INTERNATIONAL LAKE SUPERIOR BOARD OF CONTROL

CANADA
Mr. Carr McLeod, Member
Mr. David Fay, Secretary

UNITED STATES
BG (P) Steven R. Hawkins, Member
Mr. John W. Kangas, Secretary

January 27, 2004

Dr. Murray Clamen
Secretary, Canadian Section
International Joint Commission
234 Laurier Avenue West, 22nd Floor
Ottawa, ON K1P 6K6

Dear Dr. Clamen:

This letter report is the International Lake Superior Board of Control's (Board) report to the International Joint Commission (Commission) on experiences with peaking and ponding operations during 2003. Based upon the experiences of the past two years, the Board recommends that peaking and ponding continue for an indefinite period under its supervision. The Board further recommends that, following completion of dredging in the St. Marys River, the Commission consider lowering the critical U.S. Slip water level at which ponding is suspended. Background information on the peaking and ponding issue, as well as events prior to 2003, is presented in Enclosure A.

The hydropower entities were directed to suspend ponding on 59 days in 2003, out of a total of 112 days weekend days or holidays on which they would prefer to conduct ponding. While weekend and holiday ponding is suspended the hydropower entities are directed to release on-peak flows for 8-hour periods (0800h to 1600h) each day to provide shipping a window of higher water levels in the Lower St. Marys River. Enclosure B lists the dates and circumstances in which ponding was suspended, as well as the levels and flows that occurred.

According to information (see enclosure C) from the U.S. Coast Guard vessel transit logs, only 16 of 859 cargo vessels that transited the locks on weekends in 2003 were delayed due to low levels. Of the 16 vessels, 13 resumed their passage during the 8-hour periods in which ponding was suspended and the hydro-power companies were passing peak flows. Five of these vessels were ocean-going ships. Although there is insufficient detail in the Coast Guard logs to prove if the on-peak flows during the weekends and holidays prevented further delays of these vessels, it appears to be the case that suspending ponding on weekends and holidays did reduce the delays. It is not possible to determine from the logs how many of the ships that were able to transit during these on-peak weekend periods would otherwise have been delayed or light-loaded had ponding been allowed.

In November 2003 the Board invited the hydropower entities, navigation interests and offices of the Great Lakes Fishery Commission and Sea Lamprey Control Centre to comment on the peaking and ponding that took place in 2003 to-date, and their experience with water levels and flows in the St. Marys River. Hydropower and navigation interest responses are contained in the Enclosures D and E, respectively. No response was received from the Great Lakes Fishery Commission, nor from the Sea Lamprey Control Centre.

In its December 19, 2003 letter (Enclosure D), the Edison Sault Electric Company (ESEC) re-iterated its request to the Commission to allow it to continue to peak and pond in order to operate its plant in the most cost-effective manner to meet customer needs. ESEC calculated that, in 2003, replacement electricity costs during the 8 hour weekend and holiday on-peak periods (in which ponding is sometimes suspended) averaged 3% less than replacement costs in the remaining off-peak hours (the hours in which they would otherwise have used this water).

Great Lakes Power Limited's letter dated December 8, 2003 (Enclosure D) highlighted the need to peak and pond to maximize electrical generation efficiency during high-demand and reduced-demand periods. They requested the Commission approve continued peaking and ponding in order to help them meet Ontario electrical market demand.

Of the navigation interests, Fednav International Limited (Fednav) responded by letter dated December 18, 2003, and the Lake Carriers' Association responded by e-mail dated January 6, 2004 (see Enclosure E). Fednav provided a listing of their vessels that were forced to leave ports on Lake Superior at reduced draft due to low levels in 2003, but recognized that the reason for these "shortlifts" could be both general low levels in the St Marys River as well as impacts of ponding. Fednav stated that the monthly memo that informs navigation interests and others of the scheduled flows at Sault Ste. Marie "helped us immensely". Fednav also stated that they support the continuation of the peaking and ponding policy in order to allow other stakeholders the means to run their operations efficiently.

Fednav suggest that once the U.S. Army Corps of Engineers completes its Lower St Marys River dredging program, peaking and ponding would not affect the transit of their ships in the Lower St Marys River loaded to the maximum draft allowable at the Welland Canal unless the level at US Slip fell to more than one foot (30 cm) below Chart Datum. This is one foot (30 cm) lower than the level currently used to trigger the suspension of ponding. The Board agrees that, with the completion of the Corps' maintenance dredging program for the Lower St. Marys River in late FY 04, the level at the U.S. Slip Gauge that is used to trigger the suspension of ponding by the hydropower companies could be lowered without detriment to ships loaded to the Welland Canal draft . As suggested by Fednav, this may be a threshold level of 176.09 m (577.7 ft) at U.S. Slip, which is Chart Datum minus one foot. Completion of the Lower St Marys dredging program, as well as confirmation of resultant channel depths, is recommended before a change in the current methodology is adopted.

The Lake Carriers' Association replied that they did not have any comment on peaking and ponding by the hydropower companies as it affects transits of the Lower St. Marys River.

In summary, the interim guidelines on the suspension of ponding and the mechanism of disseminating information to the public continue to work well. Annual reports have now been submitted covering the last two shipping seasons (2002 and 2003). Based on the Board's experience over the last two years, the discussion above, and the information presented in the enclosures, the Board recommends that the Commission consider extending the authority given to the power entities to conduct peaking and ponding operations under the Board's supervision for an indefinite period. The Board suggests that, in the future, it provide summaries on the peaking and ponding activities within its semi-annual reports to the Commission. The Board will continue to monitor peaking and ponding and will continue to direct that the hydropower entities suspend ponding in accordance with its interim guidelines. The Board further recommends that, following completion of dredging in the St. Marys River, the Commission consider lowering the critical U.S. Slip water level at which ponding is suspended.

A similar letter has been sent by the United States Board Member to the United States Secretary of the Commission.

Sincerely,

Mr. Carr McLeod
Member for Canada
International Lake Superior Board of Control

Enclosures;

A. Background Information

B. Water Levels and Flows

-- Background discussion
-- Water Levels for Lakes Michigan-Huron and U.S. Slip, 2002 and 2003
Hydropower Flow Rates at:
-- U. S. Government Plant, 2002 and 2003
-- Edison Sault Electric Company, 2002 and 2003
-- Great Lakes Power Limited, 2002 and 2003
-- Summary of Peaking and Ponding Actions During 2003
-- Hourly U.S. Slip Gauge Levels January through December 2003

C. Soo Locks and St. Marys River Transits During 2003:

-- Impact of Low Water Levels on Shipping
-- Summary of Lockages During 2003
-- Monthly Summary of Lockages and Transits During 2003

-- Vessels Delayed by Low Water and Transiting on Weekends and Holidays (April 20 to December 31, 2003)
-- Vessels Delayed by Low Water April 2003
-- U.S Coast Guard Logs of Vessels at Anchor Due to Low Water Conditions

D. Communications with Hydropower Entities

-- November 13 e-mail to Edison Sault Electric co., and Great Lakes Power Ltd.; Subject: Update Report on Peaking and Ponding
-- December 8, 2003 letter from Great Lakes Power Ltd.
-- December 19, 2003 letter from Edison Sault Electric Company

E. Communications with Navigation Entities.

-- November 13 e-mail to navigation interests
-- December 18, 2003 letter from Fednav International Ltd.
-- December 18, 2003 comments to Fednav
-- December 19, 2003 Fednav e-mail responding to clarification request
-- January 14, 2004 Fednav e-mail providing additional clarification
-- January 6, 2004 e-mail from Lake Carriers' Association

F. Communications with Great Lakes Fishery Commission and Sea Lamprey Control Centre

-- November 13, 2003 e-mail to Gavin Christie of the Great Lakes Fishery Commission; Subject: Update Report on Peaking and Ponding
-- November 17, 2003 e-mail to Robert Young of the Sea Lamprey Control Centre; Subject: Update Report on Peaking and Ponding
-- December 12, 2003 follow up e-mail to Gavin Christie; Subject: Update Report on Peaking and Ponding

NOTE: No response has been received.

Enclosure A

Background Information

The release of water from Lake Superior is made through the various structures located on the St. Marys River at Sault Ste. Marie. The Board allocates the flow to these facilities monthly, based on the outflow specified by the regulation plan, Plan 1977-A, and the conditions given in the Commission's Orders of Approval. The distributions include water for purposes of domestic, sanitary and industrial uses; meeting fishery requirements; operating navigation locks; and hydropower generation. Given their water allocations, the Edison Sault Electric Co., and Great Lakes Power Ltd., hydropower plants, at times, conduct peaking and ponding operations, which involve changing the flows at the plants to meet the demand for electricity that varies within the day and within the week. Typically, high energy demand occurs during the weekday daytime hours and peak flows are released to allow generation of electricity to meet this demand. On weekends, energy demand is low and the hydropower companies prefer to run at reduced flow, or "pond" in order to operate their plants most efficiently. These lower flows, over a sustained weekend or holiday period, can result in a decline of water levels in the St. Marys River water levels downstream of the hydropower plants and locks.

In 2000, some navigation interests first expressed concerns about the low water levels in the St. Marys River downstream of the locks, and that these problems they experienced were exacerbated by ponding operations. They also expressed this concern at the annual public meeting hosted by the Board on June 27, 2001 in Port Severn, Ontario. Subsequently, discussions took place between the representatives of the shipping and hydropower interests and the Board's staff. An outcome of the discussions was the issuing, at the beginning of each month to the shipping interests, a schedule of expected hourly flows in the St. Marys River for each day of the month. This was based on information received from the hydropower companies.

As the water level of Lake Superior declined during the autumn of 2001, so did the Lake Superior outflow specified by the regulation plan. In November 2001, the Shipping Federation of Canada once again expressed concern about the lower weekend flows due to ponding operations and their impacts on the already low water level conditions. With the cooperation of the hydropower companies, the Board arranged short-term increases in the Lake Superior outflow on three successive weekends starting on December 1, 2001. These short-term flow increases, lasting about six hours each time, were reported to have reduced the delay time for the ships exiting the lower St. Marys River. These over-discharges were offset by under-discharges the remaining part of the month.

By letter dated December 10, 2001, the Commission asked the Board to conduct a review of peaking and ponding operations by hydropower plants in the St. Marys River and their effects on the navigation interests and also other interests, including the environment. The Board prepared a report containing the Board's findings and recommendations. This report entitled "Report to the International Joint Commission on Peaking and Ponding Operations On the St. Marys River by the International Lake Superior Board of Control" was submitted to the Commission on February 28, 2002. In its report the Board recommended that peaking and ponding operations by the hydropower companies be allowed to continue under its direction subject to the interim guideline that ponding would be suspended on weekends and holidays if

the Board expected that ponding would result in sustained levels below Chart Datum at the US Slip gauge in the lower St. Marys River.

The Commission accepted the Board's report and, on March 15, 2002, extended the authority given to the power entities to continue to conduct peaking and ponding operations until March 20, 2003 under the supervision of the Board. The Commission also requested a follow-up report be provided by December 15, 2002 on its observations during 2002.

A report discussing the Board's findings and experience was submitted on December 13, 2002. Input from the U.S. Coast Guard, the hydropower entities, the navigation entities, the Great Lakes Fishery Commission, and the Sea Lamprey Control Centre was included and discussed in the report. The report concluded that the interim guidelines used to govern peaking and ponding operations and provide information to the public were working well. The Board recommended that the Commission extend the peaking and ponding authority given to the power entities for at least another year, through the winter of 2003-2004 under the continued supervision of the Board.

Environmental Resources Management produced a report dated April 18, 2002 for the Commission reviewing environmental issues associated with peaking and ponding. The report concluded that, while further study is warranted by other agencies, peaking and ponding was not considered to have significant, if any, impact on the St. Marys River wetlands, fish habitats, or sea lamprey control programs. To date no further related review has been done.

On January 23, 2003, the Commission issued a public notice inviting public comment on peaking and ponding in the St. Marys River. Great Lakes Power Limited (GLPL) and Edison Sault Electric Company (ESEC) submitted joint comments dated February 19, 2003. The joint submittal contained several recommendations as follows:

a. Extend the authority for peaking and ponding on the St. Marys River,
b. Extend the authority for multi-year periods,
c. Eliminate the restrictions on peaking and ponding during periods of low water datum, and,
d. Direct the board to seek the assistance of all affected entities during unusual conditions.

Comments were also received by the Commission from the City of Sault Ste. Marie, Michigan, Cloverland Electric Cooperative, Manistique Papers, Inc., and Michigan Limestone Operations, Inc. These letters supported continuation of peaking and ponding operations by hydropower.

By letter dated March 17, 2003 the Commission again extended the authority for the power entities to continue peaking and ponding operations until March 20, 2004. The Commission further requested the Board's written advice concerning operations in 2003 and recommendations on further extension of authority for peaking and ponding operations beyond March 20, 2004.

In review, the guidelines governing peaking and ponding now call for the Board to determine twice a month, at the beginning and at mid-month, whether or not ponding operations can proceed for the month. The Board may suspend ponding operations for the month, or a portion thereof, if it expects that ponding operations would result in sustained weekend levels at U.S. Slip Gauge declining below chart datum. Based on the anticipated pattern of peaking and

ponding operations for the month, the U.S. Regulation Representative's office issues, at the beginning of the month, expected hourly flows of the St. Marys River at Sault Ste. Marie. This information is distributed to the hydropower and shipping interests, the U.S. Coast Guard Group Sault Ste. Marie, the U.S. Army Corps of Engineers, and Environment Canada.

Enclosure A

Background Information

Enclosure B

Water Level and Flows

Contents

a. Background Discussion

b. Water Levels for Lakes Michigan-Huron and U. S. Slip, 2002 and 2003

c. Hydropower Flow Rates at U. S. Government Plant, 2002 and 2003

d. Hydropower Flow Rates at Edison Sault Electric Co., Plant, 2002 and 2003

e. Hydropower Flow Rates at Great Lakes Power Limited Plant, 2002 and 2003

f. Summary of Peaking and Ponding Actions During 2003

g. Hourly U.S. Slip Levels, January 2003 through December 2003 with with Explanatory Notes for February through April.

Background Discussion

Ponding operations on weekends and holidays were allowed in January, February, March, and on the weekends of April 5th - 6th and 12th -13th since shipping on the St. Marys River was not affected during these periods. Ponding was suspended on weekends and holidays for the last half of April, the first two weekends of May, the last two weekends of June and all of July. From mid-May to mid-June, no peaking or ponding was conducted since the hydropower plants were operating at capacity due to the limited electrical supply in northern Michigan. Ponding was not expected to cause the level at US Slip to fall below Chart Datum on weekends in August, so ponding was allowed in accordance with the guidelines. Ponding was suspended on weekends and holidays from September through December 21, 2003. Ocean-going vessels had cleared the St. Marys River system by December 24th and discussions with the Lake Carriers' Association indicated that water levels were not a concern, so ponding was allowed for the remainder of the shipping season. The water levels and hydropower flows experienced during 2003 are shown in this enclosure

The enclosed monthly graphs show the variation of U.S. Slip Gauge levels for each month. A table summarizing the decisions regarding suspension of ponding is also included. When the Board suspends ponding on weekends and holidays, hydropower runs at on-peak flow rates for 8 hours (0800 hrs to 1600 hrs) during those days to provide ships a window of higher water levels in the lower St. Marys River. If ponding were allowed over a continuous 48- to 72-hour period a significant lowering of water level would be noticed at US Slip as compared to the normal fluctuation up and down during the week when the plants are running at peak rates during the day. From the monthly U.S. Slip Gauge graphs it can be seen that levels tend to rise in the 8-hour on-peak flow windows. Weather conditions, particularly when the winds are blowing steadily in a downstream or upstream direction, contribute significantly to the lowering or rising of water levels over and above what is attributable to hydropower activities and can mask the rise due to the 8-hour on-peak flows.

