
Fuel Electrical Adjustments at Tanks	1	Lump Sum	8,000.00	\$ 8,000.00
Fuel Line Adjustments at Tanks	1	Lump Sum	8,000.00	\$ 8,000.00
Overflow Alarm at Fuel Tank	1	Lump Sum	5,000.00	\$ 5,000.00
TOTAL SHORE FUEL SYSTEM REPAIRS				\$ 217,000.00
PRELIMINARY ENGINEERING STUDY ESTIMATED CONSTRUCTION COST FOR SITE WORK - PORTION ONLY				\$ 717,000.00
ESTIMATED CONTINGENCIES (10%)				\$ 71,700.00
ENGINEERING	(see note below)			
PRELIMINARY ENGINEERING STUDY - SITE WORK PORTION ONLY TOTAL ESTIMATED COST WITHOUT ENGINEERING				\$ 788,700.00

Special Notes:

Project estimated cost should be adjusted annually for cost of living and inflation increases.

The above cost estimate does not include any costs for engineering design, permits, fees and etc. Costs for engineering design, permits, fees and etc. should be included in costs when applying for grant funding.

IF ANY ITEMS LISTED UNDER THIS SHORE WORK - PHASE ONLY WERE INCLUDED UNDER A PREVIOUS CONSTRUCTED PHASE THEY NEED TO BE DEDUCTED FROM THIS SHORE WORK - PHASE ONLY PRELIMINARY COST ESTIMATE AND DEDUCTED FROM THE SHORE WORK - PHASE ONLY GRANT FUNDING REQUEST.

APPENDIX E

**PRELIMINARY ENGINEERING STUDY COST ESTIMATE
FOR A
NEW MAIN FLOATING PIER SYSTEM SEPARATE ADDITION
AND
RELATED SITE WORK – PORTION ONLY**

PRELIMINARY ENGINEERING STUDY COST ESTIMATE
 CHEBOYGAN COUNTY MARINA
 REPAIRS AND UPGRADE
 1080 NORTH HURON STREET
 CHEBOYGAN, MICHIGAN 49721

UDA job no.: 2006-35
 10/1/2008

NEW MAIN FLOATING PIER SYSTEM SEPARATE ADDITION AND RELATED SITE WORK - PORTION ONLY

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
MOBILIZATION/DEMOBILIZATION - GENERAL CONDITIONS				
Mobilization/Demobilization - General Conditions				
Mobilization/Demobilization - Dredging Work	1	Lump Sum	\$ 4,000.00	\$ 4,000.00
Mobilization/Demobilization - Floating	1	Lump Sum	\$ 4,000.00	\$ 4,000.00
Mobilization/Demobilization - Shore Work	1	Lump Sum	\$ 3,000.00	\$ 3,000.00
General Conditions	1	Lump Sum	\$ 5,000.00	\$ 5,000.00
Testing (during construction)	1	Lump Sum	\$ 2,000.00	\$ 2,000.00
Temporary Fencing/Barricades	1	Lump Sum	\$ 2,000.00	\$ 2,000.00
Temporary Soil Erosion and Sedimentation	1	Lump Sum	\$ 4,000.00	\$ 4,000.00
Stakeout	1	Lump Sum	\$ 1,500.00	<u>\$ 1,500.00</u>
Total Mobilization/Demobilization - General Conditions - New Addition				\$ 25,500.00

REMOVALS

Remove and Dispose of Existing Shore Concrete, etc	1	Lump Sum	\$ 2,000.00	\$ 2,000.00
Remove Existing Concrete Rip-Rap Plank	1	Lump Sum	\$ 5,000.00	\$ 5,000.00
Remove and Dispose of Existing Utilities	1	Lump Sum	\$ 2,500.00	<u>\$ 2,500.00</u>
Total Removals - New Separate Addition				\$ 9,500.00

DREDGING

Silt Curtain (relocate to areas as needed)	450	Lin. Ft.	28.00	\$ 12,600.00
Dredge New Addition Floating Pier Area to -9' Low Water Datum (from shore)	4,400	Cubic Yard.	18.00	<u>\$ 79,200.00</u>
Total Dredging - New Separate Addition				\$ 91,800.00

