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**CHARTER TOWNSHIP OF PLYMOUTH
BOARD OF TRUSTEES MEETING**

Tuesday, October 01, 2013
6:00 PM



A. CALL TO ORDER at _____ **P.M.**

B. PLEDGE OF ALLEGIANCE TO THE FLAG

C. ROLL CALL: Kay Arnold _____, Nancy Conzelman _____, Chuck Curmi _____,
Bob Doroshewitz _____, Ron Edwards _____, Mike Kelly _____,
Richard Reaume _____

D. CLOSED SESSION

At _____ p.m., _____ moved that a closed session be called for the following purposes: Attorney Opinion, Contract Negotiations and Pending Litigation.

These are permissible purposes under the Michigan's Open Meeting Act, Public Act No. 267, Article 15.268, Section 8, Paragraphs (c) (e) and (h).

Seconded by _____

Arnold ____ Conzelman ____ Curmi ____ Doroshewitz ____ Edwards ____ Kelly ____ Reaume ____

At _____ p.m., _____ moved to return to open session, seconded by _____

Arnold ____ Conzelman ____ Curmi ____ Doroshewitz ____ Edwards ____ Kelly ____ Reaume ____

E. APPROVAL OF AGENDA

Regular Meeting - Tuesday, October 01, 2013

F. APPROVAL OF CONSENT AGENDA

E.1 Approval of Minutes:

BOT Minutes Regular Meeting September 24 2013

G. PUBLIC COMMENTS

H. WORK SESSION

- 1) Pump House and Water Usage Update
- 2) Salem Township USD Water and Sanitary Sewer
- 3) Budget Study Session - Law Enforcement and 911 Communications Center

I. PUBLIC COMMENTS

J. ADJOURNMENT

PLEASE TAKE NOTE: The Charter Township of Plymouth will provide necessary reasonable auxiliary aids and services, such as signers for the hearing impaired and audio tapes of printed materials being considered at all Township Meetings, to individuals with disabilities at the Meetings/Hearings upon two weeks notice to the Charter Township of Plymouth by writing or calling the following: Human Resource Office, 9955 N Haggerty Road, Plymouth, MI 48170. Phone number (734) 354-3202 TDD units: 1-800-649-3777 (Michigan Relay Services)

**CHARTER TOWNSHIP OF PLYMOUTH
BOARD OF TRUSTEES
REGULAR MEETING
TUESDAY, SEPTEMBER 24, 2013**

Supervisor Reaume called the meeting to order at 7:03 p.m. and led in the Pledge of Allegiance to the Flag.

MEMBERS PRESENT: Richard Reaume, Supervisor
Nancy Conzelman, Clerk
Ron Edwards, Treasurer
Kay Arnold, Trustee
Charles Curmi, Trustee
Robert Doroshewitz, Trustee
Michael Kelly, Trustee

ABSENT: None

OTHERS PRESENT: Patrick Fellrath, Director of Public Utilities
Mark Lewis, Chief Building Official
Thomas Tiderington, Police Chief
Mark Wendel, Fire Chief
Timothy Cronin, Township Attorney
Amy Hammye, Deputy Treasurer
Michelle Lozier, Deputy Clerk
Alice Geletzke, Recording Secretary
21 Members of the Public

D. APPROVAL OF AGENDA

Regular Meeting - Tuesday, September 24, 2013

Moved by Ms. Conzelman, seconded by Ms. Arnold, to approve the agenda for the Board of Trustees regular meeting of September 24, 2013 as presented. Ayes all.

E APPROVAL OF CONSENT AGENDA

- E. 1 Approval of Minutes:**
 - Special Meeting - Tuesday, September 10, 2013
 - Regular Meeting - September 10, 2013
- E.2 Acceptance of Utility Easements:**
- E.3 Acceptance of Communications, Resolutions, Reports:**
 - Fire Department Report August 2013

**CHARTER TOWNSHIP OF PLYMOUTH
BOARD OF TRUSTEES
REGULAR MEETING
TUESDAY, SEPTEMBER 24, 2013**

E.4 Approval of Township Bills:

		Year 2013
General Fund	(101)	396,216.63
Solid Waste Fund	(226)	966.24
Improvement Revolving Fund (Capital Projects)	(246)	38,407.29
Drug Forfeiture Fund	(265)	1,497.45
Golf Course Fund	(510)	2,443.66
Water and Sewer Fund	(592)	84,258.52
Trust and Agency Fund	(701)	16,403.00
Police Bond Fund	(702)	4,802.00
Tax Fund	(703)	156,342.90
Special Assessment Fund	(805)	35,075.00
Total:		736,412.69

Moved by Ms. Conzelman, seconded by Ms. Arnold, to approve the consent agenda for the Board of Trustees regular meeting of September 24, 2013 as presented. Ayes all.

F. PUBLIC COMMENTS

A resident objected to comments made to him by Mr. Edwards when he came into Township Hall to pay his taxes.

Wayne County Commissioner Shannon Price updated Board members on items such as Wayne County's budget, Commissioner Price's action along with Supervisor Reaume to get Wayne County to return to Plymouth Township 15% of its park millage dollars for the township's own parks and recreation projects, and working toward a tri-county purchase of the Detroit Water and Sewer Department. He also answered questions regarding the upkeep of County roads.

G. PUBLIC HEARING

H. COMMUNITY DEVELOPMENT

I. UNFINISHED BUSINESS

- 1) Request for Board Action - Approve 2nd Reading of the Amended Medical Marihuana Act Moratorium Ordinance

Moved by Ms. Conzelman, seconded by Ms. Arnold, to approve the second reading of the Amended Medical Marijuana Act Moratorium Ordinance. Ayes all on a roll call vote.

A copy of the Ordinance is on file in the Clerk's office for public perusal.

**CHARTER TOWNSHIP OF PLYMOUTH
BOARD OF TRUSTEES
REGULAR MEETING
TUESDAY, SEPTEMBER 24, 2013**

J. NEW BUSINESS

- 1) Request for Board Action - Approve Dupont Imprelis Resolution for Township Hall, Fire Station #1 and Miller Park

Mr. Cronin and Mr. Reaume noted that with two previously approved agreements and the signing of these three agreements, Township Park remains the only outstanding claim regarding damage caused to trees from the application of the weed control product, Imprelis. Mr. Cronin credited Supervisor Reaume for having each reevaluated resulting in much higher settlement offers the second time around.

Moved by Mr. Edwards, seconded by Mr. Curmi, to approve the Amended Claims Resolution Agreements as submitted by DuPont for Township Hall, Fire Station #1 and Miller Family Park; and authorize the Supervisor to sign the agreements as Authorized Property Owner and the Clerk to sign as Witness. Ayes all.

- 2) Request for Board Action - Approve an Inter-Governmental Agreement with Wayne County for Improvements to Township Park - Resolution 2013-09-24-36

Supervisor Reaume explained that the \$67,000 from Wayne County has been allocated to the new park pavilion in Township Park. Board members discussed whether the agreement can be amended to substitute a different project in the event the pavilion is not built.

Moved by Ms. Conzelman, seconded by Ms. Arnold, to approve Resolution No. 2013-09-24-36 approving the Agreement between the County of Wayne and the Township of Plymouth for Improvements to Plymouth Township Park and authorize the Supervisor to sign the Agreement. Ayes all on a roll call vote.

A copy of the Resolution is on file in the Clerk's office for public perusal.

K. SUPERVISOR AND TRUSTEE ANNOUNCEMENTS

Mr. Reaume updated Board members on the Ann Arbor Road streetscape improvements and noted that the project received the highest award from the Beautification Commission. He thanked State Representative Kurt Heise for his efforts in the M-14 lane improvements and indicated the sidewalk on Sheldon Road is being installed. He noted the "Heroes on Hines" ceremony is set for Saturday, October 5. This is the dedication of the memorial for first responders located in Hines Park at Haggerty Road and Hines Park Drive.

He informed Board members of the tentative agenda for a work session scheduled for October 1 starting with closed session at 6 p.m.

Board members had questions about problems with some of the verge areas installed in conjunction with the DDA's Ann Arbor Road streetscape project, the golf course report, and emergency recovery.

Mr. Edwards noted that 95 % of the summer taxes have been collected, the highest rate in five years.

**CHARTER TOWNSHIP OF PLYMOUTH
BOARD OF TRUSTEES
REGULAR MEETING
TUESDAY, SEPTEMBER 24, 2013**

L. PUBLIC COMMENTS

A resident commented on the pictures of the park improvements that are in Township Hall, as well as comments made by Mr. Edwards to a resident which were brought up in the earlier Public Comments period.

Mr. Edwards discussed with a resident distribution of his campaign literature from 1992, a campaign he lost.

M. ADJOURNMENT

Moved by Mr. Kelly, seconded by Mr. Edwards, to adjourn the meeting at 8:29 p.m.

Nancy Conzelman, Township Clerk

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**CHARTER TOWNSHIP OF PLYMOUTH
STAFF REQUEST FOR BOARD ACTION**

Meeting date: October 1, 2013

ITEM: Pump House and Water Usage Update

BRIEF:

ACTION: Work Session

DEPARTMENT/PRESENTER(S): Patrick Fellrath, Director of Public Utilities

BACKGROUND: Present Five Mile Road Pump Station 2013 Summer Performance Analysis

BUDGET/TIME LINE:

RECOMMENDATION: **Work Session**

PROPOSED MOTION:

RECOMMENDATION: Moved by: _____ Seconded by: _____

VOTE: ___ KA ___ CC ___ RD ___ MK ___ RE ___ NC ___ RR

MOTION CARRIED _____ MOTION DEFEATED _____

Five Mile Rd. Pump Station
2013 Summer Performance Analysis
October 1, 2013

Patrick J. Fellrath, P.E.
Director of Public Utilities
Charter Township of Plymouth

The Five Mile Rd. Pump Station achieved its design objective for summer 2013. Township peak hourly flows were lowest in recent history. Data suggests use of the pump station was a major reason for the record low flows. Additional pump performance data under higher demand conditions (i.e., warmer summers) is necessary to assess the full operational capabilities of the station.

Background: Construction of the Five Mile Rd. Pump Station was in response to the Township's summer 2010 violation of its water service contract with Detroit Water and Sewerage Department (DWSD); in summer 2010, the Township exceeded its contractual peak hourly flow limit of 10.76 mgd. The pump station was designed and constructed to improve the capabilities of the Township's one million gallon storage tank to reduce future hourly flows to below 10.76 mgd.

Historically, peak hourly flows in the Township occur in early morning, namely 6:00 AM to 9:00 AM EDT during June, July and August. In some years, peak hourly flows reached near peak values in early evening from about 7:00 PM to 9:00 PM EDT.

Table 1 indicates Township annual peak hourly flows since 2006.

Table 1: Township Peak Hourly Flows

Year	Day	Time (EDT)	Flow (mgd)
2012	June 27	6:00 AM	11.95
2011	July 26	6:00 AM	11.20
2010	June 6	6:00 AM	12.41
2009*	August 3	8:00 AM	11.23
2008**	August 4	10:00 AM	12.99
2007	July 11	7:00 AM	13.40
2006	July 17	7:00 AM	14.29

*First year of DWSD Model Contract.

** First year of tank operation; filling tank in morning.

Start-Up/Testing:

The Five Mile Rd. Pump Station consists of an altitude valve, flow control valve, fill pump, drain pump and associated controls. Construction and operation occurred in two phases.

PHASE 1: Testing of the altitude valve and flow control valve including integration with the existing Supervisory Control and Data Acquisition (SCADA) system was performed in late summer/fall 2011. These components were in use during summer 2012.

PHASE 2: Testing of pumps including integration with the existing SCADA system was performed in early June 2013. As of June 15, 2013 the Five Mile Rd. Pump Station was fully operable.

Operation: The Five Mile Rd. Pump Station was operated throughout this past summer on an as-needed basis based on Township water demand. Township water demand was determined by daily monitoring of system feed pressures and flows as recorded by the Township SCADA system and Detroit Water and Sewerage Department (DWSD) master meters.

In general, the altitude valve and/or fill pump were operated between Midnight and 6:00 AM EDT; and the flow control valve and/or drain pump were operated between 6:00 AM and Midnight.

Draining: Due to water demand beginning in early July, the drain pump was operated from 6:00 AM to 9:00 AM EDT on a daily basis through August.

Filling: The fill pump was available for manual use throughout the summer. Testing and subsequent short-term operation of the fill pump in June revealed the need for an ultrasonic level transmitter to fully automate the pump via the SCADA system.

Due to adequate water storage levels and the need for an ultrasonic level transmitter, the altitude valve was predominantly used though August for tank filling purposes. An ultrasonic level transmitter was eventually installed and the fill pump was fully automated and operated on a daily basis in September. Data indicates the fill pump is performing as designed but additional data during higher demand periods is required to fully assess pump performance.

Results: Peak hourly flows from this past summer were significantly lower than historical peak hourly flows. Table 2 compares this summer's top ten peak hourly flows with last summer's top ten peak hourly flows.

Table 2: 2013 Top Ten Hourly Flows vs. 2012 Top Ten Hourly Flows

Rank	2013		2012	
	Date/Time (EDT)	Flow (mgd)	Date/Time (EDT)	Flow (mgd)
1	08/26/13 09:00 AM	7.91	06/27/12 06:00 AM	11.95
2	08/24/13 09:00 AM	7.90	06/29/12 06:00 AM	11.66
3	08/25/13 09:00 AM	7.83	07/18/12 06:00 AM	11.40
4	08/24/13 10:00 AM	7.81	06/20/12 06:00 AM	11.33
5	08/24/13 08:00 AM	7.77	07/16/12 06:00 AM	11.06
6	08/24/13 12:00 PM	7.72	06/29/12 07:00 AM	11.01
7	08/25/13 10:00 AM	7.41	06/29/12 08:00 AM	10.94
8	08/24/13 11:00 AM	7.40	06/27/12 07:00 AM	10.93
9	08/25/13 11:00 AM	7.36	06/27/12 09:00 PM	10.88
10	08/24/13 02:00 PM	7.28	06/25/12 06:00 AM	10.88

Attachment 1 ranks all hourly flows from summer 2013 (June 15 – August 31) during the 6:00 AM to Midnight timeframe (i.e., DWSD contractual time period).

Table 2 and Attachment 1 indicate the following:

- 2013 peak hourly flows are lower and generally occur later in the morning than historical peak hourly flows; and
- 2013 peak hourly flows are considerably less than past and present DWSD contractual limits for peak hourly flows.

The lower peak hourly flows and the apparent shift of the Township's high water usage (demand) period to later in the morning are results of the use of the pump during the 6:00 AM to 9:00 AM EDT timeframe. This timeframe which is the Township's historical high demand period was the lowest demand period in 2013.

Attachment 2 is a compilation of the Township's daily water usage graphs for summer 2013. The graphs indicate a consistent diurnal water usage pattern; large peak flows from Midnight to 6:00 AM (tank filling) followed by sharp decreases in flow from 6:00 AM to 9:00 AM (tank draining with pump) followed by minor flow increases/stabilization from 9:00 AM to Midnight (tank draining with valves).

Maximum Day Flow: Similar to the peak hourly flow, the Township's maximum day flow in summer 2013 was considerably less than past and present DWSD contractual limits and lowest in recent history. Table 3 compares this summer's maximum day flow with past maximum day flows.

Table 3: Annual Max Day Flows

Year	Max Day Flow (mgd)	DWSD Contract Limit (mgd)
2013	6.79	10.0
2012	9.87	10.66
2011	9.27	10.66
2010	9.23	10.66
2009	8.34	10.66
2008	9.95	N/A
2007	8.74	N/A
2006	9.18	N/A

Although this summer's climatic conditions may have contributed to the low Max Day Flow, the use of the 5 Mile Rd. Pump Station clearly played a role. Use of the pump station allowed the Township to supply more water from its one million gallon elevated storage tank and purchase less water from DWSD (particularly between the hours 6:00 AM and 9:00 AM EDT).

Next Steps/Recommendations: The effect of pump station operation on mitigating Township water demand is evident in the data collected this past summer. However, additional data during higher demand periods (i.e., warmer summers) is needed to assess the full capabilities of the pumps. The same type of data collection and analysis performed this summer are planned to be performed next summer.

Operation of the pump station has led to the following short-term actions:

1. SCADA Program Changes: Some graphics and program functionality additions and changes are required to provide more automation and control of pump and valves.
2. SCADA Equipment (PLC) Relocation: Existing PLC and temporary valve connections inside the Five Mile Rd. Tank will be permanently relocated to the Five Mile Rd. Pumping Station as originally discussed. Work is underway.