The range of flow due to peaking and ponding depends upon the flow allocation to the hydropower plants. As the allocated monthly flow approaches the capacity of the plant, the amount of peaking that is possible is reduced. ESEC was operating at or near capacity (between 85% and 98%) during the months of May through August. During the remaining months of the year ESEC operated between 62% and 80% of capacity. Similarly GLPL operated at 86% of capacity in May and at 96% in June during the Upper Peninsula power emergency and between 75% and 95% of capacity during the rest of the year. The U.S. Government plant (USG) (including Unit #10) operates at 100% of available capacity with ESEC taking the remaining U.S. hydropower flow allocation.

Water Levels (Meters) 2003

Month	Lake Michigan - Huron (1) (Chart Datum 176.0 Meters) Mean	Max. Day	Min. Day	U.S. Slip Gauge (2) (Chart Datum 176.39 Meters) Mean	Max. Day	Min. Day
January	175.82	175.89	175.78	176.36	176.57	176.08
February	175.76	175.78	175.72	176.40	176.47	176.27
March	175.73	175.77	175.71	176.33	176.44	176.12
April	175.82	175.86	175.77	176.20	176.36	176.06
May	175.92	175.97	175.86	176.22	176.33	176.07
June	176.00	176.02	175.96	176.34	176.38	176.28
July	176.04	176.06	176.02	176.36	176.42	176.26
August	176.02	176.06	175.99	176.37	176.43	176.21
September	175.94	175.99	175.91	176.32	176.41	176.24
October	175.87	175.92	175.84	176.25	176.37	176.14
November	175.89	175.94	175.83	176.19	176.36	175.92
December	175.90	175.92	175.88	176.19	176.32	176.05

Notes: (1) Mean Levels are based on final NOAA and CHS data.
(2) Mean Levels are based on final NOAA and CHS data.

Water Levels (Meters) 2002

Month	Lake Michigan - Huron (1) (Chart Datum 176.0 Meters) Mean	Max. Day	Min. Day	U.S. Slip Gauge (2) (Chart Datum 176.39 Meters) Mean	Max. Day	Min. Day
January	175.99	176.02	175.96	176.32	176.40	176.17
February	175.95	175.98	175.92	176.32	176.50	176.07
March	175.99	176.02	175.95	176.49	176.62	176.27
April	176.06	176.14	175.99	176.37	176.61	176.24
May	176.19	176.24	176.14	176.47	176.58	176.35
June	176.29	176.34	176.24	176.59	176.67	176.41
July	176.33	176.35	176.32	176.66	176.70	176.58
August	176.32	176.34	176.29	176.68	176.69	176.61
September	176.24	176.30	176.18	176.61	176.71	176.53
October	176.14	176.21	176.06	176.50	176.67	176.37
November	176.01	176.06	175.95	176.39	176.48	176.27
December	175.91	175.97	175.87	176.29	176.40	176.17

Notes: (1) Mean Levels are based on final NOAA and CHS data.
(2) Mean Levels are based on final NOAA and CHS data.

Hydropower Flow Rates (m^3s) (2003)

U.S. Government Plant

Month	Mean	Max. Day	Min. Day
January	299	346	216
February	325	348	284
March	333	354	308
April	350	391	330
May	340	359	301
June	349	359	329
July	335	368	266
August	352	391	235
September	381	400	345
October	386	413	298
November	382	407	313
December	391**	N/A	N/A

** Provisional

N/A Not available at this time

Hydropower Flow Rates (m^3s) (2002)

U.S. Government Plant

Month	Mean	Max. Day	Min. Day
January	408	420	398
February	408	413	396
March	405	410	397
April	406	414	388
May	407	414	390
June	352	428	244
July	306	373	265
August	277	357	256
September	271	337	200
October	255	265	233
November	307	374	254
December	348	370	256

Hydropower Flow Rates (m^3s) (2003)

Edison Sault Electric Company

Month	Mean	Max. Day	Min. Day	Max. Hour	Min. Hour
January	568	712	312	776	0
Februay	492	523	477	577	354
March	445	568	378	669	199
April	485	564	357	707	140
May	602	714	456	770	251
June	692	725	635	771	492
July	613	657	561	768	390
August	629	687	443	774	322
September	548	626	474	787	198
October	569	642	383	771	158
November	415	579	0	766	0
December	441	507	292	789	203

Hydropower Flow Rates (m^3s) (2002)

Edison Sault Electric Company

Month	Mean	Max. Day	Min. Day	Max. Hour	Min. Hour
	Power data collection started in April 2002				
April	457	527	408	684	177
May	558	649	361	763	194
June	665	726	427	759	419
July	759	773	731	823	624
August	765	787	719	801	541
September	761	790	625	809	139
October	750	775	654	810	638
November	752	778	720	800	576
December	637	716	534	785	376

Hydropower Flow Rates (m^3s) (2003)

Great Lakes Power Ltd.

Month	Mean	Max. Day	Min. Day	Max. Hour	Min. Hour
January	906	1042	724	1113	489
February	827	968	657	1044	456
March	786	968	537	1027	361
April	833	961	642	1109	444
May	907	1043	414	1114	295
June	1004	1099	828	1416*	706
July	948	1041	769	1142	382
August	997	1083	594	1112	0
September	945	1054	807	1116	4
October	969	1071	789	1141	279
November	822	984	565	1153	222
December	844	1043	666	1096	300

* Erroneous value recorded in final copy due to an accumulator error on June 5th.

Hydropower Flow Rates (m^3s) (2002)

Great Lakes Power Ltd.

Month	Mean	Max. Day	Min. Day	Max. Hour	Min. Hour
Power data collection started in April 2002					
April	860	1034	524	1131	282
May	958	1076	634	1161	607
June	1005	1098	831	1197	0
July	1041	1088	703	1196	0
August	1071	1162	1002	1190	706
September	1039	1085	944	1132	834
October	1034	1108	915	1147	372
November	1047	1136	897	1185	420
December	990	1150	774	1170	477

SUMMARY OF PEAKING AND PONDING ACTIONS DURING 2003

Month	Ponding Was Restricted On Weekends & Holidays?
January	N (1)
February	N (1)
March	N (1)
April	Y & N (2)
May	Y & N (3)
June	Y & N (3)
July	Y
August	N (4)
September	Y
October	Y
November	Y
December	Y & N (5)

Notes:

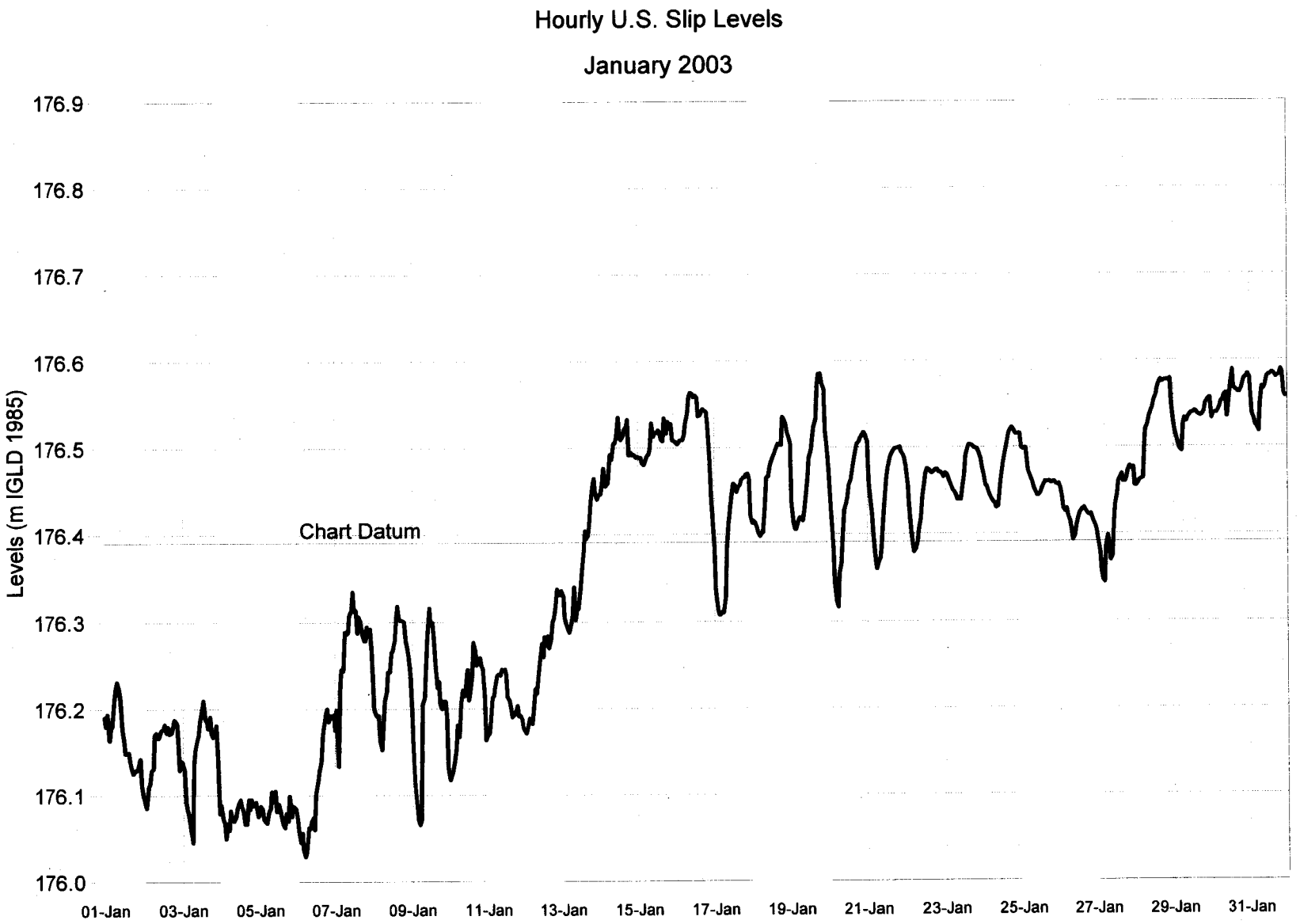
(1) Sustained weekend low "off-peak" flows were not a concern to shipping

(2) Sustained weekend low "off-peak" flows were not a concern to shipping the weekend of April 5 & 6 and 12 & 13. They were a concern for the weekends of 19 & 20 and 26 & 27.

(3) Due to the Silver Lake Dam failure in May, ESEC operated at full capacity from May 19 to June 21. GLPL operated at full capacity from May 28 to June 21. During these periods "ponding" was not practiced due to the resultant emergency need for power to support the U.P. Power Grid.

(4) U.S. Slip levels on weekends and holidays were expected to be above U.S. Slip Chart Datum.

(5) Ponding was suspended the weekends of December 6 & 7, 13 & 14, 20 & 21. Ponding was allowed on December Holidays 25 & 26 (Canadian) and the weekend of December 27 & 28 as ocean-going vessels had left the St. Marys River system and low levels were not a concern to the remaining shipping.


Hourly U.S. Slip Levels
January 2003
Levels (m IGLD 1985)
176.9
176.8
176.7
176.6
176.5
176.4
176.3
176.2
176.1
176.0
Chart Datum
01-Jan
03-Jan
05-Jan
07-Jan
09-Jan
11-Jan
13-Jan
15-Jan
17-Jan
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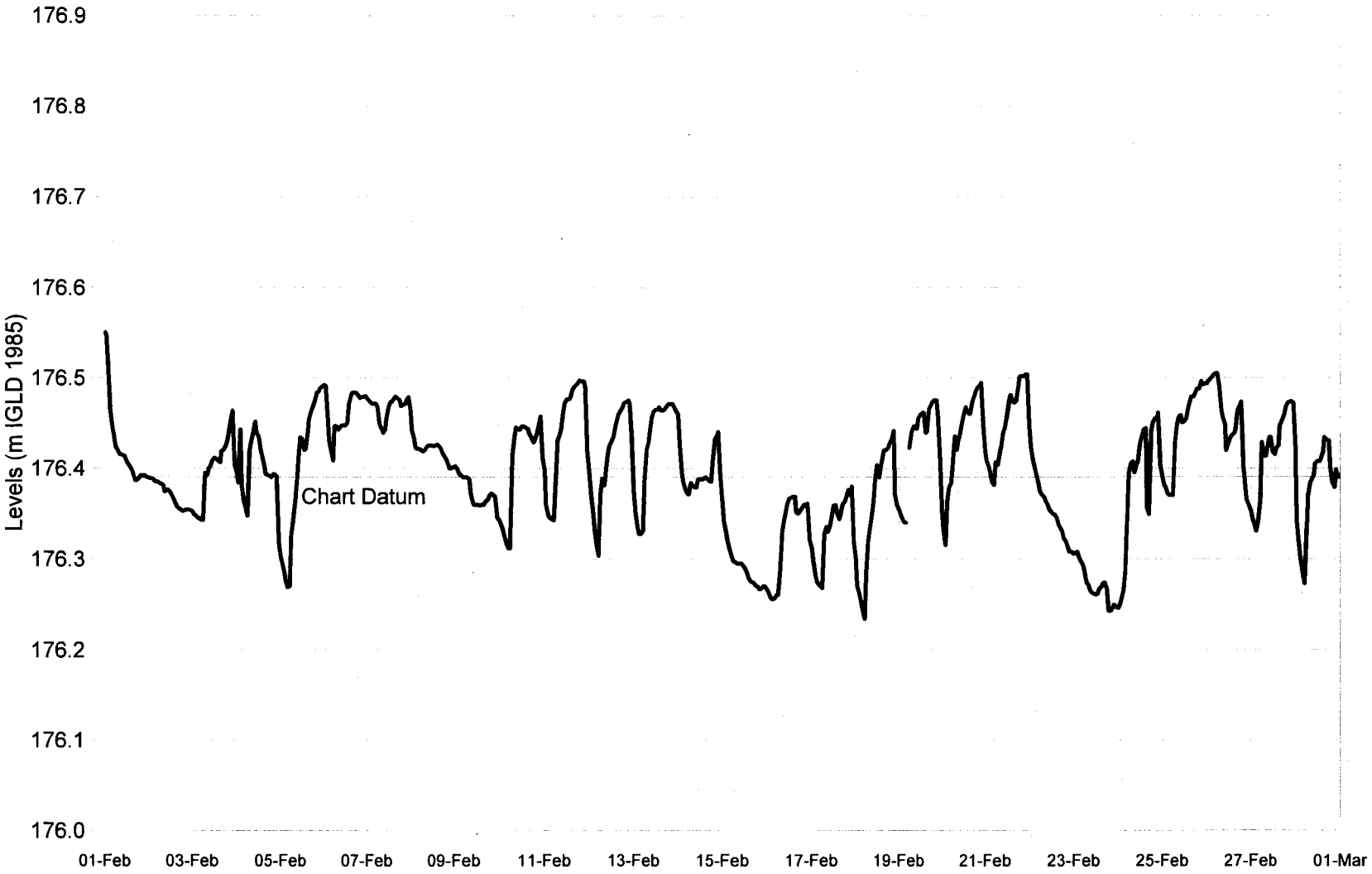
25-Jan
27-Jan
29-Jan
31-Jan