NEW MAIN FLOATING PIER SYSTEM SEPARATE ADDITION (11 slips)

Shore Abutment and Connection	1	Each	5,500.00	\$ 5,500.00
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Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
8' Wide x 50' Long ADA and ADAAG Accessible Floating Ramp	400	Sq. Feet	55.00	\$ 22,000.00
Additional Flotation for Ramp	1	Lump Sum	1,000.00	\$ 1,000.00
8' Wide Floating Main Pier with Utilities (190 lineal feet+ 30 lineal feet)	1,760	Sq. Feet	48.00	\$ 84,480.00
4' Wide x 24' Long Floating Finger Pier (1 each)	112	Sq. Feet	42.00	\$ 4,704.00
4' Wide x 30' Long Floating Finger Pier (5 each)	680	Sq. Feet	42.00	\$ 28,560.00
Ladders	4	Each	900.00	3,600.00
Craft Service/Power Centers	6	Each	3,500.00	\$ 21,000.00
Fire Protection System	1	Lump Sum	6,000.00	<u>\$ 6,000.00</u>
TOTAL-Main Floating Pier System Separate Addition		2,440 SF		\$ 176,844.00

ICE SUPPRESSION SYSTEM FOR NEW MAIN FLOATING PIER SYSTEM SEPARATE ADDITION

Ice Suppression System for New Main Floating Pier System Separate Addition	11	Slips	1,300.00	14,300.00
Additional Motor/Blower Unit	1	Lump Sum	5,500.00	<u>\$ 5,500.00</u>
Total Ice Suppression System				\$ 19,800.00

CONCRETE PLANK SECTION FOR NEW MAIN FLOATING PIER SYSTEM SEPARATE ADDITION - 300 LF

Excavation- Included Under Dredging				
Grading	3	Station	900.00	2,700.00
MDOT 6a Base - 6" Layer	288	Cubic Yard.	23.00	\$ 6,624.00
Geotextile Filter Fabric	1,040	Sq. Yard	5.00	\$ 5,200.00
4" - 6" Cobbles - 12" Layer	288	Ton	45.00	\$ 12,960.00
5" thick, 12' Long x 2' Wide Reinforced Concrete Plank	260	Each	160.00	<u>\$ 41,600.00</u>
Total Concrete Plank Section				\$ 27,484.00

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
SITE WORK				
Existing Concrete Plank Repairs (2 areas)	1	Lump Sum	13,000.00	\$ 13,000.00
Excavation (Estimate)	30	Cubic Yard.	8.00	\$ 240.00
MDOT 6A Aggregate Fill (Estimate)	10	Cubic Yard.	23.00	\$ 230.00
MDOT Granular Fill (Estimate)	10	Cubic Yard.	14.00	\$ 140.00
Grading	1	Lump Sum	1,000.00	\$ 1,000.00
4" Reinforced Concrete Sidewalk	800	Sq. Feet	7.00	\$ 5,600.00
3" Layer MDOT Topsoil and Sod	100	Sq. Yard	8.00	\$ 800.00
Storm Outfall Repairs (2 each)	1	Lump Sum	300.00	\$ 300.00
ADA Signage	1	Lump Sum	350.00	<u>\$ 350.00</u>
TOTAL SITE WORK - NEW MAIN FLOATING PIER SYSTEM SEPARATE ADDITION				\$ 21,660.00
STRUCTURES WITH UTILITIES				
Modification to Outside Free Standing Enclosure Structure for 1200 amp Electrical I-Line Panel	1	Lump Sum	2,500.00	<u>\$ 2,500.00</u>
TOTAL STRUCTURES WITH UTILITIES				\$ 2,500.00
SITE ELECTRICAL				
Electrical Conduit and Wire Panels to Pier Abutment (3 each 2 180')	540	Lin. Ft.	30.00	\$ 16,200.00
Type G Cable at Ramp (3 each @15')	45	Lin. Ft.	80.00	\$ 3,600.00
Quazite Electrical Boxes for connections	1	Each	8,000.00	<u>\$ 8,000.00</u>
TOTAL SITE ELECTRICAL				\$ 27,800.00
SITE WATER				
New Water Line to New Main Floating Pier System Separate Addition from Abutment A	1	Lump Sum	4,500.00	\$ 4,500.00
New Water Line Connection to New Main Floating Pier System Separate Addition at Abutment	1	Lump Sum	400.00	\$ 400.00
Valves	4	Each	1.00	\$ 4.00

