

# Department of Environmental Quality

Water Resources Division  
120 West Chapin Street  
Cadillac, MI 49601-2158  
231-775-3960

File Number 11-45-0055-P

Date: January 11, 2012

## PUBLIC NOTICE

Michigan Fun Venture I, LLC, Attn: Conor McCahill, 8137 South Glen Lake Road, Glen Arbor, Michigan 49636, has applied to this office for a permit under authority of Part 301, Inland Lakes and Streams, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. The applicant proposes to expand the On The Narrows Marina on Glen Lake at 8137 South Glen Lake Road to meet increased demand. Additional free-standing seasonal docks will be added and the mooring field will be expanded. Broadside dockage will be reduced by 3 feet without reducing the accommodations for mooring of boats. A new 4-foot wide by 210-foot long main pier with a 4-foot wide by 193-foot long "T" section will extend out from the existing boardwalk. A total of 20 4-foot wide by 20-foot long finger piers will provide an additional 39 slips, for a total of 46 slips. Four new mooring buoys with a 54-foot swing radius, cement block anchoring systems and 12-foot lead, will be installed east of the new docking system to increase the mooring field to a total of 16 buoys. No dredging or boat launches are proposed with this project. The project is located in T28N, R14W, Section 3, Glen Arbor Township, Leelanau County, Michigan, in accordance with plans attached to this notice.

### THIS NOTICE IS NOT A PERMIT

The proposed project may also be regulated by one or more additional parts of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA) that are administered by the Water Resources Division (WRD). The requirements of all applicable parts are considered in determining if it is in the public interest to issue a permit.

When a permit application is received requesting authorization to work in or over the inland waters of the State of Michigan, pursuant to Part 301, Inland Lakes and Streams, of the NREPA, the NREPA provides that the department submit copies for review to the department of public health, the city, village or township, and the county where the project is to be located, the local soil conservation district, any local watershed council organized under Part 311, Local River Management, and the local port commission. Additional notification is provided to certain persons as required by statute or determined by the department.

Those persons wanting to make comments on the proposed project shall furnish this office with their written comments no later than 20 days from the date of this notice. Written comments will be made part of the record and should reference the above file number. Objections must be factual, specific, and fully describe the reasons upon which any objection is founded. Unless a written request is filed with the department within the 20-day public comment period, the department may make a decision on the application without a public hearing. The determination as to whether a permit will be issued or a public hearing held will be based on evaluation of all relevant factors defined in Sections 30106 and 30311, or permit criteria defined by other appropriate parts of the NREPA. These Sections address the effect of the proposed work on the public trust or interest including navigation, fish, wildlife, and water quality among other criteria. Public comments received will also be considered.

cc: Michigan Fun Venture I, LLC, applicant  
DNR, Wildlife, Bay City  
Leelanau County Clerk  
Leelanau County Drain Commissioner  
DEQ, RD, Site 45-45  
Ginny Schmidt

DNR, Fisheries, Cadillac  
Leelanau County Health Department  
Glen Arbor Township Clerk  
Leelanau Conservation District  
Glen Lake Association  
History Division



WATER RESOURCES  
DIVISION

DEC 19 2011

CADILLAC DISTRICT

DEQ File Number

11-45-0055-P

Fee received \$ 250 - M-Card

AGENCY USE	Previous USACE File Number
	<del>USACE File Number</del> R. Schmidt

Date Received

- Validate that all parts of this checklist are submitted with the application package. Fill out application and additional pages as needed.
- All items in Sections 1 through 9 are completed.
  - Project-specific Sections 10 through 20 are completed.
  - Dimensions, volumes, and calculations are provided for all impact areas.
  - All information contained in the headings for the appropriate Sections (1-20) are addressed, and identified attachments (✎) are included
  - Map, site plan(s), cross sections; one set must be black and white on 8 1/2 by 11 inch paper; photographs.
  - Application fee is attached.

**1 Project Location Information** For Latitude, Longitude, and TRS info anywhere in Michigan see [www.mcqi.state.mi.us/wetlands/](http://www.mcqi.state.mi.us/wetlands/)

Project Address (road, if no street address) 8137 S. Glen Lake Rd Glen Arbor, MI 49636	Zip Code 49636	Municipality Township/Village/City Glen Arbor	County Leelanau
Property Tax Identification Number(s) 45-006-203-018-00	Latitude 44.86268 N	Township/Range/Section (TRS) T ___ N or S; R ___ E or W; Sec ___	
Subdivision/Plat and Lot Number	Longitude -85.99511 W	OR Private Claim #	

**2 Applicant and Agent Information**

Owner/Applicant (individual or corporate name) McFun Venture 1, LLC - On The Narrows Marina	Agent/Contractor (firm name and contact person)
Mailing Address 8137 S. Glen Lake Rd	Mailing Address
City Glen Arbor	City
State MI	State
Zip Code 49636	Zip Code
Contact Phone Number 303-324-6569	Contact Phone Number
Fax None	Fax
Email Conor.McCahill@mc.com	E-mail

No  Yes Is the applicant the sole owner of all property on which this project is to be constructed and all property involved or impacted by this project? ✎ If no, attach letter(s) of authorization from all property owners including the owner of the disposal site.

Property Owner's Name (If different from applicant)	Mailing Address
Contact Phone Number	City
	State
	Zip Code

**3 Project Description**

Project Name On the Narrows Marina	Pre-Application File Number 11-45-0055-P
Name of Water body Glen Lake	Date project staked/flagged Per App Meeting

The proposed project is on, within, or involves (check all that apply)

<input checked="" type="checkbox"/> an inland lake (5 acres or more)	<input type="checkbox"/> a Great Lake or Section 10 Waters
<input type="checkbox"/> a pond (less than 5 acres)	<input type="checkbox"/> a wetland
<input type="checkbox"/> a stream, river, ditch or drain	<input type="checkbox"/> a 100-year floodplain
<input type="checkbox"/> a legally established County Drain	<input type="checkbox"/> a dam
Date Drain was established _____	<input type="checkbox"/> a designated high risk erosion area
<input type="checkbox"/> a channel/canal	<input type="checkbox"/> a designated critical dune area
<input type="checkbox"/> 500 feet of an existing water body	<input type="checkbox"/> a designated environmental area

Project Use

- private
- commercial
- public/government
- project is receiving federal/state transportation funds
- wetland restoration
- other \_\_\_\_\_

Indicate the type of permit being applied for:  General Permit  Minor Project  Individual (All other projects.) ✎ See Appendix C.

Written Summary of All Proposed Activities  
Due to high demand we would like to expand our boat slip and mooring offerings.