ATTACHMENT 1

**Rank of Hourly Flows
(15 Pages)**

RANK OF HOURLY FLOWS
JUNE 15, 2013 – AUGUST 12, 2013
(6:00 AM – 12:00 AM)

RANK	DATE/TIME (DST)	FLOW (MGD)
1	8/10/13 9:00 AM	7.132645125
2	6/24/13 9:00 AM	7.094604351
3	7/15/13 10:00 AM	7.069243835
4	6/22/13 9:00 AM	6.948781384
5	6/24/13 11:00 AM	6.948781384
6	6/22/13 10:00 AM	6.904400481
7	6/23/13 10:00 AM	6.904400481
8	6/22/13 11:00 AM	6.840999191
9	6/23/13 9:00 AM	6.796618288
10	6/23/13 11:00 AM	6.777597901
11	6/24/13 10:00 AM	6.777597901
12	6/22/13 12:00 PM	6.771257772
13	6/22/13 1:00 PM	6.701516353
14	6/23/13 12:00 PM	6.676155837
15	7/19/13 9:00 AM	6.676155837
16	6/23/13 1:00 PM	6.631774934
17	6/24/13 12:00 PM	6.600074289
18	6/22/13 2:00 PM	6.574713773
19	6/23/13 2:00 PM	6.511312483
20	6/23/13 7:00 PM	6.479611838
21	6/23/13 8:00 PM	6.473271709
22	6/21/13 9:00 AM	6.447911193
23	6/23/13 4:00 PM	6.435230935
24	6/23/13 3:00 PM	6.422550677
25	6/20/13 9:00 AM	6.384509903
26	6/23/13 6:00 PM	6.365489516
27	8/10/13 10:00 AM	6.357881361
28	6/24/13 1:00 PM	6.302088226

RANK	DATE/TIME (DST)	FLOW (MGD)
29	6/22/13 3:00 PM	6.295748097
30	6/23/13 9:00 PM	6.251367194
31	6/23/13 5:00 PM	6.226006678
32	7/15/13 9:00 AM	6.187965904
33	6/30/13 11:00 PM	6.105544227
34	7/19/13 10:00 AM	6.105544227
35	7/14/13 10:00 AM	6.099204098
36	6/21/13 1:00 PM	6.08652384
37	6/20/13 10:00 AM	6.073843582
38	6/21/13 10:00 AM	6.073843582
39	6/21/13 11:00 AM	6.067503453
40	6/24/13 2:00 PM	6.010442292
41	7/18/13 9:00 AM	5.997762034
42	6/21/13 2:00 PM	5.991421905
43	8/10/13 11:00 AM	5.978741647
44	6/23/13 10:00 PM	5.95972126
45	6/21/13 12:00 PM	5.953381131
46	7/15/13 4:00 PM	5.940700873
47	7/15/13 12:00 PM	5.935945776
48	6/24/13 3:00 PM	5.921680486
49	7/15/13 11:00 AM	5.921680486
50	8/10/13 12:00 PM	5.889979841
51	6/24/13 8:00 PM	5.883639712
52	6/30/13 7:00 PM	5.883639712
53	6/21/13 3:00 PM	5.807558164
54	6/20/13 11:00 AM	5.794877906
55	6/24/13 11:00 PM	5.794877906
56	8/10/13 1:00 PM	5.775857519
57	6/24/13 7:00 PM	5.763177261

RANK	DATE/TIME (DST)	FLOW (MGD)
58	6/24/13 8:00 AM	5.756837132
59	6/30/13 8:00 PM	5.744156874
60	7/19/13 11:00 AM	5.725136487
61	6/22/13 4:00 PM	5.7061161
62	6/24/13 9:00 PM	5.687095713
63	6/30/13 10:00 AM	5.687095713
64	6/20/13 9:00 PM	5.668075326
65	7/26/13 9:00 AM	5.636374681
66	7/19/13 12:00 PM	5.617354294
67	6/30/13 9:00 PM	5.598333907
68	7/22/13 9:00 AM	5.553953004
69	6/21/13 8:00 PM	5.547612875
70	6/30/13 6:00 PM	5.547612875
71	7/18/13 7:00 PM	5.547612875
72	6/24/13 5:00 PM	5.528592488
73	7/18/13 10:00 AM	5.528592488
74	6/24/13 4:00 PM	5.522252359
75	6/21/13 8:00 AM	5.51591223
76	6/21/13 6:00 PM	5.51591223
77	6/21/13 4:00 PM	5.509572101
78	6/24/13 6:00 PM	5.509572101
79	7/22/13 10:00 AM	5.509572101
80	6/21/13 7:00 PM	5.496891843
81	6/20/13 10:00 PM	5.490551714
82	6/30/13 5:00 PM	5.477871456
83	6/30/13 10:00 PM	5.471531327
84	6/24/13 10:00 PM	5.458851069
85	6/20/13 8:00 PM	5.45251094
86	6/20/13 1:00 PM	5.446170811

2013 DWSD Contract Limit = 12.4 MGD
2012 DWSD Contract Limit = 10.76 MGD

RANK OF HOURLY FLOWS
JUNE 15, 2013 – AUGUST 12, 2013
(6:00 AM – 12:00 AM)

RANK	DATE/TIME (DST)	FLOW (MGD)
87	7/18/13 9:00 PM	5.439830682
88	8/10/13 2:00 PM	5.439830682
89	7/18/13 8:00 PM	5.433490553
90	6/30/13 3:00 PM	5.414470166
91	7/18/13 4:00 PM	5.414470166
92	6/21/13 5:00 PM	5.408130037
93	7/1/13 9:00 AM	5.408130037
94	6/30/13 4:00 PM	5.401789908
95	7/18/13 3:00 PM	5.395449779
96	7/18/13 5:00 PM	5.395449779
97	7/18/13 6:00 PM	5.38910965
98	6/20/13 2:00 PM	5.370089263
99	6/20/13 6:00 PM	5.370089263
100	6/20/13 12:00 PM	5.363749134
101	7/18/13 1:00 PM	5.351068876
102	6/20/13 7:00 PM	5.344728747
103	7/18/13 11:00 AM	5.344728747
104	6/21/13 9:00 PM	5.338388618
105	7/18/13 12:00 PM	5.332048489
106	7/18/13 10:00 PM	5.319368231
107	7/18/13 2:00 PM	5.306687973
108	6/20/13 5:00 PM	5.294007715
109	7/13/13 12:00 PM	5.294007715
110	6/17/13 12:00 PM	5.281327457
111	7/19/13 1:00 PM	5.268647199
112	8/11/13 10:00 AM	5.268647199
113	7/15/13 5:00 PM	5.26230707
114	7/19/13 2:00 PM	5.249626812
115	6/30/13 1:00 PM	5.243286683

RANK	DATE/TIME (DST)	FLOW (MGD)
116	6/19/13 8:00 PM	5.230606425
117	7/13/13 1:00 PM	5.230606425
118	7/26/13 11:00 AM	5.230606425
119	6/19/13 9:00 PM	5.224266296
120	8/10/13 4:00 PM	5.224266296
121	8/11/13 9:00 AM	5.205245909
122	6/20/13 4:00 PM	5.19890578
123	7/22/13 12:00 PM	5.19890578
124	7/19/13 3:00 PM	5.192565651
125	6/22/13 5:00 PM	5.186225522
126	6/30/13 12:00 PM	5.179885393
127	7/17/13 10:00 AM	5.179885393
128	8/10/13 3:00 PM	5.173545264
129	7/17/13 9:00 AM	5.167205135
130	6/20/13 3:00 PM	5.160865006
131	8/9/13 6:00 PM	5.160865006
132	6/30/13 2:00 PM	5.154524877
133	7/16/13 9:00 AM	5.154524877
134	7/1/13 8:00 AM	5.129164361
135	7/22/13 11:00 AM	5.129164361
136	6/17/13 7:00 PM	5.116484103
137	7/26/13 10:00 AM	5.091123587
138	6/30/13 9:00 AM	5.0721032
139	6/23/13 11:00 PM	5.065763071
140	7/19/13 5:00 PM	5.065763071
141	7/17/13 11:00 AM	5.046742684
142	8/9/13 5:00 PM	5.040402555
143	7/13/13 2:00 PM	5.021382168
144	8/9/13 7:00 PM	5.021382168

RANK	DATE/TIME (DST)	FLOW (MGD)
145	7/18/13 11:00 PM	5.00870191
146	7/19/13 6:00 PM	5.002361781
147	6/17/13 8:00 PM	4.996021652
148	7/26/13 12:00 PM	4.996021652
149	6/30/13 11:00 AM	4.989681523
150	7/17/13 9:00 PM	4.989681523
151	7/14/13 1:00 PM	4.983341394
152	6/22/13 6:00 PM	4.970661136
153	7/1/13 7:00 AM	4.970661136
154	7/14/13 3:00 PM	4.970661136
155	7/19/13 4:00 PM	4.970661136
156	8/11/13 1:00 PM	4.970661136
157	8/11/13 12:00 PM	4.964321007
158	7/22/13 1:00 PM	4.957980878
159	7/13/13 6:00 PM	4.951640749
160	7/22/13 9:00 PM	4.951640749
161	7/17/13 8:00 PM	4.94530062
162	8/11/13 11:00 AM	4.94530062
163	7/14/13 9:00 PM	4.932620362
164	7/26/13 2:00 PM	4.926280233
165	6/19/13 7:00 PM	4.913599975
166	6/23/13 8:00 AM	4.900919717
167	7/15/13 6:00 PM	4.900919717
168	8/9/13 4:00 PM	4.900919717
169	7/14/13 9:00 AM	4.894579588
170	7/13/13 8:00 PM	4.888239459
171	7/17/13 12:00 PM	4.888239459
172	7/26/13 1:00 PM	4.888239459
173	8/9/13 8:00 PM	4.888239459

2013 DWSD Contract Limit = 12.4 MGD
2012 DWSD Contract Limit = 10.76 MGD

RANK OF HOURLY FLOWS
JUNE 15, 2013 – AUGUST 12, 2013
(6:00 AM – 12:00 AM)

RANK	DATE/TIME (DST)	FLOW (MGD)
174	7/14/13 2:00 PM	4.88189933
175	7/14/13 12:00 PM	4.875559201
176	7/16/13 10:00 AM	4.862878943
177	8/10/13 8:00 AM	4.862878943
178	8/11/13 8:00 PM	4.862878943
179	7/14/13 4:00 PM	4.856538814
180	7/14/13 8:00 PM	4.856538814
181	8/11/13 3:00 PM	4.856538814
182	6/19/13 6:00 PM	4.850198685
183	7/17/13 1:00 PM	4.843858556
184	8/12/13 9:00 AM	4.843858556
185	8/10/13 5:00 PM	4.837518427
186	8/11/13 2:00 PM	4.837518427
187	7/21/13 5:00 PM	4.831178298
188	6/19/13 10:00 PM	4.824838169
189	6/21/13 10:00 PM	4.824838169
190	6/22/13 10:00 PM	4.824838169
191	7/17/13 7:00 PM	4.812157911
192	6/17/13 6:00 PM	4.799477653
193	7/21/13 6:00 PM	4.786797395
194	7/22/13 2:00 PM	4.786797395
195	7/22/13 8:00 PM	4.786797395
196	7/13/13 3:00 PM	4.780457266
197	8/9/13 11:00 PM	4.780457266
198	8/9/13 9:00 PM	4.774117137
199	6/17/13 5:00 PM	4.767777008
200	7/13/13 5:00 PM	4.767777008
201	7/31/13 9:00 AM	4.767777008
202	6/25/13 8:00 AM	4.761436879

RANK	DATE/TIME (DST)	FLOW (MGD)
203	7/13/13 4:00 PM	4.761436879
204	6/20/13 8:00 AM	4.75509675
205	7/23/13 9:00 AM	4.75509675
206	7/15/13 7:00 PM	4.746114879
207	7/17/13 10:00 PM	4.742416492
208	7/23/13 8:00 AM	4.742416492
209	7/25/13 8:00 PM	4.742416492
210	8/9/13 9:00 AM	4.742416492
211	6/17/13 4:00 PM	4.736076363
212	7/26/13 3:00 PM	4.729736234
213	7/1/13 10:00 AM	4.723396105
214	7/21/13 7:00 PM	4.723396105
215	7/21/13 8:00 PM	4.717055976
216	8/10/13 6:00 PM	4.717055976
217	8/11/13 6:00 PM	4.717055976
218	7/14/13 11:00 AM	4.710715847
219	7/25/13 9:00 PM	4.698035589
220	6/25/13 1:00 PM	4.685355331
221	7/17/13 11:00 PM	4.685355331
222	7/13/13 7:00 PM	4.679015202
223	7/22/13 7:00 PM	4.679015202
224	6/22/13 9:00 PM	4.672675073
225	7/21/13 4:00 PM	4.672675073
226	6/25/13 2:00 PM	4.666334944
227	7/21/13 2:00 PM	4.666334944
228	7/24/13 9:00 AM	4.666334944
229	8/11/13 9:00 PM	4.666334944
230	7/20/13 12:00 PM	4.659994815
231	6/19/13 5:00 PM	4.653654686

RANK	DATE/TIME (DST)	FLOW (MGD)
232	6/26/13 7:00 AM	4.653654686
233	7/6/13 10:00 AM	4.653654686
234	8/9/13 10:00 PM	4.647314557
235	7/31/13 10:00 AM	4.640974428
236	6/22/13 7:00 PM	4.634634299
237	7/14/13 11:00 PM	4.62829417
238	6/19/13 11:00 PM	4.615613912
239	7/5/13 11:00 PM	4.615613912
240	7/20/13 2:00 PM	4.615613912
241	8/12/13 10:00 AM	4.615613912
242	6/30/13 8:00 AM	4.602933654
243	7/26/13 4:00 PM	4.602933654
244	7/17/13 2:00 PM	4.596593525
245	7/21/13 10:00 AM	4.590253396
246	7/21/13 9:00 PM	4.590253396
247	7/25/13 10:00 PM	4.590253396
248	8/9/13 3:00 PM	4.583913267
249	8/11/13 5:00 PM	4.583913267
250	6/17/13 3:00 PM	4.577573138
251	7/6/13 11:00 AM	4.577573138
252	6/19/13 3:00 PM	4.571233009
253	6/22/13 8:00 PM	4.571233009
254	6/17/13 9:00 PM	4.56489288
255	8/11/13 7:00 PM	4.56489288
256	7/14/13 6:00 PM	4.558552751
257	7/14/13 10:00 PM	4.552212622
258	7/21/13 12:00 PM	4.552212622
259	6/19/13 6:00 AM	4.545872493
260	7/14/13 5:00 PM	4.545872493

2013 DWSD Contract Limit = 12.4 MGD
2012 DWSD Contract Limit = 10.76 MGD

RANK OF HOURLY FLOWS
JUNE 15, 2013 – AUGUST 12, 2013
(6:00 AM – 12:00 AM)

RANK	DATE/TIME (DST)	FLOW (MGD)	RANK	DATE/TIME (DST)	FLOW (MGD)	RANK	DATE/TIME (DST)	FLOW (MGD)
261	8/9/13 1:00 PM	4.545872493	290	7/26/13 5:00 PM	4.444430429	319	8/12/13 11:00 AM	4.304947591
262	7/21/13 11:00 AM	4.539532364	291	6/21/13 11:00 PM	4.4380903	320	7/16/13 11:00 AM	4.285927204
263	7/21/13 1:00 PM	4.539532364	292	7/17/13 5:00 PM	4.431750171	321	8/10/13 10:00 PM	4.285927204
264	8/9/13 12:00 PM	4.539532364	293	6/19/13 8:00 AM	4.425410042	322	6/26/13 11:00 PM	4.273246946
265	7/17/13 3:00 PM	4.533192235	294	7/20/13 3:00 PM	4.425410042	323	7/22/13 5:00 PM	4.273246946
266	7/17/13 6:00 PM	4.533192235	295	8/9/13 11:00 AM	4.425410042	324	7/31/13 12:00 PM	4.273246946
267	7/21/13 9:00 AM	4.533192235	296	7/6/13 3:00 PM	4.412729784	325	7/31/13 1:00 PM	4.273246946
268	7/14/13 7:00 PM	4.526852106	297	7/17/13 4:00 PM	4.406389655	326	6/19/13 9:00 AM	4.266906817
269	7/20/13 10:00 PM	4.526852106	298	7/20/13 1:00 PM	4.400049526	327	6/25/13 3:00 PM	4.266906817
270	7/24/13 8:00 AM	4.526852106	299	8/10/13 9:00 PM	4.393709397	328	7/14/13 8:00 AM	4.266906817
271	8/10/13 7:00 PM	4.526852106	300	6/19/13 10:00 AM	4.387369268	329	6/26/13 10:00 AM	4.260566688
272	8/11/13 4:00 PM	4.520511977	301	7/6/13 4:00 PM	4.381029139	330	6/27/13 10:00 AM	4.260566688
273	8/9/13 10:00 AM	4.50149159	302	7/19/13 7:00 PM	4.355668623	331	7/25/13 1:00 PM	4.260566688
274	8/10/13 8:00 PM	4.500223564	303	7/25/13 7:00 PM	4.355668623	332	6/26/13 12:00 PM	4.254226559
275	7/6/13 12:00 PM	4.495151461	304	7/26/13 6:00 PM	4.355668623	333	8/4/13 6:00 PM	4.254226559
276	7/21/13 3:00 PM	4.495151461	305	6/19/13 4:00 PM	4.349328494	334	6/18/13 9:00 PM	4.24788643
277	7/24/13 10:00 AM	4.488811332	306	7/22/13 3:00 PM	4.342988365	335	7/20/13 11:00 AM	4.24788643
278	7/16/13 12:00 PM	4.482471203	307	7/22/13 6:00 PM	4.342988365	336	6/18/13 8:00 PM	4.241546301
279	6/19/13 7:00 AM	4.469790945	308	7/22/13 10:00 PM	4.342988365	337	7/12/13 1:00 PM	4.235206172
280	6/19/13 1:00 PM	4.469790945	309	7/13/13 11:00 AM	4.330308107	338	6/17/13 1:00 PM	4.228866043
281	7/6/13 2:00 PM	4.469790945	310	7/20/13 4:00 PM	4.330308107	339	6/25/13 9:00 AM	4.228866043
282	7/20/13 11:00 PM	4.469790945	311	8/4/13 7:00 PM	4.330308107	340	7/19/13 8:00 PM	4.228866043
283	8/9/13 2:00 PM	4.469790945	312	7/13/13 9:00 PM	4.317627849	341	7/25/13 11:00 PM	4.228866043
284	6/19/13 2:00 PM	4.457110687	313	6/24/13 6:00 AM	4.31128772	342	8/4/13 9:00 PM	4.228866043
285	7/21/13 10:00 PM	4.457110687	314	8/10/13 11:00 PM	4.31128772	343	7/5/13 8:00 PM	4.216185785
286	7/3/13 11:00 PM	4.450770558	315	6/25/13 12:00 PM	4.304947591	344	7/6/13 1:00 PM	4.216185785
287	7/31/13 11:00 AM	4.450770558	316	6/26/13 8:00 AM	4.304947591	345	7/21/13 8:00 AM	4.216185785
288	6/17/13 2:00 PM	4.444430429	317	7/4/13 11:00 PM	4.304947591	346	7/21/13 11:00 PM	4.216185785
289	6/26/13 11:00 AM	4.444430429	318	8/4/13 8:00 PM	4.304947591	347	7/13/13 10:00 PM	4.209845656