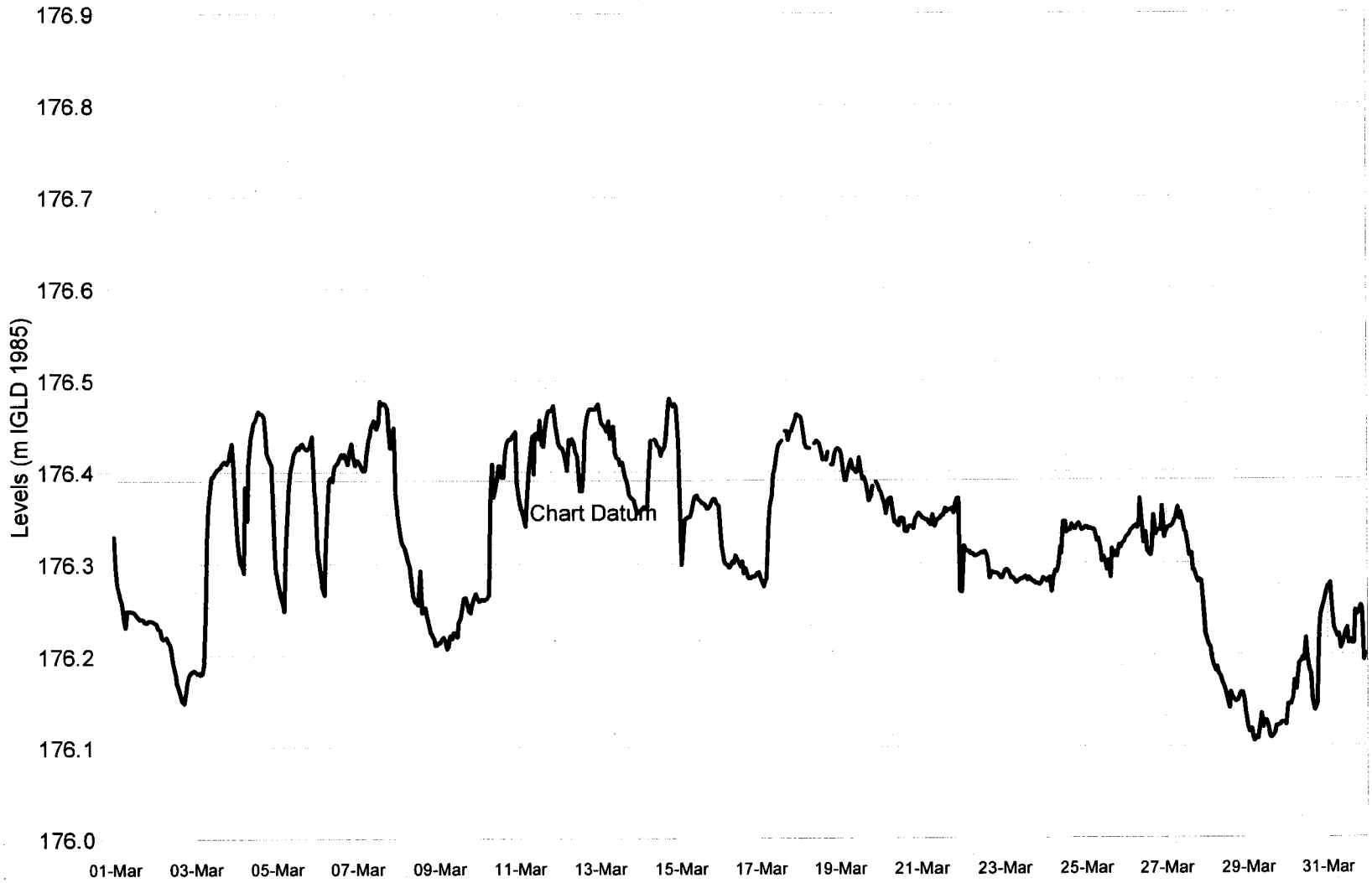
Hourly U.S. Slip Levels

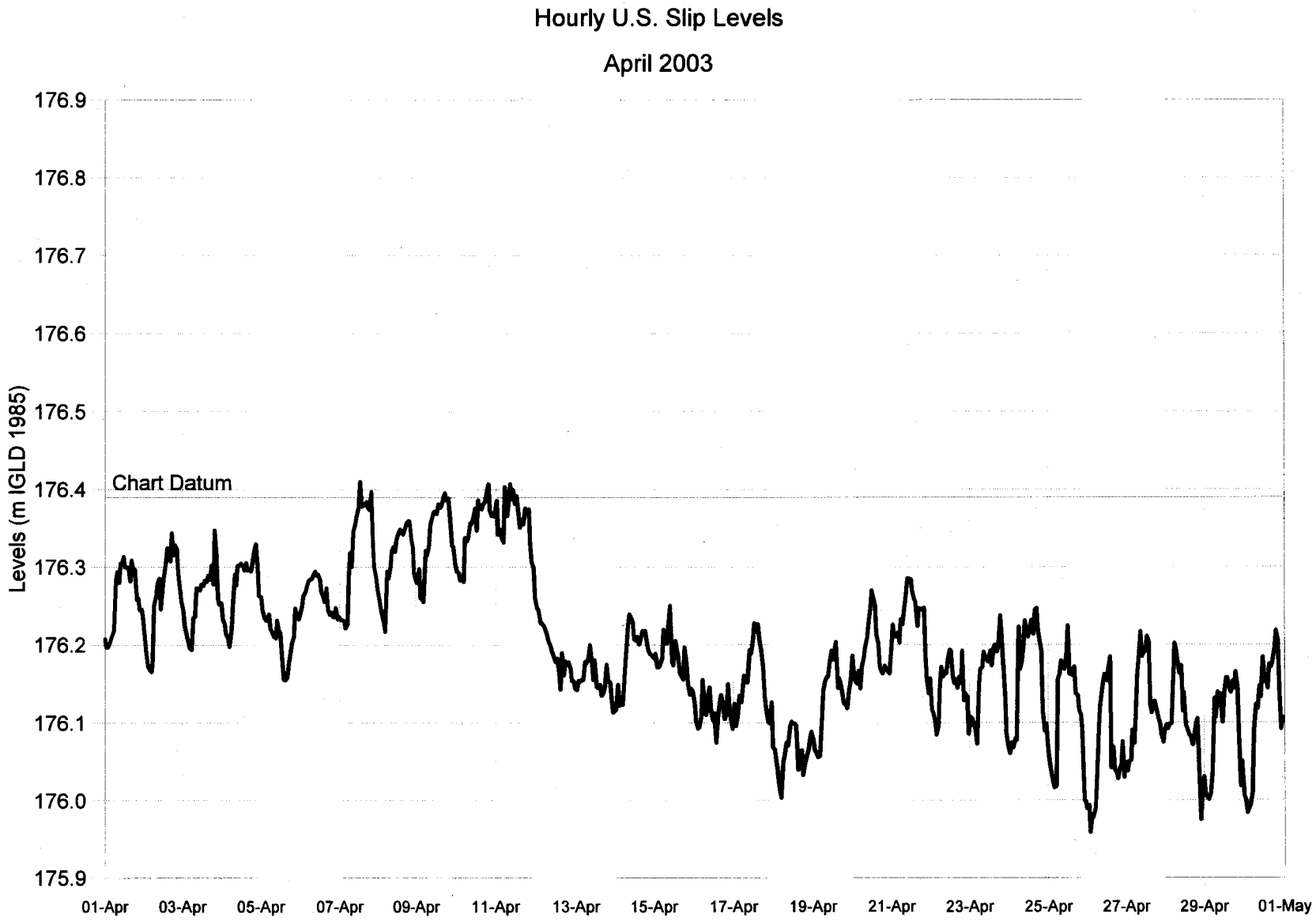
February 2003



Hourly U.S. Slip Levels

March 2003




Hourly U.S. Slip Levels
April 2003
Levels (m IGLD 1985)
176.9
176.8
176.7
176.6
176.5
176.4
176.3
176.2
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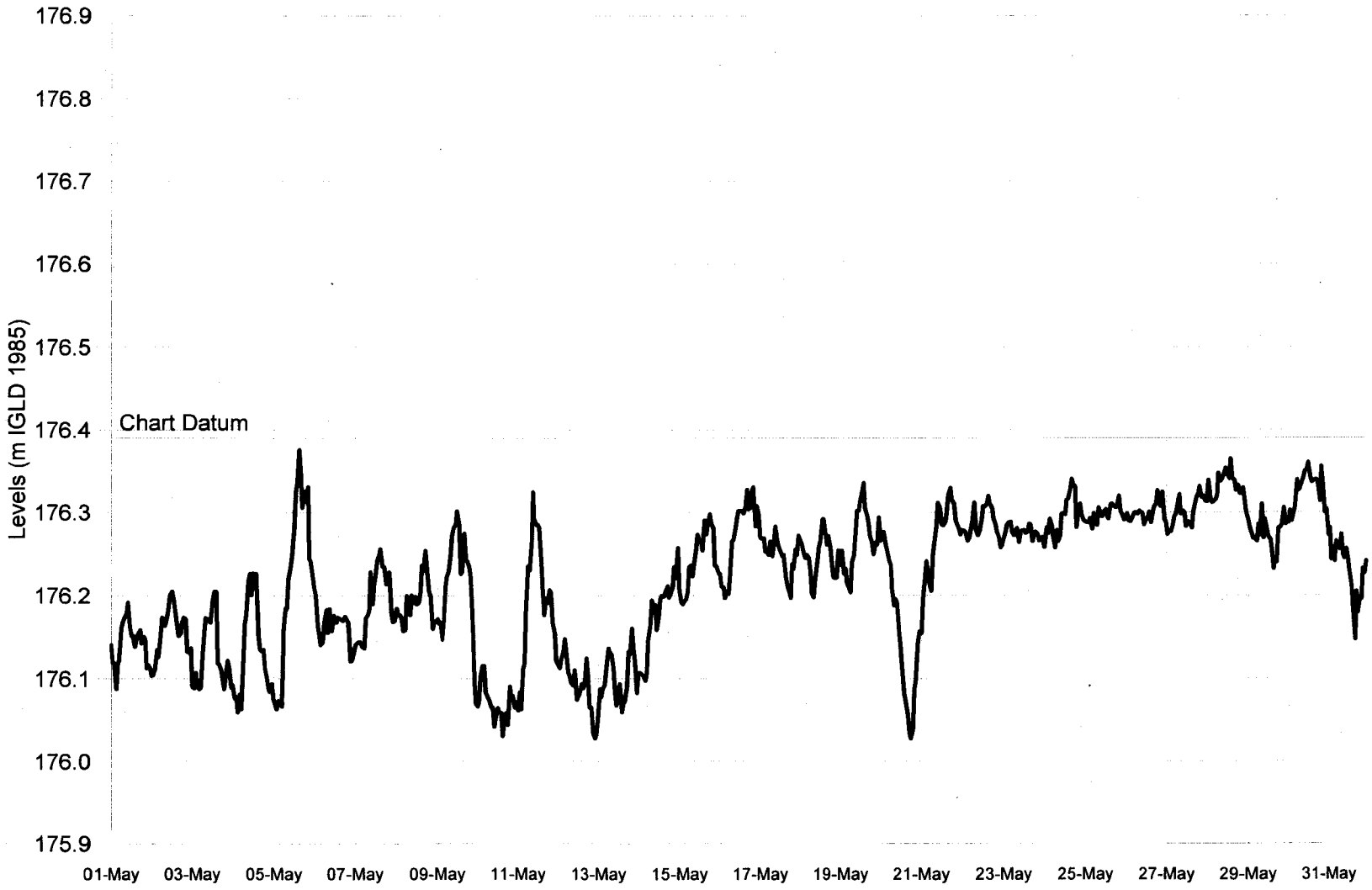
175.9
Chart Datum
01-Apr
03-Apr
05-Apr
07-Apr
09-Apr
11-Apr
13-Apr
15-Apr
17-Apr
19-Apr
21-Apr
23-Apr
25-Apr
27-Apr
29-Apr
01-May