Construction Sequence and Methods  
If permitted we would simply install additional preexisting seasonal docks and move and expand our mooring field. This would take place in Spring 2012

**4 Project Purpose, Use and Alternatives** Attach additional sheets as necessary.

Describe the purpose of the project and its intended use; include any new development or expansion of an existing land use.  
*The purpose is to expand the number of slips and meetings on the Narrows Marina can provide to the public. There is very high demand for slips and meetings on Glen Lake that we currently cannot accommodate.*

Describe the alternatives considered to avoid or minimize resource impacts. Include factors such as, but not limited to, alternative locations, project layout and design, and construction technologies. For utility crossings include alternative routes and construction methods.  
*Following our Pic Application Meeting we adjusted our layout and design to exclude a boat ramp and any dredging activity. This will require more dock sections to be used, but eliminated dredging in shallow areas.*

**5 Locating Your Project Site** Attach a legible black and white map with a North arrow.

Names of roads of closest intersection *M22 + W. Day Forest Rd*

Directions from main intersection to the project site, with distances from the best and nearest visible landmark and water body  
*S. on M22 200 yards, Marina is on left (Big Glen Lake Side)*

Description of buildings on the site (color; 1 or 2 story, other) *White with Blue Trim* Description of adjacent landmarks or buildings (address; color; etc) *8137 S. Glen Lake Rd. Last Building before bridge*

How can your site be identified if there is no visible address? *N/A*

**6 Easements and Other Permits**

No  Yes Is there a conservation easement or other easement, deed restriction, lease, or other encumbrance upon the property?  
 If yes, attach a copy. Provide copies of court orders and legal lake levels if applicable.

List all other federal, interstate, state, or local agency authorizations including required assurances for Critical Dune Area projects.

Agency	Type of Approval	Number	Date Applied	Date approved /denied	Reason for denial

**7 Compliance**

If a permit is issued, when will the activity begin? (M/D/Y) *5-1-12* Proposed completion date (M/D/Y) *6-1-12*

No  Yes Has any construction activity commenced or been completed in a regulated area?  
 If Yes, identify the portion(s) underway or completed on drawings or attach project specifications and give completion date(s)

No  Yes Were the regulated activities conducted under a DEQ and/or USACE permit?  
 If Yes, list the permit numbers \_\_\_\_\_

No  Yes Are you aware of any unresolved violations of environmental law or litigation involving the property?  
 If Yes, attach explanation.

WATER RESOURCES DIVISION  
 DEC 19 2011  
 CADILLAC DISTRICT

**8 Adjacent Property Owners** Provide current mailing addresses. Attach additional sheets/labels for long lists.

Established Lake Board Contact Person \_\_\_\_\_ Mailing Address \_\_\_\_\_ City \_\_\_\_\_ State and Zip Code \_\_\_\_\_

Lake Association *PO Box 551* *Glen Arbor* *MI, 49636*

List all adjacents. If you own the adjacent lot, provide the requested information for the first adjacent parcel that is not owned by you.

Property Owner's Name	Mailing Address	City	State and Zip Code
<i>Gilany Schmidt</i>	<i>8097 S. Glen Lake Rd</i>	<i>Glen Arbor</i>	<i>MI 49636</i>

**9 Applicant's Certification** Read carefully before signing.

I am applying for a permit(s) to authorize the activities described herein. I certify that I am familiar with the information contained in this application; that it is true and accurate; and, to the best of my knowledge, that it is in compliance with the State Coastal Zone Management Program. I understand that there are penalties for submitting false information and that any permit issued pursuant to this application may be revoked if information on this application is untrue. I certify that I have the authority to undertake the activities proposed in this application. By signing this application, I agree to allow representatives of the DEQ, USACE, and/or their agents or contractors to enter upon said property in order to inspect the proposed activity site before and during construction and after the completion of the project. I understand that I must obtain all other necessary local, county, state, or federal permits and that the granting of other permits by local, county, state, or federal agencies does not release me from the requirements of obtaining the permit requested herein before commencing the activity. I understand that the payment of the application fee does not guarantee the issuance of a permit.

Property Owner  
 Agent/Contractor  
 Corp. or Public Agency / Title

Printed Name *Conor McCall* Signature *[Signature]* Date *12-9-2011*



10 Projects Impacting Inland Lakes, Streams, Great Lakes, Wetlands or Floodplains

- Complete only those sections A through M applicable to your project.
If your project impacts wetlands also complete Section 12. If your project impacts regulated floodplains also complete Section 13.
To calculate volume in cubic yards (cu yd), multiply the average length in feet (ft) times the average width (ft) times the average depth (ft) and divide by 27. Example: (25 ft long x 10 ft wide x 2 feet deep) / 27 = 18.5 cubic yards
Some projects on the Great Lakes require an application for conveyance prior to Joint Permit Application completeness.
Provide a black and white overall site plan, with cross-section and profile drawings. Show existing lakes, streams, wetlands, and other water features; existing structures; and the location of all proposed structures, land change activities and soil erosion and sedimentation control measures. Review Appendix B and EZ Guides for aid in providing complete site-specific drawings.
Provide tables for multiple impact areas or multiple activities such as multiple fill areas or multiple culverts. Include your calculations.

Water Level Elevation

On inland waters [ ] NGVD 29 [X] NAVD 88 [ ] other \_\_\_ Observed water elevation (ft) 595.81 date of observation (M/D/Y) 9/22/11
On a Great Lake [ ] IGLD 85 [ ] surveyed [ ] converted from observed still water elevation.

[ ] A. PROJECTS REQUIRING FILL (See All Sample Drawings)

- Attach a site plan and cross-section views to scale showing maximum and average fill dimensions with calculations.
For multiple impact areas on a site provide a table with location, dimensions and volumes for each fill area.

Purpose [ ] bioengineered shore protection [ ] boat ramp [ ] boat well [ ] bridge or culvert [ ] crib dock
[ ] riprap [ ] seawall [ ] swim area [ ] other \_\_\_\_\_

Table with 3 columns: Dimensions of fill (ft) (Length, Width, Maximum Depth), Total volume (cubic yards), Volume below OHWM (cubic yards). Includes a section for Maximum water depth in fill area (ft), Area filled (sq ft), and Will filter fabric be used under proposed fill? (No/Yes).

Fill will extend \_\_\_ feet into the water from the shoreline and upland \_\_\_ feet out of the water.

Type of clean fill [ ] peastone \_\_\_% [ ] sand \_\_\_% [ ] gravel \_\_\_% [ ] other \_\_\_\_\_

Source of clean fill [ ] commercial [ ] on-site [ ] other
If on-site, show location on site plan.
If other, attach description of location.

[ ] B. PROJECTS REQUIRING DREDGING OR EXCAVATION (See Sample Drawings)

- Refer to www.mi.gov/jointpermit for spoils disposal and authorization requirements.
Attach a site plan and cross-section views to scale showing maximum and average dredge or excavation dimensions with calculations.
For multiple impact areas on a site provide a table with location, dimensions and volumes for each dredge/excavation area.

Purpose [ ] boat ramp [ ] boat well [ ] bridge or culvert [ ] maintenance dredge
[ ] navigation [ ] pond/basin [ ] other \_\_\_\_\_

Table with 3 columns: Dimensions (ft) (Length, Width, Maximum Depth), Total volume (cu yds), Volume below OHWM (cu yds)

Has this same area been previously dredged? [ ] No [ ] Yes If Yes, provide date and permit number:
Will the previously dredged area be enlarged? [ ] No [ ] Yes If Yes, when and how much?
Is long-term maintenance dredging planned? [ ] No [ ] Yes If Yes, how often?