2013 DWSD Contract Limit = 12.4 MGD
2012 DWSD Contract Limit = 10.76 MGD

RANK OF HOURLY FLOWS
JUNE 15, 2013 – AUGUST 12, 2013
(6:00 AM – 12:00 AM)

RANK	DATE/TIME (DST)	FLOW (MGD)	RANK	DATE/TIME (DST)	FLOW (MGD)	RANK	DATE/TIME (DST)	FLOW (MGD)
348	7/25/13 6:00 PM	4.209845656	377	7/13/13 11:00 PM	4.114743721	406	7/30/13 10:00 AM	4.051342431
349	7/31/13 2:00 PM	4.209845656	378	7/20/13 9:00 AM	4.114743721	407	8/5/13 10:00 AM	4.051342431
350	7/6/13 5:00 PM	4.203505527	379	6/26/13 9:00 AM	4.108403592	408	6/28/13 10:00 AM	4.045002302
351	6/25/13 10:00 AM	4.197165398	380	7/13/13 10:00 AM	4.108403592	409	7/25/13 2:00 PM	4.045002302
352	7/22/13 11:00 PM	4.197165398	381	7/20/13 10:00 AM	4.108403592	410	7/30/13 11:00 PM	4.038662173
353	8/5/13 1:00 PM	4.190825269	382	7/20/13 6:00 PM	4.108403592	411	7/23/13 10:00 AM	4.032322044
354	7/31/13 8:00 AM	4.18448514	383	6/18/13 11:00 PM	4.095723334	412	6/25/13 4:00 PM	4.025981915
355	7/26/13 11:00 PM	4.178145011	384	6/22/13 8:00 AM	4.095723334	413	7/12/13 2:00 PM	4.025981915
356	6/15/13 11:00 AM	4.171804882	385	6/25/13 7:00 PM	4.095723334	414	6/19/13 11:00 AM	4.019641786
357	7/26/13 7:00 PM	4.171804882	386	6/25/13 8:00 PM	4.095723334	415	7/5/13 9:00 PM	4.019641786
358	8/5/13 9:00 AM	4.171804882	387	6/29/13 11:00 PM	4.095723334	416	8/5/13 2:00 PM	4.019641786
359	7/20/13 9:00 PM	4.165464753	388	7/16/13 11:00 PM	4.095723334	417	7/12/13 11:00 PM	4.013301657
360	7/11/13 11:00 PM	4.159124624	389	8/11/13 11:00 PM	4.095723334	418	7/24/13 12:00 PM	4.000621399
361	7/6/13 9:00 AM	4.159124624	390	6/18/13 6:00 PM	4.089383205	419	7/31/13 3:00 PM	4.000621399
362	6/17/13 11:00 PM	4.152784495	391	6/27/13 11:00 AM	4.089383205	420	8/5/13 3:00 PM	4.000621399
363	8/4/13 5:00 PM	4.152784495	392	7/20/13 5:00 PM	4.089383205	421	8/4/13 3:00 PM	3.99428127
364	6/15/13 10:00 AM	4.146444366	393	6/15/13 3:00 PM	4.083043076	422	6/17/13 9:00 AM	3.987941141
365	6/18/13 10:00 PM	4.146444366	394	6/27/13 2:00 PM	4.083043076	423	7/7/13 11:00 PM	3.987941141
366	6/19/13 12:00 PM	4.146444366	395	7/5/13 6:00 PM	4.083043076	424	6/15/13 4:00 PM	3.981601012
367	7/24/13 11:00 AM	4.140104237	396	7/25/13 11:00 AM	4.076702947	425	6/22/13 11:00 PM	3.981601012
368	8/4/13 10:00 PM	4.140104237	397	7/22/13 4:00 PM	4.070362818	426	7/20/13 8:00 PM	3.981601012
369	6/17/13 8:00 AM	4.133764108	398	7/30/13 8:00 PM	4.070362818	427	7/30/13 3:00 PM	3.981601012
370	8/5/13 11:00 AM	4.133764108	399	7/6/13 11:00 PM	4.064022689	428	6/24/13 7:00 AM	3.975260883
371	6/18/13 7:00 PM	4.127423979	400	7/25/13 7:00 AM	4.064022689	429	6/25/13 6:00 PM	3.975260883
372	7/25/13 10:00 AM	4.127423979	401	8/12/13 12:00 PM	4.064022689	430	7/25/13 3:00 PM	3.975260883
373	8/11/13 10:00 PM	4.127423979	402	6/25/13 11:00 PM	4.05768256	431	6/15/13 12:00 PM	3.968920754
374	7/20/13 7:00 PM	4.12108385	403	7/2/13 11:00 PM	4.05768256	432	7/27/13 10:00 AM	3.968920754
375	7/30/13 8:00 AM	4.12108385	404	7/20/13 8:00 AM	4.05768256	433	7/30/13 4:00 PM	3.968920754
376	6/25/13 9:00 PM	4.114743721	405	7/25/13 5:00 PM	4.05768256	434	8/4/13 4:00 PM	3.968920754

2013 DWSD Contract Limit = 12.4 MGD
2012 DWSD Contract Limit = 10.76 MGD

RANK OF HOURLY FLOWS
JUNE 15, 2013 – AUGUST 12, 2013
(6:00 AM – 12:00 AM)

RANK	DATE/TIME (DST)	FLOW (MGD)
435	8/5/13 12:00 PM	3.968920754
436	8/5/13 4:00 PM	3.962580625
437	7/8/13 11:00 PM	3.956240496
438	8/4/13 11:00 PM	3.956240496
439	6/17/13 10:00 PM	3.949900367
440	7/23/13 2:00 PM	3.949900367
441	7/24/13 11:00 PM	3.949900367
442	6/30/13 7:00 AM	3.943560238
443	7/5/13 7:00 PM	3.943560238
444	7/25/13 12:00 PM	3.943560238
445	7/6/13 6:00 PM	3.937220109
446	7/12/13 5:00 PM	3.937220109
447	7/16/13 10:00 PM	3.937220109
448	7/23/13 11:00 PM	3.937220109
449	7/25/13 9:00 AM	3.937220109
450	7/30/13 9:00 PM	3.937220109
451	6/27/13 12:00 PM	3.93087998
452	7/23/13 1:00 PM	3.93087998
453	7/25/13 8:00 AM	3.93087998
454	7/25/13 4:00 PM	3.93087998
455	7/30/13 7:00 PM	3.93087998
456	6/15/13 1:00 PM	3.924539851
457	7/23/13 12:00 PM	3.924539851
458	7/24/13 10:00 PM	3.924539851
459	6/27/13 1:00 PM	3.918199722
460	6/27/13 11:00 PM	3.918199722
461	6/20/13 11:00 PM	3.911859593
462	6/26/13 1:00 PM	3.911859593
463	7/26/13 9:00 PM	3.911859593

RANK	DATE/TIME (DST)	FLOW (MGD)
464	6/17/13 7:00 AM	3.905519464
465	7/4/13 2:00 PM	3.905519464
466	7/12/13 4:00 PM	3.905519464
467	7/30/13 7:00 AM	3.905519464
468	8/12/13 1:00 PM	3.905519464
469	6/15/13 5:00 PM	3.899179335
470	7/30/13 5:00 PM	3.899179335
471	7/30/13 6:00 PM	3.899179335
472	7/16/13 2:00 PM	3.892839206
473	8/12/13 3:00 PM	3.892839206
474	7/5/13 5:00 PM	3.886499077
475	7/26/13 10:00 PM	3.886499077
476	7/4/13 1:00 PM	3.880158948
477	7/12/13 12:00 PM	3.880158948
478	7/26/13 8:00 PM	3.880158948
479	6/15/13 2:00 PM	3.873818819
480	7/27/13 12:00 PM	3.873818819
481	7/30/13 9:00 AM	3.873818819
482	8/2/13 8:00 AM	3.873818819
483	8/5/13 8:00 PM	3.873818819
484	6/25/13 5:00 PM	3.86747869
485	7/16/13 1:00 PM	3.86747869
486	7/16/13 9:00 PM	3.86747869
487	7/8/13 2:00 PM	3.854798432
488	8/4/13 11:00 AM	3.854798432
489	6/30/13 6:00 AM	3.848458303
490	7/23/13 11:00 AM	3.848458303
491	7/9/13 11:00 PM	3.842118174
492	6/18/13 1:00 PM	3.835778045

RANK	DATE/TIME (DST)	FLOW (MGD)
493	7/24/13 1:00 PM	3.835778045
494	7/27/13 11:00 AM	3.835778045
495	7/29/13 7:00 AM	3.835778045
496	7/30/13 1:00 PM	3.835778045
497	8/5/13 7:00 PM	3.835778045
498	6/18/13 5:00 PM	3.829437916
499	7/12/13 3:00 PM	3.829437916
500	8/7/13 9:00 PM	3.829437916
501	6/25/13 10:00 PM	3.823097787
502	7/6/13 8:00 AM	3.816757658
503	7/12/13 6:00 PM	3.816757658
504	7/30/13 12:00 PM	3.816757658
505	8/3/13 2:00 PM	3.816757658
506	6/28/13 11:00 PM	3.810417529
507	7/24/13 2:00 PM	3.810417529
508	6/18/13 9:00 AM	3.797737271
509	7/30/13 11:00 AM	3.797737271
510	8/1/13 4:00 PM	3.797737271
511	8/7/13 8:00 PM	3.797737271
512	8/8/13 8:00 PM	3.797737271
513	6/18/13 10:00 AM	3.791397142
514	7/11/13 11:00 PM	3.791397142
515	8/2/13 7:00 AM	3.791397142
516	7/10/13 11:00 PM	3.785057013
517	7/16/13 3:00 PM	3.785057013
518	7/27/13 9:00 AM	3.785057013
519	7/30/13 10:00 PM	3.785057013
520	8/8/13 9:00 PM	3.785057013
521	8/3/13 3:00 PM	3.778716884

2013 DWSD Contract Limit = 12.4 MGD
2012 DWSD Contract Limit = 10.76 MGD

RANK OF HOURLY FLOWS
JUNE 15, 2013 – AUGUST 12, 2013
(6:00 AM – 12:00 AM)

RANK	DATE/TIME (DST)	FLOW (MGD)	RANK	DATE/TIME (DST)	FLOW (MGD)	RANK	DATE/TIME (DST)	FLOW (MGD)
522	8/3/13 4:00 PM	3.778716884	551	8/8/13 11:00 PM	3.721655723	580	7/4/13 10:00 PM	3.670934691
523	6/18/13 4:00 PM	3.772376755	552	7/13/13 9:00 AM	3.715315594	581	7/8/13 1:00 PM	3.670934691
524	7/4/13 3:00 PM	3.772376755	553	6/18/13 11:00 AM	3.708975465	582	7/27/13 8:00 AM	3.670934691
525	7/16/13 4:00 PM	3.772376755	554	7/3/13 4:00 PM	3.708975465	583	7/5/13 10:00 PM	3.664594562
526	7/29/13 11:00 PM	3.772376755	555	8/4/13 12:00 PM	3.708975465	584	7/16/13 8:00 PM	3.664594562
527	8/3/13 6:00 PM	3.772376755	556	8/7/13 11:00 PM	3.708975465	585	8/5/13 11:00 PM	3.664594562
528	8/3/13 11:00 PM	3.772376755	557	8/8/13 7:00 PM	3.708975465	586	8/7/13 1:00 PM	3.664594562
529	8/5/13 6:00 PM	3.772376755	558	6/15/13 9:00 AM	3.702635336	587	6/16/13 3:00 PM	3.658254433
530	7/24/13 3:00 PM	3.766036626	559	7/24/13 7:00 PM	3.702635336	588	7/1/13 6:00 AM	3.658254433
531	8/1/13 6:00 PM	3.766036626	560	7/29/13 11:00 AM	3.702635336	589	7/29/13 10:00 PM	3.658254433
532	7/23/13 10:00 PM	3.759696497	561	7/15/13 11:00 PM	3.696295207	590	8/1/13 12:00 PM	3.658254433
533	7/24/13 9:00 PM	3.759696497	562	7/29/13 8:00 PM	3.696295207	591	7/19/13 11:00 PM	3.651914304
534	8/8/13 6:00 PM	3.759696497	563	8/3/13 8:00 PM	3.696295207	592	7/30/13 2:00 PM	3.651914304
535	8/8/13 10:00 PM	3.759696497	564	6/16/13 5:00 PM	3.689955078	593	8/6/13 5:00 PM	3.651914304
536	6/16/13 11:00 AM	3.753356368	565	6/18/13 2:00 PM	3.689955078	594	7/12/13 7:00 PM	3.645574175
537	7/19/13 9:00 PM	3.753356368	566	7/1/13 3:00 PM	3.689955078	595	8/1/13 1:00 PM	3.645574175
538	8/3/13 5:00 PM	3.753356368	567	7/5/13 4:00 PM	3.689955078	596	6/16/13 4:00 PM	3.639234046
539	8/3/13 7:00 PM	3.753356368	568	7/29/13 9:00 PM	3.689955078	597	6/16/13 8:00 PM	3.639234046
540	8/3/13 9:00 PM	3.753356368	569	8/5/13 9:00 PM	3.689955078	598	6/16/13 10:00 PM	3.639234046
541	7/23/13 8:00 PM	3.747016239	570	8/6/13 6:00 PM	3.689955078	599	7/4/13 6:00 PM	3.639234046
542	6/16/13 9:00 PM	3.74067611	571	7/23/13 9:00 PM	3.683614949	600	7/24/13 5:00 PM	3.639234046
543	7/16/13 5:00 PM	3.74067611	572	7/29/13 8:00 AM	3.683614949	601	8/4/13 2:00 PM	3.639234046
544	7/24/13 8:00 PM	3.74067611	573	8/5/13 5:00 PM	3.683614949	602	7/5/13 2:00 PM	3.632893917
545	8/7/13 2:00 PM	3.74067611	574	6/26/13 9:00 PM	3.67727482	603	7/12/13 9:00 PM	3.632893917
546	7/4/13 12:00 PM	3.734335981	575	7/31/13 11:00 PM	3.67727482	604	6/26/13 10:00 PM	3.626553788
547	8/1/13 2:00 PM	3.734335981	576	8/3/13 10:00 PM	3.67727482	605	6/27/13 3:00 PM	3.626553788
548	8/1/13 3:00 PM	3.734335981	577	8/4/13 10:00 AM	3.67727482	606	7/3/13 7:00 PM	3.626553788
549	7/4/13 11:00 AM	3.727995852	578	6/15/13 6:00 PM	3.670934691	607	7/5/13 1:00 PM	3.626553788
550	6/18/13 3:00 PM	3.721655723	579	7/3/13 8:00 PM	3.670934691	608	7/28/13 12:00 PM	3.626553788

2013 DWSD Contract Limit = 12.4 MGD
2012 DWSD Contract Limit = 10.76 MGD

RANK OF HOURLY FLOWS
JUNE 15, 2013 – AUGUST 12, 2013
(6:00 AM – 12:00 AM)

RANK	DATE/TIME (DST)	FLOW (MGD)
609	6/16/13 2:00 PM	3.620213659
610	6/16/13 6:00 PM	3.620213659
611	7/3/13 9:00 PM	3.61387353
612	8/6/13 11:00 PM	3.61387353
613	7/17/13 8:00 AM	3.607533401
614	8/1/13 11:00 PM	3.607533401
615	6/18/13 7:00 AM	3.601193272
616	7/2/13 8:00 PM	3.601193272
617	8/1/13 11:00 AM	3.601193272
618	8/4/13 1:00 PM	3.594853143
619	6/16/13 12:00 PM	3.588513014
620	6/16/13 7:00 PM	3.588513014
621	7/3/13 6:00 PM	3.588513014
622	6/16/13 1:00 PM	3.582172885
623	7/2/13 7:00 PM	3.582172885
624	7/12/13 8:00 PM	3.582172885
625	7/24/13 4:00 PM	3.582172885
626	6/17/13 6:00 AM	3.575832756
627	7/28/13 8:00 PM	3.575832756
628	7/1/13 11:00 AM	3.569492627
629	7/5/13 3:00 PM	3.569492627
630	7/28/13 2:00 PM	3.569492627
631	7/31/13 4:00 PM	3.569492627
632	6/26/13 8:00 PM	3.563152498
633	7/28/13 10:00 PM	3.563152498
634	8/1/13 7:00 PM	3.563152498
635	8/6/13 4:00 PM	3.563152498
636	7/1/13 1:00 PM	3.556812369
637	7/28/13 11:00 PM	3.556812369