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
Drains	3	Each	1.00	\$ 3.00
TOTAL SITE WATER - NEW ADDITION				\$ 4,907.00
PRELIMINARY ENGINEERING STUDY ESTIMATED CONSTRUCTION COST FOR A NEW MAIN FLOATING PIER SYSTEM SEPARATE ADDITION AND RELATED SITE WORK - PORTION ONLY				\$ 407,795.00
ESTIMATED CONTINGENCIES (10%)				\$ 40,779.50
PRELIMINARY ENGINEERING STUDY - NEW MAIN FLOATING PIER SYSTEM SEPARATE ADDITION AND RELATED SITE WORK - PORTION ONLY - TOTAL ESTIMATED COST				\$ 448,574.50

Special Notes:

Project estimated cost should be adjusted annually for cost of living and inflation increases.

The above preliminary engineering cost estimate does not include any costs for engineering design, permits, fees and etc. Costs for engineering design, permits, fees and etc. should be included in costs when applying for grant funding.

APPENDIX F

**PRELIMINARY ENGINEERING STUDY COST ESTIMATE
SUMMARY**

PRELIMINARY ENGINEERING STUDY COST ESTIMATE
CHEBOYGAN COUNTY MARINA
REPAIRS AND UPGRADE
1080 NORTH HURON STREET
CHEBOYGAN, MICHIGAN 49721

UDA job no.: 2006-35
10/1/2008

PRELIMINARY ENGINEERING COST ESTIMATE SUMMARY - AS ONE PROJECT VERSUS SEVERAL PHASES

Total Project - One Phase of Construction with Contingencies

total cost does not include engineering design, permits, fees and etc. **\$3,145,751.40**

Total Project - Four Phases of Construction

PHASE 1 System "A" and Related Site Work with Contingencies **\$1,243,459.80**

Phase Cost does not include engineering design, permits, fees and etc.

PHASE 2 System "B" and Related Site Work with Contingencies **\$923,304.80**

Phase cost does not include engineering design, permits, fees and etc.

PHASE 3 Site Work and Building Work with Contingencies **\$788,700.00**

Phase cost does not include engineering design, permits, fees and etc.

PHASE 4 New Main Floating Pier System Separate Addition and Related Site Work **\$495,104.50**

Phase cost does not include engineering design, permits, fees and etc.

Total Cost of all Four Phases Phase of Construction **\$3,450,569.10**

total cost of all individual phases with contingencies
cost does not include engineering design, permits, fees and etc.

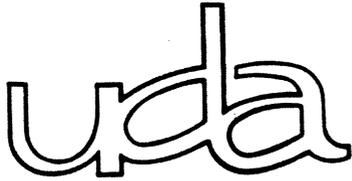
Special Notes:

Project estimated cost should be adjusted annually for cost of living and inflation increases.

The above preliminary engineering cost estimate does not include any costs for engineering design, permits, fees and etc. Costs for engineering design, permits, fees and etc. should be included in costs when applying for grant funding.

APPENDIX G

**EMERGENCY ELECTRICAL FUNDING
REQUEST INFORMATION**



united design associates

231-627-2268

September 29, 2008

Waterways Planning Unit
Parks and Recreation
Michigan Department of Natural Resources
P. O. Box 30257
Lansing, Michigan 48909

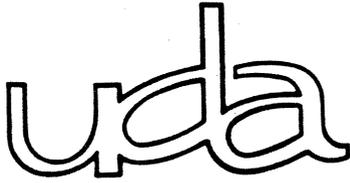
Needs Justification for the Electrical Emergency Repairs and Related Work at the Cheboygan County Marina, in the City of Cheboygan, Michigan

This justification report is prepared in conjunction with the State of Michigan, Department of Natural Resources authorized Preliminary Engineering Study for the needed repairs and upgrade project at the Cheboygan County Marina
1080 North Huron Street
Cheboygan, Michigan 49721