Dredge or Excavation Method [ ] Hydraulic [ ] Mechanical [ ] other \_\_\_\_\_

Spoils Disposal: Dredged or excavated spoils will be placed [ ] on-site [ ] landfill [ ] USACE confined disposal facility [ ] other upland off-site
For disposal, provide a Detailed spoils disposal area location map and site plan with property lines.
Letter of authorization from property owner of spoils disposal site, if disposed off-site.
For volumes less than 5,000 cu yards, has proposed dredge material been tested for contaminants within the past 10 years?
[ ] No [ ] Yes If Yes, provide test results with a map of sampling locations.

[ ] C. PROJECTS REQUIRING RIPRAP (See Sample Drawings 2, 3, 8, 12, 14, 22, and 23)

Table with 4 columns: Riprap water ward of the ordinary high water mark: dimensions (ft) length, width, depth, Volume(cu yd)

Table with 4 columns: Riprap landward of the ordinary high water mark: dimensions (ft) length, width, depth, Volume(cu yd)

Type and size of riprap (inches) [ ] field stone [ ] angular rock [ ] other
Will filter fabric or pea stone be used under proposed riprap? [ ] No [ ] Yes, Type



<input type="checkbox"/> <b>D. SHORE PROTECTION PROJECTS</b> (See EZ Guides and Sample Drawings 2, 3, and 17. Complete Sections 10A, B, and/or C.) * For bioengineering projects include the list of native plants/seeds, if available.			
Type and length (ft) <input type="checkbox"/> bioengineering (ft) _____ <input type="checkbox"/> revetment (ft) _____ <input type="checkbox"/> riprap (ft) _____ <input type="checkbox"/> seawall/bulkhead (ft) _____		Structure is <input type="checkbox"/> new <input type="checkbox"/> repair <input type="checkbox"/> replacement of an existing structure	
Proposed Toe Stone (linear feet) _____		Will the existing structure be removed? <input type="checkbox"/> No <input type="checkbox"/> Yes	
Distance of project from an obvious fixed structure (example - 50 ft from SW corner of house)		Distance of project from adjacent property lines (ft)	
For bioengineering projects indicate the structure type <input type="checkbox"/> brush bundles <input type="checkbox"/> coir log <input type="checkbox"/> live stakes <input type="checkbox"/> tree revetment <input type="checkbox"/> other _____			
<input checked="" type="checkbox"/> <b>E. DOCK - PIER - MOORING PILINGS</b> (See Sample Drawing 10) * Attach a copy of the property legal description, mortgage survey, or a property boundary survey report.			
Dock Type <input type="checkbox"/> open pile <input type="checkbox"/> filled <input type="checkbox"/> crib <input type="checkbox"/> floating <input type="checkbox"/> cantilevered <input type="checkbox"/> spring piles <input type="checkbox"/> piling clusters <input checked="" type="checkbox"/> other <i>Seasonal</i>		Is the structure within the applicant's riparian area interest area? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes * Show parcel property lines on the site plan. <i>(see Standing removable)</i>	
Proposed structure dimensions (ft) length _____ width _____		Use <input checked="" type="checkbox"/> private <input checked="" type="checkbox"/> public <input checked="" type="checkbox"/> commercial	
Dimensions of nearest adjacent structures (ft) length _____ width _____		Distance of dock from adjacent property lines (ft)	
<input type="checkbox"/> <b>F. BOAT WELL</b> (See EZ Guide. Complete Sections 10A and 10B)			
Dimensions (ft) length _____ width _____ depth _____		Number of boats	
Type of sidewall stabilization <input type="checkbox"/> concrete <input type="checkbox"/> riprap <input type="checkbox"/> steel <input type="checkbox"/> vinyl <input type="checkbox"/> wood <input type="checkbox"/> other _____			
Volume of backfill behind sidewall stabilization (cu yd)		Distance of boat well from adjacent property lines (ft)	
<input type="checkbox"/> <b>G. BOAT RAMP</b> (See EZ Guide. Complete sections 10A, 10B, and 10C for mattress and pavement fill, dredge, and riprap)			
Type <input type="checkbox"/> new <input type="checkbox"/> existing <input type="checkbox"/> maintenance/improvement		Use <input type="checkbox"/> private <input type="checkbox"/> public <input type="checkbox"/> commercial	
Existing overall boat ramp dimensions (ft) length _____ width _____ depth _____		Type of construction material <input type="checkbox"/> concrete <input type="checkbox"/> wood <input type="checkbox"/> stone <input type="checkbox"/> other _____	
Proposed overall ramp dimensions (ft) length _____ width _____ depth _____		Proposed ramp dimensions (ft) below ordinary high water mark length _____ width _____ depth _____	
Number of proposed skid piers	Proposed skid pier dimensions (ft) length _____ width _____	Distance of ramp from adjacent property lines (ft)	
<input type="checkbox"/> <b>H. BOAT HOIST - ROOFS</b> (See EZ Guide)			
Type <input type="checkbox"/> cradle <input type="checkbox"/> side lifter <input type="checkbox"/> other _____		Located on <input type="checkbox"/> seawall <input type="checkbox"/> dock <input type="checkbox"/> bottomlands	
Hoist dimensions, including catwalks (ft) Length _____ Width _____		Area occupied, including cat walks (sq ft)	
Distance of hoist from adjacent property lines (ft)		Permanent Roof <input type="checkbox"/> No <input type="checkbox"/> Yes * If Yes, how is the roof supported?	
Maximum Roof Dimensions (ft): length _____ width _____ height _____			
<input type="checkbox"/> <b>I. BOARDWALKS and DECKS In WETLANDS or FLOODPLAINS</b> (See Sample Drawings 5 and 6. Complete Sections 12 and/or 13) * Provide a table for multiple boardwalks and decks proposed in one project; include locations and dimensions.			
<b>Wetlands</b>		<b>Floodplains</b>	
Boardwalk <input type="checkbox"/> on pilings <input type="checkbox"/> on fill	Deck <input type="checkbox"/> on pilings <input type="checkbox"/> on fill	Boardwalk <input type="checkbox"/> on pilings <input type="checkbox"/> on fill	Deck <input type="checkbox"/> on pilings <input type="checkbox"/> on fill
Dimensions (ft) Length _____ Width _____	Dimensions (ft) Length _____ Width _____	Dimensions (ft) Length _____ Width _____	Dimensions (ft) Length _____ Width _____
<input type="checkbox"/> <b>J. INTAKE PIPES</b> (See Sample Drawing 16) or <b>OUTLET PIPES</b> (See Sample Drawing 22)			
If outlet pipe, discharge is to <input type="checkbox"/> inland lake <input type="checkbox"/> stream, drain or river <input type="checkbox"/> overland flow <input type="checkbox"/> Great Lake <input type="checkbox"/> wetland <input type="checkbox"/> other			
Number of pipes	Pipe diameters and invert elevations	Does pipe discharge below the OHWM?	<input type="checkbox"/> No <input type="checkbox"/> Yes
		Is the water treated before discharge?	<input type="checkbox"/> No <input type="checkbox"/> Yes
Type <input type="checkbox"/> headwall <input type="checkbox"/> end section <input type="checkbox"/> other _____	Dimensions of headwall OR end section (ft) Length _____ Width _____ Height _____		

WATER RESOURCES DIVISION

DEC 19 2011

**K. MOORING and NAVIGATION BUOYS** (See EZ Guide for Sample Drawing)  
 ➔ Provide a site plan showing the distances between each buoy and from the shore to each buoy, and depth (ft) of water at each location.  
 ➔ Provide cross-section drawing(s) showing anchoring system(s) and dimensions.

