



16150
30 Jun 2016

MEMORANDUM

From: *A. J. Maffia*
A. J. Maffia, CDR
CCGD Nine (dpw)

To: COMDT (CG-WWM)
Thru: CG LANTAREA (LANT-54)

Subj: 2015-2016 NINTH DISTRICT END OF SEASON ICE REPORT

Ref: (a) Domestic Ice Breaking Operations Policy, COMDTINST 16151.1 (series)
(b) Ninth District Domestic Icebreaking Standard Operating Procedures Manual, D9INST M16150.3 (series)

1. Narrative Summary:

a. Compared to the previous two ice seasons, the 2015-2016 ice season was rather mild. A warm fall delayed ice development until much later in the year than normally seen and both domestic icebreaking operations didn't begin until mid to late January. The mild weather patterns of late fall and early winter persisted throughout the icebreaking season, aligning with the forecasted El Nino weather pattern of above average temperatures with below average precipitation.

b. Ninth District Domestic Icebreaking operations began on 13 January 2016 with the commencement of Operation Taconite. During the 72 days of icebreaking operations, the seven cutters assigned to the operation spent a total of 1,277 hours and assisted 69 commercial vessel transits; 13 of these transits required direct icebreaking assistance, which supported the movement of approximately 1.8 million tons of dry bulk (iron ore, coal, stone, cement) and liquid (gasoline, diesel, heating oil) cargoes. These cargoes had an estimated value of more than \$66 million U.S. dollars. Operation Taconite ended on 25 March 2016.

c. Sector Detroit commenced Operation Coal Shovel on 29 January 2016. During the 39 days of ice breaking operations, the USCG cutter and two CCG ships assigned to the operation spent a total of 106 hours in the ice, assisting 7 commercial vessels transits. Operation Coal Shovel secured on 07 March 2014.

d. In total, the USCG cutters expended 1,383 cutter resource hours in support of Ninth District icebreaking operations.

e. The icebreaking efforts of the cutters would have been much more challenging without the assistance of our partners. Over flights by AIRSTA Detroit, AIRSTA Traverse City, and CG Auxiliary provided valuable, real time ice conditions to Tactical Commanders. U.S. and

Canadian Coast Guard, and Auxiliary aviators flew 9 sorties in support of operation Taconite and 30.1 hours in support of Coal Shovel. This valuable aerial reconnaissance and ice analysis remained vital to operational planning and successful mission execution. NOAA and the Canadian Ice Service provided excellent forecasts and satellite imagery to further support operational planning. The participation of CCGS SAMUEL RISLEY and CCGS GRIFFON, coupled with the shore side support in Sarnia, Montreal, Ottawa, and Halifax ensured the successful execution of another icebreaking season.

f. In October 2015, the Ninth District and Canadian Coast Guard co-hosted a Great Lakes Icebreaking Conference in Cleveland, OH. This proved beneficial to improving communication with industry partners, laying the groundwork for a successful ice season and reviewing vital lessons learned from the previous season. Additionally, ice rescue training was conducted by the Ninth District RFO team with all equipped district units to ensure continued SAR capability while underway. Routine icebreaking teleconferences were held with our industry partners throughout the season and helped ensure best placement of Coast Guard assets based on forecasted and scheduled vessel movements.

2. Winter Severity:

a. The winter of 2015-2016 proved to be a very mild icebreaking season. Above average temperatures in late fall and early winter continued throughout the icebreaking season.

b. The unseasonably warm temperatures and low precipitation resulted in the late development of ice without much build up throughout the season.

c. The remarkably warm pattern that developed over the Great Lakes in 2016 resulted in maximum ice coverage of 27.5% in mid February.

d. The following summarizes the maximum ice conditions observed in key locations of the D9 AOR:

- (1) Thunder Bay: 24" plate ice with 6-12" snow cover.
- (2) Duluth-Superior: 24" plate ice with 6-8" brash accumulations.
- (3) Lake Superior (west): NSTR.
- (4) Lake Superior (east): NSTR.
- (5) Whitefish Bay: 20-24" plate ice with 4-6" brash accumulations.
- (6) St. Mary's River: 16-18" plate ice with 6-8" brash accumulations.
- (7) Straits of Mackinac: 18-24" plate ice with 6-8" brash accumulations.

(8) Green Bay (North): 24” plate ice, 12” snow cover.

(9) Green Bay (South): 18-24” plate ice, 12” snow cover.

(10) Georgian Bay: 24” plate ice, 12” snow cover.

3. Economic Value:

a. Estimated at \$66 million dollars for Operation Taconite. The Lake Carriers Association is expected to publish economic data for the 2015-2016 ice season later this year.

b. Economic values for Operation Coal Shovel were not provided but assumed to be of less value than Operation Taconite.

4. Performance Standards and Data Collection:

a. 99% of Domestic Icebreaking requests met.

(1) 76 navigation assistance requests made

(2) 1 requests declined (outlined below in Taconite’s operational summary)

b. Icebreaking Asset Availability:

(1) 1,383 total icebreaking operation hours

(2) 2,208 scheduled Charlie hours

(3) 240 unscheduled Charlie hours

c. At least four icebreaking assets were operationally available throughout the entire icebreaking season. Maintenance periods during ice season are scheduled during the closed season, when navigation through the Great Lakes is extremely limited, and fewer icebreaking resources are required.

d. The Great Lakes fleet experienced 10 lost cutter days due to the following casualties:

(1) 30-Jan-15: NEAH BAY #1 MDE Raw Water Suction Hose failure (9 days)

(2) 25-Jan-15: NEAH BAY #1 and #2 MDE Raw Water Suction Hoses (1 day)

e. A breakdown of cutter asset hours by icebreaking mission is captured in Enclosures (1) and (2).

f. Tier 1 Waterways were open 100% of the ice season.

(1) 2,642 hours of Tier 1 Availability (potential)

(a) St. Mary's River/Straits of Mackinac: 1,730 hours

(b) Detroit/St. Clair River System: 912 hours

(2) 2,642 hours of Tier 1 Availability (actual)

(a) St. Mary's River/Straits of Mackinac: 1,730 hours

(b) Detroit/St. Clair River System: 912 hours

(3) Waterway restrictions and closures are outlined in the respective operational summaries below.

5. Operation Coal Shovel:

a. Search and Rescue Response Requests: 0

b. Urgent Vessel Response Requests: 0

c. Exigent Community Service Requests: 1

(1) 26-Feb-16: The city of Algonac, MI contacted the Sector Detroit Command Center to report that high water levels had breached the sea wall and entered the streets as well as the yards of several waterfront properties north of the downtown area in the vicinity of the Walpole ferry terminal. Shortly thereafter the Harsens Island Ferry reported the ice dam north of their route had given way and created an obstruction to their route, cutting off mainland access to Harsens Island residents. The Clay County Emergency Operations Center and the Army Corps of Engineers Emergency Manager partnered with Sector Detroit to assess the situation and coordinate a response. CCGS SAMUEL RISLEY responded from Sarnia, ON within four hours to provide flood relief, conducting flushing operations in the North Channel of the St. Clair River. Water levels peaked at 577.32 feet and following flushing operations and a wind shift they steadily declined to 576.58 feet, down 8.9 inches from the high point. CGC NEAH BAY arrived on-scene on February 27th, 2016 and continued to perform flushing operations in the North and South Channels of the St. Clair River successfully loosening any remaining ice in the region and supporting a continued drop in water levels.

d. Navigation Assistance Requests: 0

e. Vessels Assisted: 07 (02 U.S., 05 CA)

f. Waterway Restrictions: 0

- g. Waterway Closures: 0
- h. Tier 1 Availability: 100% (912 hours of 912 total hours).