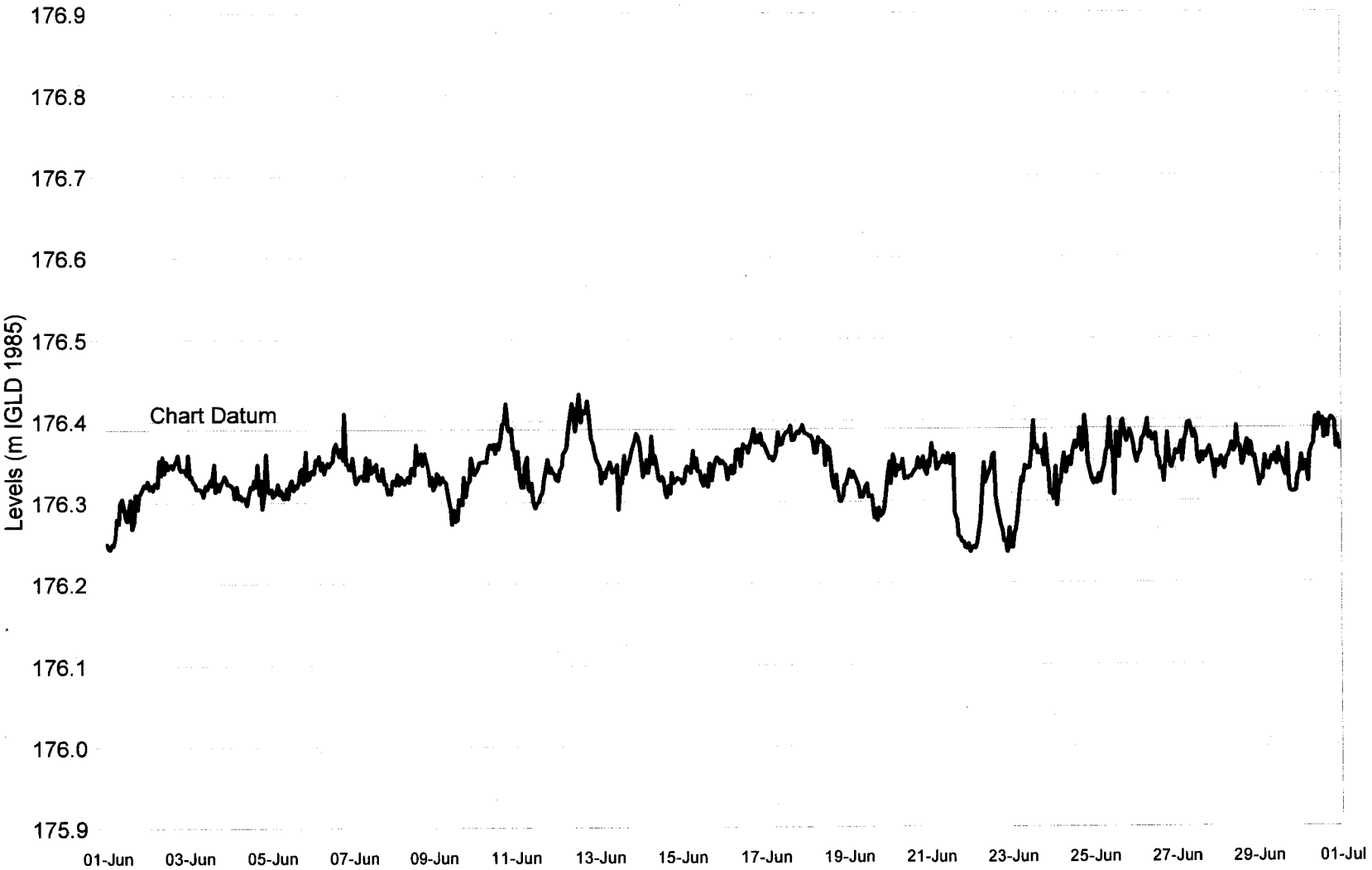
Hourly U.S. Slip Levels

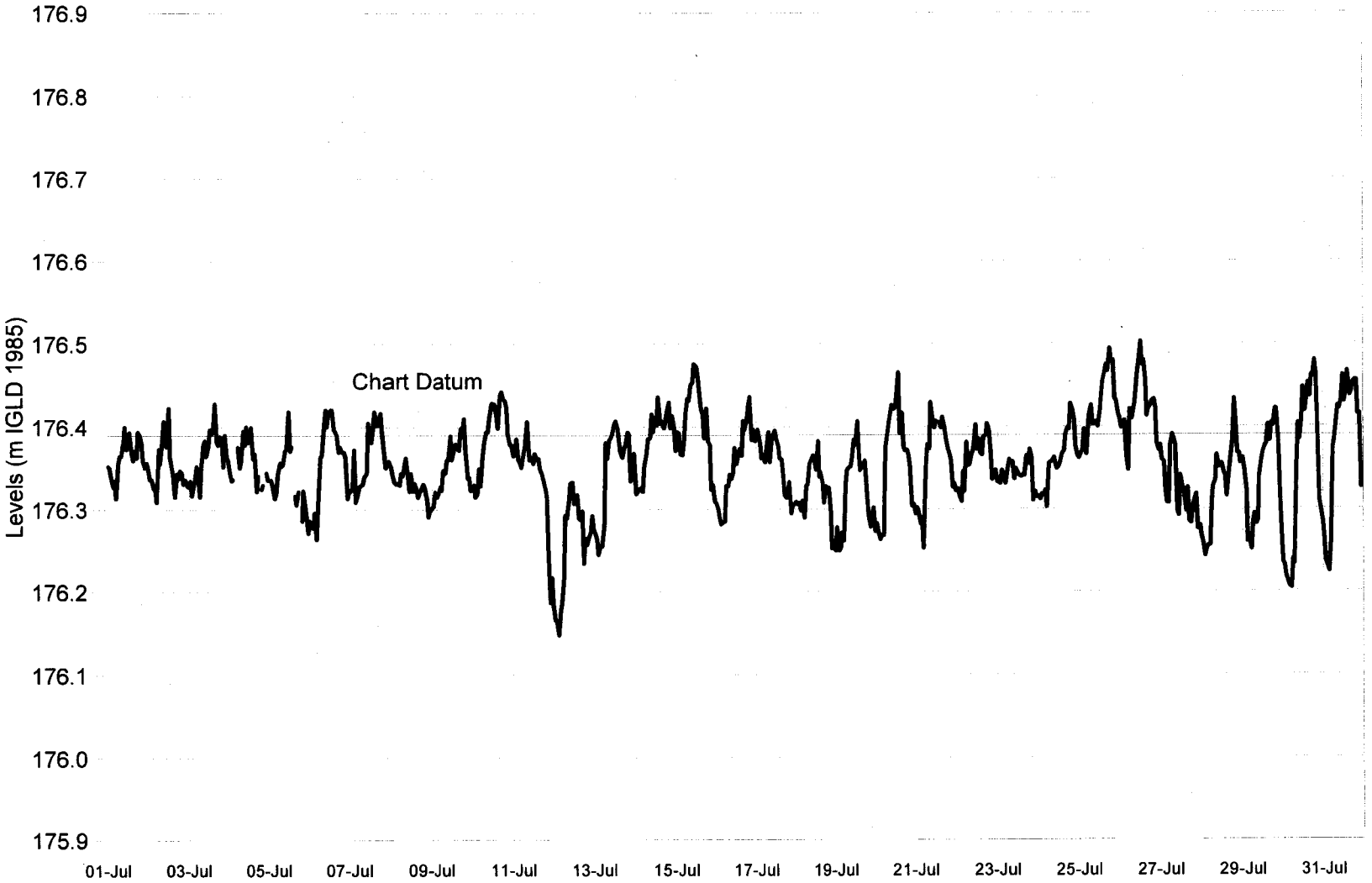
May 2003



Hourly U.S. Slip Levels

June 2003




Hourly U.S. Slip Levels
July 2003
Levels (m IGLD 1985)
176.9
176.8
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176.6
176.5
176.4
176.3
176.2
176.1
176.0
175.9
Chart Datum
01-Jul
03-Jul
05-Jul
07-Jul
09-Jul
11-Jul
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29-Jul
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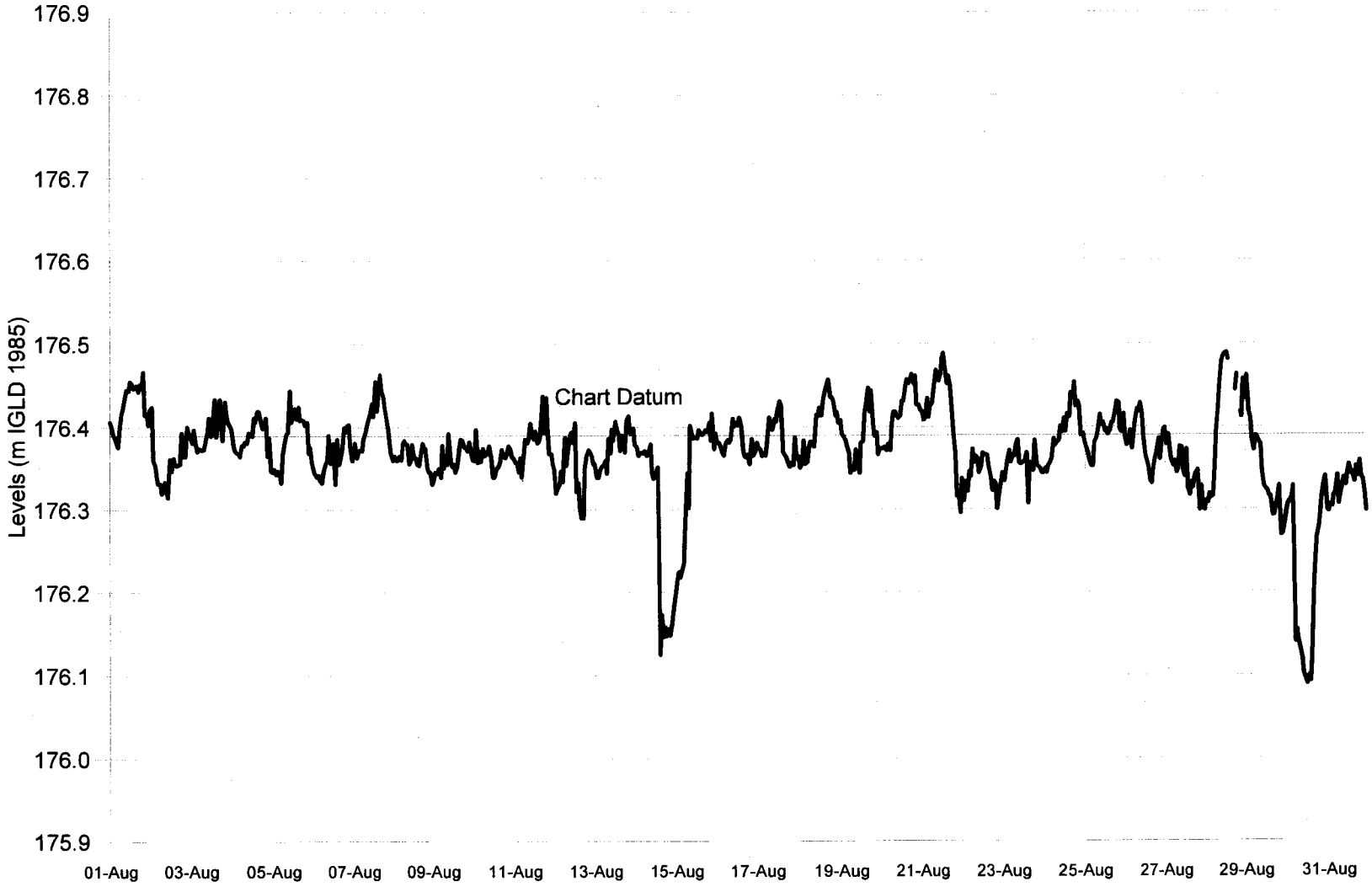
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176.8
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Chart Datum
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03-Aug
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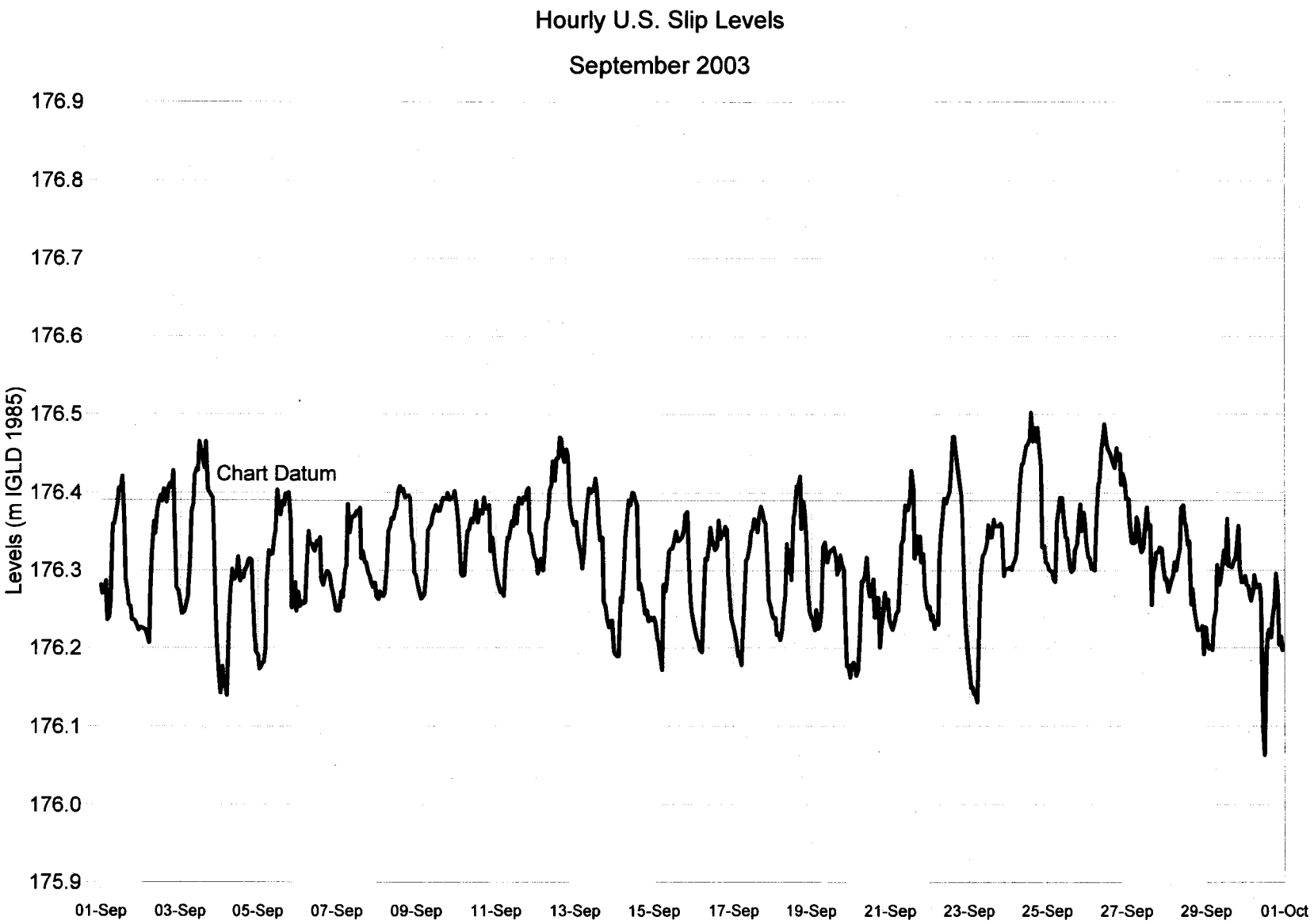
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05-Sep
07-Sep
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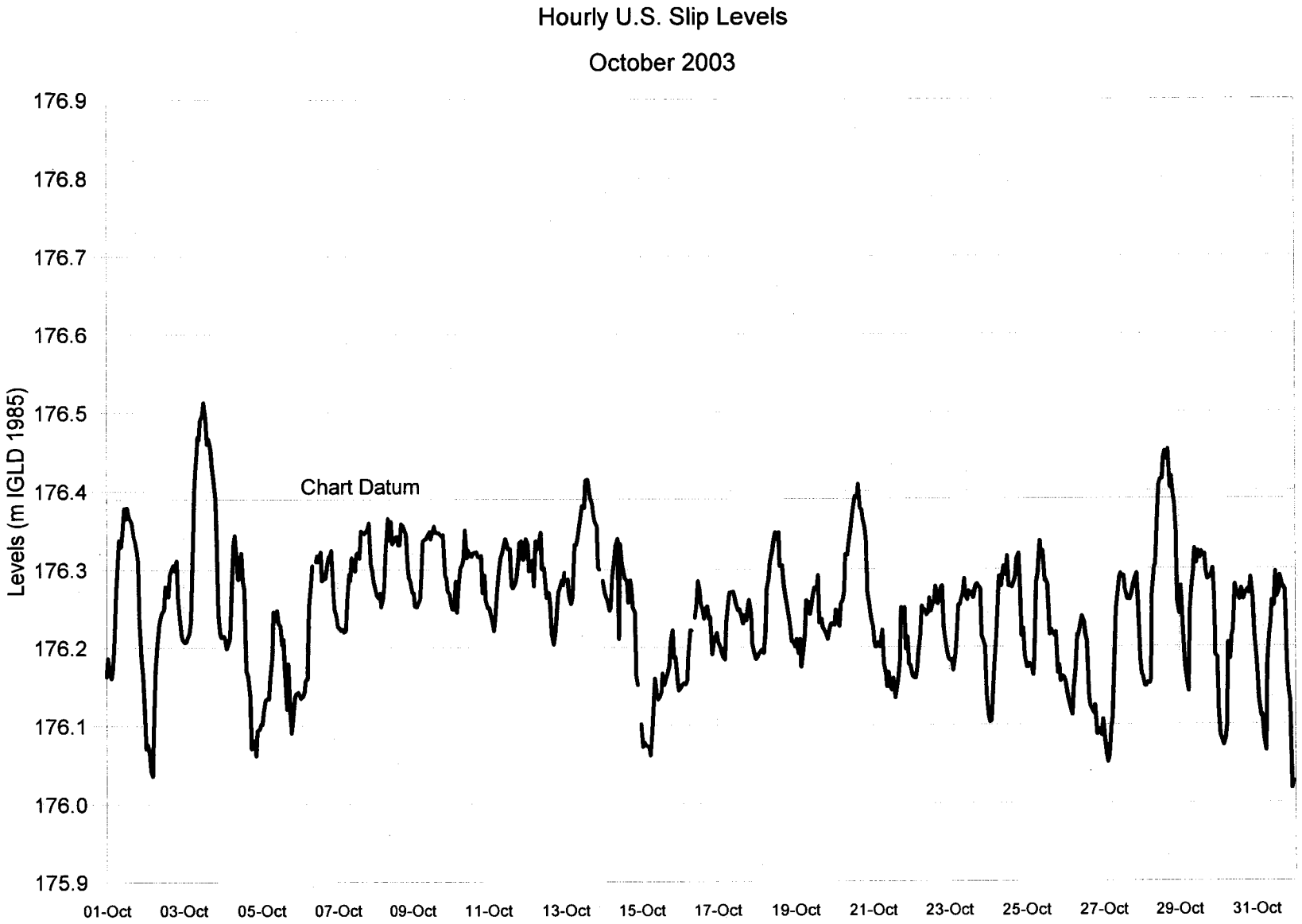
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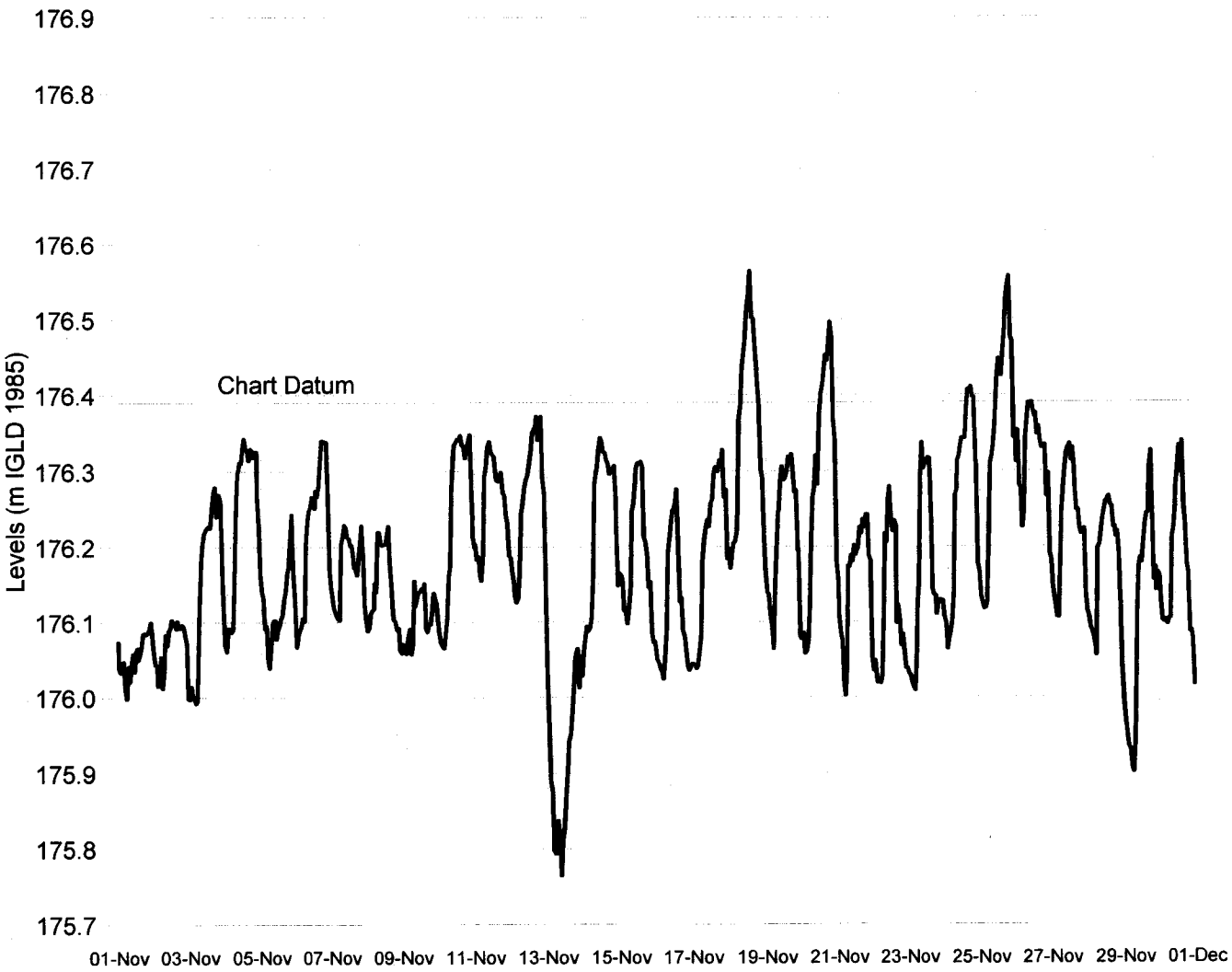
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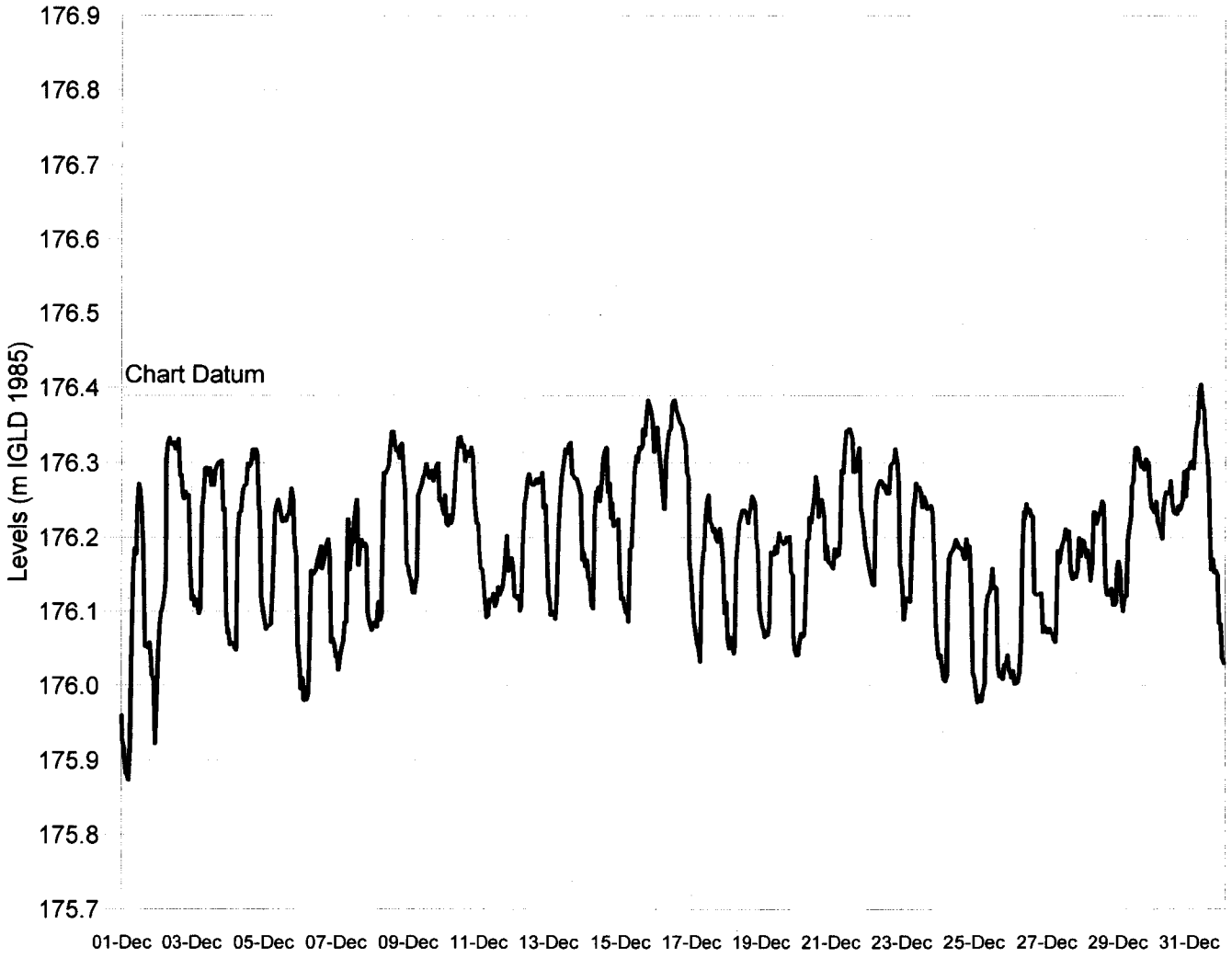
29-Nov
01-Dec