Purpose of buoy  mooring  navigation  scientific structures  swimming  other

Number of buoys	Dimensions of buoys (ft)			Boat Lengths	Type of anchor system
16	width	height	swing radius 54'	chain length 1.5 depth 0 - 25'	Cement Block

Buoy Location: Latitude \_\_\_\_\_ N Longitude \_\_\_\_\_ W. ➔ Provide a table for multiple buoys.

Do you own the property along the shoreline?  No  Yes ➔ If No, attach an authorization letter from the property owner(s).

Do you own the bottomlands? Yes  No  Yes ➔ If No, attach an authorization letter from the property owner(s).

**L. FENCES**  
 ➔ Provide an overall site plan showing the proposed fencing through streams, wetlands or floodplains.  
 ➔ Provide a drawing of fence profile showing the design, dimension, post spacing, mesh, and distance from ground to bottom of fence.

Purpose of fence  Airport  Cervidae  Livestock  Residential  Security  Other

Total length (ft) of fence through streams _____ wetlands _____ floodplains _____	Fence height (ft)	Fence type and material
---	-------------------	-------------------------

**M. OTHER** - e.g., structure removal, maintenance or repair, aerator, dry fire hydrant, gold prospecting, habitat structures, scientific measuring devices, soil borings, or survey activities.

Structure description, dimensions and volumes. Complete Sections 10A-C as applicable.

WATER RESOURCES DIVISION  
DEC 19 2011

**11 Expansion Of An Existing Or Construction Of A New Lake Or Pond** (See Sample Drawings 4 and 5)  
 ➔ Complete Section 10J for outlets and Section 17 for water control structures.  
 ➔ Provide elevations, cross-sections and profiles of outlets, dams, dikes, water control structures and emergency spillways to nearest water bodies.

Which best describes your proposed water body use (check all that apply)  
 mining  recreation  storm water retention basin  wastewater basin  wildlife  other \_\_\_\_\_

Water source for lake/pond  
 groundwater  natural springs  Inland Lake or Stream  storm water runoff  pump  sewage  other \_\_\_\_\_

Location of the lake/basin/pond  floodplain  wetland  stream (inline)  upland

Maximum dimensions (ft) length _____ width _____ depth _____	Maximum Area: <input type="checkbox"/> acres <input type="checkbox"/> sq ft _____
---	---

Has there been a hydrologic study performed on the site?  No  Yes ➔ If Yes, provide a copy.

Has the DEQ conducted a wetland assessment for this parcel?  No  Yes ➔ If Yes, provide a copy or WIP number:

Has a professional wetland delineation been conducted for this parcel?  No  Yes ➔ If Yes, provide a copy with data sheets.

Spoils Disposal	Dredged or excavated spoils will be placed <input type="checkbox"/> on-site <input type="checkbox"/> landfill <input type="checkbox"/> USACE confined disposal facility <input type="checkbox"/> other upland off-site For disposal, provide a ➔ Detailed spoils disposal area location map and site plan with property lines. ➔ Letter of authorization from property owner of spoils disposal site, if disposed off-site.
-----------------	---

**18 Utility Crossings** (See Sample Drawings 12 and 13, and EZ Guide)

- If side casting is proposed, complete Sections 10A and 10B. If spoils will be placed in or impact wetlands, complete Section 12.
  - ✦ Attach additional sheets or tables with the requested information as needed for multiple crossings.
  - ✦ For wetland crossings using the open trench method show clay plugs at the wetland/upland boundaries on the plans.

Crossing of  Inland Lake or Stream  floodplain  Great Lake  wetlands (also complete Section 12)

What method will be used to construct the crossings?  directional boring  jack and bore  open trench  plow / knife  flume

Utility Type	Number of lake or stream crossings	Number of wetland crossings	Pipe diameter with casing (in)	Pipe length per crossing (ft)	Distance below streambed or wetland (in)	Trench width (ft)
<input type="checkbox"/> sanitary sewer						
<input type="checkbox"/> storm sewer						
<input type="checkbox"/> watermain						
<input type="checkbox"/> cable						
<input type="checkbox"/> electric						
<input type="checkbox"/> fiber optic cable						
<input type="checkbox"/> oil/gas pipeline						

**19 Marina Construction, Expansion and Reconfiguration** (See Sample Drawing 21)

- For more information go to [www.mi.gov/marinas](http://www.mi.gov/marinas)
- Marinas located on the Great Lakes, including Lake St. Clair, may be required to secure leases or conveyances from the state of Michigan to place structures on the bottomlands. If a conveyance is necessary, an application must be submitted before the Joint Permit Application can be determined complete.
  - ✦ Fully complete Section 10 E. For multiple structures provide a table with the requested information.
  - ✦ Enclose a copy of any current pump-out agreement with another marina facility, if on-site sanitary pump out facilities are not available.
  - ✦ Attach a copy of the property legal description, mortgage survey, or a property boundary survey to your application.
  - ✦ The WRD may require a riparian interest area (RIA) estimate survey, sealed by a licensed surveyor, in order to determine whether the proposed project will adversely impact riparian rights. Include any available sealed RIA estimate survey and/or written authorizations from affected adjacent riparian owners with your application.

Proposed Marina Activity  New construction  Expansion  Reconfiguration

Do you have an existing Great Lake Conveyance?  No  Yes For more information visit [www.mi.gov/deggreatlakes](http://www.mi.gov/deggreatlakes).

Are sanitary pump-out facilities available?  No  Yes Is there a pump out agreement?  No  Yes If Yes, provide a copy.