6. Operation Taconite:

- a. Search and Rescue Response Requests: 0
- b. Urgent Vessel Response Requests: 0
- c. Exigent Community Service Requests: 0
- d. Navigation Assistance Requests: 69 (1 declined)

(1) 20-Feb-16: Sugar Island Ferry requested ice breaking support to clear ice from below the island terminal. The requested area could not be safely reached by a WTGB due to shallow water depths and proximity of shoal water. The incident commander advised the ferry captain the wind was forecasted to shift from west to northwest in a few hours. The wind shift and current flow would send the ice downstream. The wind shift occurred and the ice was moved down stream as forecasted. Ferry operations were never halted or hindered.

e. Vessel Transits Assisted: 69 required direct icebreaking assistance to complete their intended movements.

- f. Waterway Restrictions: 0
- g. Waterway Closures: 0
- h. Tier 1 Availability: 100% (1,730 hours of 1,730 total hours)

i. The documentation for the aforementioned incidents, along with each of the following waterway controls were captured in the Maritime Information for Safety and Law Enforcement (MISLE) System.

j. The Great Lakes Regulated Navigation Areas (33 CFR Part 165.901) and those waterways defined by the St. Mary’s River Winter Navigation Rules (33 CFR Part 162.117) were closed and re-opened as follows:

(1) Grays Reef Passage	22-Jan-16 to 21-Mar-16 (59 days)
(2) South Channel	22-Jan-16 to 07-Mar-16 (45 days)
(3) Mackinac Island to St. Ignace	22-Jan-16 to 25-Feb-16 (34 days)
(4) West Neebish Channel	16-Jan-16 to 22-Mar-16 (66 days)

- (5) Pipe Island Passage 16-Jan-16 to 18-Mar-16 (62 days)
- (6) Little Rapids Cut (no mtg for Ice Boom) 02-Dec-15 to 23-Mar-16 (112 days)

7. Statistical Summary: The Statistical Data Summary for Operation Taconite 2015-2016 is included as Enclosure (1).

8. Night Operations: U.S. Coast Guard Cutters assigned to Operation Taconite conducted 04 hours of night time icebreaking. Cutters assigned to Operation Coal Shovel conducted 00 hours of night time icebreaking.

9. Future Plans and Recommendations:

a. The light ice conditions seen throughout the Great Lakes this winter was a welcome reprieve from the previous two years. The return of the MORRO BAY as the first WTGB to complete SLEP was a welcome sight but post SLEP issues plagued the cutter well into the ice season. We must put full effort into ensuring BRISTOL BAY returns to the lakes on time and is fully operational prior to commencement of the ice breaking season.

b. See Enclosures (1) and (2) for additional recommendations from the Tactical Commanders.

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Enclosures: (1) 2015-2016 Operation TACONITE End of Season Ice Report
(2) 2015-2016 Operation COAL SHOVEL End of Season Ice Report

Copy: CGD One (dpw)
CGD Five (dpw)
CGC MACKINAW
CGC HOLLYHOCK
CGC ALDER
CGC MOBILE BAY
CGC BRISTOL BAY
CGC NEAH BAY
CGC BISCAYNE BAY
CGC KATMAI BAY
CGC BUCKTHORN
CG Sector Buffalo
CG Sector Detroit
CG Sector Lake Michigan
CG Sector Sault Ste Marie
CG AIRSTA Traverse City
CG AIRSTA Detroit

U.S. Department of
Homeland Security

United States
Coast Guard

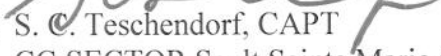


Commander
United States Coast Guard
Sector Sault Sainte Marie

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16150
16-05-905
10 May 2016

MEMORANDUM

From:  S. C. Teschendorf, CAPT
CG SECTOR Sault Sainte Marie (s)

To: CGD NINE (d)
Thru: (1) CCD NINE (dpw)
(2) CCD NINE (dp)

Subj: OPERATION TACONITE END OF SEASON REPORT

Ref: (a) Operation Taconite Incident Action Plan for 2015-16
(b) Domestic Ice Breaking Operations Policy, COMDTINST 16151.1D
(c) D9 Ice Breaking Standard Operating Procedures (SOP), D9INST M16150.2B
(d) D9 Operational Reports and Procedures, D9INST 3500.1E
(e) Great Lakes Regulated Navigation Areas, 33 CFR Part 165.901

1. During the 2016 domestic ice breaking season, the seven U.S. Coast Guard cutters assigned to Operation Taconite spent a total of 1,277 hours in the ice and assisted 69 commercial transits. Thirteen of these transits (11 US and 2 CA) required direct icebreaker assistance to complete their intended movements.

2. Operation Taconite commenced on 13 January 2016 and ended on 25 March 2016. Great Lakes maritime industry stakeholders estimate 1.8 million tons of dry bulk (iron ore, salt, coal, stone and cement) and liquid (gasoline, diesel, and home heating oil) cargoes received ice-breaking assistance during the 2016 ice season. These cargoes, valued at more than \$66 million U.S. dollars, provided critical industrial production and power generation capability for the Great Lakes region during the 72 day operational period. U.S. Coast Guard cutters did not break ice in Canadian waters and Canadian Coast Guard ships did not break ice in Operation Taconite's U.S. waters.

3. The National Oceanographic Atmospheric Administration (NOAA), with input provided by the Great Lakes Environmental Research Laboratory (GLERL), classified the 2016 ice season as "mild". An analysis of the 2016 winter weather and ice thickness measurements appears in enclosure 1. Enclosure 2 contains the statistical data summary and the required measures of effectiveness for Operation Taconite.

4. I look forward to the update of reference (e). I appreciate you including my staff in the development process. Converting the Regulated Navigation Areas to Safety Zones and the addition of three new safety zones, to extend protections to other known recreational ice use areas, are long overdue. I agree with your premise, we owe these safeguards to the public. I also wish to highlight the added flexibility provided to local Captain of the Ports (COTP). This winter, several weeks after closing the waters between Mackinac Island and St Ignace, the ice

Subj: OPERATION TACONITE END OF SEASON REPORT 16150
16-05-905
10 May 2016

blew out, leaving the area with open water. With the ice not likely to return and residents having no other way to access the island, local ferry operators sought a waiver to operate inside the regulated navigation area while it was closed. Occasionally ice conditions do not require a season long closing of these protected waterways. The new rule allows COTPs to assess local conditions, permit one time access, or open the safety zones altogether, which improves the functionality and overall safety of the waterways. The old regulation was inflexible in this regard.

5. USCGC MACKINAW end of season report noted the lack of underway connectivity in western Lake Superior. I remain confident CG electronics and integrated equipment support teams are working diligently to improve underway connectivity as fast as budget and technology allow. Other than a small nuance learned with the SEACARD fuel purchase contract, there was no significant feedback offered by the cutters. I continue to support your staff's effort to address initiatives offered in previous end of season reports.

6. My point of contact for domestic icebreaking operations is Mr. Mark Gill, the Director of Vessel Traffic Service St Mary's River. You can reach Mr. Gill at 906-635-3299.