Hourly U.S. Slip Levels

December 2003



Enclosure C

Soo Locks and St. Marys River Transits During 2003

Contents

a. Summary of Lockages During 2003

b. Summary of Lockages and Transits During 2003

c. Vessels Delayed by Low Water and Transiting on Weekends and Holidays
April 20, 2003 through December 31, 2003.

d. Vessels Delayed by Low Water
April 2003.

e. U. S. Coast Guard Logs of Vessels at Anchor Due to Low Water Conditions

Impacts of Low Water Levels on Shipping

Briefly, the Soo Locks logs of vessel transits show that during 2003, cargo vessels transited the Soo Locks and the St. Marys River a total of 2,462 times. This includes 351 transits made during the peak flow window hours of 0800 to 1600 hrs on weekends and holidays. Of the total 2,462 transits, the "U. S. Coast Guard Logs of Vessels at Anchor Due to Low Water Conditions", shown at the end of this enclosure, indicates that 41 vessels went to anchor due to low water conditions. 17 of these 41 vessels transited on weekends and holidays. Of the 17 vessels, 13 resumed their passage during the 8-hour periods when ponding was suspended and the hydropower companies were passing peak flows. Five of these vessels were "salties" or ocean-going ships. The remaining 24 vessels transited on non weekend-holiday periods when the hydropower plants were operating in a normal daytime on-peak and nighttime off-peak mode. A tabulation of the above 17, "Vessels Delayed by Low Water and Transiting on Weekends and Holidays" is also contained in this enclosure .

Summary of Lockages and Transits During 2003

The Soo Locks at Sault Ste. Marie, Michigan opened on March 25, 2003 for traffic to and from Lake Superior. Based on the Soo Locks logs of vessels locking through the locks, upbound or downbound, 2,462 transits were made between March 25, 2003 and December 31, 2003. Of these, 1,603 were made on weekdays and 859 were made on weekends. When the Board suspended ponding, the hydropower plants discharged at peak rates between the hours of 0800 and 1600 on weekend and holiday days. Transits between the hours of 0800 and 1600 on those days totaled 351. Based on the U.S. Coast Guard Group Sault Ste. Marie's logs, vessels were delayed due to low water 41 times. A monthly summary breakdown is provided below.

Monthly Summary of Lockages and Transits During 2003

a. March (25 - 31):

Total Lockages:.	13
Total Weekday Lockages:	6
Total Weekend Lockages:	7
Weekend and Holiday Lockages from 0800 - 1600 Hrs:.....	3
Total vessels delayed due to low water:	0

b. April (1 - 30):

Total Lockages:	247
Total Weekday Lockages:	143
Total Weekend Lockages:	104
Weekend and Holiday Lockages from 0800 - 1600 Hrs:....	39
Total vessels delayed due to low water:	3

c. May (1 - 31):

Total Lockages: 326
Total Weekday Lockages: 166
Total Weekend Lockages: 160
Weekend and Holiday Lockages from 0800 - 1600 Hrs: 55
Total vessels delayed due to low water: 4

d. June (1 - 30):

Total Lockages: 319
Total Weekday Lockages: 183
Total Weekend Lockages: 136
Weekend and Holiday Lockages from 0800 - 1600 Hrs: 44
Total vessels delayed due to low water: 0

e. July (1 - 31):

Total Lockages: 264
Total Weekday Lockages: 193
Total Weekend Lockages: 71
Weekend and Holiday Lockages from 0800 - 1600 Hrs: 34
Total vessels delayed due to low water: 0

f. August (1 - 31):

Total Lockages: 245
Total Weekday Lockages: 152
Total Weekend Lockages: 93
Weekend and Holiday Lockages from 0800 - 1600 Hrs: 42
Total vessels delayed due to low water: 1

g. September (1 - 30):

Total Lockages:. 259
Total Weekday Lockages: 191
Total Weekend Lockages: 68
Weekend and Holiday Lockages from 0800 - 1600 Hrs: 23
Total vessels delayed due to low water: 6

h. October (1 - 31):

Total Lockages: 255
Total Weekday Lockages: 187
Total Weekend Lockages: 68
Weekend and Holiday Lockages from 0800 - 1600 Hrs: 41
Total vessels delayed due to low water: 15

i. November (1 - 30):

Total Lockages: 248
Total Weekday Lockages: 175
Total Weekend Lockages: 73
Weekend and Holiday Lockages from 0800 - 1600 Hrs: 33
Total vessels delayed due to low water: 6

j. December (1 - 31):

Total Lockages: 286
Total Weekday Lockages: 207
Total Weekend Lockages: 79
Weekend and Holiday Lockages from 0800 - 1600 Hrs: 37
Total vessels delayed due to low water: 6

k. The delays due to low water and the month of occurrence is tabulated below.

Month of Delay	Number of Delays Due to Low Water
Mar	0
Apr	3
May	4
Jun	0
Jul	0
Aug	1
Sept	6
Oct	15
Nov	6
Dec	6
Total	41

The Soo Locks logs are not included here as they take up a substantial number of pages. They can be made available on request.

From U.S. Coast Guard's April 2003 and May through December 2003 lists of "Vessels At Anchor Due To Low Water" seventeen (17) vessels transited on weekends and holidays, as discussed above. They are listed in the table below:

Vessels Delayed by Low Water and Transiting on Weekends and Holidays			
Date	**Vessel Name**	**Registry**	**Delay Length**
20 April	Island Gem	Unknown	Unknown
3 May	Kapitonal Andzejauska*	Foreign	3.93 hours
3 May	Isolda*	Foreign	10.58 hours
10 May	Federal Hudson*	Foreign	2.2 hours
30 August	Canadian Miner*	Canadian	5.67 Hours
4 October	Canadian Prospector*	Canadian	20.46 hours
5 October	Birchglen*	Canadian	6.26 hours
5 October	Algolake*	Canadian	3.17 hours
12 October	Mesabi Miner*	United States	4.25 hours
12 October	Federal Saguenay	Foreign	4.18 hours
26 October	Edwin H. Gott	United States	3.85 hours
26 October	Adam E. Cornelius	United States	3.32 hours
1 November	Lake Superior*	Foreign	5.67 hours
29 November	Edgar B. Speer*	United States	2.4 hours
29 November	Algolake*	Canadian	1.98 hours
7 December	Frontenac*	Canadian	1.1 hours
25 December	Algonova*	Canadian	10.0 hours

Note:

(1) The thirteen (13) vessels indicated with an * got underway during the eight (8) hour peak flow window period (0800 to 1600 hours)

(2) The five ocean-going vessels or "salties" are indicated as "Foreign Registry".