RANK	DATE/TIME (DST)	FLOW (MGD)
638	7/1/13 2:00 PM	3.55047224
639	7/4/13 5:00 PM	3.544132111
640	7/28/13 1:00 PM	3.544132111
641	7/8/13 3:00 PM	3.537791982
642	7/28/13 11:00 AM	3.537791982
643	7/29/13 10:00 AM	3.537791982
644	8/7/13 6:00 PM	3.537791982
645	7/1/13 4:00 PM	3.531451853
646	7/4/13 4:00 PM	3.531451853
647	7/5/13 12:00 PM	3.531451853
648	8/6/13 3:00 PM	3.531451853
649	7/1/13 12:00 PM	3.525111724
650	7/29/13 12:00 PM	3.525111724
651	7/29/13 2:00 PM	3.525111724
652	8/7/13 7:00 PM	3.525111724
653	8/7/13 10:00 PM	3.525111724
654	7/4/13 9:00 PM	3.518771595
655	7/12/13 10:00 PM	3.518771595
656	8/2/13 11:00 PM	3.518771595
657	6/18/13 12:00 PM	3.512431466
658	7/3/13 5:00 PM	3.512431466
659	7/28/13 10:00 AM	3.512431466
660	7/1/13 7:00 PM	3.506091337
661	7/6/13 10:00 PM	3.506091337
662	7/6/13 7:00 PM	3.499751208
663	7/28/13 7:00 PM	3.499751208
664	7/29/13 9:00 AM	3.499751208
665	7/19/13 10:00 PM	3.48707095
666	8/7/13 5:00 PM	3.48707095

RANK	DATE/TIME (DST)	FLOW (MGD)
667	7/16/13 7:00 PM	3.480730821
668	8/8/13 5:00 PM	3.480730821
669	7/28/13 9:00 PM	3.474390692
670	8/1/13 5:00 PM	3.474390692
671	8/7/13 3:00 PM	3.474390692
672	7/8/13 10:00 PM	3.468050563
673	7/9/13 7:00 PM	3.468050563
674	7/13/13 8:00 AM	3.468050563
675	6/15/13 7:00 PM	3.461710434
676	6/18/13 8:00 AM	3.461710434
677	7/23/13 7:00 PM	3.461710434
678	7/24/13 6:00 PM	3.461710434
679	6/16/13 11:00 PM	3.455370305
680	7/27/13 1:00 PM	3.455370305
681	7/1/13 10:00 PM	3.449030176
682	8/6/13 7:00 PM	3.449030176
683	7/1/13 6:00 PM	3.442690047
684	7/29/13 1:00 PM	3.442690047
685	6/16/13 10:00 AM	3.436349918
686	7/6/13 8:00 PM	3.436349918
687	7/16/13 6:00 PM	3.436349918
688	8/6/13 9:00 PM	3.436349918
689	7/3/13 2:00 PM	3.430009789
690	7/29/13 3:00 PM	3.430009789
691	7/28/13 6:00 PM	3.42366966
692	8/7/13 9:00 AM	3.42366966
693	8/7/13 11:00 AM	3.42366966
694	7/3/13 1:00 PM	3.417329531
695	7/4/13 10:00 AM	3.404649273

2013 DWSD Contract Limit = 12.4 MGD
2012 DWSD Contract Limit = 10.76 MGD

RANK OF HOURLY FLOWS
JUNE 15, 2013 – AUGUST 12, 2013
(6:00 AM – 12:00 AM)

RANK	DATE/TIME (DST)	FLOW (MGD)	RANK	DATE/TIME (DST)	FLOW (MGD)	RANK	DATE/TIME (DST)	FLOW (MGD)
696	7/11/13 10:00 PM	3.404649273	725	7/29/13 7:00 PM	3.341247983	754	8/1/13 10:00 AM	3.290526951
697	7/21/13 7:00 AM	3.404649273	726	8/3/13 10:00 AM	3.341247983	755	6/15/13 9:00 PM	3.277846693
698	7/27/13 2:00 PM	3.404649273	727	8/12/13 11:00 PM	3.341247983	756	7/1/13 9:00 PM	3.277846693
699	7/31/13 10:00 PM	3.404649273	728	6/26/13 6:00 PM	3.334907854	757	7/27/13 11:00 PM	3.277846693
700	8/3/13 11:00 AM	3.404649273	729	7/4/13 7:00 PM	3.334907854	758	8/12/13 9:00 PM	3.277846693
701	8/6/13 10:00 PM	3.404649273	730	7/8/13 12:00 PM	3.334907854	759	7/3/13 10:00 PM	3.271506564
702	8/7/13 4:00 PM	3.404649273	731	8/1/13 9:00 PM	3.334907854	760	7/7/13 10:00 PM	3.271506564
703	7/28/13 3:00 PM	3.398309144	732	8/7/13 12:00 PM	3.334907854	761	7/8/13 4:00 PM	3.271506564
704	6/26/13 5:00 PM	3.391969015	733	8/3/13 1:00 PM	3.328567725	762	7/9/13 1:00 PM	3.271506564
705	7/1/13 8:00 PM	3.391969015	734	8/12/13 8:00 PM	3.328567725	763	7/11/13 8:00 PM	3.271506564
706	7/28/13 4:00 PM	3.391969015	735	7/1/13 5:00 PM	3.322227596	764	7/23/13 4:00 PM	3.271506564
707	8/5/13 10:00 PM	3.391969015	736	7/9/13 2:00 PM	3.322227596	765	6/15/13 10:00 PM	3.265166435
708	6/26/13 7:00 PM	3.385628886	737	7/14/13 6:00 AM	3.322227596	766	7/27/13 4:00 PM	3.265166435
709	7/2/13 9:00 PM	3.385628886	738	7/31/13 5:00 PM	3.322227596	767	8/5/13 8:00 AM	3.265166435
710	7/23/13 3:00 PM	3.385628886	739	8/6/13 1:00 PM	3.322227596	768	7/2/13 5:00 PM	3.258826306
711	8/1/13 8:00 AM	3.385628886	740	8/8/13 4:00 PM	3.322227596	769	8/6/13 8:00 PM	3.252486177
712	7/29/13 6:00 AM	3.379288757	741	8/12/13 4:00 PM	3.322227596	770	8/7/13 8:00 AM	3.246146048
713	8/7/13 10:00 AM	3.379288757	742	7/2/13 3:00 PM	3.315887467	771	8/12/13 7:00 PM	3.246146048
714	6/26/13 2:00 PM	3.372948628	743	8/6/13 2:00 PM	3.315887467	772	7/5/13 11:00 AM	3.239805919
715	7/2/13 10:00 PM	3.372948628	744	6/15/13 8:00 PM	3.309547338	773	7/9/13 5:00 PM	3.239805919
716	8/1/13 8:00 PM	3.372948628	745	7/4/13 8:00 PM	3.309547338	774	8/12/13 6:00 PM	3.239805919
717	7/2/13 6:00 PM	3.366608499	746	7/9/13 4:00 PM	3.309547338	775	7/29/13 4:00 PM	3.23346579
718	7/9/13 10:00 PM	3.366608499	747	7/11/13 9:00 PM	3.309547338	776	7/8/13 11:00 AM	3.227125661
719	6/27/13 7:00 PM	3.36026837	748	7/9/13 3:00 PM	3.303207209	777	6/26/13 3:00 PM	3.220785532
720	8/4/13 9:00 AM	3.353928241	749	7/3/13 3:00 PM	3.29686708	778	7/7/13 3:00 PM	3.220785532
721	6/15/13 11:00 PM	3.347588112	750	7/28/13 5:00 PM	3.29686708	779	8/3/13 12:00 PM	3.220785532
722	6/27/13 8:00 PM	3.347588112	751	7/8/13 6:00 PM	3.290526951	780	8/12/13 2:00 PM	3.220785532
723	7/6/13 9:00 PM	3.347588112	752	7/8/13 9:00 PM	3.290526951	781	7/7/13 9:00 PM	3.214445403
724	7/23/13 6:00 PM	3.341247983	753	7/23/13 5:00 PM	3.290526951	782	7/11/13 5:00 PM	3.208105274

2013 DWSD Contract Limit = 12.4 MGD
2012 DWSD Contract Limit = 10.76 MGD

**RANK OF HOURLY FLOWS
JUNE 15, 2013 – AUGUST 12, 2013
(6:00 AM – 12:00 AM)**

RANK	DATE/TIME (DST)	FLOW (MGD)	RANK	DATE/TIME (DST)	FLOW (MGD)	RANK	DATE/TIME (DST)	FLOW (MGD)
783	6/26/13 4:00 PM	3.201765145	812	7/9/13 9:00 PM	3.125683597	841	7/7/13 11:00 AM	3.04326192
784	7/9/13 12:00 PM	3.195425016	813	7/11/13 6:00 PM	3.125683597	842	8/1/13 7:00 AM	3.04326192
785	7/14/13 7:00 AM	3.195425016	814	7/29/13 6:00 PM	3.119343468	843	7/7/13 8:00 PM	3.036921791
786	7/27/13 3:00 PM	3.195425016	815	8/12/13 5:00 PM	3.119343468	844	6/21/13 7:00 AM	3.030581662
787	6/27/13 10:00 PM	3.189084887	816	7/7/13 6:00 PM	3.113003339	845	8/6/13 12:00 PM	3.030581662
788	7/8/13 5:00 PM	3.189084887	817	7/11/13 7:00 PM	3.113003339	846	7/11/13 1:00 PM	3.017901404
789	7/27/13 5:00 PM	3.189084887	818	8/12/13 10:00 PM	3.113003339	847	7/11/13 2:00 PM	3.017901404
790	6/27/13 9:00 PM	3.182744758	819	7/9/13 11:00 AM	3.10666321	848	7/7/13 7:00 PM	3.011561275
791	7/28/13 9:00 AM	3.182744758	820	7/27/13 7:00 AM	3.100323081	849	7/26/13 8:00 AM	3.011561275
792	7/31/13 7:00 PM	3.182744758	821	7/8/13 7:00 PM	3.093982952	850	6/27/13 7:00 AM	3.005221146
793	6/15/13 8:00 AM	3.176404629	822	7/9/13 6:00 PM	3.093982952	851	7/5/13 9:00 AM	3.005221146
794	6/29/13 10:00 PM	3.176404629	823	7/8/13 8:00 PM	3.087642823	852	8/8/13 3:00 PM	2.998881017
795	7/7/13 2:00 PM	3.176404629	824	7/27/13 7:00 PM	3.087642823	853	7/10/13 2:00 PM	2.992540888
796	7/31/13 6:00 PM	3.176404629	825	6/27/13 9:00 AM	3.081302694	854	6/29/13 5:00 PM	2.986200759
797	7/31/13 9:00 PM	3.176404629	826	7/10/13 8:00 PM	3.081302694	855	6/29/13 9:00 PM	2.986200759
798	7/2/13 2:00 PM	3.1700645	827	7/10/13 10:00 PM	3.081302694	856	8/2/13 9:00 PM	2.986200759
799	7/2/13 4:00 PM	3.1700645	828	7/10/13 9:00 PM	3.074962565	857	8/2/13 10:00 PM	2.986200759
800	7/8/13 8:00 AM	3.163724371	829	7/31/13 8:00 PM	3.068622436	858	6/29/13 1:00 PM	2.97986063
801	8/6/13 8:00 AM	3.163724371	830	6/28/13 6:00 PM	3.062282307	859	7/9/13 8:00 PM	2.97986063
802	7/22/13 8:00 AM	3.157384242	831	7/7/13 1:00 PM	3.062282307	860	7/12/13 11:00 AM	2.97986063
803	7/5/13 6:00 AM	3.151044113	832	7/10/13 3:00 PM	3.062282307	861	8/6/13 9:00 AM	2.97986063
804	7/27/13 10:00 PM	3.151044113	833	7/11/13 4:00 PM	3.055942178	862	7/12/13 10:00 AM	2.973520501
805	8/1/13 10:00 PM	3.151044113	834	7/27/13 6:00 PM	3.055942178	863	7/7/13 5:00 PM	2.967180372
806	7/10/13 7:00 PM	3.144703984	835	6/27/13 8:00 AM	3.049602049	864	6/28/13 7:00 PM	2.960840243
807	7/10/13 6:00 PM	3.138363855	836	7/10/13 1:00 PM	3.049602049	865	6/29/13 7:00 PM	2.960840243
808	6/27/13 6:00 PM	3.132023726	837	8/1/13 9:00 AM	3.049602049	866	7/7/13 12:00 PM	2.960840243
809	7/11/13 3:00 PM	3.132023726	838	8/2/13 7:00 PM	3.049602049	867	7/27/13 8:00 PM	2.960840243
810	8/3/13 9:00 AM	3.132023726	839	8/6/13 7:00 AM	3.049602049	868	8/2/13 8:00 PM	2.960840243
811	7/5/13 10:00 AM	3.125683597	840	6/29/13 6:00 PM	3.04326192	869	8/6/13 11:00 AM	2.960840243

2013 DWSD Contract Limit = 12.4 MGD
2012 DWSD Contract Limit = 10.76 MGD

RANK OF HOURLY FLOWS
JUNE 15, 2013 – AUGUST 12, 2013
(6:00 AM – 12:00 AM)

RANK	DATE/TIME (DST)	FLOW (MGD)	RANK	DATE/TIME (DST)	FLOW (MGD)	RANK	DATE/TIME (DST)	FLOW (MGD)
870	6/28/13 9:00 PM	2.954500114	899	7/3/13 11:00 AM	2.840377792	928	6/28/13 2:00 PM	2.681874567
871	6/29/13 3:00 PM	2.954500114	900	7/8/13 6:00 AM	2.840377792	929	8/4/13 8:00 AM	2.675534438
872	7/29/13 5:00 PM	2.954500114	901	7/11/13 12:00 PM	2.840377792	930	6/20/13 7:00 AM	2.669194309
873	6/29/13 2:00 PM	2.948159985	902	7/9/13 10:00 AM	2.827697534	931	7/2/13 10:00 AM	2.669194309
874	7/6/13 7:00 AM	2.948159985	903	7/27/13 9:00 PM	2.827697534	932	6/21/13 6:00 AM	2.66285418
875	8/6/13 10:00 AM	2.948159985	904	7/10/13 12:00 PM	2.808677147	933	6/28/13 1:00 PM	2.650173922
876	7/8/13 7:00 AM	2.941819856	905	8/2/13 4:00 PM	2.808677147	934	7/4/13 8:00 AM	2.643833793
877	7/2/13 1:00 PM	2.935479727	906	6/29/13 11:00 AM	2.802337018	935	7/8/13 9:00 AM	2.643833793
878	7/7/13 4:00 PM	2.929139598	907	7/8/13 10:00 AM	2.783316631	936	6/29/13 10:00 AM	2.637493664
879	6/28/13 3:00 PM	2.922799469	908	7/11/13 11:00 AM	2.783316631	937	6/28/13 11:00 AM	2.618473277
880	6/28/13 4:00 PM	2.91645934	909	7/28/13 8:00 AM	2.783316631	938	7/19/13 7:00 AM	2.612133148
881	6/28/13 8:00 PM	2.91645934	910	8/2/13 6:00 AM	2.770636373	939	7/19/13 8:00 AM	2.612133148
882	6/29/13 12:00 PM	2.91645934	911	8/2/13 2:00 PM	2.770636373	940	7/6/13 6:00 AM	2.586772632
883	8/2/13 3:00 PM	2.910119211	912	6/27/13 4:00 PM	2.764296244	941	7/12/13 8:00 AM	2.586772632
884	6/28/13 5:00 PM	2.903779082	913	7/4/13 9:00 AM	2.764296244	942	6/15/13 7:00 AM	2.574092374
885	6/29/13 4:00 PM	2.903779082	914	6/16/13 9:00 AM	2.757956115	943	6/28/13 8:00 AM	2.574092374
886	7/3/13 12:00 PM	2.878418566	915	7/10/13 11:00 AM	2.757956115	944	7/10/13 10:00 AM	2.574092374
887	7/10/13 4:00 PM	2.878418566	916	8/2/13 5:00 PM	2.757956115	945	7/3/13 10:00 AM	2.555071987
888	6/18/13 6:00 AM	2.872078437	917	7/2/13 11:00 AM	2.745275857	946	7/15/13 7:00 AM	2.548731858
889	7/5/13 8:00 AM	2.872078437	918	8/8/13 2:00 PM	2.745275857	947	8/3/13 8:00 AM	2.542391729
890	7/10/13 5:00 PM	2.872078437	919	7/2/13 12:00 PM	2.738935728	948	6/28/13 6:00 AM	2.529711471
891	8/2/13 11:00 AM	2.872078437	920	7/15/13 8:00 AM	2.738935728	949	6/28/13 9:00 AM	2.529711471
892	8/2/13 6:00 PM	2.872078437	921	7/3/13 8:00 AM	2.732595599	950	7/3/13 9:00 AM	2.529711471
893	6/28/13 10:00 PM	2.865738308	922	6/27/13 5:00 PM	2.72625547	951	6/25/13 7:00 AM	2.523371342
894	8/2/13 9:00 AM	2.859398179	923	6/27/13 6:00 AM	2.713575212	952	7/3/13 7:00 AM	2.523371342
895	8/2/13 10:00 AM	2.859398179	924	8/8/13 1:00 PM	2.707235083	953	8/8/13 12:00 PM	2.517031213
896	8/2/13 1:00 PM	2.859398179	925	8/2/13 12:00 PM	2.694554825	954	7/11/13 10:00 AM	2.510691084
897	7/5/13 7:00 AM	2.846717921	926	7/7/13 10:00 AM	2.688214696	955	6/28/13 7:00 AM	2.491670697
898	6/29/13 8:00 PM	2.840377792	927	7/12/13 9:00 AM	2.688214696	956	7/9/13 8:00 AM	2.491670697