Marina Description	Current Count	Final Count
Number of boat slips/wells (do not include broadside dockage or mooring buoys)	7	46
Lineal feet of broadside dockage	71	68
Maximum number of boats at broadside dockage	3	3
Number of mooring buoys	12	16
Number of launch ramps/lanes	0	0

WATER RESOURCES  
DIVISION

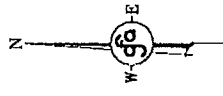
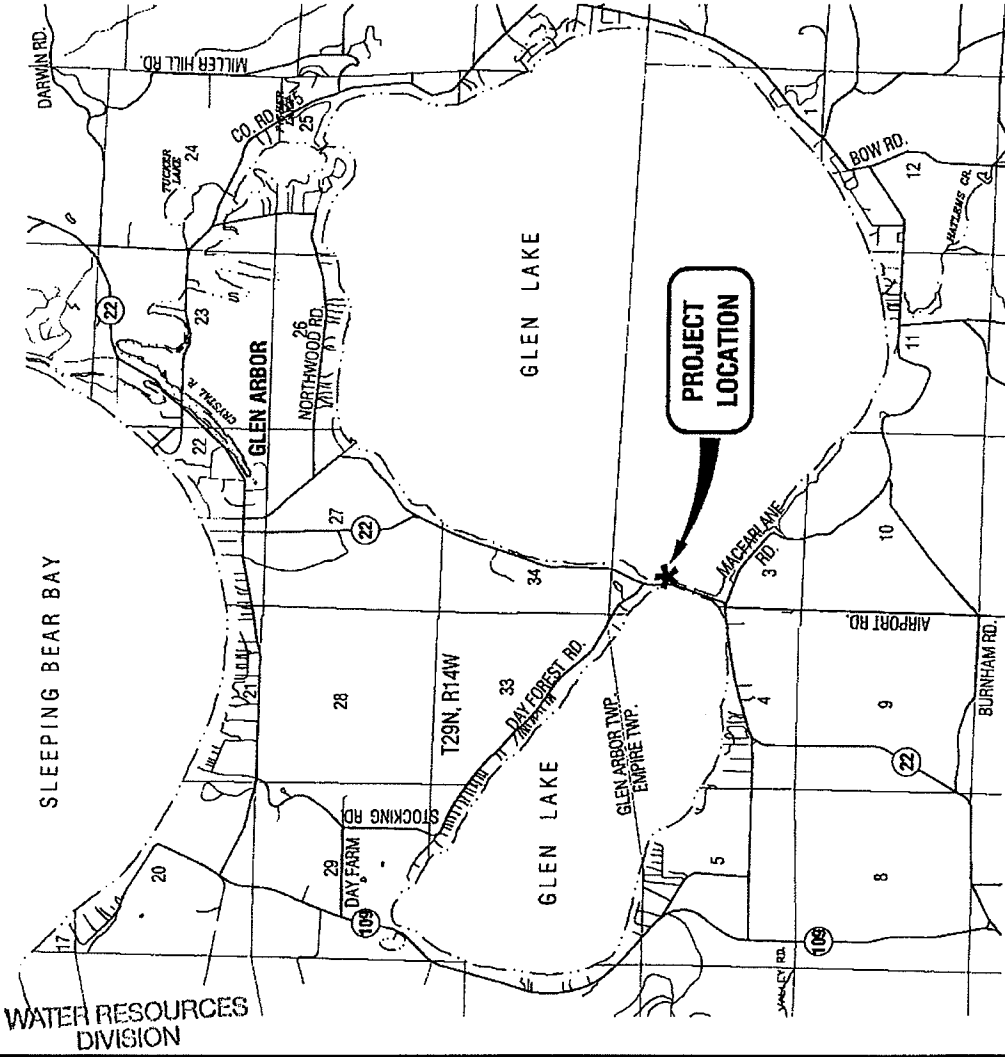
DEC 19 2011

CADILLAC DISTRICT

DETAIL PLANS FOR  
**CONOR McCAHILL**  
**ON THE NARROWS MARINA**

**INDEX OF SHEETS**

SHEET	TITLE
1	COVER SHEET
2	EXISTING CONDITIONS
3	PROPOSED SITE PLAN
4	CROSS SECTION
5	CROSS SECTION
6	MOORING BUOY PLAN
7	MOORING BUOY DETAIL



VICINITY MAP



APPLICATION PREPARED BY:  
 COURDIE/FRASER  
 SCALE: NO SCALE  
 DATE: 12/08/11 SHEET 1 OF 7

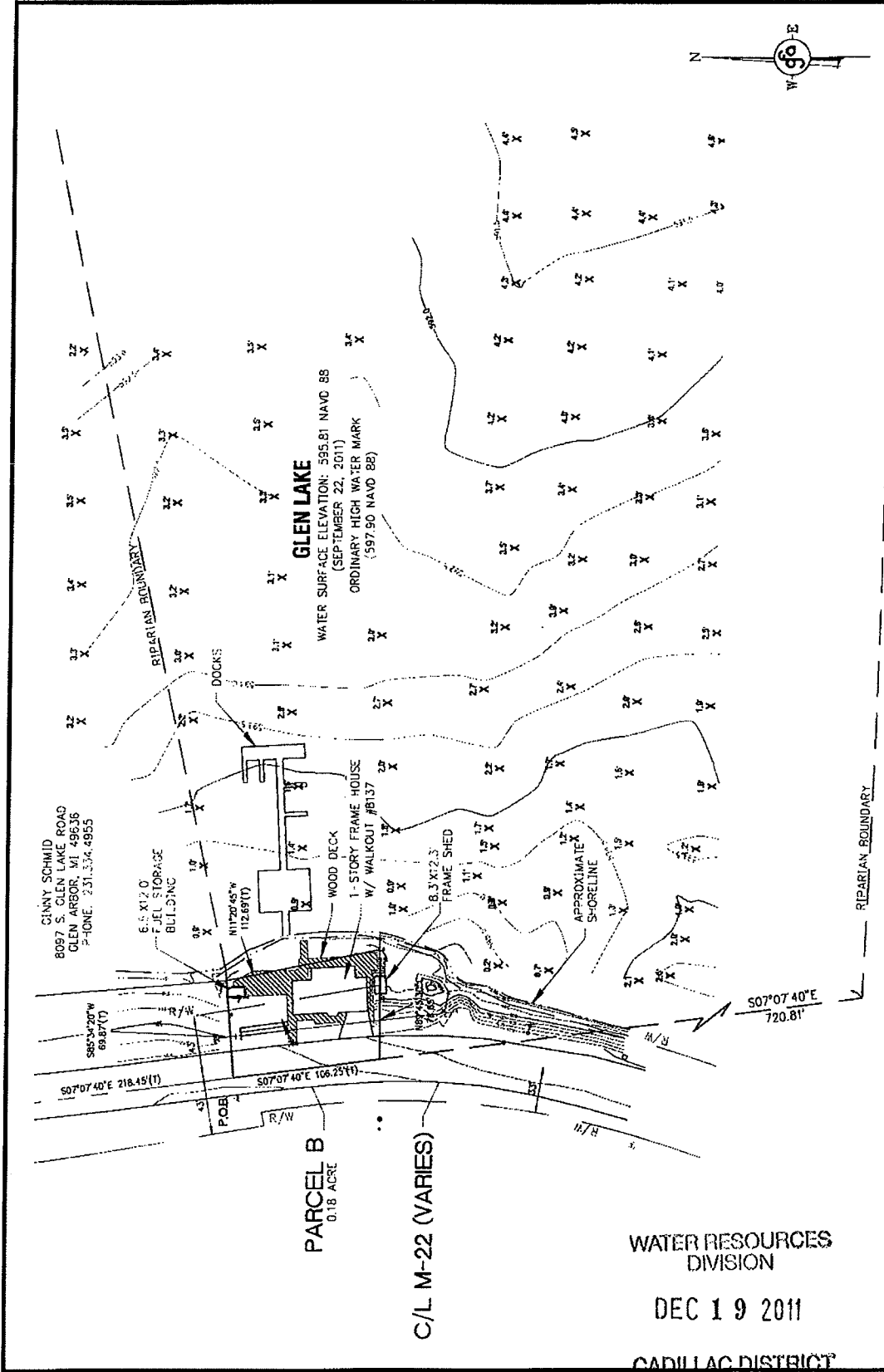
OWNER: CONOR McCAHILL  
 WATERWAY: GLEN LAKE  
 COUNTY: LEELANAU COUNTY  
 SEC. 3, T.28N., R.14W., GLEN ARBOR TOWNSHIP