(3) Example of timing in the U.S. Coast Guard logs contained below:

For the Kapitonas Andzejauska on 3 May -- Time A/A (At Anchor) of 030541Q is 3 May at 0541 hours; Time U/W (Underway) of 030937Q is 3 May at 0937 hours. The Q indicates daylight savings time. R is used to indicate regular time.

The U.S. Coast Guard Group Sault "Logs of Vessels at Anchor Due to Low Water Conditions" are shown below.

Vessels Delayed by Low Water
April 2003

(As Supplied by the U.S. Coast Guard Group Sault)

Vessels at anchor due to low water levels:

13 Apr – Algonova Draft – 21-0 (feet-inches)
(Enroute Government Dock in Canada)
14 Apr – Emerald Star Draft – 21-6 (Grounded in Harbor)
16 Apr – Island Gem Draft – 25-10
18 Apr – Federal Yoshino Draft – 27-00
20 Apr – Island Gem Draft – 25-11

Note: Of the above vessels, only the Island Gem (16 and 20 April) and the Federal Yoshino (18 April) represent three delays attributable to low water in the St. Marys River. The Algonova was at anchor on Sunday April 13, 2003, but at its draft of 21'-0" the water level in the shipping channel would not have been a factor. Similarly for the Emerald Star.

U. S. COAST GUARD LOGS OF VESSELS AT ANCHOR DUE TO LOW WATER CONDITIONS (3 Pages)

DATE	VESSEL NAME	FLAG	U/B D/B	DR AFT	TIME A/A	POSITION	WATER FLOW	LOWER POOL	ROCK CUT	TIME U/W	WATER FLOW	LOWER POOL	ROCK CUT
03 MAY	KAPITONAS ANDZEJAUSKA	LT	D/B	25'11	030541Q	280T 1.5 NM FM LT 26	68,200	-11	-11	030937Q	77,300	-8	-8
03 MAY	ISOLDA	CY	D/B	25'9	032303Q	289T 1.8 NM FM LT 26	68,200	-10	-10	040938Q	77,300	-8	-8
10 MAY	FEDERAL HUDSON	HK	D/B	25'9	100628Q	1.2NM N OF GROS CAP LT	54,700	-10	-10	100840Q	63,900	-13	-13
20 MAY	QUEBECOIS	CA	U/B	24'6	201735Q	.8 CABLES FM RAINS PT	77,700	-12	-12	202127Q	77,700	-12	-12
30 AUG	CANADIAN MINER	CA	D/B	26'3	300810Q	3.2NM N of GROS CAP	37,500	-10	-10	301350Q	71,000	-11	-11
15 SEP	EDGAR B SPEER	US	D/B	26'7	150805Q	323T 1.4NM FM 9 MILE	81,100	-4	-4	151035Q	81,100	-2	-2
30 SEP	ALGOWOOD	CA	D/B	26'6	301303Q	318T .9NM FM 9 MILE	81,100	- 10	- 10	301758Q	81,100	-7	-7
30 SEP	ROGER BLOUGH	US	D/B	26'7	301343Q	205T 5NM FM WHITEFISH	81,100	- 11	- 11	301754Q	81,100	-7	-7
30 SEP	OGLEBAY NORTON	US	D/B	26'7	301510Q	202T 6NM FM WHITEFISH	81,100	-11	-11	301820Q	81,100	-7	-7
30 SEP	QUEBECOIS	CA	D/B	26'5	301415Q	WEST PIER	81,100	-13	-13	301740Q	81,100	-7	-7
30 SEP	MIDDLETOWN	US	D/B	26'4	301618Q	284T .5NM FM 9 MI	81,100	-6	-6	301758Q	81,100	-7	-7
30 SEP	MIDDLETOWN	US	D/B	26'4	301618Q	284T .5NM FM 9 MI	81,100	-6	-6	301758Q	81,100	-7	-7
03 OCT	ADAM E CORNELIUS	US	D/B	26'4	032220Q	310T .2NM FM ANC B "A"	81,100	+1	+1	302250Q	81,100	-1	-1
04	CANADIAN	CA	D/	26'4	04174	HAY LK @ ANC	72,70	-9	-9	0514	72,70	-6	-6

OCT	PROSPECTOR		B		1Q	BUOY "B"	0			05Q	0		
05 OCT	BIRCHGLEN	CA	D/B	26'2	05025 5Q	46-27.6N 084-34.1W	72,700	-11	-11	0509 11Q	72,700	-6	-6
05 OCT	ALGO LAKE	CA	D/B	26'3	05060 4Q	HAY LK @ ANC BUOY "A"	72,700	-10	-10	0509 30Q	72,700	-6	-6
12 OCT	MESABI MINER	US	D/B	26'3	12104 5Q	290T .52NM 9 MILE PT LT	80,500	-6	-9	1215 00Q	80,500	-2	-2
12 OCT	FEDERAL SAGUENAY	BB	D/B	26'3	12193 1Q	280T/1.6NM FM LT 26	80,500	-7	-7	1223 42Q	67,800	-4	-4
14 OCT	PAUL R TREGURTHA	US	D/B	26'3	14202 3Q	300T/.5 NM FM 9 MI PT	67,800	-4	-10	1519 24Q	80,500	-9	-7.9
14 OCT	STEWART J CORT	US	D/B	26'3	14223 3Q	326T/1.4 NM FM 9 MI PT	67,800	-6	-11	1509 25Q	80,500	-11	-8.5
15 OCT	PRESQUE ISLE	US	D/B	26'3	15020 3Q	292T/2.2 NM FM LT 26	67,800	-9	-13	1509 39Q	80,500	-11	-8.5
15 OCT	JOYCE L VANEKEVORT	US	D/B	26'5	15060 4Q	TO LT 26 , 092 DEG, 1.6 NM	67,800	-12	-16	1516 43Q	80,500	-9	-11.5
26 OCT	EDWIN H GOTT	US	D/B	26'3	26145 4R	317T / 1.1NM FM 9 MI PT	80,500	-7	-14	2618 45R	67800	0	-9.9
26 OCT	ADAM E. CORNELIUS	US	D/B	26'	26160 7R	302T / .75 NM FM 9 MI PT	67,800	-10	-13.9	2619 20R	67800	0	-9.1
27 OCT	BIRCHGLEN	CA	D/B	26'3	26024 9R	067T/8.27NM FM ISL PAR LT	67,800	-12	-10	2708 31R	80,500	-6	-5
31 OCT	PRESQUE ISLE	US	D/B	26'3	31212 6R	321T/1.08NM FM 9 MI PT	80,500	-10	-14	0101 45R	36,700	-13	-10.5
31 OCT	JOHN G. MUNSON	US	D/B	26'2	31221 6R	311T/0.6NM FM 9 MI PT	80,500	-9	-14	0100 13R	36,700	-14	-11
01 NOV	LAKE SUPERIOR	RM	D/B	26'0	01032 0R	289T/1.75NM FM LT 26	36,700	-14	-10.4	0109 00R	55,400	-14	-9
07 NOV	ROGER BLOUGH	US	D/B	26'0	07161 5R	302T/0.68NM FM 9 MI PT	79,800	-8	-14.8	0719 00R	79,800	-9	-10.4
13NOV	ZIEMIA LODZKA	PL	D/B	26'4	13204 0R	090T/2NM FM PARADISE	79,800	-13	-8.9	1406 30R	44,500	-10	-2
18NOV	PINEGLEN	CA	D/B	26'1	18224 2R	315 DRG T, 7.1NM FM 9 MILE PT	44,500	-3	-8.7	1904 40R	44,500	-9.4	

29NOV	EDGAR B SPEER	US	D/B	26'0	290714R	333T 1.8NM FM GROS CAP	44,500	-19	-14	290938R	79,800	-12	-8
29NOV	ALGOLAKE	CA	D/B	26'6	29074R	310T 3.1NM FM GROS CAP	44,500	-19	- 14	290939R	79,800	-12	-8
07 DEC	FRONTENAC	CA	D/B	25'11	070733R	2.7NM ABOVE BIRCH PT	49,200	-12	-6	070839R	76,600	-7	-6
11 DEC	EDWIN H GOTT	US	D/B	26'1	110909R	316T / .9 NM FM 9 MILE PT	76,600	-10	-14	111750R	76,600	-9	-8.6
11 DEC	LADY HAMILTON	HK	D/B	26'3	111210R	307T / .68 NM FM 9 MI PT	76,600	-10	-15	120802R			
11 DEC	ST. CLAIR	US	D/B	25'8	111230R	1.7NM W OF LT 26	76,600	-11	-14	111425R	76,600	-10	-13
25DEC	ALGONOVA	CA	U/B	17'5	252200R	346T, .6NM TO B 83	51,900	-14	-7.6	260830R	51,900	- 4	
31 DEC	JAMES R BARKER	US	D/B	26'0	311705R	310T/.53NM FM 9 MI PT	76,600	-8	-13	311841R	76,600	-8	

Enclosure D

Communications with Hydropower Entities

Contents

a. November 13 e-mail to Edison Sault Electric Co., and Great Lakes Power Ltd.; Subject: Update Report on Peaking and Ponding

b. December 8, 2003 letter response from Great Lakes Power Limited

c. December 19, 2003 letter response from Edison Sault Electric Company

From: Woodruff, Carl L LRE
Sent: Thursday, November 13, 2003 4:42 PM
To: Donald Sawruk (E-mail); Andy McPhee (E-mail)
Cc: David Fay (E-mail); Kangas, John W LRDGL
Subject: Update Report on Peaking and Ponding

The IJC has requested an update report on the experiences related to peaking and ponding by the hydropower plants during 2003.

To recap, Edison Sault Electric Company and Great Lakes Power Ltd., discharge higher flows during the daytime and evening hours when electricity demand is higher, and discharge lower flows during the night time hours, and on weekends and holidays when electricity demand is low. In addition to weather related fluctuations extended periods of low discharge over weekends and holidays can have an adverse affect on levels in the Lower St. Marys River below the locks. As a result on weekend days and holidays during months when the monthly mean level at U.S. Slip is expected to be below Chart Datum ponding is suspended and the power companies are required to discharge at their expected peak flow rate for that month during the hours of 0800 hrs to 1600 hrs in order to provide a window with higher water levels for ship traffic transiting the Soo Locks and the St. Marys River on those days. Peaking and ponding by the power companies has been allowed under authorization of the International Joint Commission (IJC) and the supervision of the International Lake Superior Board of Control (ILSBC).

The report will address the Board's experience with peaking and ponding operations during 2003. Input from the hydropower companies and other interested parties will be used in preparation of the report and where appropriate included as addenda for reference. Information that you can provide on the economic impacts of peaking and ponding on your operations will be discussed as part of the report.

I would appreciate the information that you can provide as soon as possible. I am working to have a draft ready by mid - late December for review and comment before finalizing and submittal to the IJC in January.

Thankyou very much for your assistance in preparing this report.

Carl L. Woodruff, P.E.
Hydraulic Engineer
U.S. Army Corps of Engineers
Detroit District
Great Lakes H&H Office
Watershed Hydrology Branch
Phone: (313) 226-2202
Fax: (313) 226-2398

Great Lakes Power
LIMITED
A member of the Brascan Group of Companies

Monday, December 08, 2003

Mr. David Fay, P. Eng.
Regulation Representative, Canadian Section
Great Lakes-St. Lawrence Regulation Office
Environment Canada
111 Water Street East, Room 232
Cornwall, Ontario K6H 6S2

Dear David:

Thank you for the opportunity to provide comments regarding Great Lakes Power Limited's experience with respect to the peaking and ponding operations at Clergue Generating Station during the last year.

The International Joint Commission extended the authority for Great Lakes Power Limited and Edison Sault Electric to continue with peaking and ponding operations by virtue of its letter dated March 17, 2003. GLPL utilized peaking and ponding operations extensively in 2003 as a result of this extension, maximizing generation during high demand periods and reducing generation in off peak times to attain the monthly flow allocation. This mode of operation provides the needed flexibility GLPL requires to compete in the Ontario Electricity Market effectively.

GLPL has respected the terms and conditions for peaking and ponding operations set out by the International Lake Superior Board of Control. Projected flow patterns through Clergue GS were sent to the ILSBC regularly so that this information could be incorporated into the flow data provided to shipping interests. There were numerous occasions in 2003 where peaking and ponding operations were suspended on weekends due to low water conditions in the St. Mary's River. During these instances, GLPG coordinated maximum generation from Clergue GS for 8-hour periods per day with the Edison Sault Electric facility as set out in the ILSBC conditions.

Great Lakes Power Limited and Edison Sault Electric's joint submission of February 8, 2002 details our position with respect to effect of peaking and ponding on water levels in the St. Mary's River. GLPG stands by the information presented in that report that the variability of Lake Huron water levels is the main factor in determining water levels in the St. Mary's River. Peaking and ponding operations at the hydroelectric facilities have minimal impact on these levels.

In order to continue to utilize the available resources in the most efficient manner, GLPL requests that the International Joint Commission approve the continuation of the practice of peaking and ponding in order to meet market demands of Ontario's electricity market, which benefits both the consumer and the company.

Ian Mackenzie
Vice President & General Manager
Great Lakes Power Limited – Generation Division

cc: Andy McPhee
Carl Woodruff

Water is Power
EDISON SAULT ELECTRIC COMPANY
Serving Since 1892
A Wisconsin Energy Company
725 East Portage Avenue / Sault Ste. Marie, MI 49783
906-632-2221 800-562-4960

December 19, 2003

Mr. Carl L. Woodruff, P.E.
Hydraulic Engineer
U.S. Army Corps of Engineers, Detroit District
477 Michigan Avenue
Detroit, MI 48226-2550

Via e-mail and US mail

Dear Mr. Woodruff:

Thank you for requesting our comments and observations regarding the peaking and ponding operations of electric generating facilities during this year. By letter dated March 17, 2003, the International Joint Commission extended the authority for Edison Sault Electric Company and Great Lakes Power Ltd. to conduct peaking and ponding operations. As it has in the past, Edison Sault continued to operate its hydro plant in a peaking and ponding manner in order to meet the electric needs of our customers and to operate the plant in the most cost-effective and productive manner.

The ability to operate in a peaking and ponding mode results in considerable savings for us and our customers as electric consumption tends to be higher during weekdays and lower at night and weekends. Wholesale electric prices follow this pattern with prices being higher during peak periods. Operating our hydro plant in a peaking and ponding mode permits Edison Sault to meet the peak demands of our customers and to minimize the cost of purchased power.

Our February 8, 2002 comments submitted in the IJC's inquiry into peaking and ponding concluded that hydro peaking and ponding operations had minimal effects on water elevation levels near the locks and the hydro plants, and had a negligible effect on the critical elevation in the Rockcut area. The primary factor that influences the levels in the lower St. Marys River is the variability of the level of Lake Huron. Notwithstanding these findings, the IJC issued directives that mandated that power generation be maximized during eight-hour periods on weekends when the water elevation levels were below low water datum levels.

Water elevation levels were below low water datum levels for most of 2003, and as directed, Edison Sault peaked its hydro plant for eight hours on many of the weekends. Edison Sault continued to operate its hydro plant in a peaking and ponding mode, using its allocated water (and any water that could not be used by the U. S. Corp hydro plant due to its automation project). Edison Sault was not made aware of any party that was adversely impacted by the peaking and ponding operations.