2013 DWSD Contract Limit = 12.4 MGD
2012 DWSD Contract Limit = 10.76 MGD

RANK OF HOURLY FLOWS
JUNE 15, 2013 – AUGUST 12, 2013
(6:00 AM – 12:00 AM)

RANK	DATE/TIME (DST)	FLOW (MGD)
957	7/9/13 7:00 AM	2.478990439
958	7/2/13 8:00 AM	2.47265031
959	7/15/13 1:00 PM	2.47265031
960	8/8/13 11:00 AM	2.47265031
961	6/16/13 8:00 AM	2.459970052
962	7/2/13 9:00 AM	2.453629923
963	7/12/13 7:00 AM	2.453629923
964	7/4/13 7:00 AM	2.434609536
965	7/9/13 9:00 AM	2.428269407
966	7/13/13 7:00 AM	2.428269407
967	8/8/13 6:00 AM	2.428269407
968	7/10/13 9:00 AM	2.421929278
969	8/8/13 7:00 AM	2.415589149
970	6/28/13 12:00 PM	2.396568762
971	7/19/13 6:00 AM	2.396568762
972	8/12/13 8:00 AM	2.392341988
973	6/17/13 10:00 AM	2.364868117
974	7/11/13 9:00 AM	2.364868117
975	7/7/13 9:00 AM	2.339507601
976	8/8/13 10:00 AM	2.326827343
977	8/8/13 8:00 AM	2.301466827
978	7/25/13 6:00 AM	2.288786569
979	7/2/13 7:00 AM	2.28244644
980	6/25/13 6:00 AM	2.263426053
981	6/22/13 7:00 AM	2.250745795
982	7/20/13 7:00 AM	2.250745795
983	7/11/13 8:00 AM	2.238065537
984	7/10/13 8:00 AM	2.231725408
985	6/17/13 11:00 AM	2.225385279

RANK	DATE/TIME (DST)	FLOW (MGD)
986	8/10/13 7:00 AM	2.212705021
987	6/20/13 6:00 AM	2.193684634
988	7/15/13 6:00 AM	2.187344505
989	7/28/13 7:00 AM	2.161983989
990	8/9/13 8:00 AM	2.161983989
991	7/7/13 7:00 AM	2.142963602
992	8/8/13 9:00 AM	2.136623473
993	6/23/13 7:00 AM	2.130283344
994	7/11/13 7:00 AM	2.130283344
995	6/29/13 9:00 AM	2.117603086
996	7/10/13 7:00 AM	2.117603086
997	7/18/13 8:00 AM	2.117603086
998	7/30/13 6:00 AM	2.104922828
999	7/26/13 6:00 AM	2.085902441
1000	7/22/13 6:00 AM	2.073222183
1001	7/7/13 6:00 AM	2.02884128
1002	6/26/13 6:00 AM	2.016161022
1003	6/22/13 6:00 AM	1.990800506
1004	7/7/13 8:00 AM	1.984460377
1005	7/3/13 6:00 AM	1.978120248
1006	8/10/13 6:00 AM	1.978120248
1007	6/25/13 11:00 AM	1.971780119
1008	8/12/13 6:00 AM	1.959099861
1009	8/7/13 6:00 AM	1.946419603
1010	7/16/13 8:00 AM	1.889358442
1011	7/17/13 6:00 AM	1.889358442
1012	7/18/13 7:00 AM	1.883018313
1013	6/15/13 6:00 AM	1.851317668
1014	7/12/13 6:00 AM	1.844977539

RANK	DATE/TIME (DST)	FLOW (MGD)
1015	7/28/13 6:00 AM	1.844977539
1016	7/26/13 7:00 AM	1.825957152
1017	6/16/13 7:00 AM	1.813276894
1018	6/23/13 6:00 AM	1.813276894
1019	7/27/13 6:00 AM	1.794256507
1020	8/11/13 8:00 AM	1.77523612
1021	7/10/13 6:00 AM	1.762555862
1022	7/2/13 6:00 AM	1.756215733
1023	7/16/13 7:00 AM	1.749875604
1024	8/5/13 6:00 AM	1.692814443
1025	7/15/13 3:00 PM	1.673794056
1026	7/4/13 6:00 AM	1.667453927
1027	7/18/13 6:00 AM	1.667453927
1028	8/3/13 7:00 AM	1.661113798
1029	7/17/13 7:00 AM	1.64843354
1030	7/22/13 7:00 AM	1.642093411
1031	7/13/13 6:00 AM	1.629413153
1032	6/29/13 8:00 AM	1.610392766
1033	7/24/13 6:00 AM	1.578692121
1034	8/5/13 7:00 AM	1.540651347
1035	7/9/13 6:00 AM	1.515290831
1036	8/6/13 6:00 AM	1.508950702
1037	7/24/13 7:00 AM	1.483590186
1038	7/31/13 6:00 AM	1.445549412
1039	8/12/13 7:00 AM	1.39482838
1040	6/16/13 6:00 AM	1.363127735
1041	7/16/13 6:00 AM	1.337767219
1042	7/11/13 6:00 AM	1.287046187
1043	7/31/13 7:00 AM	1.274365929

2013 DWSD Contract Limit = 12.4 MGD
2012 DWSD Contract Limit = 10.76 MGD

RANK OF HOURLY FLOWS
JUNE 15, 2013 – AUGUST 12, 2013
(6:00 AM – 12:00 AM)

RANK	DATE/TIME (DST)	FLOW (MGD)
1044	7/21/13 6:00 AM	1.249005413
1045	8/7/13 7:00 AM	1.229985026
1046	8/4/13 7:00 AM	1.160243607
1047	7/15/13 10:00 PM	1.147563349
1048	8/9/13 6:00 AM	1.134883091
1049	8/9/13 7:00 AM	1.071481801
1050	7/23/13 7:00 AM	1.046121285
1051	8/3/13 6:00 AM	0.88761806
1052	7/23/13 6:00 AM	0.786175996
1053	8/11/13 6:00 AM	0.686847287
1054	7/20/13 6:00 AM	0.665713545
1055	6/29/13 7:00 AM	0.602312255
1056	8/4/13 6:00 AM	0.595972126
1057	6/29/13 6:00 AM	0.551591223
1058	8/11/13 7:00 AM	0.545251094
1059	7/15/13 2:00 PM	0.488189933
1060	7/15/13 8:00 PM	0
1061	7/15/13 9:00 PM	0

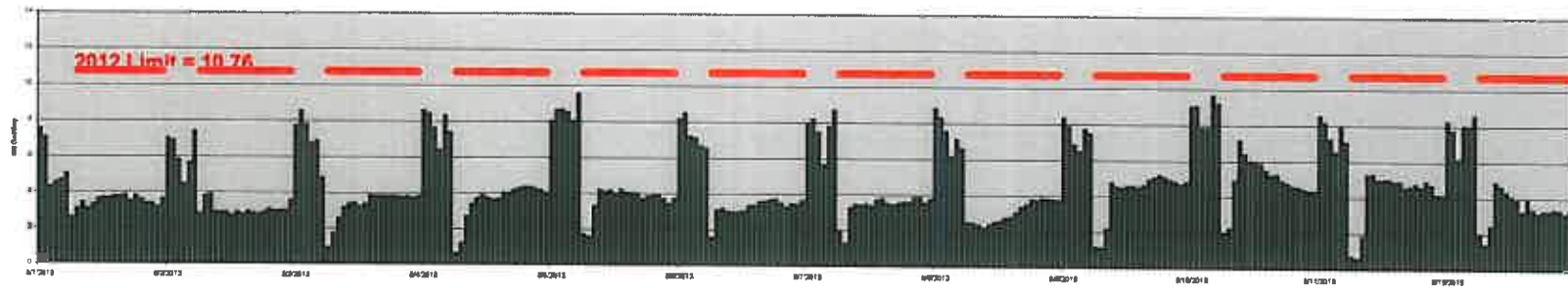
25

2013 DWSD Contract Limit = 12.4 MGD
 2012 DWSD Contract Limit = 10.76 MGD

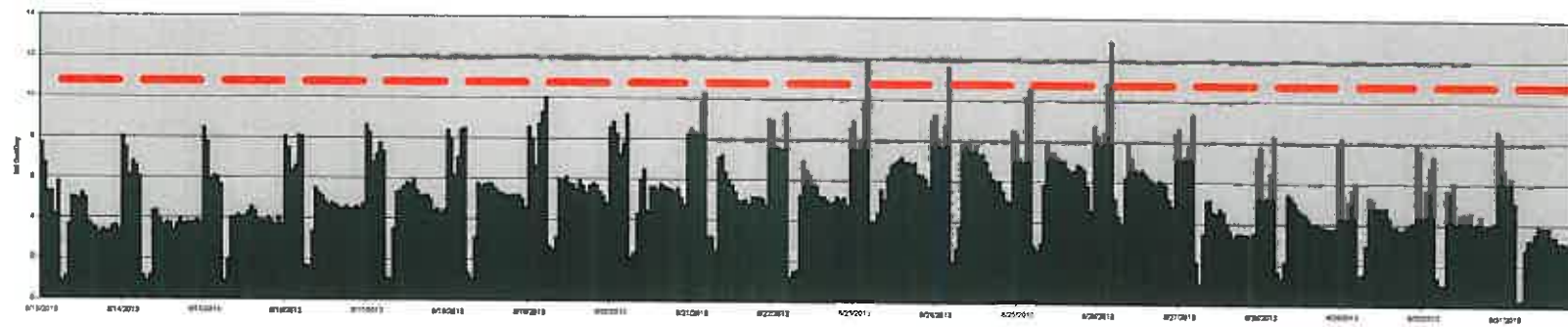
**RANK OF HOURLY FLOWS
JUNE 15, 2013 – AUGUST 12, 2013
(6:00 AM – 12:00 AM)**