CONOR McCAHILL  
 ON THE NARROWS MARINA  
 DEQ NO. 11-45-0055-P

GFA#10243

DEC 19 2011

CADILLAC DISTRICT



**OWNER:** CONOR McCAHILL  
**WATERWAY:** GLEN LAKE  
**COUNTY:** LEELENAU COUNTY  
**SEC. 3, T.28N., R.14W., GLEN ARBOR TOWNSHIP**

**APPLICATION PREPARED BY:**  
COURDIE/FRASER  
SCALE: 1" = 100'  
DATE: 12/08/11 SHEET 2 OF 7

**CONOR McCAHILL**  
**ON THE NARROWS MARINA**  
**DEQ NO. 11-45-0055-P**



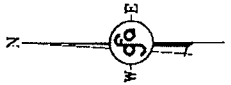
GFA#10243

**BROADSIDE DOCKAGE TABLE**

EX. LF OF DOCKAGE	EX. NO. OF BOATS DOCKED (MAX.)	PROP. LF OF DOCKAGE	PROP. NO. OF BOATS DOCKED (MAX.)	TOTAL LF OF DOCKAGE	TOTAL NO. OF BOATS
71	3	68	5	139	6

**GLEN LAKE**

WATER SURFACE ELEVATION: 595.81 NAVD 88  
(SEPTEMBER 22, 2011)



16 PROPOSED MOORINGS  
(SEE SHEET 6 FOR DETAILS)

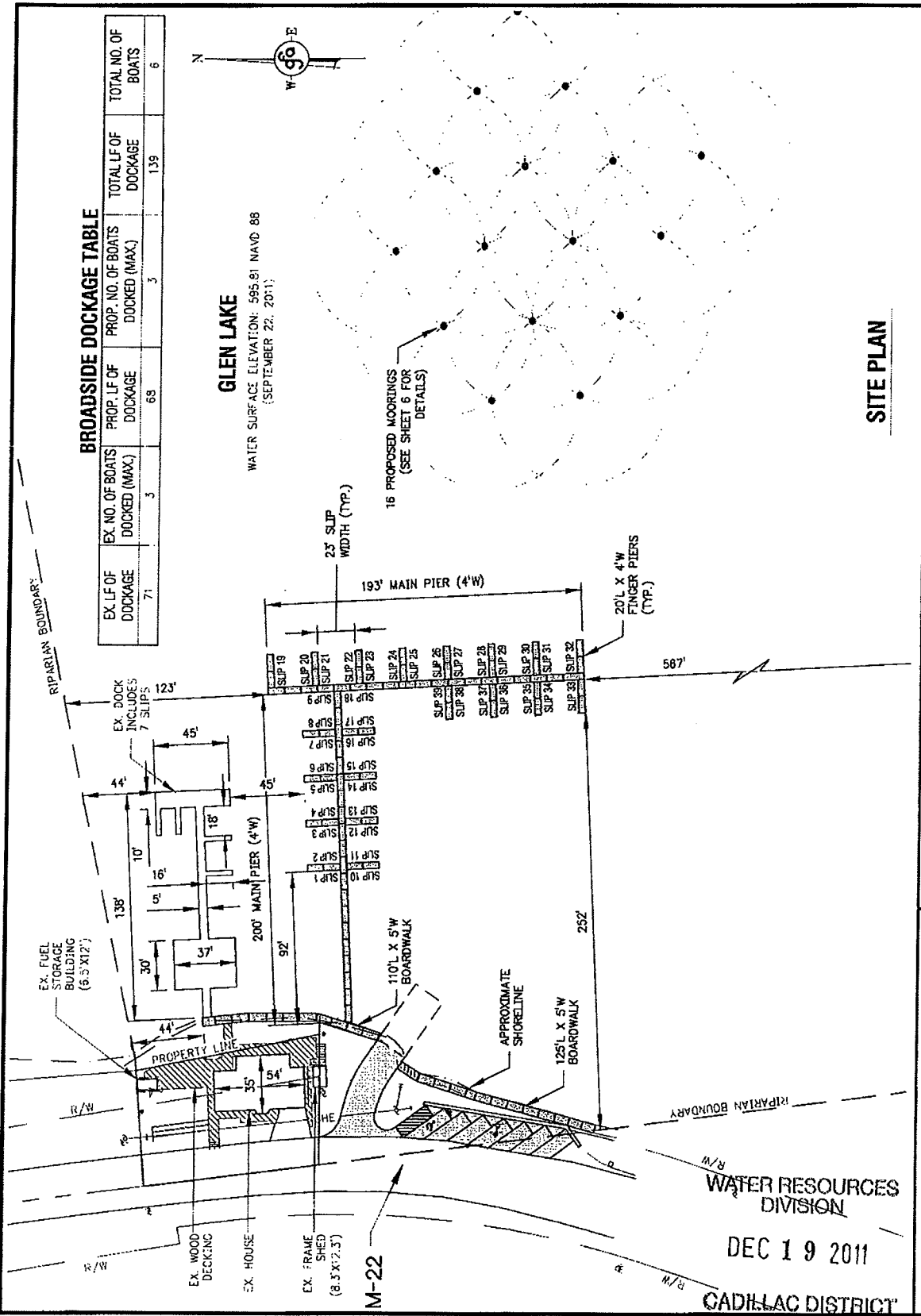
**SITE PLAN**

APPLICATION PREPARED BY:  
GOURDIE/FRASER  
SCALE: 1" = 80'  
DATE: 12/08/11 SHEET 3 OF 7

OWNER: CONOR MCCAHILL  
WATERWAY: GLEN LAKE  
COUNTY: LEELANAU COUNTY  
SEC. 3, T.28N., R.14W., GLEN ARBOR TOWNSHIP

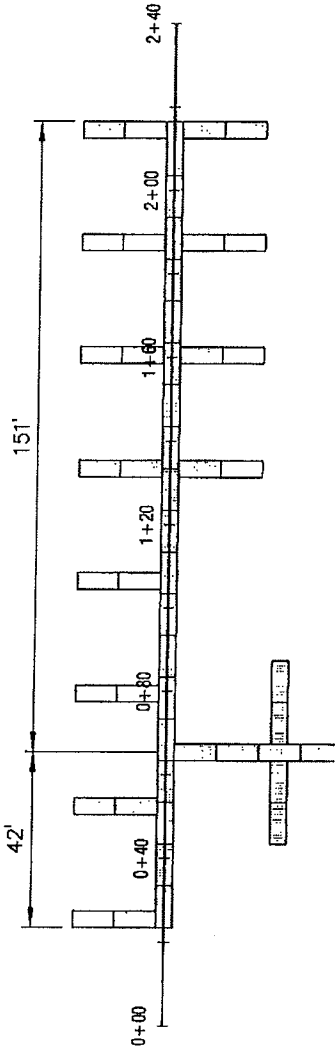
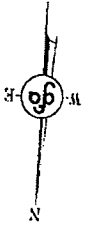
CONOR MCCAHILL  
ON THE NARROWS MARINA  
DEC NO. 11-45-0055-P

