USCG 9th District Waterways Management Branch

- Captain Amy Beach – Chief, Prevention Division
  - 216-902-6046
- Commander Tony Maffia – Chief, WWM Branch
  - 216-902-6064
- Lt Commander Zac Bender – Icebreaking Supervisor
  - 216-902-6065
- Lt Jason Radcliffe – OPS Support
  - 216-902-6060
- Lt Rachel Christensen – DOMICE Support/Schedule
  - 216-902-6066
Why We Break Ice

➢ Urgent Vessel Response
  - Extricate vessels from danger.

➢ Exigent Community Service/Flood Control
  - Direct support of the general public.

➢ Facilitate Navigation
  - “meet the reasonable demands of commerce”
Tier One and Two Waterways
# Employment of Icebreakers

<table>
<thead>
<tr>
<th>Waterway Classifications</th>
<th>Ice Breaking Assistance</th>
<th>Operational Phases of Ice Breaking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier One</td>
<td>PI / VA / DA</td>
<td>Extended, Winter, Breakout</td>
</tr>
<tr>
<td>Tier Two</td>
<td>PI/ VA* / DA*</td>
<td>Extended, Breakout (Winter Season Upon Request)</td>
</tr>
<tr>
<td>Tier Three</td>
<td>PI* / VA* / DA*</td>
<td>Extended, Breakout (Winter Season Upon Request)</td>
</tr>
<tr>
<td>Tier Four</td>
<td>Exigent Only*</td>
<td>Extended, Winter, Breakout</td>
</tr>
</tbody>
</table>

* = If Commercial Assistance not available  
PI – Preventive Icebreaking  
VA – Vessel Assistance  
DA – Direct Assistance
<table>
<thead>
<tr>
<th></th>
<th>140’ WTGB (6)</th>
<th>225’ WLB (2)</th>
<th>240’ WLBB (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length</strong></td>
<td>140 ft</td>
<td>225 ft</td>
<td>240 ft</td>
</tr>
<tr>
<td><strong>Beam</strong></td>
<td>37 ft 6 in</td>
<td>46 ft</td>
<td>58 ft</td>
</tr>
<tr>
<td><strong>Displacement</strong></td>
<td>662 Long Tons</td>
<td>2000 Long Tons</td>
<td>3625 Long Tons</td>
</tr>
<tr>
<td><strong>Horsepower</strong></td>
<td>2500</td>
<td>6200</td>
<td>9000</td>
</tr>
<tr>
<td><strong>Icebreaking</strong></td>
<td>22 in @ 3kts 36 in backing and ramming Bubbler system</td>
<td>14 in @ 3kts 36 in backing and ramming</td>
<td>32 in @ 3 knots 12 ft through ridges by backing and ramming</td>
</tr>
</tbody>
</table>
Project Completion in 2020

D9 will continue to have 5 operational WTGB’s per ice season
Major Upgrades
GREAT LAKES SURFACE ENVIRONMENTAL ANALYSIS (GLSEA)

Analysis Date: JD 016 01/16/2018
Percent Pixels with Data within +/-10 Days: 69.8%
Date of last ice analysis: 1/16/2018

NOAA CoastWatch

Great Lakes Total Ice Cover: 35.5%

Median Ice Concentration
- <10%
- 10–39%
- 40–69%
- 70–89%
- 90–99%
- 100%

Water Temperature

Duluth
Marquette
Sault Ste. Marie
Green Bay
Milwaukee
Muskegon
Detroit
Toledo
Cleveland
Buffalo
Chicago
Toronto
Alpena

Great Lakes Environmental Research Laboratory
National Ice Ice Center
Same Week: Historical Ice Coverage for the week of 0115, seasons:1980/81-2017/18


Regional Great Lakes / Régionale Grands Lacs

Area / Aire : 254,674 km²
Single Season: Weekly Ice Coverage for the season
2017/18, Weeks: 1105-0514

Une saison: Couverture des glaces hebdomadaire pour la saison 2017/18, Semaines: 1105-0514

Regional Great Lakes / Régionale Grands Lacs

Area / Aire : 254,673 km²
Daily Ice Breaking Calls

The purpose of this call is to communicate with the Great Lakes shipping industry where the US and Canadian Coast Guard icebreaking assets will be operating based on existing and forecasted conditions, as well as validating requests for icebreaking service/assistance we have received from the shipping industry.

Typical Agenda:

- Welcome (USCG D9 staff)
- Ice conditions and weather forecast/ questions (Environment Canada Ice Specialist)
- Canadian CG Asset employment/ questions (ROC Montreal)
- Operation COAL SHOVEL brief/ questions (Sector Detroit)
- Operation TACONITE brief/ questions (Sector Sault Ste Marie)
- General questions from shipping industry
- Closing- next call date (USCG D9 Staff)

Calls are held at 10:00 Eastern Time

Call in Number: 877-950-2463

Passcode: 62697718

To be added to the distribution list send an e-mail to: Zachary.C.Bender@USCG.mil
Questions?