ATTACHMENT 2
Daily Water Consumption

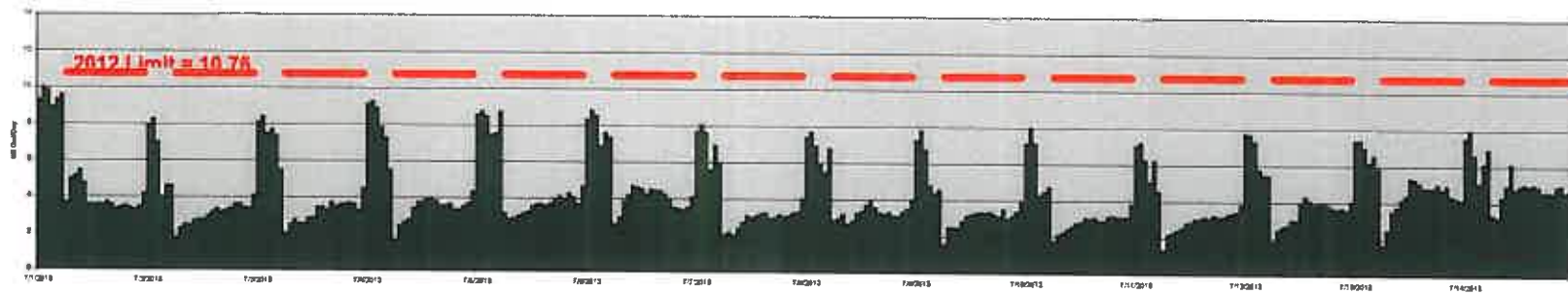
2013
August 1 - August 12



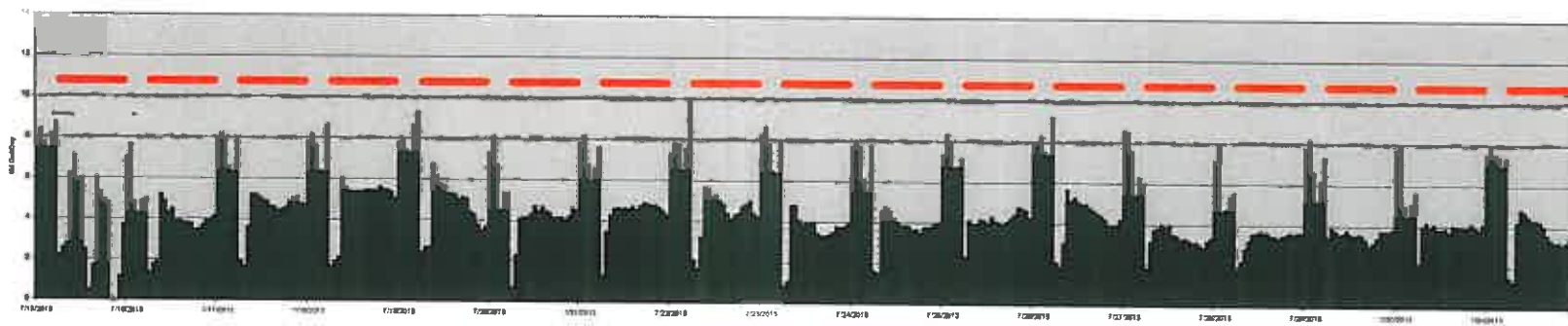
2013
August 13 - August 31



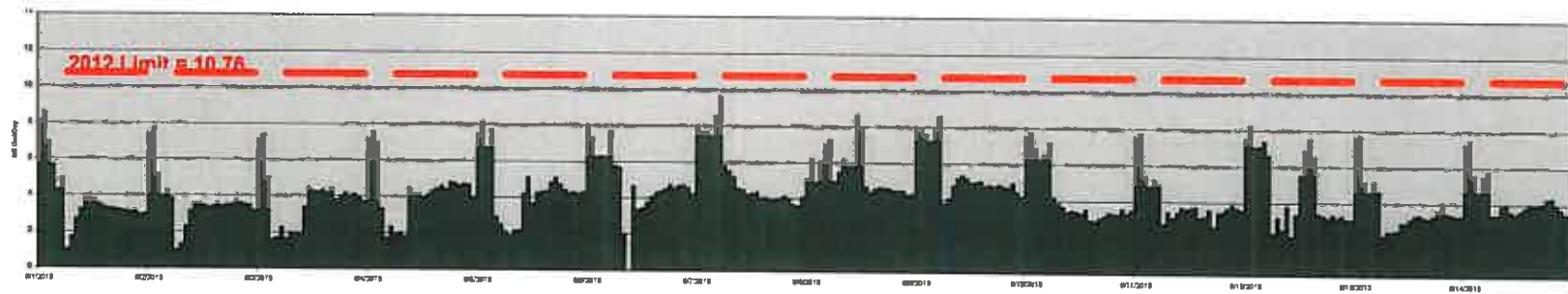
2013
July 1 - July 14



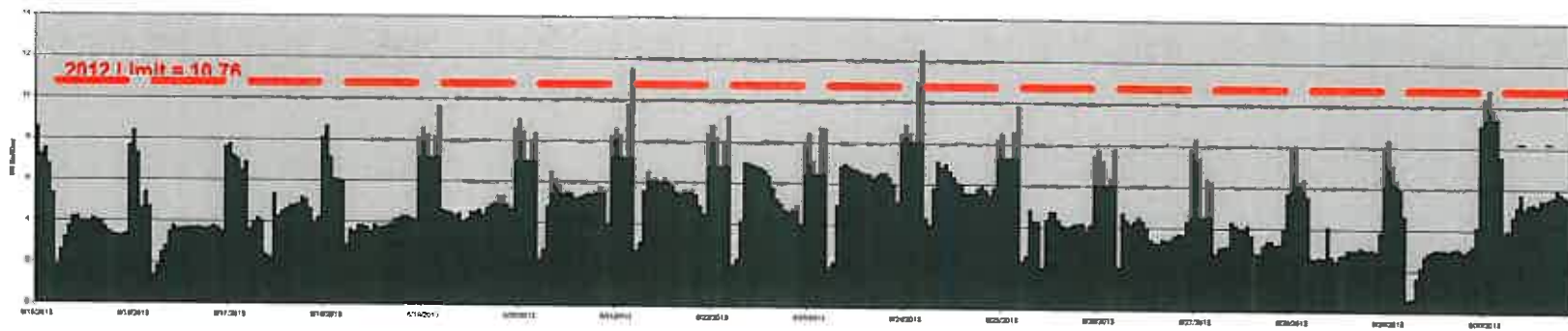
2013
July 15 - July 31



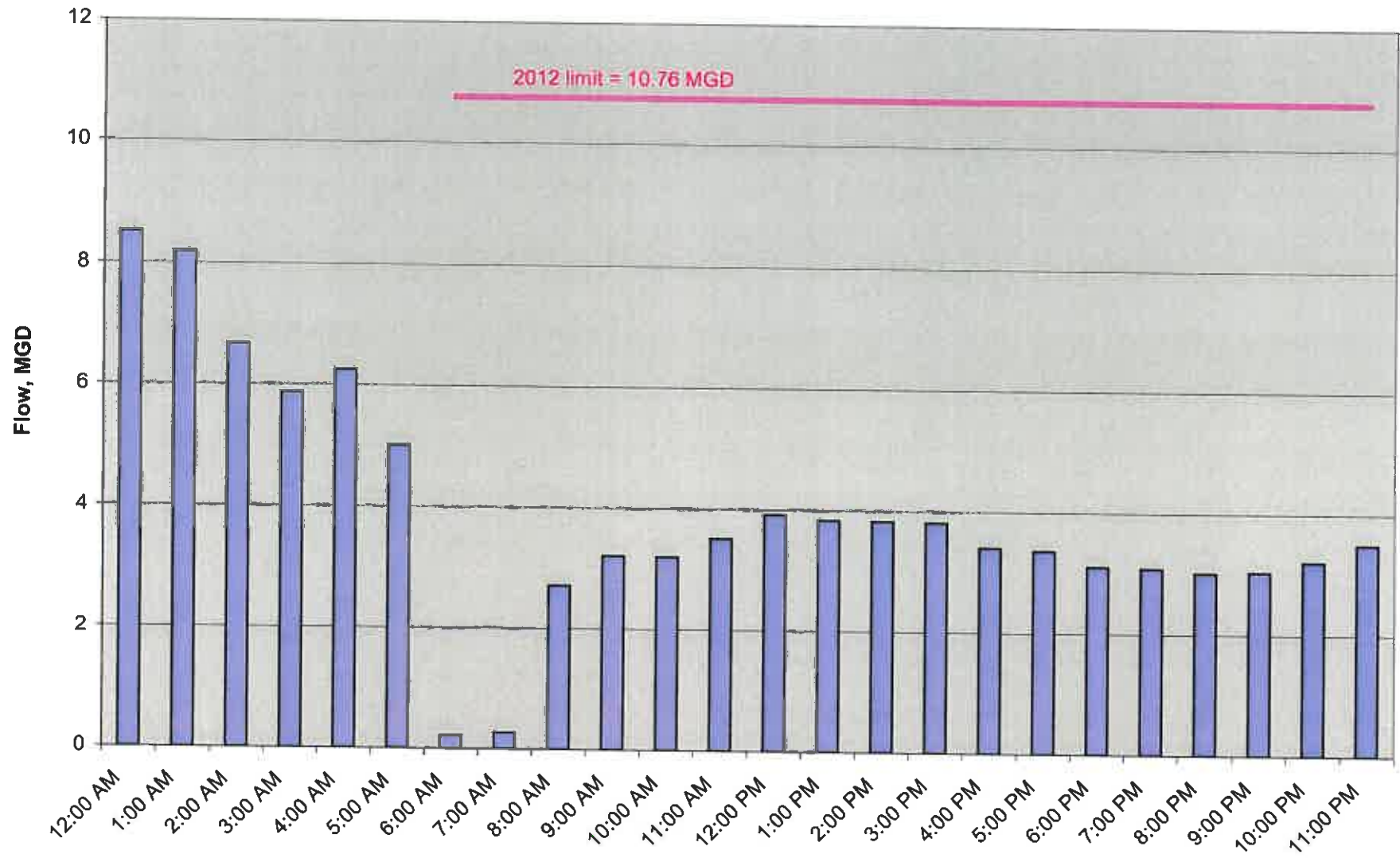
2013
June 1 - June 14