GFA#10243

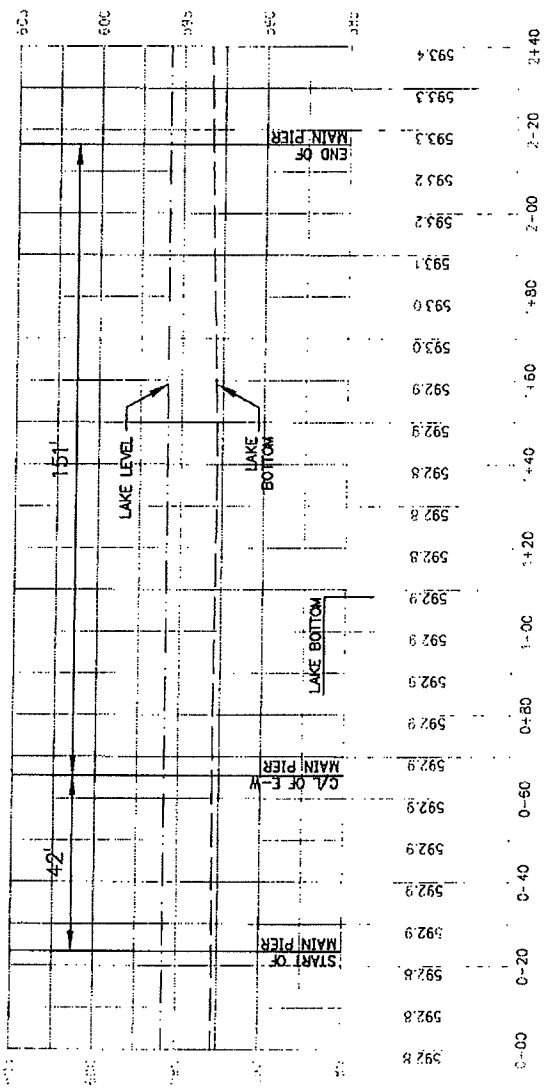


11/17/2011 10:58 AM (2011-11-17 10:58 AM) (2011-11-17 10:58 AM) (2011-11-17 10:58 AM)