During the State of Michigan, Department of Natural Resources authorized Preliminary Engineering Study, for a repairs and upgrade project at the Cheboygan County Marina, it was discovered that the facility is in such a condition that extensive repairs and upgrade of the facility is needed because of its existing deteriorated condition. Also, the extensive repairs and upgrades are needed in order to bring the facility up to compliance with the current requirements of State of Michigan and local construction codes, ADA (Americans with Disabilities Act) requirements, ADAAG (Americans with Disabilities Act Accessibility Guidelines) guidelines, and the State of Michigan Department of Natural Resources Floating Pier System requirements especially for slip spacing and increased boat slip electrical requirements. With the age and deteriorated condition of this facilities floating pier systems the Preliminary Engineering Study recommends the need to completely replace the existing floating pier systems with new upgraded floating pier systems.

During the preparation of the Preliminary Engineering Study, and meetings and discussions with State of Michigan, Department of Natural Resources personnel, all indications are that possible funding for the entire Preliminary Engineering Study repairs and upgrade recommendations and cost estimates, is several years off. Also because of the anticipated extent of the construction cost as indicated in the Preliminary Engineering Study, it appears that construction of the repairs and upgrade project might have to be completed in several phases and over several years of construction so the Owner can adequately request Waterways Grant-in-Aid funds for this project.

During the summer of 2008, it was discovered during the on-site inspections at the marina facility that the head pier systems electrical systems are in an accelerated need of electrical repairs with a schedule that is needed ahead of the anticipated funding schedule. The existing under deck junction boxes are rusted to the point that several have already had to be replaced, and a significant number still need replacing. Also the existing electrical pedestals are in need



of replacement because of damage and deterioration that has occurred over the years. These encountered electrical issues are a rising concern for public use and safety.

The requested electrical emergency repair and related work funds will be focused on replacing the existing electrical junction boxes under the head piers, and to replace the existing service centers with new service centers. The existing main wiring in the head piers from the existing comfort station electrical panels will remain; however the electrical wiring from the under deck junction boxes to the new service centers will need to be replaced with new. The type of proposed service centers anticipated to be designed and installed with these electrical emergency repairs will be such that the electrical receptacles will be on plug in boards to the service centers with the service centers internal wiring to be capable of handling the future designs of the current State of Michigan, Department of Natural Resources Floating Pier System performance specification upgraded electrical requirements for the various sizes of craft and slips. Thus, with these unique plug in receptacles of this type, the new service centers to be used for emergency repairs will match the existing head pier wiring, and only the receptacle plates will need to be changed out and replaced with new receptacle plates to match the future new head pier systems design which will include meeting the required current slip receptacle configurations. Thus the service center pedestal unit will be able to be reused with new plates at a future date which will save costs for the future total repairs and upgrade project.

Sincerely,

A handwritten signature in black ink, appearing to read 'John H. Schlak, PE'. The signature is fluid and cursive, with the first letters of each word being capitalized and prominent.

John H. Schlak, PE

**PRELIMINARY STUDY COST ESTIMATE
FOR ELECTRICAL EMERGENCY REPAIRS - ONLY**

UDA job no.: 2006-35

CHEBOYGAN COUNTY MARINA
REPAIRS AND UPGRADE
1080 NORTH HURON STREET
CHEBOYGAN, MICHIGAN 49721

9/29/2008

**NOTE: THIS PRELIMINARY ESTIMATE IS FOR ELECTRICAL EMERGENCY REPAIRS - ONLY
FOR ELECTRICAL REPAIRS TO BOTH HEAD PIER SYSTEMS:**

Description	Quantity	Unit	Unit Cost/\$	Total Cost/\$
MOBILIZATION/GENERAL CONDITIONS				
Mobilization-general conditions				
General Conditions	1	Lump Sum	\$ 7,200.00	\$ 7,200.00
Temporary Fencing/Barricades	1	Lump Sum	\$ 800.00	\$ 800.00
Total Mobilization/General Conditions				\$ 8,000.00
REMOVALS				
Remove and Dispose of Existing Service Centers (44) both head piers	1	Lump Sum	\$ 2,500.00	\$ 2,500.00
Remove and Dispose of Existing Junction Boxes under both head piers to existing service centers (25) both head piers	1	Lump Sum	\$ 3,000.00	\$ 3,000.00
Remove and Dispose of Existing Head Piers Timber Decking (both head piers-only) (400' + 430') 8' wide 6,640 square feet	1	Lump Sum	\$ 7,000.00	\$ 7,000.00
Total Removals				\$ 12,500.00
ELECTRICAL				
New Under Deck Junction Boxes to match existing junction box sizes & locations. The existing feed wiring from comfort station are to remain.	25	Each	750.00	\$ 18,750.00
New Service Centers to match existing receptacle configurations	44	Each	1,600.00	\$ 70,400.00