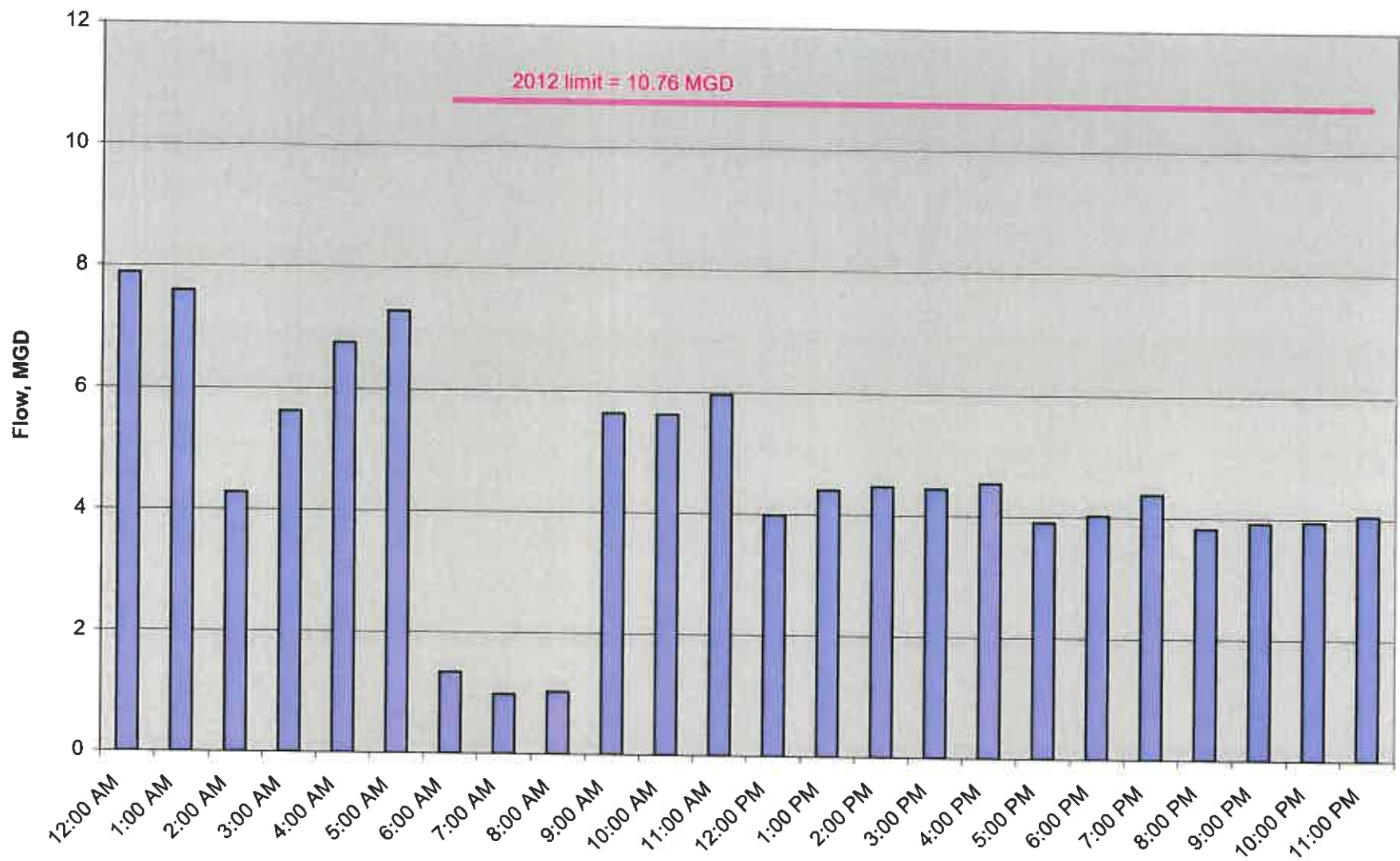
2013
June 15* - June 30



8/31/2013

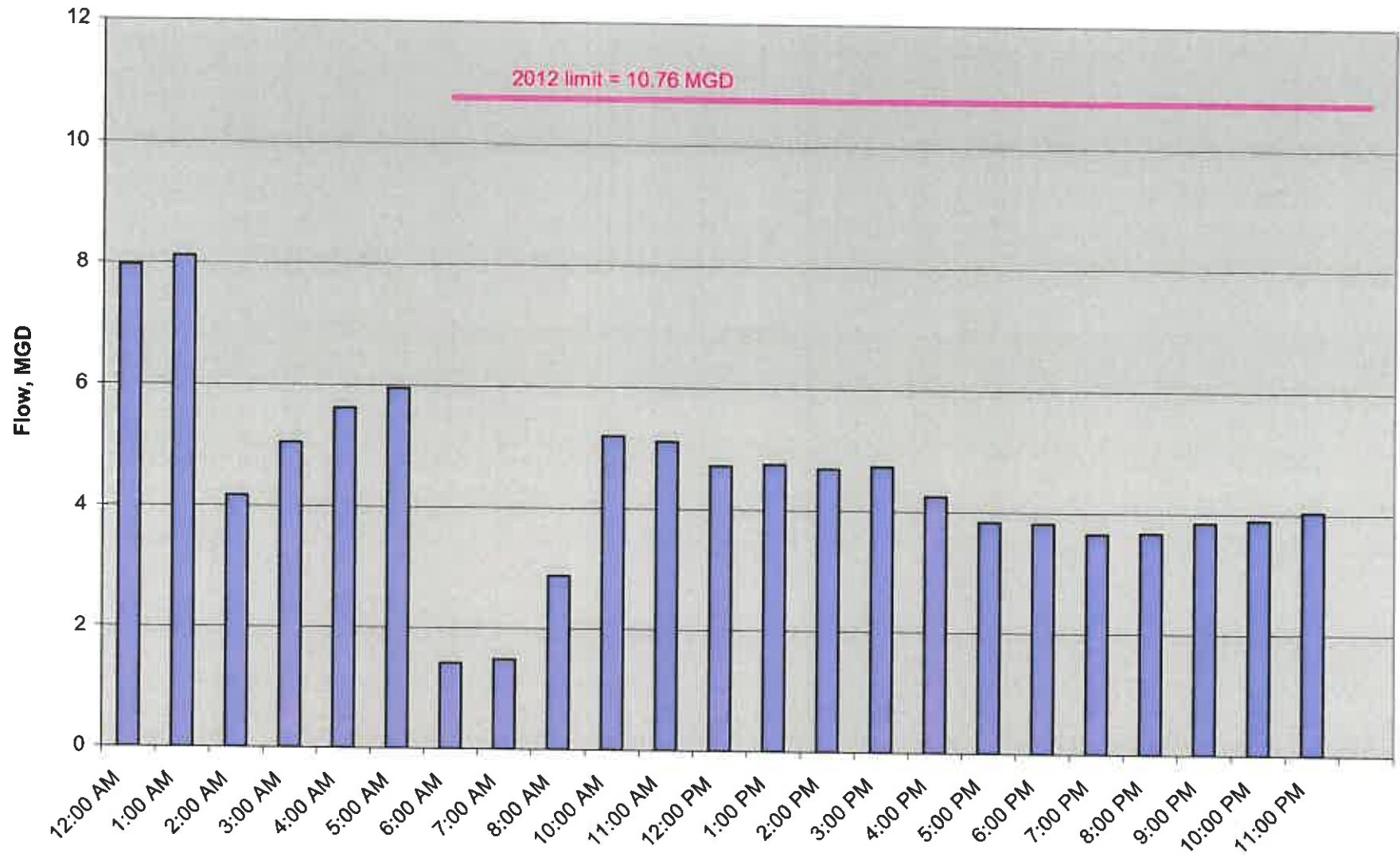


8/30/2013

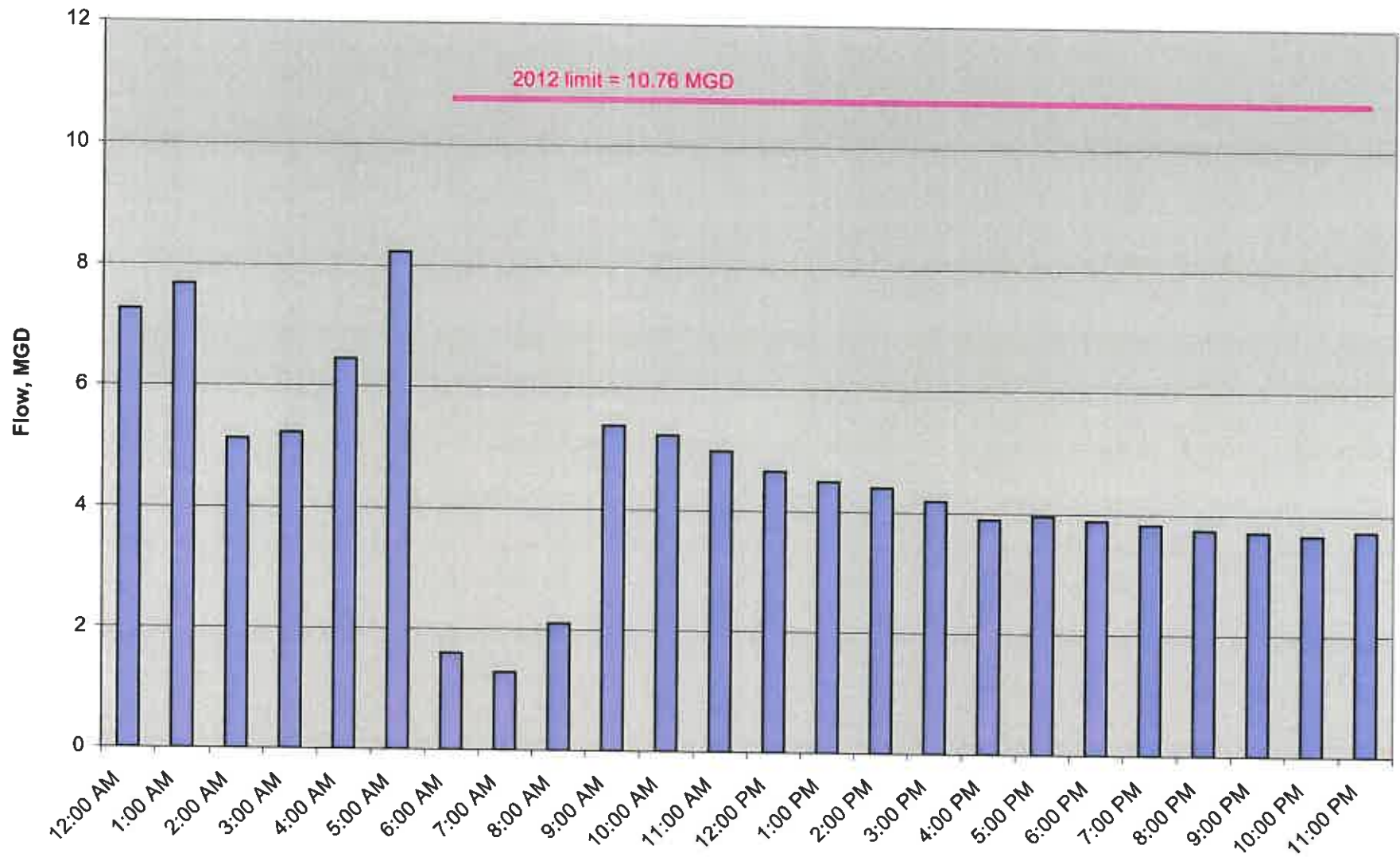


8/29/2013

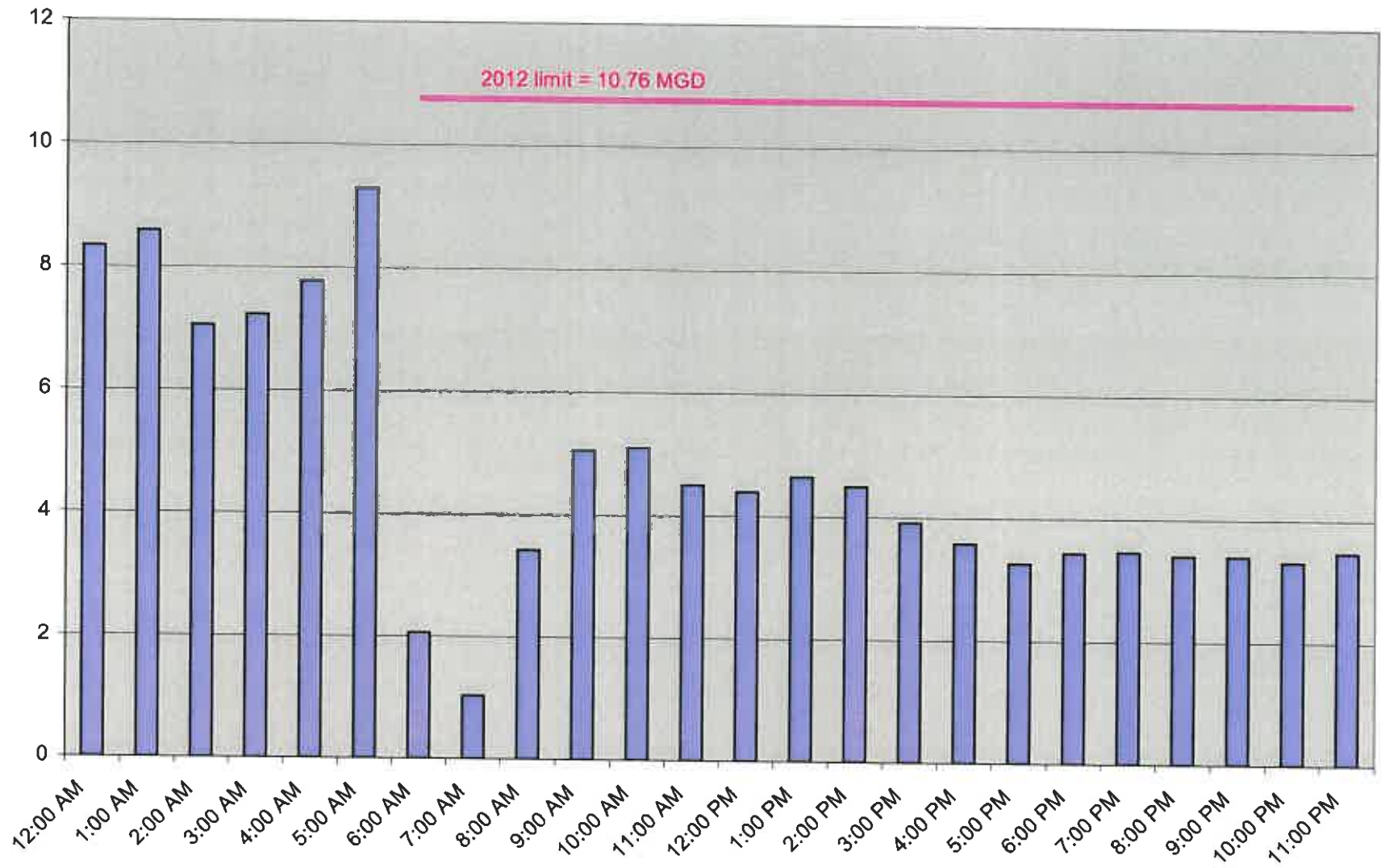
33



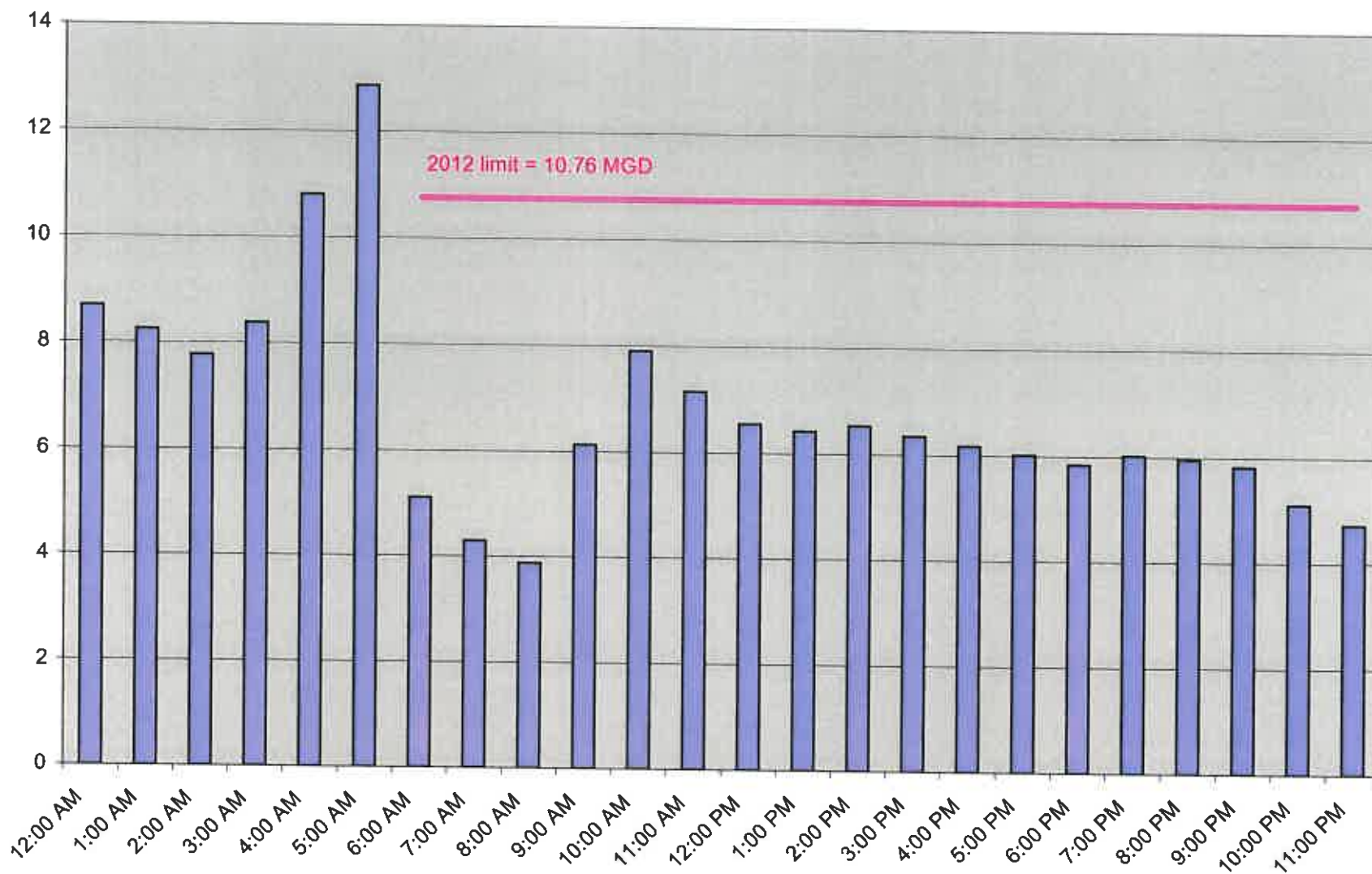
8/28/2013



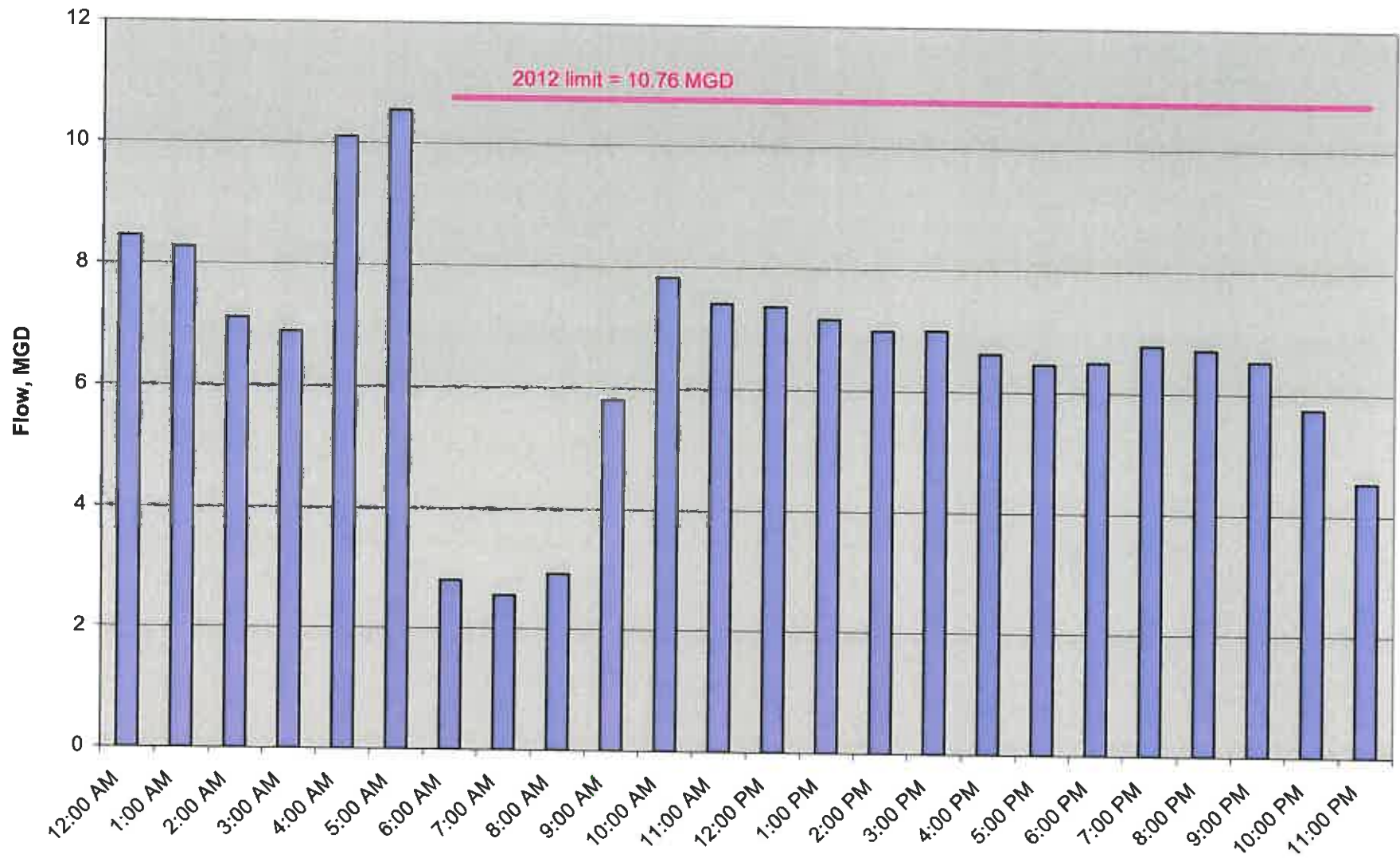
8/27/2013



8/26/2013

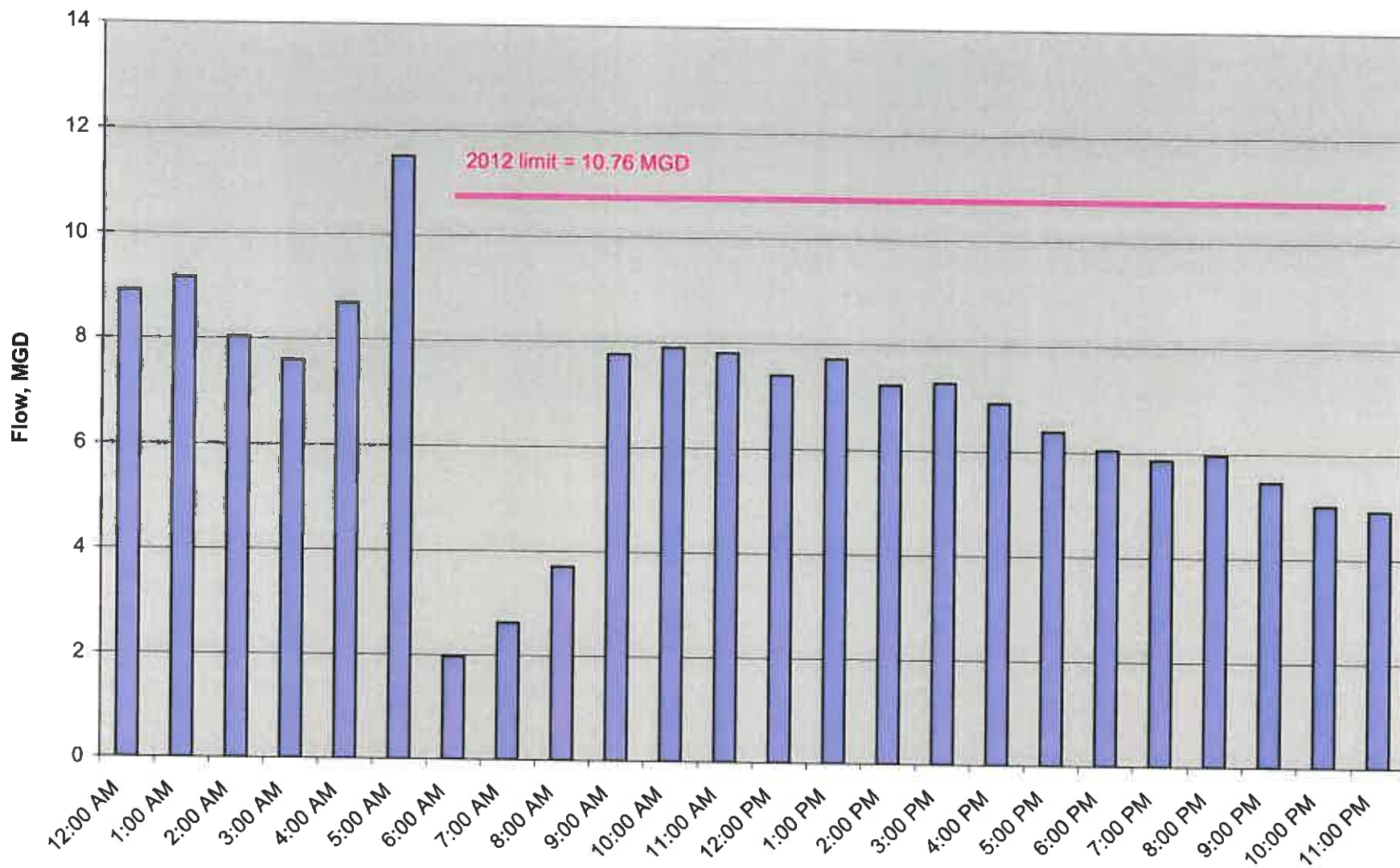


8/25/2013