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Encl: (1) Weather and Ice Summary
(2) Operation Taconite Statistical Data Summary

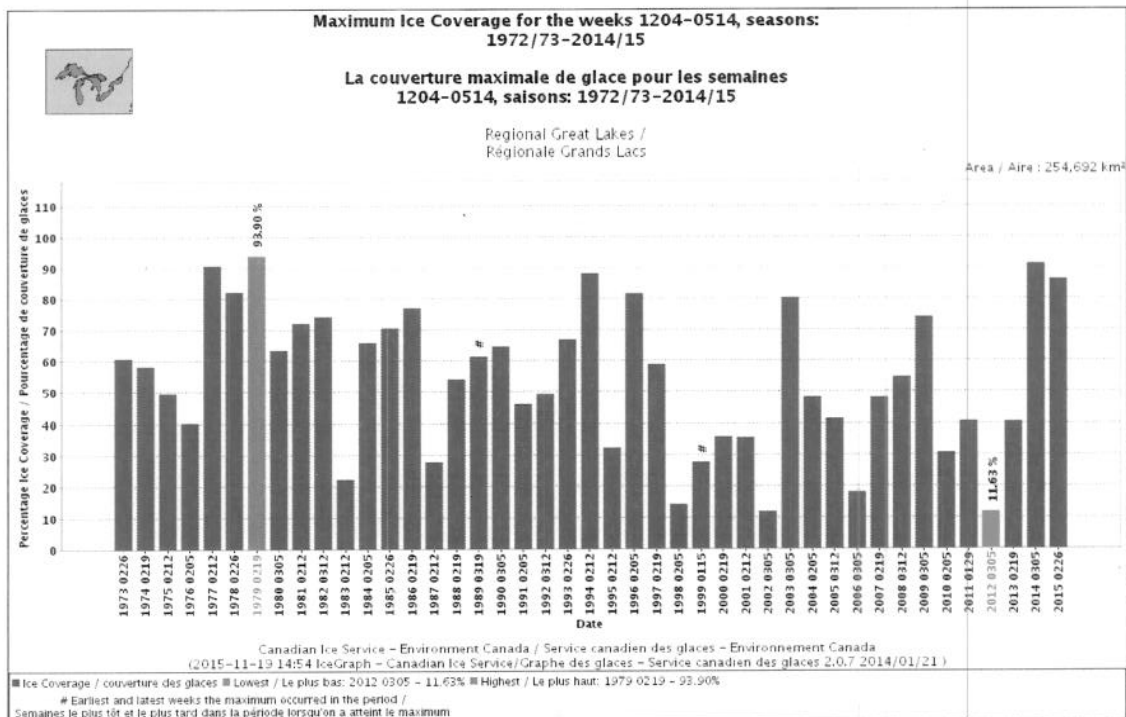
Copy: CG-5PW
All CGD NINE Sectors and Cutters
CG AIRSTA Traverse City
MSU Duluth

Enclosure (1) to 2015 Operation Taconite End of Season Report

Weather Analysis and Ice Thickness Measurements:

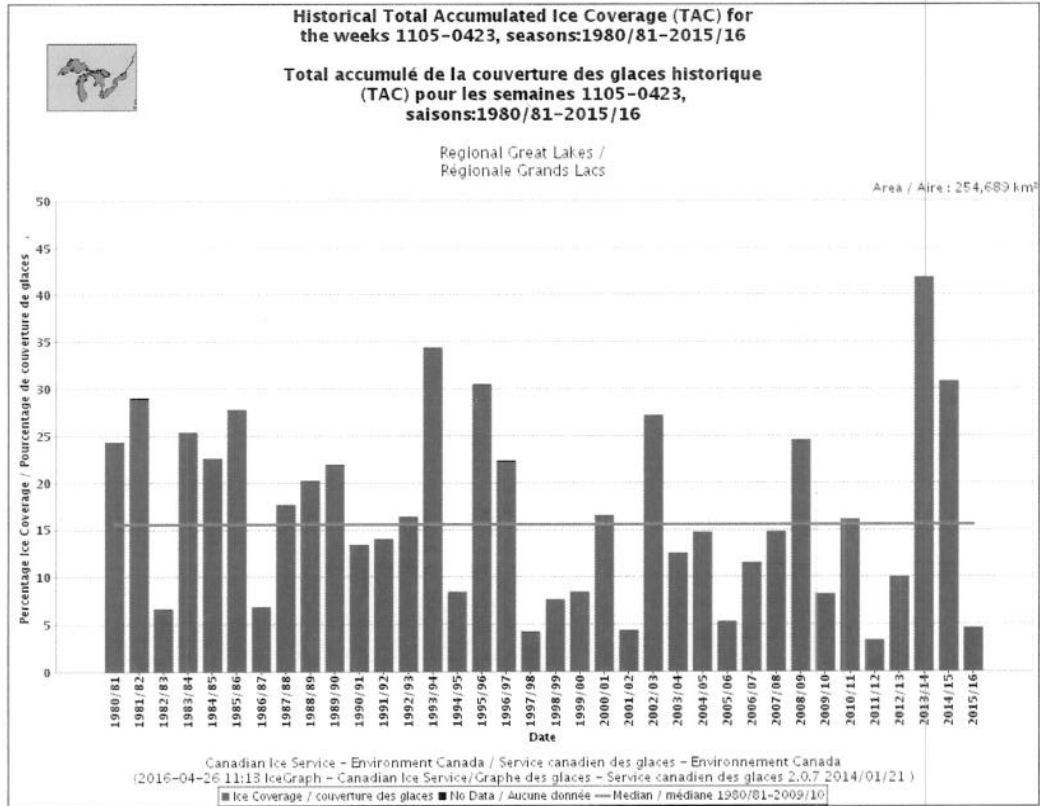
The Great Lakes Winter of 2016 was most notably dominated by the presence of a strong El Nino. Positioned over the Pacific Northwest, the El Nino weather pattern flattened the jet stream across the mid-western United States which kept the flow of colder arctic air to a minimum. This resulted in milder conditions for the Great Lakes region. The year-to-date temperatures for January-March, as reported by the National Oceanographic Atmospheric Administration (NOAA), were roughly two degrees above the 20th century average. Warmer temperatures and decreased snowfall (2nd smallest in 50 years) resulted in less than normal ice growth. Great Lakes ice coverage reached its peak of 19.7% 04 March 2016. Great Lakes ice coverage was reduced to 1.5% by 24 March 2016. The Great Lakes Ice Coverage for 2016 ranks as the 4th lowest in 35 years of Great Lakes ice study. The following table summarizes the maximum ice conditions observed in key locations of the Operation Taconite area of responsibility.

- a. Thunder Bay: 24” plate ice with 6-12” snow cover.
- b. Duluth-Superior: 24” plate ice with 6-8” brush accumulations.
- c. Lake Superior (west): NSTR.
- d. Lake Superior (east): NSTR.
- e. Whitefish Bay: 20-24” plate ice with 4-6” brush accumulations.
- f. St. Mary’s River: 16-18” plate ice with 6-8” brush accumulations.
- g. Straits of Mackinac: 18-24” plate ice with 2-3’ windrows.
- h. Green Bay (North): 24” plate ice with 12” snow cover.
- i. Green Bay (South): 18-24” plate ice with 12” snow cover.
- j. Georgian Bay: 24” plate ice with 12” snow cover.