There were a number of circumstances that impacted the peaking and ponding operations during 2003. First, low water flow allocations in the winter restricted Edison Sault's ability to operate in a peaking and ponding mode as Edison Sault attempts to prevent a freeze-up of the power canal. Even while maintaining off-peak flows, Edison Sault's hydro plant forebay did experience some ice accumulations due to cold weather and some anchor ice conditions. The ice accumulation can

impact the plant's efficiency, but fortunately, the ice build-up did not materially impact the plant's operations.

Flooding on the Dead River knocked the Presque Isle generating plant out of service resulting in a power emergency in the Upper Peninsula of Michigan. From mid May through mid June, Edison Sault was allowed an emergency allocation of water to operate at full capacity. Edison Sault appreciated the actions taken by the Corp and the IJC during this emergency.

On November 1 and 2, Edison Sault shut down its hydro plant completely to accommodate the removal of the Fort Street bridge over Edison Sault's power canal in Sault Ste. Marie. On November 8 and 9, Edison Sault reduced the output of its hydro plant to accommodate the construction of a new electrical substation in Sault Ste. Marie.

On each of these circumstances, the U.S. Corp of Engineers was advised of the intended operations and it notified interested parties in advance of the scheduled activities. To our knowledge, no parties were adversely impacted by these activities. These circumstances do however, show the need to maintain flexibility in the control of water flows.

Edison Sault has prepared an analysis of incremental energy costs for peaking and non-peaking periods, a copy of which is attached. The analysis was prepared on a replacement energy cost, or the incremental costs that Edison Sault would have incurred if its hydro generation was not available. For the past twelve months, Edison Sault's replacement energy costs for all hours averaged $28.41/MWH. Replacement energy costs during on-peak hours averaged $38.27/MWH, while replacement energy costs during off-peak hours averaged $21.72/MWH. Replacement energy costs for the eight-hour period on weekends and holidays (when ponding is suspended) averaged $21.08/MWH.

The analysis shows that operating in a peaking and ponding manner is cost beneficial, as Edison Sault is able to generate on-peak electricity that is 76.2% more valuable than if such electricity was generated during the off-peak period. The analysis shows that the weekend suspension of ponding results in a modest 3.0% increase in cost over electricity that otherwise would be generated in the remaining off-peak hours. The weekend suspension of ponding would be significant if the increased weekend generation came at the expense of on-peak generation.

Based upon our experience, Edison Sault requests that peaking and ponding operations be allowed to continue.

Sincerely;

Donald Sawruk,
President

Enc.
Cc: John W. Kangas
Secretary, U.S. Section
International Lake Superior Board of Control
111 North Canal Street, 6th floor
Chicago, IL 60606-7205

File: IJCPeakPondNov03.doc

EDISON SAULT ELECTRIC COMPANY
Analsis of Peaking and Ponding Costs

Month 2003	Monthly Average Replacement Energy Cost/Hour $/MWH	On-Peak Monthly Average Replacement Energy Cost/Hour $/MWH	Off-Peak Monthly Average Replacement Energy Cost/Hour $/MWH	Savings (Cost) Average Replacement Energy Cost/Hour $/MWH	On Peak Savings as Percentage of Off Peak Costs	Weekend* On-Peak Monthly Average Replacement Energy Cost/Hour $/MWH	Weekend Hourly Savings (Cost) $/MWH	Weekend Savings (Cost) as Percentage of Off Peak Costs
December 02	20.21	28.31	14.93	13.38	89.6%	14.61	(0.32)	-2.1%
January	39.55	51.54	31.08	20.46	65.8%	20.58	(10.50)	-33.8%
February	24.84	31.11	20.37	10.74	52.7%	19.93	(0.44)	-2.2%
March	38.52	52.25	29.55	22.70	76.8%	32.66	3.11	10.5%
April	23.77	27.53	20.95	6.58	31.4%	26.19	5.24	25.0%
May	30.55	41.72	23.25	18.47	79.4%	19.18	(4.07)	-17.5%
June	26.42	37.21	18.97	18.24	96.2%	15.82	(3.15)	-16.6%
July	33.14	44.76	24.93	19.83	79.5%	28.69	3.76	15.1%
August	34.85	50.46	24.64	25.82	104.8%	24.89	0.25	1.0%
September	22.32	31.56	15.95	15.61	97.9%	15.79	(0.16)	-1.0%
October	23.19	30.50	17.63	12.87	73.0%	15.76	(1.87)	-10.6%
November	23.53	32.32	18.39	13.93	75.7%	18.82	0.43	2.3%
Monthly Ave.	28.41	38.27	21.72	16.55	76.2%	21.08	(0.64)	-3.0%

Weekends include Holidays

File: IJCPeakPondCosts.xls 12/17/03

Enclosure E

Communications with Navigation Entities

Contents

a. November 13 e-mail to navigation interests; Subject: Update Report on Peaking and Ponding

b. December 18, 2003 letter response from Fednav International Ltd.

c. Comments on Fednav's December 18, 2003 letter

d. December 19, 2003 Fednav e-mail responding to clarification request.

e. January 14, 2004 Fednav e-mail providing additional clarification.

f. January 6, 2004 e-mail response from the the Lake Carriers Association.

Notes:

(1) Fednav has requested that the table in their December 18, 2003 letter showing shortlift statistics be treated as confidential information. The letter and subsequent clarification e-mails provide sufficient information for the purposes of this report therefore it has been omitted from the attached letter. The table is on file if reference to it is needed.

(2) For a discussion of the Impacts of Low Water Levels on Shipping, reference the discussion contained in Enclosure C.

From: Woodruff, Carl L LRE
Sent: Thursday, November 13, 2003 2:56 PM
To: Anjuna Langevin (E-mail); Capt. Ivan Lantz (E-mail); Dan Sydow (E-mail); Don Willecke (E-mail); G. Walls (E-mail); Helen A. Brohl (E-mail); Karena Jorciefska (E-mail); Philippe Roderbourg (E-mail); Rejean Lanteigne (E-mail); Rick Harkins (E-mail)
Cc: Kangas, John W LRDGL; David Fay (E-mail)
Subject: Update Report on Peaking and Ponding

The IJC has requested an update report on the experiences related to peaking and ponding by the hydropower plants during 2003.

To recap, Edison Sault Electric Company and Great Lakes Power Ltd., discharge higher flows during the daytime and evening hours when electricity demand is higher, and discharge lower flows during the night time hours, and on weekends and holidays when electricity demand is low. In addition to weather related fluctuations extended periods of low discharge over weekends and holidays can have an adverse affect on levels in the Lower St. Marys River below the locks. As a result on weekend days and holidays during months when the monthly mean level at U.S. Slip is expected to be below Chart Datum ponding is suspended and the power companies are required to discharge at their expected peak flow rate for that month during the hours of 0800 hrs to 1600 hrs in order to provide a window with higher water levels for ship traffic transiting the Soo Locks and the St. Marys River on those days. Peaking and ponding by the power companies has been allowed under authorization of the International Joint Commission (IJC) and the supervision of the International Lake Superior Board of Control (ILSBC).

Delays to ships associated with peaking and ponding operations will be addressed as part of the report. I have requested the U.S. Coast Guard's (USCG) log information on ship anchorages in the St. Marys River this season and a review of them will be discussed in the report. Please provide any comments you and your association may have, information you would like included or addressed as part of the report, and any data that you may have collected over this shipping season regarding peaking and ponding operations as they may have affected your vessels in transiting the St. Marys River that may provide supplementary information to the USCG's logs.

In addition to any information provided in response to the above request, if possible, I would like to discuss the economic impacts, if any, that may be attributable to delays related to peaking and ponding. Recognizing that weather plays significantly influences level fluctuations in the River below the locks and can result in low water related delays, these would be delays primarily asssociated with low water conditions that can be attributed to ponding operations over and above those normally incurred while waiting for clearances to proceed, lock access, boarding of pilots, linesmen or other personnel, home office orders, scheduling, or other activities necessary to the operation and progress of the vessels. I am not sure how you would place a dollar value on this, possibly cost per hour per inch of draft increase required for passage, or cost per vessel per hour would be a way of quantifying this. The resultant cost numbers when associated with the USCG log information may give me an idea of the overall impact for the season. Any of your thoughts on how to quantify this will be appreciated.

I would appreciate the information that you can provide as soon as possible. I am working to have a draft ready by mid - late December for review and comment before finalizing and submitting to the IJC in January.

Thankyou very much for your assistance in preparing this report.

Carl L. Woodruff, P.E.
Hydraulic Engineer

U.S. Army Corps of Engineers
Detroit District
Great Lakes H&H Office
Watershed Hydrology Branch
Phone: (313) 226-2202
Fax: (313) 226-2398

Fednav International Ltd.
Suite 3500
1000 rue de la Gauchetière Ouest
Montreal, Quebec
Canada H3B 4W5

FEDNAV

Telephone (514) 878 6500
Telex 055 60637 (Fednav Mtl)
Fax (514) 878 6642

December 18, 2003

Mr. David Fay
Manager
Regulation Representative, Canadian Section
Great Lakes St-Lawrence
Environment Canada
Suite 232
111 Water St. East
Cornwall, ONT
K6H 6S2

Dear David,

This letter is Fednav's response to Carl Woodruff's request for comments on peaking and ponding operations on the Lower St. Marys River during the year 2003.

Please find our statistics on shortlift at the opening of the 2003 season. We thank you to treat this information as confidential.

As I have explained in our past discussions on the subject, these figures should be used carefully; a good part of the loss stems from the low water situation and cannot be correlated directly to the peaking and ponding operations. It could be argued that shipowners benefit from the peaking policy when they have ships transiting in daytime on weekdays, but suffer additional losses during weekends. These losses take the form of a reduced intake - to ensure the vessel can transit the Lower River; a time lost – awaiting for the water levels to rise sufficiently to allow a safe passage – or a combination of the two.

If you need to estimate the impact of the peaking and ponding policy in periods of low water levels, I suppose the best way would be for you to calculate what the levels at Little Rapids would have been at the time of ship transit and assume that

each of these ships could have been loaded deeper (or lighter) by the same amount of cm that the water level would have been raised (or lowered).

For Salties, each cm represents abt. 40 tons of cargo at an average freight rate of USD 30/ton (this is actually much less than what the market fetched this year).

This should address your question about the losses we had to deal with at the opening of the season.

It should, however, be stressed that since the USACE began increasing the project depth, no further losses have been suffered even with the very low water levels we experienced during the month of October.

A timely publication of the survey results of the dredging achieved so far, combined with the heavy precipitations in November, has allowed us to take advantage of the extra depth available.

Because of the above and since the impact of peaking and ponding in those sections of the channel not yet dredged is much smaller than in the waters closer to the locks, there has been no detrimental effects on our ships.

We do therefore expect that once the deepening of the Lower River is completed, and unless faced with very low water levels, peaking and ponding should not influence the safe transit of our ships.

I have run the following calculation based on a hypothetical level on Lake Huron of -12" and calculated the impact that the flow program for December of this year would have.

1800 cms: set flow for December
1460 cms: lowest flow
2200 cms: highest flow

Based on a change of water level at U.S. Slip of 16 cm for every 1000 cms change in the flow, the impact of peaking and ponding would be:

- a drop of 2.1" at the lowest flow
- a rise of 2.5" at the highest flow

So that,

28'06" project depth
-1'00" under keel clearance
-1'00" assumed water level
26'06"
- 2" negative variation due to peaking/ponding
26'04" maximum draft

This would demonstrate that peaking and ponding when water level on Lake Huron is 1 foot below datum would still allow transit of ships loaded for arrival at the present maximum allowable draft at the Welland Canal.

Therefore, I would conclude that peaking and ponding in normal circumstances will not affect our fleet until Lake Huron water level reach 1 feet below datum

The situation may change if we were to meet with extreme water levels (i.e. when Lake Huron reaches 1 foot below datum), if the project of the USACE in the Lower River is not completed as planned and, to a lesser extend, if the Seaway goes ahead with its plan to increase the maximum allowable draft.

In conclusion, we support the continuation of the peaking and ponding policy so as not to deprive another stakeholder of the means to run its operation efficiently, but would ask that a communication channel as exists now be opened when shipping interests are at risk. To allow shipowners to take timely conservative action in their contract negotiations with grain shippers, we would offer to use an average water level of -6" as a trigger for the re-opening of communications.

I hope the above will be of assistance and remain.

Yours truly,

Philippe Roderbourg
Manager, Operations
Fednav International Ltd.

PR/cd

Attachment

Cc: Mr. Carl L. Woodruff
Hydraulic Engineer
U.S. Army Corps of Engineers
Detroit District
Great Lakes H&H Office
P.O. Box 1027
Detroit, MI 48231

Mr. Ivan Lantz
Director, Marine Operations
Shipping Federation of Canada
300 Du Saint Sacrement
Suite 326
Montreal, QC
H2Y 3Z6

Comments on Fednav's December 18, 2003 Letter

Fednav indicated in its December 18, 2003 letter that, in low water level situations, each centimeter of draft given up equates to a loss of about 40 tons of cargo per ship valued at an average freight rate of USD 30/ton. Fednav's experience since the U.S. Army Corps of Engineers had deepened a key portion of the Lower St. Marys River as part of its dredging program in the autumn was that "...no further losses have been suffered even with the very low water levels we experienced during the month of October". Fednav provided a brief analysis in their letter to show that, once the Corps' Lower St Marys River dredging program is complete, unless Lake Huron fell more than one foot (30 cm) below Chart Datum, peaking and ponding would not affect the transit of their ships in the Lower St Marys River loaded to the maximum draft allowable at the Welland Canal. Fednav indicates that conditions resulting in water levels one foot below Chart Datum at US Slip would adversely change the situation. Fednav concluded by stating that they support the continuation of the peaking and ponding policy in order to allow other stakeholders the means to run their operations efficiently. Fednav asked that the current communications channels be kept open. They suggested that, once the Corps dredging program is complete, a level 6 inches (15 cm) below Chart Datum, referenced to U.S. Slip Gauge (See January 14, 2004 e-mail below in this enclosure) could be used as a trigger for re-opening communications.

From: PRoderbourg@fednav.com
Sent: Friday, December 19, 2003 3:01 PM
To: Woodruff, Carl L; PRoderbourg@fednav.com
Cc: David.Fay@ec.gc.ca; Ilantz@shipfed.ca; PGourdeau@fednav.com; DGrieve@fednav.com; SChan@fednav.com
Subject: RE: Response to December 18, 2003 e-mail on request for peak'g & pond 'g comments

Carl,

happy we were able to assist.

We would have no problem if you were to used 'approximate' figures: you could use, for instance, the average of usd 30/mton we used for the opening of the season freight rate and quote the shortshipped cargo. You will see that it is close enough, but then again it doesn't even approach the level that the freight rates have reached in the last few months.

Your understanding is quite correct except that there could - and probably will - be delays a/o shortlifts even with a water level above the - 12" below datum on Lake Huron. This would be the result of high NW'ly winds or other atmospheric phenomenons.

What I meant to show is that in a neutral situation (no weather influence on the water level) peaking and ponding will not affect our ability to transit at full draft untill the -12" level is reached on Lake Huron. In other words the delay a/o shortlift would not be the direct result of peaking and ponding but rather the result of unfavourable weather. From experience, I don't think that a 4.5 inches variation would make a significant difference in these conditions.