**CROSS SECTION B-B**  
 SCALE:  
 HORIZONTAL: 1" = 40'  
 VERTICAL: 1" = 10'



**CROSS SECTION B-B**

WATER RESOURCES  
 DIVISION  
 DEC 19 2011  
 CADILLAC DISTRICT

OWNER: CONOR MCCAHILL  
 ON THE NARROWS MARINA  
 DEQ NO. 11-45-0055-P

OWNER: CONOR MCCAHILL  
 WATERWAY: GLEN LAKE  
 COUNTY: LEELELANAU COUNTY  
 SEC. 3, T.28N., R.14W., GLEN ARBOR TOWNSHIP

APPLICATION PREPARED BY:  
 GOURDIE/FRASER  
 SCALE: 1" = 40'  
 DATE: 12/08/11 SHEET 5 OF 7



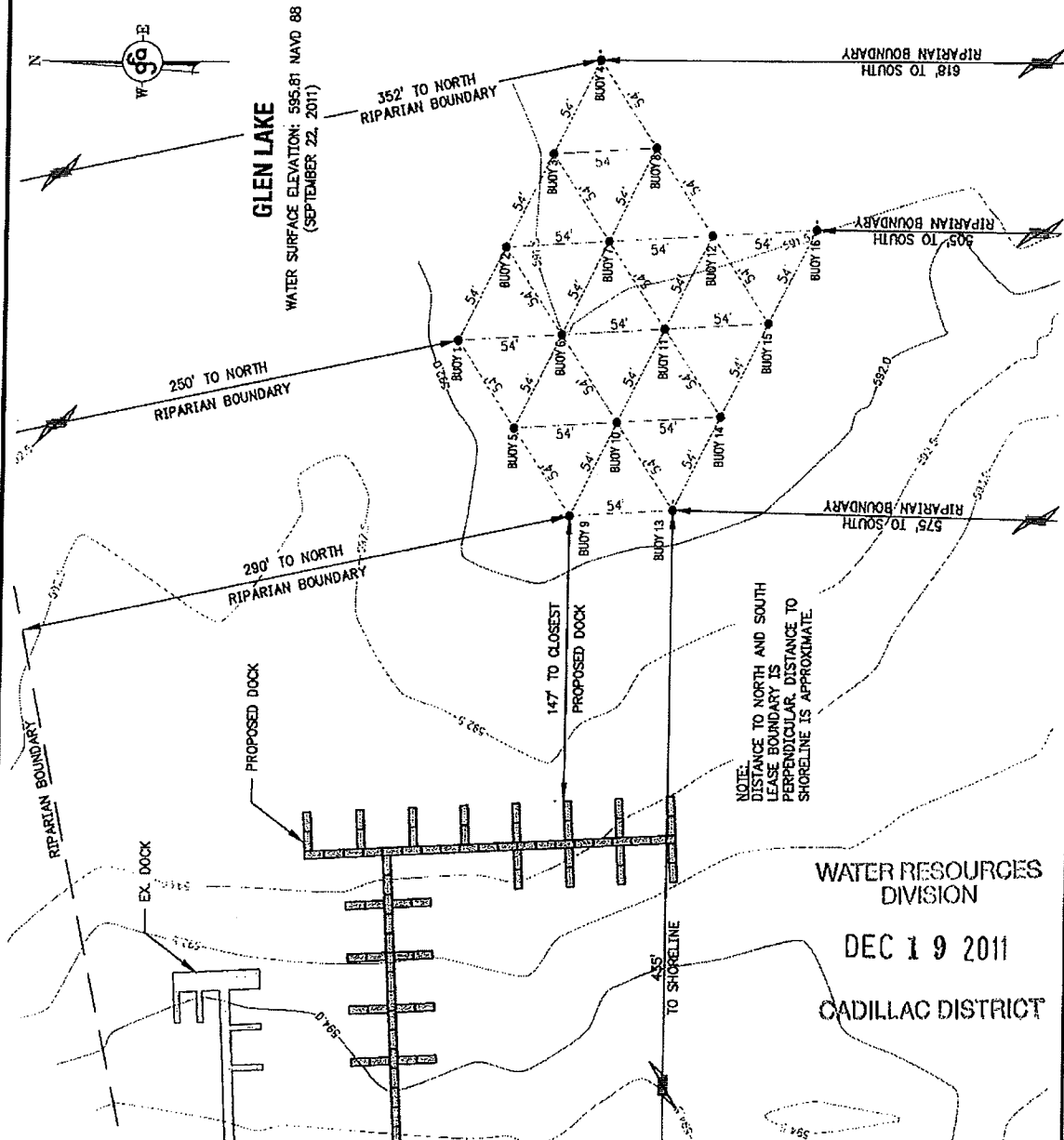
GFA#10243

**DESIGN NOTES:**

1. MOORING FIELD LAYOUT FOR BOATS 26' IN LENGTH AND UNDER.
2. DEPTH RANGE OF MOORING FIELD RANGES FROM APPROX. 4.0' TO 4.5'.
3. DESIGN PARAMETERS:  
 -- 26' MAX. BOAT LENGTH  
 -- 4.5' (AVG.) WATER DEPTH  
 -- 12' LEAD TO BOAT

BUOY NO. 1:	LAT: N44° 51' 45.032"
	LONG: W85° 59' 35.713"
BUOY NO. 2:	LAT: N44° 51' 44.802"
	LONG: W85° 59' 35.037"
BUOY NO. 3:	LAT: N44° 51' 44.572"
	LONG: W85° 59' 34.360"
BUOY NO. 4:	LAT: N44° 51' 44.342"
	LONG: W85° 59' 33.683"
BUOY NO. 5:	LAT: N44° 51' 44.750"
	LONG: W85° 59' 36.331"
BUOY NO. 6:	LAT: N44° 51' 44.500"
	LONG: W85° 59' 35.655"
BUOY NO. 7:	LAT: N44° 51' 44.270"
	LONG: W85° 59' 34.978"
BUOY NO. 8:	LAT: N44° 51' 44.041"
	LONG: W85° 59' 34.302"
BUOY NO. 9:	LAT: N44° 51' 44.428"
	LONG: W85° 59' 36.949"
BUOY NO. 10:	LAT: N44° 51' 44.188"
	LONG: W85° 59' 36.273"
BUOY NO. 11:	LAT: N44° 51' 43.969"
	LONG: W85° 59' 35.596"
BUOY NO. 12:	LAT: N44° 51' 43.739"
	LONG: W85° 59' 34.920"
BUOY NO. 13:	LAT: N44° 51' 43.897"
	LONG: W85° 59' 36.891"
BUOY NO. 14:	LAT: N44° 51' 43.667"
	LONG: W85° 59' 36.214"
BUOY NO. 15:	LAT: N44° 51' 43.437"
	LONG: W85° 59' 35.538"
BUOY NO. 16:	LAT: N44° 51' 43.207"
	LONG: W85° 59' 34.861"

**MOORING BUOY PLAN**



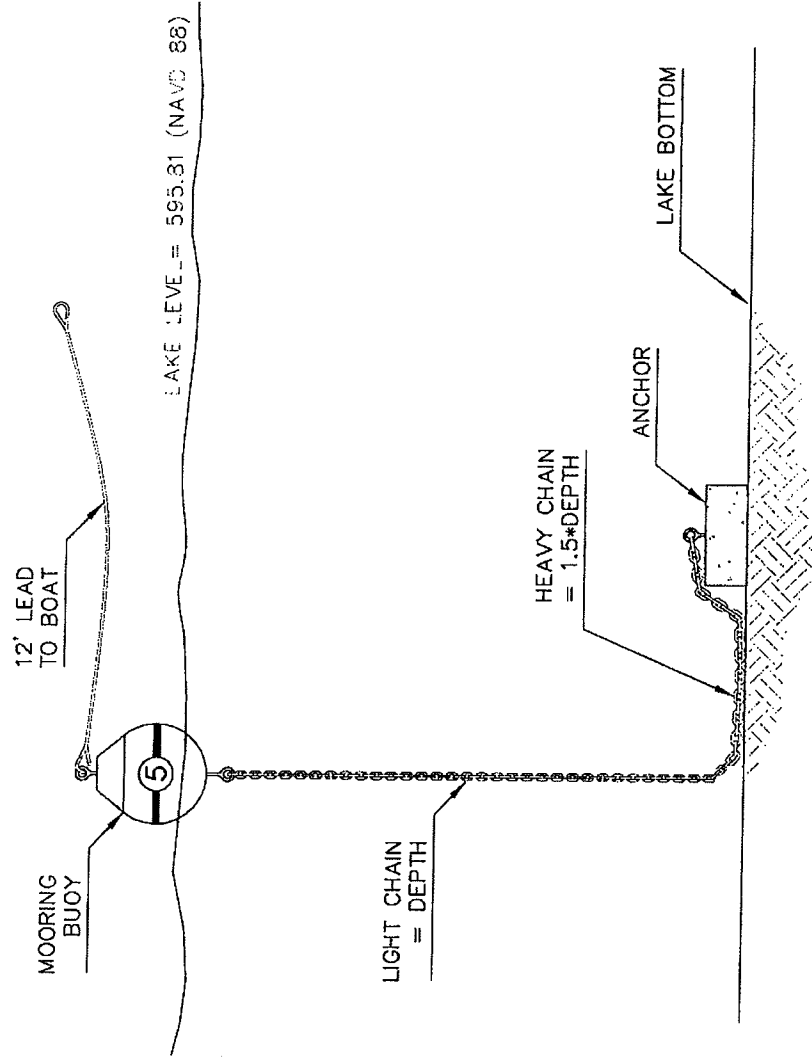
APPLICATION PREPARED BY:  
 GOURDIE/FRASER  
 SCALE: 1" = 80'  
 DATE: 12/08/11 SHEET 6 OF 7

OWNER: CONOR McCAHILL  
 WATERWAY: GLEN LAKE  
 COUNTY: LEELENAU COUNTY  
 SEC. 3, T.28N., R.14W., GLEN ARBOR TOWNSHIP

CONOR McCAHILL  
 ON THE NARROWS MARINA  
 DEC NO. 11-45-0055-P



GFA#10243



WATER RESOURCES  
DIVISION

DEC 19 2011

CADILLAC DISTRICT

**MOORING BUOY DETAIL**

CONOR McCAHILL  
ON THE NARROWS MARINA  
DEQ NO. 11-45-0055-P

OWNER: CONOR McCAHILL  
WATERWAY: GLEN LAKE  
COUNTY: LEELANAU COUNTY  
SEC. 3, T.28N., R.14W., GLEN ARBOR TOWNSHIP

APPLICATION PREPARED BY:  
GOURDIE/FRASER  
SCALE: NONE  
DATE: 12/08/11 SHEET 7 OF 7



GFA#10243