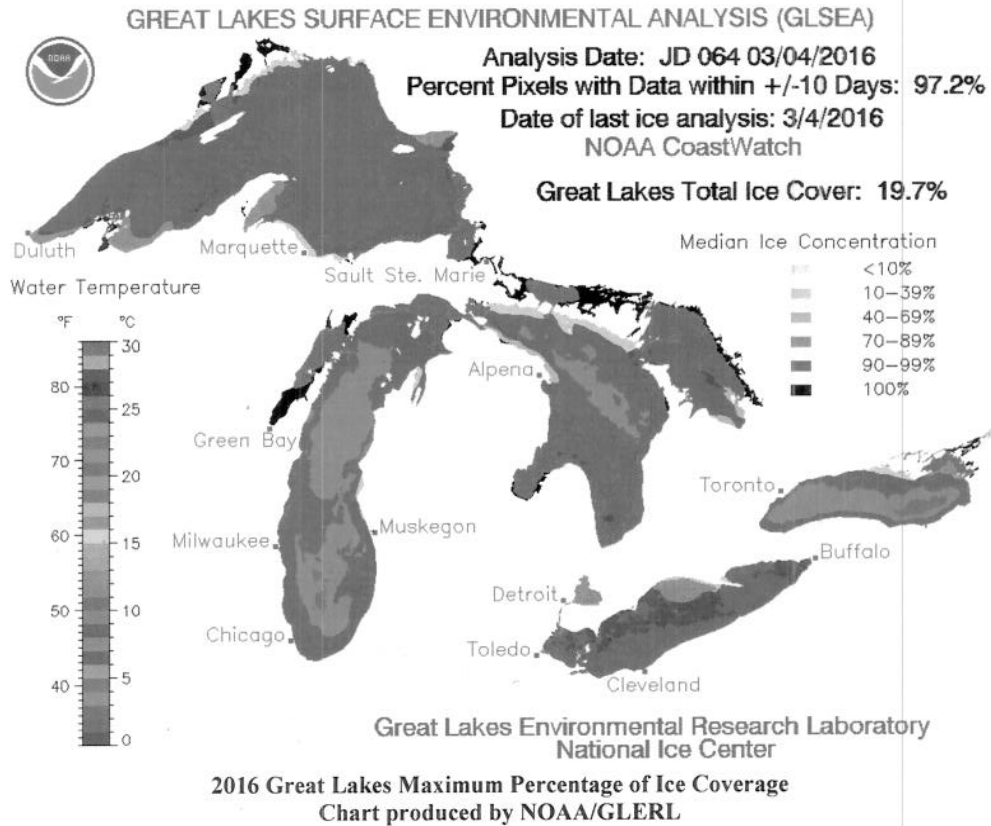


Great Lakes Maximum Ice Coverage 1973-2015
Max-1979 Min-2012
Chart produced by the Canadian Ice Service

Enclosure (1) to 2015 Operation Taconite End of Season Report



Great Lakes Total Accumulated Ice Coverage 1981-2016
 Chart produced by the Canadian Ice Service



Enclosure (2) to 2016 Operation Taconite End of Season Report

1. Performance Measures:

- a. Search and Rescue Response Requests: None
- b. Urgent Vessel Assistance Requests: None
- c. Exigent Community Service Requests: None

d. Navigation Assistance Requests: The Incident Commander received 69 requests for ice breaking assistance. Only one of these requests was declined. On 20 February 2016, the Sugar Island Ferry requested ice breaking support to clear ice from below the island terminal. The requested area could not be safely reached by a WTGB due to shallow water depths and proximity of shoal water. The incident commander advised the ferry captain the wind was forecasted to shift from west to northwest in a few hours. The wind shift and current flow would send the ice downstream. The wind shift occurred and the ice was moved down stream as forecasted. Ferry operations were never halted or hindered.

e. Vessel Transits Assisted: 69 vessel transits were assisted. 31 of these transits occurred in the St Marys River, 21 transits were assisted crossing the Straits of Mackinac, 12 transits were assisted in Green Bay and 05 transits were facilitated in western Lake Superior. Of those transits assisted, 13 vessels (11 U.S. and 02 CA) required direct ice breaking assistance to complete their intended movements.

f. Waterway Restrictions: None

g. Waterway Closures: None

h. Tier 1 Availability: 100%; 1730 of a possible 1730 hours.

1. Extended Navigation Season: 100%; 108 of a possible 108 hours

2. Closed Navigation Season: 100%; 1176 of a possible 1176 hours.

3. Spring Break Out: 100%; 446 of a possible 446 hours.

i. Planned Waterway Closures: Per 33 CFR Parts 162.117 and 165.901, the following waterways were purposely closed or restricted by the Captain of the Port Sault Sainte Marie.

- | | |
|---|-----------------------------------|
| 1. Grays Reef Passage: | 22-Jan-16 to 21 Mar-16 (59 days) |
| 2. South Channel: | 22-Jan-16 to 07-Mar-16 (45 days) |
| 3. Waters Btwn Mackinac Is. and St. Ignace: | 22-Jan-16 to 25-Feb-16 (34 days) |
| 4. West Neebish Channel: | 16-Jan-16 to 22-Mar-16 (66 days) |
| 5. Pipe Island Passage: | 16-Jan-16 to 18-Mar-16 (62 days) |
| 6. Little Rapids Cut (No mtg for Ice Boom): | 02-Dec-15 to 23-Mar-16 (112 days) |

Enclosure (2) to 2016 Operation Taconite End of Season Report

2. Statistical Summary:

a. Aerial Support:

HH65	03 Sorties
CG Auxiliary	06 Sorties

b. Cutter Employment:

Area 4A (Lake Huron / Georgian Bay / North Channel) - 27 Hrs of Cutter Support

Cutter	DAVA	PI	FR	FC	MC	US	CA	FF
Neah Bay	00/00/007/00/00/004					00	00	00
Morro Bay	00/00/012/00/00/004					00	00	00
Totals	00/00/019/00/00/008					00	00	00

Area 4B (Lake Huron / Alpena / Calcite Hbr) No Cutter Activity

Area 5A (Straits of Mackinac) - 348 Hrs of Cutter Support

Cutter	DAVA	PI	FR	FC	MC	US	CA	FF
Mackinaw	00/02/008/00/00/084					00	00	00
Mobile Bay	00/00/008/00/00/083					00	00	00
Biscayne Bay	04/00/008/01/00/075					01	00	00
Katmai Bay	00/00/016/00/00/059					00	00	00
Totals	04/02/040/01/00/301					01	00	00

Area 5B (Charlevoix / Grand Traverse Bay) No Cutter Activity

Area 6A (Whitefish Bay) No Cutter Activity

Area 6B (St Marys River - 617 Hrs of Cutter Support

Cutter	DAVA	PI	FR	FC	MC	US	CA	FF
Mackinaw	00/09/017/00/00/127					00	00	00
Mobile Bay	00/05/019/01/00/058					00	00	00
Biscayne Bay	00/01/023/00/00/015					00	00	00
Katmai Bay	01/26/058/02/00/174					01	00	00
Morro Bay	00/00/000/00/00/026					00	00	00
Neah Bay	00/00/007/00/00/048					00	00	00
Totals	01/41/124/03/00/448					01	00	00

Area 7 (Eastern Lake Superior / Marquette / Keweenaw) No Cutter Activity

Area 8A (Duluth, Superior, Two Hbrs, Silver Bay, Taconite Hbr) - 43 Hrs of Cutter Support

Cutter	DAVA	PI	FR	FC	MC	US	CA	FF
Alder	00/12/006/00/00/025					00	00	00
Totals	00/12/006/00/00/025					00	00	00

Enclosure (2) to 2016 Operation Taconite End of Season Report

Area 8B (Thunder Bay, Ont) - 60 Hrs of Cutter Support

Cutter	DAVA PI FR FC MC	US CA FF
Alder	00/00/011/00/00/049	00 00 00
Totals	00/00/011/00/00/049	00 00 00

Area 9 (Green Bay) - 182 Hrs of Cutter Support

Cutter	DAVA PI FR FC MC	US CA FF
Mackinaw	02/11/021/00/00/105	01 02 00
Mobile Bay	18/03/033/00/00/000	08 00 00
Totals	20/14/043/00/00/105	09 02 00

Area 10A (Lake Michigan-West Milwaukee) No Cutter Activity

Area 10B (Lake Michigan-South Calumet-Gary-Indiana-Burns Hhrs) No Cutter Activity

Area 10C (Lake Michigan-East Ludington) No Cutter Activity

Op Taconite Totals

Cutter	DA	VA	PI	FR	FC	MC	US	CA	FF	Total Hrs in the Ice
Mackinaw	002	022	046	00	00	316	01	02	00	0386
Alder	000	012	017	00	00	074	00	00	00	0103
Mobile Bay	018	008	049	01	00	141	08	00	00	0217
Katmai Bay	001	026	074	02	00	233	01	00	00	0336
Biscayne Bay	004	001	031	01	00	090	01	00	00	0127
Morro Bay	000	000	012	00	00	030	00	00	00	0042
Neah Bay	000	000	014	00	00	052	00	00	00	0066
Totals	025	069	243	04	00	936	11	02	00	1277

3. Night Operations: U.S. Coast Guard cutters assigned to Operation Taconite conducted 04 hours of night time ice breaking.