<u>This all remains subject to the dredging project being completed as originaly intended i.e. a new project depth of 28.5 feet!</u>

We have been carrying out test with the Seaway at 26'06" in the Welland Canal and 26'04" in the Montreal-Lake Ontario section.
I think these are the drafts the Seaway is aiming for.

Carl, because of the way we fix our contracts, the 'alarm bell' ringing at -6" is something that we would realy need.
I realize that the publishing of the flow program has meant a lot of additional work for you but please know that it helped us immensely when times were hard!

Our sincere thanks (I am including David in there!) for the job done so far.

Last, you may want to have a word with the Domestic Carriers (both Canadian and American) as I suspect they may have a different opinion on the subject.

Merry Xmas and Happy New Year to you and yours!

Philippe Roderbourg
Fednav International Ltd.

Peaking and Ponding reportFrom: PRoderbourg@fednav.com
Sent: Wednesday, January 14, 2004 11:10 AM
To: Woodruff, Carl L; PRoderbourg@fednav.com
Cc: david.fay@ec.gc.ca; DGrieve@fednav.com; PGourdeau@fednav.com; info@shipfed.ca; Brohlco@cs.com; SChan@fednav.com
Subject: Peaking and Ponding report

Hi Carl,

Realize this was not very clear indeed!

I think the reference point should be US Slip for the reasons I'll detail further in this message.

Because I don't expect that peaking and ponding would affect our transit drafts untill a level of -12 inches is reached at U.S.Slip, it would be , in my opinion, sufficient that the alarm be rung when the calculated monthly average water level at US Slip is expected to reach 6 inches below water datum.

The gauge at US Slip should be used because, once the USACE has completed the project in the Lower River - no changes there I hope? - this location will be closest to the new ' limiting factor': with an equal depth of water available until the Rock Cut, it is at the location where the impact of peaking and pounding is maximal that we would face problems first. US Slip is the gauge that we would monitor should the water level continue to fall further.

I refered in my letter to extreme low water levels as those reached when Lake Huron is at -12": for the same reasons, I now think it would be better to use U.S.Slip as reference.

Once determined that average weekend/holiday levels at U.S. Slip gauge would fall 12 inches below Chart Datum, relief measures similar to the ones now being granted by the Board (on-peak flow rates for eight hours period when water level expected below Datum) would be necessary during the weekends/holidays to reduce the impact of peaking and ponding on Shipping interests.

Hope this clarifies.

Philippe Roderbourg
Manager, Operations
Fednav International Ltd., Montreal
tel (514) 878 6664

-----Original Message-----
From: Carl.L.Woodruff@lre02.usace.army.mil
[mailto:Carl.L.Woodruff@lre02.usace.army.mil]
Sent: Tuesday, January 13, 2004 4:02 PM
To: PRoderbourg@fednav.com
Cc: david.fay@ec.gc.ca
Subject: Peaking and Ponding report
Importance: High

Philippe:

In your December 18, 2003 letter (last paragraph) and December 19, 2003 e-mail you reference the "use of an average water level of -6" as a trigger for re-opening communications."

Is this referenced to Low Water Datum of Lake Huron, or some other water level gauge station such as U.S. Slip? If so are you indicating that notification to shippping be made when water levels are expected to reach a point of LWD -6 inches, or when they do actually reach that point?

Please clarify your thoughts on this item in your letter.

Carl L. Woodruff, P.E.
Hydraulic Engineer
U.S. Army Corps of Engineers
Detroit District
Great Lakes H&H Office
Watershed Hydrology Branch
Phone: (313) 226-2202
Fax: (313) 226-2398

NOTE: Regarding the reference to concern about funding to complete the dredging. The dredging of the remaining critical project areas will be completed during the 2004-dredging season on the St. Marys River.

FW: Update Report on Peaking and PondingFrom: Richard W. Harkins [harkins@lcaships.com]
Sent: Tuesday, January 06, 2004 2:01 PM
To: Woodruff, Carl L
Cc: Glen Nekvasil; Jim Weakley
Subject: RE: Update Report on Peaking and Ponding

Carl minor clarification. Suggested change:

Lake Carriers' Association does not have any comment on peaking and ponding by the hydropower companies as it affects transits of the Lower St. Marys River. The impact that affects the Lake Carriers' vessels most is the channel depths. The area between the Soo Locks and the Rock Cut is the current controlling depth. LCA remains concerned with ACOE's ability to fund the necessary dredging for the St. Marys River System.

Hope this helps.
RICK

Richard W. Harkins
Vice President - Operations
Lake Carriers' Association
Suite 915
614 West Superior Avenue
Cleveland, Ohio 44113-1383

Phone: 216-861-0591
Fax: 216-241-8262
E-Mail: harkins@lcaships.com

-----Original Message-----
From: Carl.L.Woodruff@lre02.usace.army.mil [mailto:Carl.L.Woodruff@lre02.usace.army.mil]
Sent: Tuesday, January 06, 2004 1:14 PM
To: harkins@lcaships.com
Subject: FW: Update Report on Peaking and Ponding

Rick:

Based on recent conversations with you it is my understanding that the Lake Carriers' Association does not have any comment on peaking and ponding by the hydropower companies as it affects transit of the Lower St. Marys River. The impact that affects the Lake Carriers' vessels most is the channel depths in the area between the Soo Locks and the Rock Cut and the current dredging program for the Lower St. Marys River has addressed those concerns.

If you could confirm or clarify my above understanding as soon as possible I would appreciate it as I am wrapping up my report to the IJC on peaking and ponding during 2003 this week.

Thanks and Happy New Year,

Carl L. Woodruff, P.E.
Hydraulic Engineer
U.S. Army Corps of Engineers
Detroit District
Great Lakes H&H Office
Watershed Hydrology Branch
Phone: (313) 226-2202
Fax: (313) 226-2398

Enclosure F

Communications with the Great Lakes Fishery Commission
and
Sea Lamprey Control Centre

Contents

a. November 13, 2003 e-mail to Gavin Christie of Great Lakes Fishery Commission; Subject: Update Report on Peaking and Ponding

b. November 17, 2003 e-mail to Robert Young of Sea Lamprey Control Centre; Subject: Update Report on Peaking and Ponding

c. December 12, 2003 follow up e-mail to Gavin Christie; Subject: Update Report on Peaking and Ponding

NOTE: No response has been received.

From: Woodruff, Carl L LRE
Sent: Thursday, November 13, 2003 3:46 PM
To: Gavin Christie (E-mail)
Cc: Kangas, John W LRDGL; David Fay (E-mail)
Subject: Update Report on Peaking and Ponding

The IJC has requested an update report on the experiences related to peaking and ponding by the hydropower plants during 2003.

To recap, Edison Sault Electric Company and Great Lakes Power Ltd., discharge higher flows during the daytime and evening hours when electricity demand is higher, and discharge lower flows during the night time hours, and on weekends and holidays when electricity demand is low. In addition to weather related fluctuations extended periods of low discharge over weekends and holidays can have an adverse affect on levels in the Lower St. Marys River below the locks. As a result on weekend days and holidays during months when the monthly mean level at U.S. Slip is expected to be below Chart Datum ponding is suspended and the power companies are required to discharge at their expected peak flow rate for that month during the hours of 0800 hrs to 1600 hrs in order to provide a window with higher water levels for ship traffic transiting the Soo Locks and the St. Marys River on those days. Peaking and ponding by the power companies has been allowed under authorization of the International Joint Commission (IJC) and the supervision of the International Lake Superior Board of Control (ILSBC).

Please advise if the Great Lakes Fishery Commission or the Sea Lamprey Control Centre have any comments on the affects that fluctuations in levels due to peaking and ponding operations may have had on the St. Marys River fishery. The comments and information provided will be included as part of the report. As indicated above it must be recognized that weather also plays a significant role in the St. Marys River water level fluctuations.

I would appreciate the information that you can provide as soon as possible. I am working to have a draft ready by mid - late December for review and comment before finalizing and submitting to the IJC in January.

Thankyou very much for your assistance in preparing this report.

Carl L. Woodruff, P.E.
Hydraulic Engineer
U.S. Army Corps of Engineers
Detroit District
Great Lakes H&H Office
Watershed Hydrology Branch
Phone: (313) 226-2202
Fax: (313) 226-2398

From: Woodruff, Carl L LRE
Sent: Monday, November 17, 2003 9:11 AM
To: 'robert.j.young@xca.dfo-mpo.x400.gc.ca'
Cc: Gavin Christie (E-mail); David Fay (E-mail); Kangas, John W LRDGL
Subject: FW: Update Report on Peaking and Ponding

Mr. Young:

Please see the messages to Gavin Christie of the Great Lakes Fisheries Commission. Please advise if the Sea Lamprey Control Centre has any comments on the affects that fluctuations in levels due to peaking and ponding operations (see below) may have had on the St. Marys River fishery. The comments and information provided will be included as part of the report. As indicated above it must be recognized that weather also plays a significant role in the St. Marys River water level fluctuations.

Yo may want to coordinate any comments you may have with Gavin Christie.

Thanks for your assistance,

Carl L. Woodruff, P.E.
Hydraulic Engineer
U.S. Army Corps of Engineers
Detroit District
Great Lakes H&H Office
Watershed Hydrology Branch
Phone: (313) 226-2202
Fax: (313) 226-2398

-----Original Message-----
From: Woodruff, Carl L LRE
Sent: Thursday, November 13, 2003 4:30 PM
To: Gavin Christie (E-mail)
Cc: David Fay (E-mail); Kangas, John W LRDGL
Subject: FW: Update Report on Peaking and Ponding

Gavin:

Re: Message below:

Any information on the economic impacts of peaking and ponding that you may be aware of will also be welcome and discussed in the report.

Carl L. Woodruff, P.E.
Hydraulic Engineer
U.S. Army Corps of Engineers
Detroit District
Great Lakes H&H Office
Watershed Hydrology Branch
Phone: (313) 226-2202
Fax: (313) 226-2398

-----Original Message-----
From: Woodruff, Carl L LRE
Sent: Thursday, November 13, 2003 3:46 PM
To: Gavin Christie (E-mail)

Cc: Kangas, John W LRDGL; David Fay (E-mail)
Subject: Update Report on Peaking and Ponding

The IJC has requested an update report on the experiences related to peaking and ponding by the hydropower plants during 2003.

To recap, Edison Sault Electric Company and Great Lakes Power Ltd., discharge higher flows during the daytime and evening hours when electricity demand is higher, and discharge lower flows during the night time hours, and on weekends and holidays when electricity demand is low. In addition to weather related fluctuations extended periods of low discharge over weekends and holidays can have an adverse affect on levels in the Lower St. Marys River below the locks. As a result on weekend days and holidays during months when the monthly mean level at U.S. Slip is expected to be below Chart Datum ponding is suspended and the power companies are required to discharge at their expected peak flow rate for that month during the hours of 0800 hrs to 1600 hrs in order to provide a window with higher water levels for ship traffic transiting the Soo Locks and the St. Marys River on those days. Peaking and ponding by the power companies has been allowed under authorization of the International Joint Commission (IJC) and the supervision of the International Lake Superior Board of Control (ILSBC).

Please advise if the Great Lakes Fishery Commission or the Sea Lamprey Control Centre have any comments on the affects that fluctuations in levels due to peaking and ponding operations may have had on the St. Marys River fishery. The comments and information provided will be included as part of the report. As indicated above it must be recognized that weather also plays a significant role in the St. Marys River water level fluctuations.

I would appreciate the information that you can provide as soon as possible. I am working to have a draft ready by mid - late December for review and comment before finalizing and submitting to the IJC in January.

Thankyou very much for your assistance in preparing this report.

Carl L. Woodruff, P.E.
Hydraulic Engineer
U.S. Army Corps of Engineers
Detroit District
Great Lakes H&H Office
Watershed Hydrology Branch
Phone: (313) 226-2202
Fax: (313) 226-2398

From: Woodruff, Carl L LRE
Sent: Friday, December 12, 2003 2:41 PM
To: 'Gavin Christie (E-mail)'
Cc: Kangas, John W LRDGL; 'David Fay (E-mail)'
Subject: RE: Update Report on Peaking and Ponding

A month ago on November 13, 2003 I sent the message below inviting your comments and observations regarding peaking and ponding operations on the Lower St. Marys River during the year 2003 to date. The International Lake Superior Board of Control has been tasked by the International Joint Commission with providing a report in January 2004 on our studies and observations on this subject during 2003. The Board will be commenting on areas of concern related to peaking and ponding, as well as economic impacts that can be attributed to peaking and ponding operations, so please provide any relavant data or comments you may have. In order to meet the deadline, to consider your input, and to allow sufficient time for review of a draft your response by December 26, 2003 (sooner if possible) will be greatly appreciated.

You may e-mail your comments directly to me at "Carl.L.Woodruff@lre02.usace.army.mil", or to John Kangas at "John.W.Kangas@lrdgl.usace.army.mil", or David Fay at "david.fay@ec.gc.ca", or by regular mail at the following addresses:

Carl L. Woodruff:

U.S. Army Engineer District, Detroit
Detroit District
Representative, Canadian Section
ATTN: Carl L. Woodruff (CELRE-HH-W)
Lawrence Regulation Office
Great Lakes H&H Office
Canada
P.O. Box 1027
Detroit, MI 48231
East

K6H 6S2

John Kangas:

Mr. John Kangas
U.S. Secretary

U.S. Army Corps of Engineers

Great Lakes Center

111 N. Canal Street
Chicago, IL 60606-7205

David Fay:

Mr. David Fay
Regulation

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-----Original Message-----
From: Woodruff, Carl L LRE
Sent: Thursday, November 13, 2003 3:46 PM
To: Gavin Christie (E-mail)
Cc: Kangas, John W LRDGL; David Fay (E-mail)
Subject: Update Report on Peaking and Ponding

The IJC has requested an update report on the experiences related to peaking and ponding by the hydropower plants during 2003.

To recap, Edison Sault Electric Company and Great Lakes Power Ltd., discharge higher flows during the daytime and evening hours when electricity demand is higher, and discharge lower flows during the night time hours, and on weekends and holidays when electricity demand is low. In addition to weather related fluctuations extended periods of low discharge over weekends and holidays can have an adverse affect on levels in the Lower St. Marys River below the locks. As a result on weekend days and holidays during months when the monthly mean level at U.S. Slip is expected to be below Chart Datum ponding is suspended and the power companies are required to discharge at their expected peak flow rate for that month during the hours of 0800 hrs to 1600 hrs in order to provide a window with higher water levels for ship traffic transiting the Soo Locks and the St. Marys River on those days. Peaking and ponding by the power companies has been allowed under authorization of the International Joint Commission (IJC) and the supervision of the International Lake Superior Board of Control (ILSBC).

Please advise if the Great Lakes Fishery Commission or the Sea Lamprey Control Centre have any comments on the affects that fluctuations in levels due to peaking and ponding operations may have had on the St. Marys River fishery. The comments and information provided will be included as part of the report. As indicated above it must be recognized that weather also plays a significant role in the St. Marys River water level fluctuations.

I would appreciate the information that you can provide as soon as possible. I am working to have a draft ready by mid - late December for review and comment before finalizing and submitting to the IJC in January.

Thankyou very much for your assistance in preparing this report.

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