New Electrical Conduit & Wire from exist head pier boxes to service centers to match existing electrical boxes	360	Lin. Ft.	20.00	<u>\$ 7,200.00</u>
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Total Electrical				\$ 96,350.00
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PLUMBING

New Water connection to service centers (assume 44@8') to match existing electrical	44	Each	200.00	<u>\$ 8,800.00</u>
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Total Plumbing				\$ 8,800.00
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NEW TIMBER DECKING

New 2x6 Pressure Treated Timber Decking (400' + 430') 8' wide 6,640 square feet	13,280	FBM	4.00	<u>\$ 53,120.00</u>
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Total New Timber Decking				\$ 53,120.00
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ESTIMATED EMERGENCY REPAIRS - CONSTRUCTION COST				\$ 178,770.00
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ESTIMATED PROFESSIONAL SERVICES				\$ 18,000.00
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Contingencies 10%				\$ 17,877.00
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TOTAL ESTIMATED EMERGENCY REPAIRS PROJECT COSTS				\$ 214,647.00
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Note: Service Centers can be reused when Project Funding for entirely New Head Piers and facilities upgrade is secured and project is constructed. New receptacles plates of receptacle configuraton upgrade to meet new Electrical Pedestal Power Specifications of the floating pier performance specifications will be done under the future project .

Existing feed wiring from comfort station to remain existing for this emergency repair project.

APPENDIX H

SIMILAR PROJECT CONSTRUCTION CODE INFORMATION FOR COMFORT STATION ADDITION ONLY

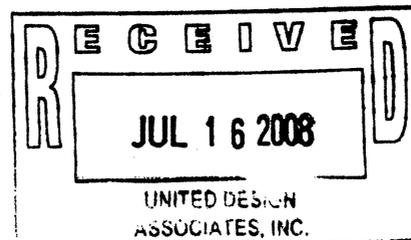


STATE OF MICHIGAN
DEPARTMENT OF LABOR & ECONOMIC GROWTH
LANSING

JENNIFER M. GRANHOLM
GOVERNOR

KEITH W. COOLEY
DIRECTOR

July 2, 2008



Mr. John Schlak
United Design Associates Inc
111 N Main Street
Suite 3
Cheboygan, MI 49721

RE: Project Number: 80628 - Chippewa
Arch. Project Number: N/A
DeTour State Harbor of Refuge
600 N Ontarior Street
DeTour, MI

Use Group: A3B
Construction Type: VB
Square Footage: Add 400

Dear Mr. Schlak:

Enclosed please find 1 set(s) of approved construction documents for the above referenced project. This project has been reviewed for compliance with the barrier-free design portion of the 2003 Michigan Building Code. This approval is subject to item(s) noted herein and field inspection. **One set of approved construction documents and all plan review correspondence shall be placed on the project site in accordance with the code.**

2003 Michigan Building Code - James Greene

MBC, 3409.4 - Only the new addition is required to comply with the requirements of accessibility. The existing facility may remain "as-is".

Please reference the submission number when applying for any permit regarding this project. If you have any questions regarding your plan review, contact the Plan Review Division at (517) 241-9328.

Sincerely,

Irvin J. Poke, AIA
Chief, Plan Review Division

IJP/hf
Enclosure

cc: DMB - OFAS - Design & Construction Division- Robert Hall

DLEG is an equal opportunity employer/program.
Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.

Providing for Michigan's Safety in the Built Environment

BUREAU OF CONSTRUCTION CODES
P.O. BOX 30254 • LANSING, MICHIGAN 48909
Telephone (517) 241-9328 • Fax (517) 241-9308
www.michigan.gov

APPENDIX I
SITE CONDITION PICTURES