4. Sufficiency/Adequacy of Icebreaking Assets: Adequate.

Seasonal Lost Cutter Hours			
Cutter	Casualty Related	Other - Logistics	Casualty (Unsked Charlie)
KATMAI BAY	1MC-ALARMS	00 Hrs	98 Hrs

5. MISLE Case Summary: No case activity.

U.S. Department of
Homeland Security

United States
Coast Guard



Commander
U.S. Coast Guard Sector Detroit

110 Mount Elliott Ave.
Detroit, MI 48207
Phone: (313) 568-9508
Fax: (313) 568-9581

16155
03 May 2016

MEMORANDUM

From: 
K. B. Floyd, CDR
CG SECTOR Detroit

To: CCGD NINE (dpw)

Subj: 2015 – 2016 OPERATION COAL SHOVEL ANNUAL REPORT

Ref: (a) Domestic Icebreaking Policy and Reporting Requirements, COMDTINST 16151.1C
(b) Ninth District Icebreaking Policy and Procedures, D9INST M16150.2B
(c) Operation Coal Shovel Standard Operating Procedures, SECDETINST 16150

1. This report outlines significant events occurring during Operation Coal Shovel for the 2015 – 2016 ice season and is submitted in accordance with reference (b). A detailed summary of Operation Coal Shovel is contained in Enclosure (1).
2. Operation Coal Shovel commenced on January 29, 2016 and concluded on March 07, 2016. In support of Operation Coal Shovel, U.S. Coast Guard icebreakers conducted a total of 106 hours.
3. The Sector Detroit point of contact for this report is LCDR Nicholas Seniuk at (313) 568-9508.

#

Enclosures: (1) Operation Coal Shovel Statistical Data Summary
(2) Operation Coal Shovel Weekly Summaries
(3) USCGC NEAH BAY End of Season Ice Report

Copy: Sector Sault Ste Marie
Sector Buffalo
MSD Massena
CGC NEAH BAY

2015-2016 Operation Coal Shovel Statistical Data Summary

I. Winter Assessment

Operation Coal Shovel began on January 29, 2016 and concluded on March 07, 2016 after 39 consecutive days. Mild weather patterns in the late fall and early winter held lake temperatures well above normal levels. The mild weather pattern persisted throughout the winter navigation season with occasional periods of more typical seasonal temperatures but never for a significant duration such to enable measurable ice growth. The conditions observed throughout the season aligned with forecasted El Nino weather patterns which included above average temperatures and below average precipitation totals.

For the second year in a row, the start of Operation Coal Shovel fell nearly one month later than in the previous season. Unlike the previous two seasons, the 2015-2016 winter never saw lake ice achieve measurable levels or witnessed consistent periods of accumulation to the point where it became a significant hindrance to navigation. The operation was highlighted with an exigent community service request by the City of Algonac, MI and the Harsens Island Ferry on February 26, 2016 when water levels exceeded the minor flood stage in the area immediately above the St. Clair River delta. Operation Coal Shovel concluded on March 07, 2016 after a sustained period of above average temperatures.

Limited operational demands this winter season created an opportunity for training, collaboration and revisions to long standing doctrine. Throughout the winter, Air Station Detroit flight crews performed 83 helicopter hoist evolutions in Lake Huron, Lake Erie and the Detroit River with CCGS SAMUEL RISLEY, CCGS GRIFFON and CGC NEAH BAY. The joint hoist training with the Canadian Coast Guard was the first of its kind in recent memory and served to enhance search and rescue capability, readiness and proficiency by both air and surface crews, specifically enabling currency training for 26 pilots and aircrew members. In addition, CGC NEAH BAY assisted the crew of CCGS GRIFFON with their efforts to conduct market research supporting the acquisition of a hull lubrication system. CGC NEAH BAY visited Amherstberg, ON twice during the winter to enable engineers from CCGS GRIFFON access to the NEAH BAY bubbler system and the engineering crew who maintain it. Finally, Sector Detroit personnel authored the Operation Coal Shovel Standing Operating Procedures replacing the long standing Coal Shovel OPORDER of years' past.

II. Icebreaking Data

Season Totals:

- 39 Days of Icebreaking Operations
- 3 Total CG Cutters/Ships utilized

- 0 Search and Rescue Response Request
- 0 Urgent Vessel Response Requests
- 1 Exigent Community Service Requests
- 07 Vessels assisted (02 US, 05 Canadian)
- 0 Waterway Restrictions by beset vessels, 0 COTP Waterway Restriction
- 0 Waterway Closures
- 30.1 hours of USCG Aircraft ice reconnaissance ISO Coal Shovel
- Tier 1 Waterway Availability: 100%
- Vessels beset: 00
- Vessel Queue System: Not established during 2015-2016
- Total U.S. icebreaking hours: 106

1. Total number of days for Operation Coal Shovel:
 - a. **39 days** - From January 29, 2016 to March 07, 2016
2. USCG Cutters and Canadian CG ships participated in Operation Coal Shovel:
 - b. **One USCG Cutter:** NEAH BAY
 - c. **Two Canadian Ships:** SAMUEL RISLEY, GRIFFON
3. Search and Rescue Response Requests: **0**
4. Urgent Vessel Response Requests: **0**
5. Exigent Community Service Requests: **1**
 - a. On February 26th, 2016 the City of Algonac, MI contacted the Sector Detroit Command Center to report that high water levels had breached the sea wall and entered the streets as well as the yards of several waterfront properties north of the downtown area in the vicinity of the Walpole ferry terminal. Shortly thereafter the Harsens Island Ferry reported the ice dam north of their route had given way and created an obstruction to their route, cutting off mainland access to Harsens Island residents. The Clay County Emergency Operations Center and the Army Corps of Engineers Emergency Manager partnered with Sector Detroit to assess the situation and coordinate a response. CCGS SAMUEL RISLEY responded from Sarnia, ON within four hours to provide flood relief, conducting flushing operations in the North Channel of the St. Clair River. Water levels peaked at 577.32 feet and following flushing operations and a wind shift they steadily declined to 576.58 feet, down 8.9 inches from the high point. CGC NEAH BAY arrived on-scene on February 27th, 2016 and continued to perform flushing operations in the North and South Channels of the St. Clair River successfully loosening any remaining ice in the region and supporting a continued drop in water levels.
6. Vessels assisted: 07
 - a. **02** U.S. flag vessels
 - b. **05** Canadian flag vessels
7. Waterways Restrictions: **0**
 - a. The one-way traffic pattern on the St. Clair River imposed by the Captain of the Port during the previous two winter navigation seasons was not warranted during the 2015-2016 winter. Two-way traffic remained in effect with very limited ice conditions throughout the winter.

8. Waterway Closures: **0**
 - a. Ice conditions and traffic density remained at manageable levels throughout the winter. Icebreakers were able to conduct track maintenance and manage all vessel traffic without the imposition of any restrictions or closures of the waterway.

9. Aircraft Flyover hours ISO of Coal Shovel: **30.1 hours**
 - a. Air Station Detroit provided all ice reconnaissance flights for Operation Coal Shovel during the 2015-2016 winter. Aircrews performed two sorties per week for the duration of the operation, frequently hosting a Sector Detroit Ice Observer.
 - b. Auxiliary aircraft support was not requested during the winter season due to manageable ice conditions and flight availability by Air Station Detroit.

10. Total Tier 1 Waterways Availability: **100%**

Availability per Tier 1 Waterway:

	Hours	Hours Closed	Percentage Per Waterway
a. St. Clair River	912	0	100
b. Detroit River	912	0	100
c. Pelee Passage	912	0	100
g. St. Lawrence Seaway	Not included		

11. Beset vessels: **0**

12. Vessel Queue System: Not employed during the 2015-2016 winter.

13. Hours of icebreaking total by USCG Cutters: **106**

Icebreaking Hours per USCG Cutter:

Cutter	Total Hours
a. USCGC NEAH BAY:	106 hours

Icebreaking Hours per Area:

AREA 1A EASTERN LAKE ERIE					
CUTTER	DA	VA	PI	MC	TOTAL
NEAH BAY	0	0	0	12	12

AREA 1B LAKE ONTARIO & ST. LAWRENCE SEAWAY					
CUTTER	DA	VA	PI	MC	TOTAL
N/A	0	0	0	0	0

AREA 2A ST CLAIR RIVER & HURON CUT					
CUTTER	DA	VA	PI	MC	TOTAL
NEAH BAY	00	00	06	00	06

AREA 2B LAKE ST CLAIR					
CUTTER	DA	VA	PI	MC	TOTAL
NEAH BAY	00	03	00	03	06

AREA 2C DETROIT RIVER LT TO LAKE ST CLAIR LT 1					
CUTTER	DA	VA	PI	MC	TOTAL
NEAH BAY	00	00	00	36.8	36.8

AREA 2D WESTERN LAKE ERIE					
CUTTER	DA	VA	PI	MC	TOTAL
NEAH BAY	00	00	00	45.2	45.2

AREA 3A LAKE HURON					
CUTTER	DA	VA	PI	MC	TOTAL
N/A	0	0	0	0	0

AREA 3B SAGINAW BAY					
CUTTER	DA	VA	PI	MC	TOTAL
N/A	0	0	0	0	0

DA = Direct Assistance
VA = Vessel Assistance
PI = Preventive Icebreaking
MC = Miscellaneous

III. Opportunities for Improvement and Best Practices

1. Opportunities for Improvement

- a. Conduct early season outreach to validate commercial icebreaking resource availability, capabilities and contact information for the upcoming ice season. Commercial service providers were not employed in the Coal Shovel AOR during the 2015-2016 ice season. In addition, a complete turnover of Ice Officers and Waterways Management personnel will occur prior to the next ice season. As a result of the gap in collaboration between seasons and significant turnover, an effort should be made to reconnect with key partners.
- b. Formalize the Ice Observer program. ANT Detroit provided nearly 100 percent of the personnel supporting ice observation and reconnaissance flights. Personnel assigned to ANT Detroit and Saginaw River represent a unique resource with significant waterway, traffic and AtoN knowledge for their AOR. They bring significant value to the Ice Officer when used. A preseason training program and standardized reporting format would only enhance the value of the product they provide to Ice Officers and the guidance they provide to air crews while on scene. Additionally, a specific schedule and duty rotation would be beneficial in ensuring 100 percent coverage for all aircraft sorties.

2. Best Practices

- a. Use of Homeport and posting Daily Summaries. The posting of the daily waterways condition and icebreaker operations summaries continued to be a productive resource in assuring transparency and enhancing awareness amongst our partners in industry.
- b. The use of a Goodlink provisioned smart phone by the ice officers provided enhanced connectivity and ease of access to critical information. In addition, the use of a shared mailbox provided stakeholders a single access point for the Detroit Ice Officer while also creating a system of record for all ice related correspondence for the season. Recommend a revised shared mailbox for the 2016-2017 ice season to separate Ice Operations from all other Waterways Management activity throughout the year.
- c. Pre-season outreach and ice training with key partners. Prior to the 2015 season, key players from Operation Taconite, Operation Coal Shovel and the Ninth District (Dpw) staff met to conduct a round-table discussion and align on certain key elements well in advance of the season. Ice Officers also hosted work-up training for air crews from Air Station Detroit to kick off the season sustaining proficiency and incorporating lessons learned from prior seasons. In each case, the dialogue and interaction strengthened the partnerships needed to prosecute the mission and should be continued annually.
- d. Hoist Training. Utilizing both U.S. and Canadian icebreakers for hoist training enabled 12 aircraft sorties, 83 hoist evolutions and supported proficiency for 26 pilots/aircrew. In addition, the training supported increased collaboration and demonstrated another mode of interoperability between U.S. and CA assets on the Great Lakes.

- e. The development of a Standard Operating Procedure and CG Portal site consolidated multiple sources of guidance into actionable, unit level resources for Ice Officers and Sector staff. It replaced a long standing OPORDER with more current guidance and incorporated lessons learned from the dynamic ice seasons of 2013-2015.

COAL SHOVEL WEEKLY SUMMARY

29 JAN 2016 thru 31 JAN 2016

Ref: CCGD9INST M16150.2B

1. Situation:

Sector Detroit COTP has Commenced Operation Coat Shovel at 0800 29 Jan 2016. Ice conditions were prominent enough in the western basin due to the large plates of ice beginning to ridge and become a possible hazard to navigation. Traffic is at a minimal throughout the AOR.

Unseasonably warm temps & light winds continue to persist throughout AOR. Ice growth has ceased and continues to deteriorate in most areas of Saginaw Bay. No impact to navigation, no assets assigned to date. Do not expect ice growth for the next 7 days.

HURON remains ice free, no asset assigned. No new Ice growth and continues to deteriorate. CCGS SAMUEL RISELEY is moored Sarnia. Saint Clair River is ice free. Lake Saint Clair has a significant amount of ice with the majority fast to the east posing no threat to commercial traffic during this period. Detroit River remains ice free. NEAH BAY assigned to the Erie division at the commencement of Op Coal Shovel developed a casualty and returned to H/P for repairs. ETR is TBD. Western Basin Erie has significant amounts of ice with the potential of ridging and being put under pressure with constantly shifting winds. Commercial traffic continues to move under the close watch of an ice breaker within the vicinity. CCGS GRIFFON is assigned to the Erie division. Eastern Erie ice free, no asset assigned.

2. Performance Standards this week:

Qty	Measure of Effectiveness
00	Search and Rescue Response Requests
00	Urgent Vessel Response Requests
00	Exigent Community Service Requests
01	Navigation Assistance Requests
00	U.S. Vessels Assisted
01	CA Vessels Assisted
00	Waterways Restrictions (hrs)
00	Waterways Closures (hrs)
100%	Tier I Availability
25	Icebreaking Resource Hours
00	Vessels beset

3. Weekly Hours per Tier I Waterway:

Waterway	Hours	Hours Closed	Percentage
St. Clair River	72	0	100
Detroit River	72	0	100
Pelee Passage	72	0	100
St. Lawrence Seaway	Not Included		

4. Seasonal Totals

Qty	Measure of Effectiveness
00	Search and Rescue Response Requests
00	Urgent Vessel Response Requests
00	Exigent Community Service Requests
01	Navigation Assistance Requests
00	U.S. Vessels Assisted
01	CA Vessels Assisted
00	Waterways Restrictions (hrs)
00	Waterways Closures (hrs)
100%	Tier I Availability
20	Icebreaking Resource Hours
00	Vessels beset

5. Seasonal Hours per Tier I Waterways

Waterway	Hours	Hours Closed	Percentage
St. Clair River	72	0	100
Detroit River	72	0	100
Pelee Passage	72	0	100
St. Lawrence Seaway	Not Included		

6. Waterway Status:

Waterway	Status
Coal Shove AOR	Open

7. Lost Cutter Hours:

Lost Cutter Hours			
Cutter	Casualty Related	Other - Logistics	Casualty (Charlie)

<i>NEAH BAY</i>	<i>64</i>	<i>00</i>	<i>00</i>

8. Seasonal Lost Cutter Hours:

Lost Cutter Hours			
Cutter	Casualty Related	Other - Logistics	Casualty (Charlie)
<i>NEAH BAY</i>	<i>64</i>	<i>00</i>	<i>00</i>

9. Future Plans:

Monitor commercial traffic, ice growth and forecasted weather.

COAL SHOVEL WEEKLY SUMMARY
01 FEB 2016 thru 07 FEB 2016

Ref: CCGD9INST M16150.2B

1. Situation:

Ice conditions greatly decreased throughout the Coal Shovel AOR with the above normal air temperatures, intermittent rain and sunshine.

Saginaw had no new ice growth. Huron remains ice free, no asset assigned. CCGS SAMUEL RISELEY is moored Sarnia. Saint Clair River is ice free. Lake Saint Clair had a significant decrease in ice coverage. The majority of ice accumulation is to the Northeast of the lake posing no threat to commercial traffic during this period. Detroit River remains ice free. CCGS GRIFFON is assigned to the Erie division. The Western Basin of Erie has significantly diminished ice concentration with a small percentage accumulating North of Pelee leaving the rest of the Lake ice free. Commercial traffic continues to move unhindered. Eastern Erie remains ice free, no asset assigned.

2. Performance Standards this week:

Qty	Measure of Effectiveness
00	Search and Rescue Response Requests
00	Urgent Vessel Response Requests
00	Exigent Community Service Requests
00	Navigation Assistance Requests
00	U.S. Vessels Assisted
00	CA Vessels Assisted
00	Waterways Restrictions (hrs)
00	Waterways Closures (hrs)
100%	Tier I Availability
00	Icebreaking Resource Hours
00	Vessels beset

3. Weekly Hours per Tier I Waterway:

Waterway	Hours	Hours Closed	Percentage
St. Clair River	168	0	100
Detroit River	168	0	100
Pelee Passage	168	0	100
St. Lawrence Seaway	Not Included		

4. Seasonal Totals

Qty	Measure of Effectiveness
00	Search and Rescue Response Requests
00	Urgent Vessel Response Requests
00	Exigent Community Service Requests
00	Navigation Assistance Requests
00	U.S. Vessels Assisted
00	CA Vessels Assisted
00	Waterways Restrictions (hrs)
00	Waterways Closures (hrs)
100%	Tier I Availability
25	Icebreaking Resource Hours
00	Vessels beset

5. Seasonal Hours per Tier I Waterways

Waterway	Hours	Hours Closed	Percentage
St. Clair River	240	0	100
Detroit River	240	0	100
Pelee Passage	240	0	100
St. Lawrence Seaway	Not Included		

6. Waterway Status:

Waterway	Status
Coal Shove AOR	Open

7. Lost Cutter Hours:

Lost Cutter Hours			
Cutter	Casualty Related	Other - Logistics	Casualty (Charlie)
<i>NEAH BAY</i>	<i>168</i>	<i>00</i>	<i>00</i>

8. Seasonal Lost Cutter Hours:

Lost Cutter Hours			
Cutter	Casualty Related	Other - Logistics	Casualty (Charlie)
<i>NEAH BAY</i>	<i>232</i>	<i>00</i>	<i>00</i>

9. Future Plans:

Monitor commercial traffic, ice growth and forecasted weather.

COAL SHOVEL WEEKLY SUMMARY
08 FEB 2016 thru 15 FEB 2016

Ref: CCGD9INST M16150.2B

1. Situation:

Ice conditions remain negligible throughout the region. Below average temperature trends through the weekend fueled ice growth in the Western Basin of Lake Erie but there continues to be no impact to vessel traffic. CCGS SAMUEL RISLEY and CCGS GRIFFON remain in icebreaking standby and all USCG assets remain unavailable.

2. Performance Standards this week:

Qty	Measure of Effectiveness
00	Search and Rescue Response Requests
00	Urgent Vessel Response Requests
00	Exigent Community Service Requests
00	Navigation Assistance Requests
00	U.S. Vessels Assisted
00	CA Vessels Assisted
00	Waterways Restrictions (hrs)
00	Waterways Closures (hrs)
100%	Tier I Availability
00	Icebreaking Resource Hours
00	Vessels beset

3. Weekly Hours per Tier I Waterway:

Waterway	Hours	Hours Closed	Percentage
St. Clair River	168	0	100
Detroit River	168	0	100
Pelee Passage	168	0	100
St. Lawrence Seaway	Not Included		

4. Seasonal Totals

Qty	Measure of Effectiveness
00	Search and Rescue Response Requests
00	Urgent Vessel Response Requests
00	Exigent Community Service Requests
01	Navigation Assistance Requests

00	U.S. Vessels Assisted
01	CA Vessels Assisted
00	Waterways Restrictions (hrs)
00	Waterways Closures (hrs)
100%	Tier I Availability
25	Icebreaking Resource Hours
00	Vessels beset

5. Seasonal Hours per Tier I Waterways

Waterway	Hours	Hours Closed	Percentage
St. Clair River	408	0	100
Detroit River	408	0	100
Pelee Passage	408	0	100
St. Lawrence Seaway	Not Included		

6. Waterway Status:

Waterway	Status
Coal Shove AOR	Open

7. Lost Cutter Hours:

Lost Cutter Hours			
Cutter	Casualty Related	Other - Logistics	Casualty (Charlie)
<i>NEAH BAY</i>	<i>00</i>	<i>00</i>	<i>168</i>

8. Seasonal Lost Cutter Hours:

Lost Cutter Hours			
Cutter	Casualty Related	Other - Logistics	Casualty (Charlie)
<i>NEAH BAY</i>	<i>232</i>	<i>00</i>	<i>168</i>

9. Future Plans:

Monitor commercial traffic, ice growth and forecasted weather.

**COAL SHOVEL WEEKLY SUMMARY
16 FEB 2016 thru 21 FEB 2016**

Ref: CCGD9INST M16150.2B

1. Situation:

Ice conditions diminished throughout the region. Throughout the week we had below average temperatures until the weekend as the temperatures reached the high 50's throughout the region decimating much of the ice that was made the previous week. There continues to be no impact to vessel traffic. CCGS SAMUEL RISLEY and CCGS GRIFFON remain in icebreaking standby and all USCG assets remained unavailable.

2. Performance Standards this week:

Qty	Measure of Effectiveness
00	Search and Rescue Response Requests
00	Urgent Vessel Response Requests
00	Exigent Community Service Requests
04	Navigation Assistance Requests
00	U.S. Vessels Assisted
04	CA Vessels Assisted
00	Waterways Restrictions (hrs)
00	Waterways Closures (hrs)
100%	Tier I Availability
00	Icebreaking Resource Hours
00	Vessels beset

3. Weekly Hours per Tier I Waterway:

Waterway	Hours	Hours Closed	Percentage
St. Clair River	168	0	100
Detroit River	168	0	100
Pelee Passage	168	0	100
St. Lawrence Seaway	Not Included		

4. Seasonal Totals

Qty	Measure of Effectiveness
00	Search and Rescue Response Requests
00	Urgent Vessel Response Requests
00	Exigent Community Service Requests

05	Navigation Assistance Requests
00	U.S. Vessels Assisted
05	CA Vessels Assisted
00	Waterways Restrictions (hrs)
00	Waterways Closures (hrs)
100%	Tier I Availability
25	Icebreaking Resource Hours
00	Vessels beset

5. Seasonal Hours per Tier I Waterways

Waterway	Hours	Hours Closed	Percentage
St. Clair River	576	0	100
Detroit River	576	0	100
Pelee Passage	576	0	100
St. Lawrence Seaway	Not Included		

6. Waterway Status:

Waterway	Status
Coal Shove AOR	Open

7. Lost Cutter Hours:

Lost Cutter Hours			
Cutter	Casualty Related	Other - Logistics	Casualty (Charlie)
<i>NEAH BAY</i>	<i>00</i>	<i>00</i>	<i>168</i>

8. Seasonal Lost Cutter Hours:

Lost Cutter Hours			
Cutter	Casualty Related	Other - Logistics	Casualty (Charlie)
<i>NEAH BAY</i>	<i>232</i>	<i>00</i>	<i>336</i>

9. Future Plans:

Monitor commercial traffic, ice growth and forecasted weather.

COAL SHOVEL WEEKLY SUMMARY
23 FEB 2016 thru 29 FEB 2016

Ref: CCGD9INST M16150.2B

1. Situation:

Regional ice conditions remain at nearly negligible levels. A prolonged period of north/northwest winds with the arrival of a low pressure system during the midweek drove significant saiche in Lake Huron and likely fed all the remaining lake ice into the St. Clair River system where it jammed in both the North Channel and in the vicinity of the Southeast Bend. These ice jams in conjunction with the prolonged northerly winds drove a significant rise in water levels at Algonac, MI where minor flood stage levels were recorded on Friday. CCGS SAMUEL RISLEY and CGC NEAH BAY performed flushing operations and successfully cleared the Harsen's Island ferry route and removed the plugs in both channels to enable water levels to normalize by late Saturday. Ferry operations resumed midday Saturday for both passenger and vehicular traffic.

2. Performance Standards this week:

Qty	Measure of Effectiveness
00	Search and Rescue Response Requests
00	Urgent Vessel Response Requests
01	Exigent Community Service Requests
02	Navigation Assistance Requests
02	U.S. Vessels Assisted
00	CA Vessels Assisted
00	Waterways Restrictions (hrs)
00	Waterways Closures (hrs)
100%	Tier I Availability
39	Icebreaking Resource Hours
00	Vessels beset

3. Weekly Hours per Tier I Waterway:

Waterway	Hours	Hours Closed	Percentage
St. Clair River	168	0	100
Detroit River	168	0	100
Pelee Passage	168	0	100
St. Lawrence Seaway	Not Included		

4. Seasonal Totals

Qty	Measure of Effectiveness
00	Search and Rescue Response Requests
00	Urgent Vessel Response Requests
01	Exigent Community Service Requests
07	Navigation Assistance Requests
02	U.S. Vessels Assisted
05	CA Vessels Assisted
00	Waterways Restrictions (hrs)
00	Waterways Closures (hrs)
100%	Tier I Availability
64	Icebreaking Resource Hours
00	Vessels beset

5. Seasonal Hours per Tier I Waterways

Waterway	Hours	Hours Closed	Percentage
St. Clair River	744	0	100
Detroit River	744	0	100
Pelee Passage	744	0	100
St. Lawrence Seaway	Not Included		

6. Waterway Status:

Waterway	Status
Coal Shove AOR	Open

7. Lost Cutter Hours:

Lost Cutter Hours			
Cutter	Casualty Related	Other - Logistics	Casualty (Charlie)
NEAH BAY	114	07	000

8. Seasonal Lost Cutter Hours:

Lost Cutter Hours			
Cutter	Casualty Related	Other - Logistics	Casualty (Charlie)
<i>NEAH BAY</i>	<i>346</i>	<i>07</i>	<i>336</i>

9. Future Plans:

Monitor commercial traffic, ice growth and forecasted weather. CCGS SAMUEL RISLEY and CCGS GRIFFON will perform helicopter hoist and rescue swimmer deployment training with AIRSTA Detroit throughout the week. Current forecasts suggest below average temperatures near the end of the upcoming week followed by a return to normal levels in the week to follow. Ice concentration is extremely limited in the AOR and we do not anticipate making any additional ice in the near term. We intend to evaluate conditions near the end of the business week and evaluate the necessity for leaving the operation running beyond Monday, 07 March. At this time, we anticipate concluding ice operations for the 2015/2016 season as early as 07 March 2016.

COAL SHOVEL WEEKLY SUMMARY

29 FEB 2016 thru 06 MAR 2016

Ref: CCGD9INST M16150.2B

1. Situation:

Regional ice conditions remain at nearly negligible levels at the beginning of the week but temperature quickly plummeted in the middle of the week making new ice throughout the AOR. Fortunately, the temperatures began to rise well above normal on the weekend decreasing the percentage at a significant rate.

The forecast along with commercial traffic moving throughout the region prompted the conclusion of Op Coal Shovel.

CCGS SAMUEL RISLEY and CCGS GRIFFON performed helicopter hoist and rescue swimmer deployment training with AIRSTA Detroit throughout the week. CGC NEAH BAY performed ice breaking standby, training and ice recon in Central and Eastern Lake Erie as well as a visit to Sector Buffalo prior to returning to their homeport in Cleveland.

2. Performance Standards this week:

Qty	Measure of Effectiveness
00	Search and Rescue Response Requests
00	Urgent Vessel Response Requests
00	Exigent Community Service Requests
00	Navigation Assistance Requests
00	U.S. Vessels Assisted
00	CA Vessels Assisted
00	Waterways Restrictions (hrs)
00	Waterways Closures (hrs)
100%	Tier I Availability
42.5	Icebreaking Resource Hours
00	Vessels beset

3. Weekly Hours per Tier I Waterway:

Waterway	Hours	Hours Closed	Percentage
St. Clair River	168	0	100
Detroit River	168	0	100
Pelee Passage	168	0	100
St. Lawrence Seaway	Not Included		

4. Seasonal Totals

Qty	Measure of Effectiveness
00	Search and Rescue Response Requests
00	Urgent Vessel Response Requests
01	Exigent Community Service Requests
07	Navigation Assistance Requests
02	U.S. Vessels Assisted
05	CA Vessels Assisted
00	Waterways Restrictions (hrs)
00	Waterways Closures (hrs)
100%	Tier I Availability
106	Icebreaking Resource Hours
00	Vessels beset

5. Seasonal Hours per Tier I Waterways

Waterway	Hours	Hours Closed	Percentage
St. Clair River	912	0	100
Detroit River	912	0	100
Pelee Passage	912	0	100
St. Lawrence Seaway	Not Included		

6. Waterway Status:

Waterway	Status
Coal Shove AOR	Open

7. Lost Cutter Hours:

Lost Cutter Hours			
Cutter	Casualty Related	Other - Logistics	Casualty (Charlie)
<i>NEAH BAY</i>	<i>114</i>	<i>07</i>	<i>000</i>

8. Seasonal Lost Cutter Hours:

Lost Cutter Hours			
Cutter	Casualty Related	Other - Logistics	Casualty (Charlie)
<i>NEAH BAY</i>	<i>346</i>	<i>07</i>	<i>336</i>

9. Future Plans:

Conclude OPERATION COAL SHOVEL 07 March 2016 @ 0800.