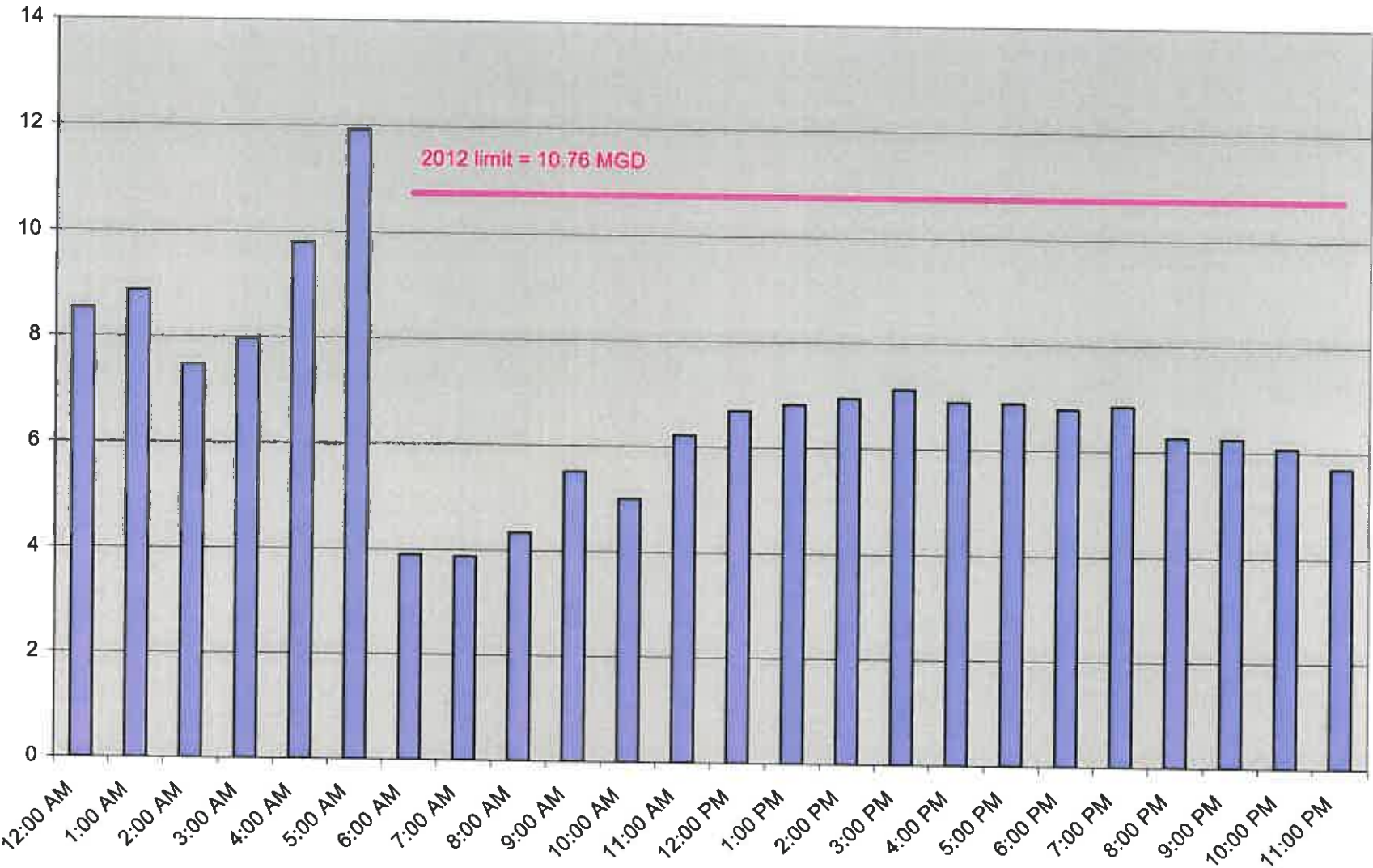


8/24/2013

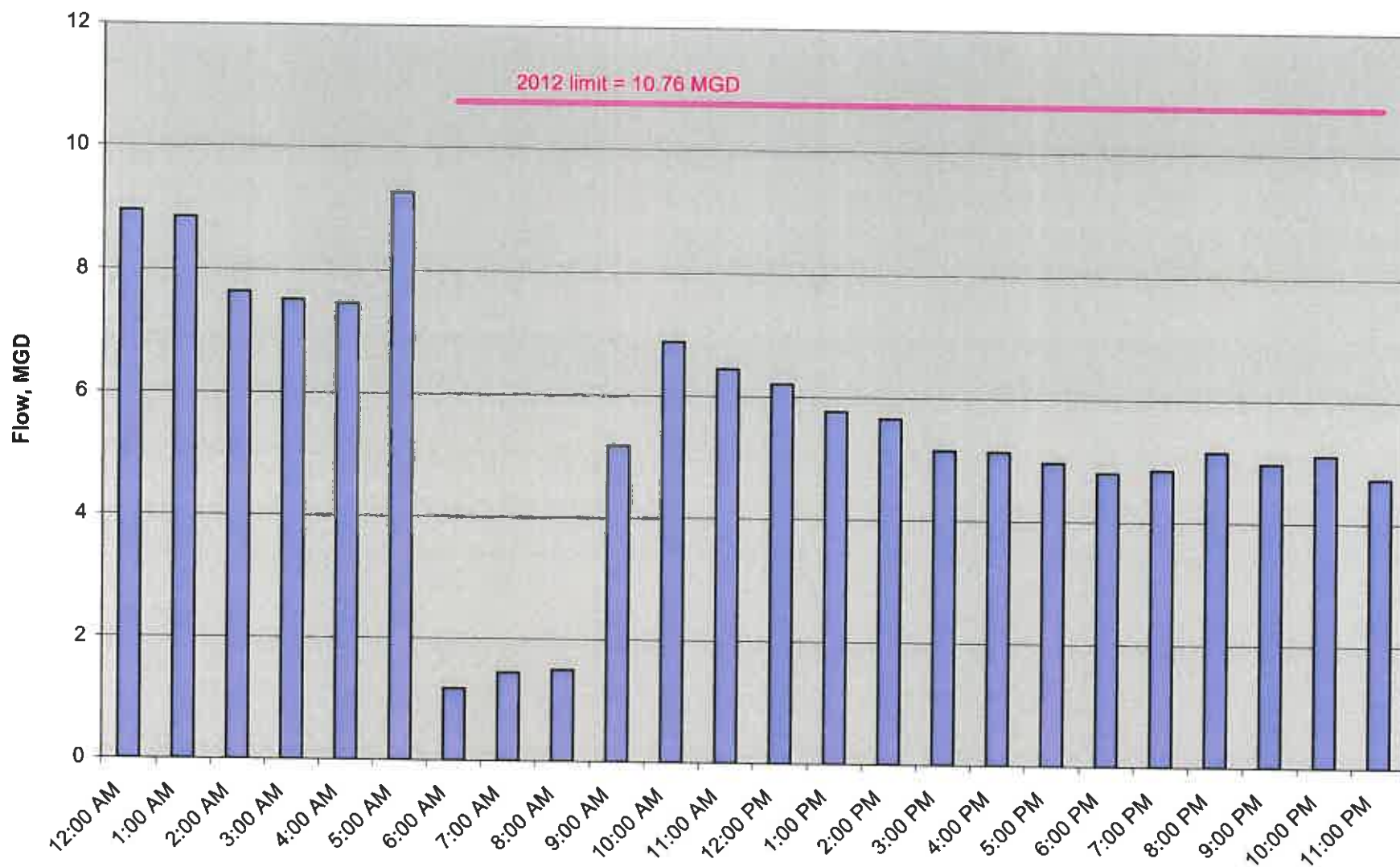
88



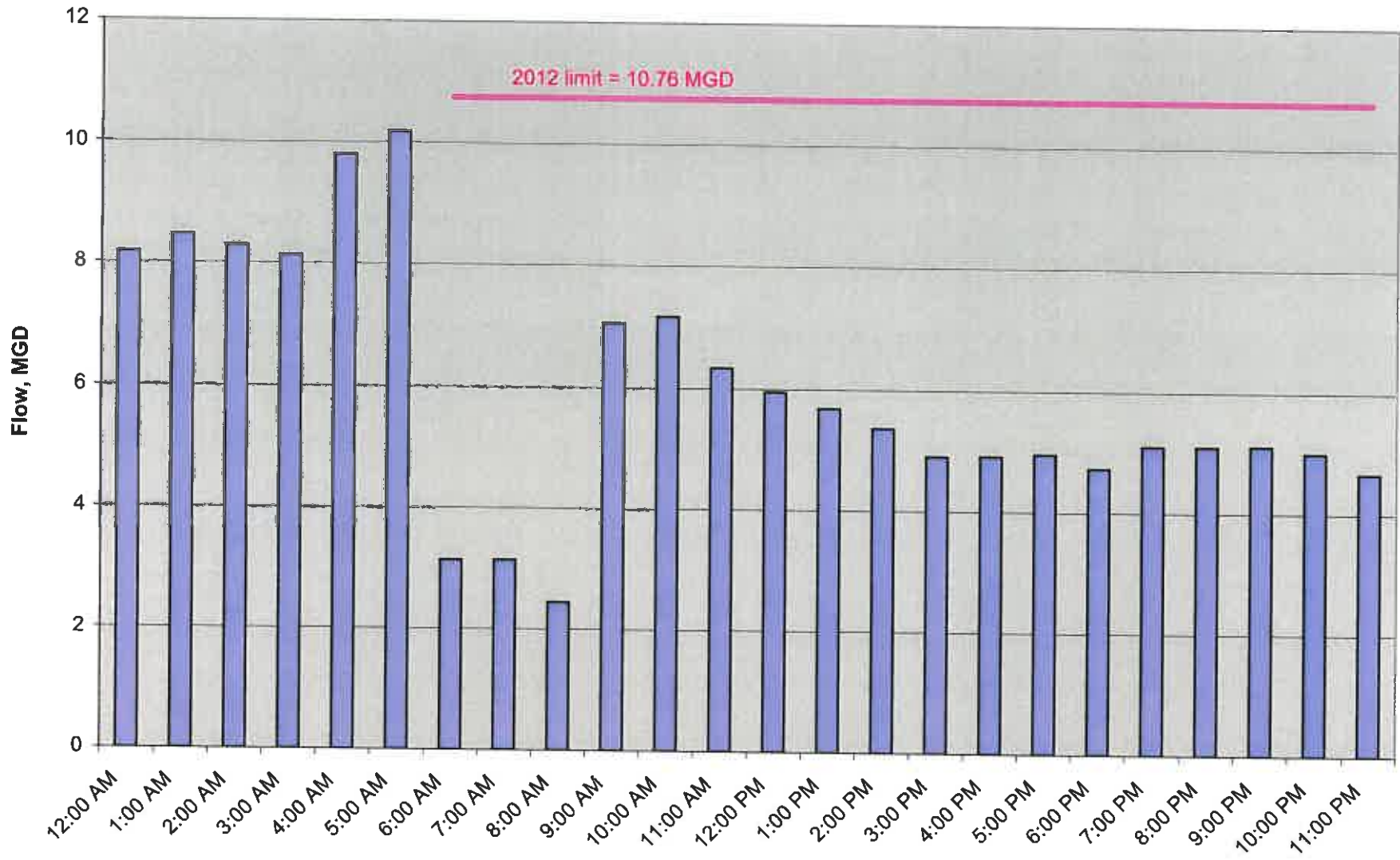
8/23/2013



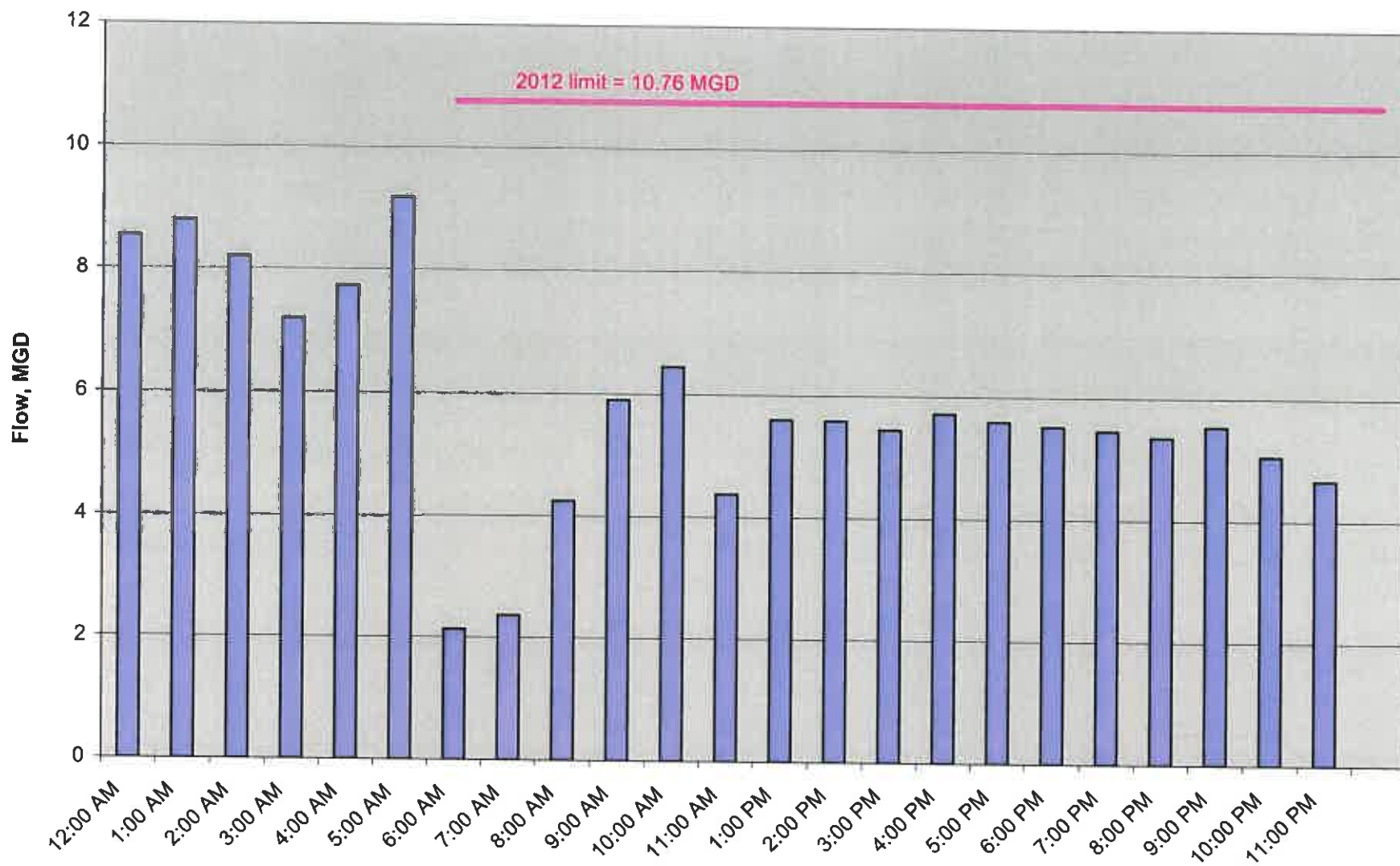
8/22/2013



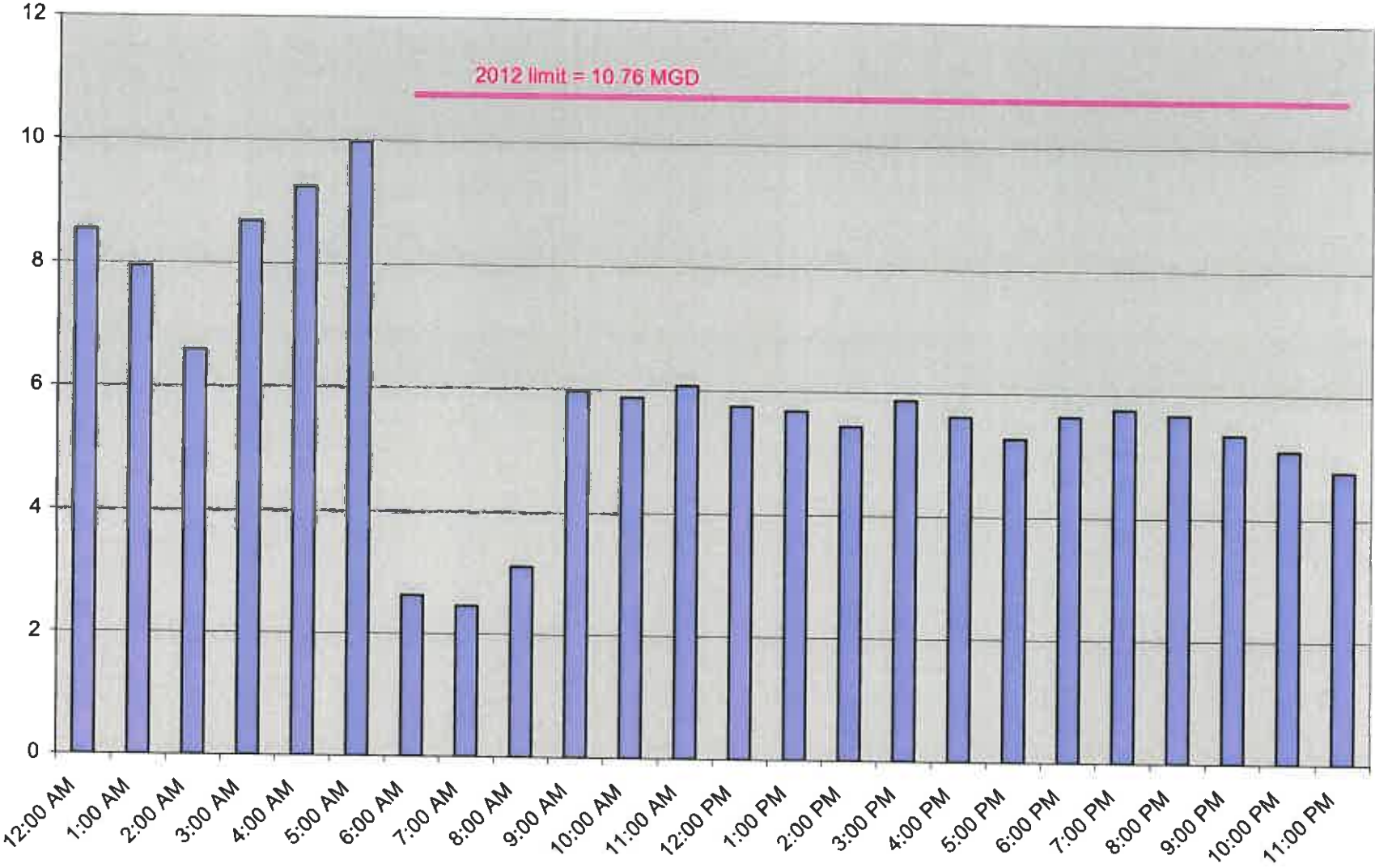
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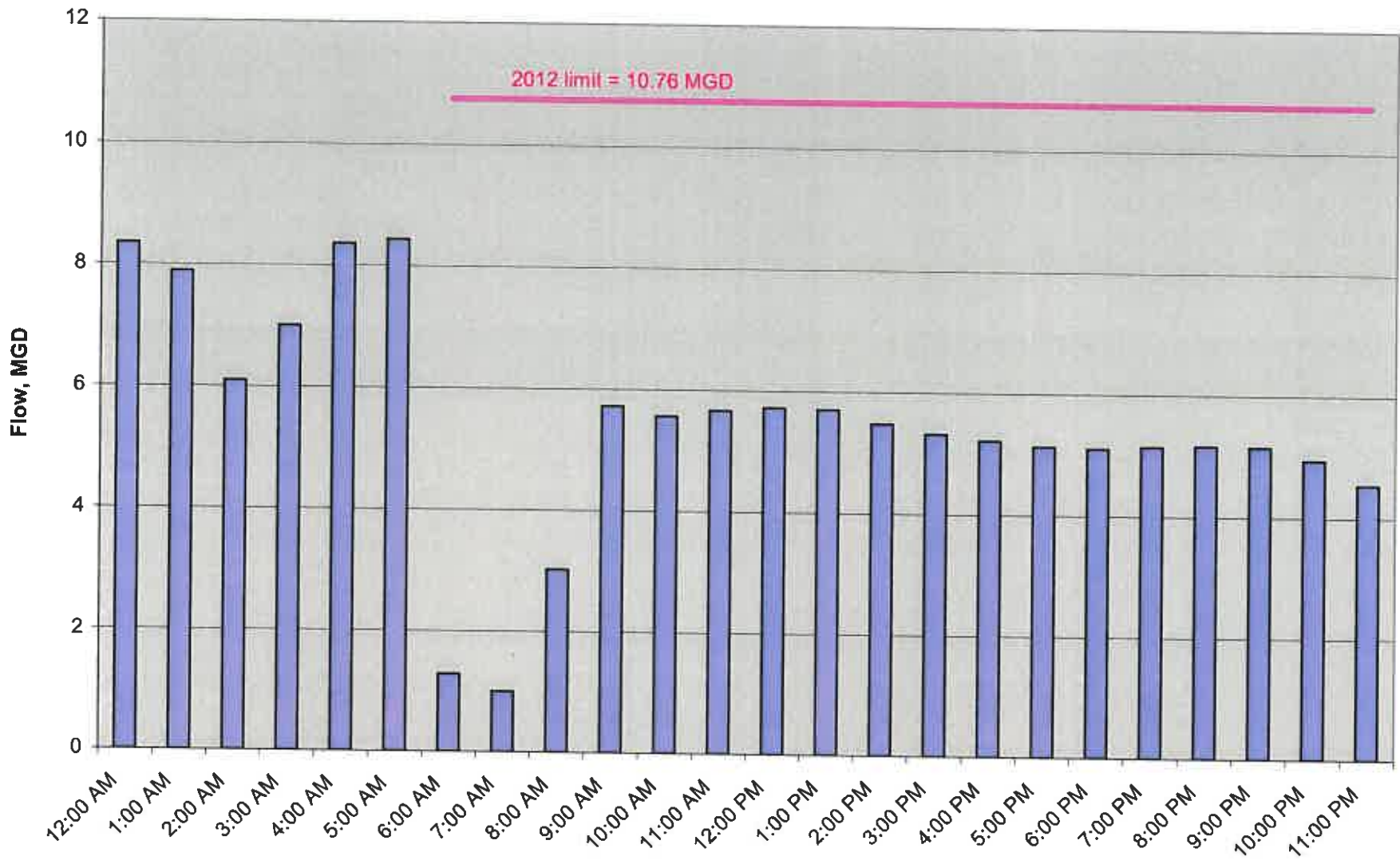
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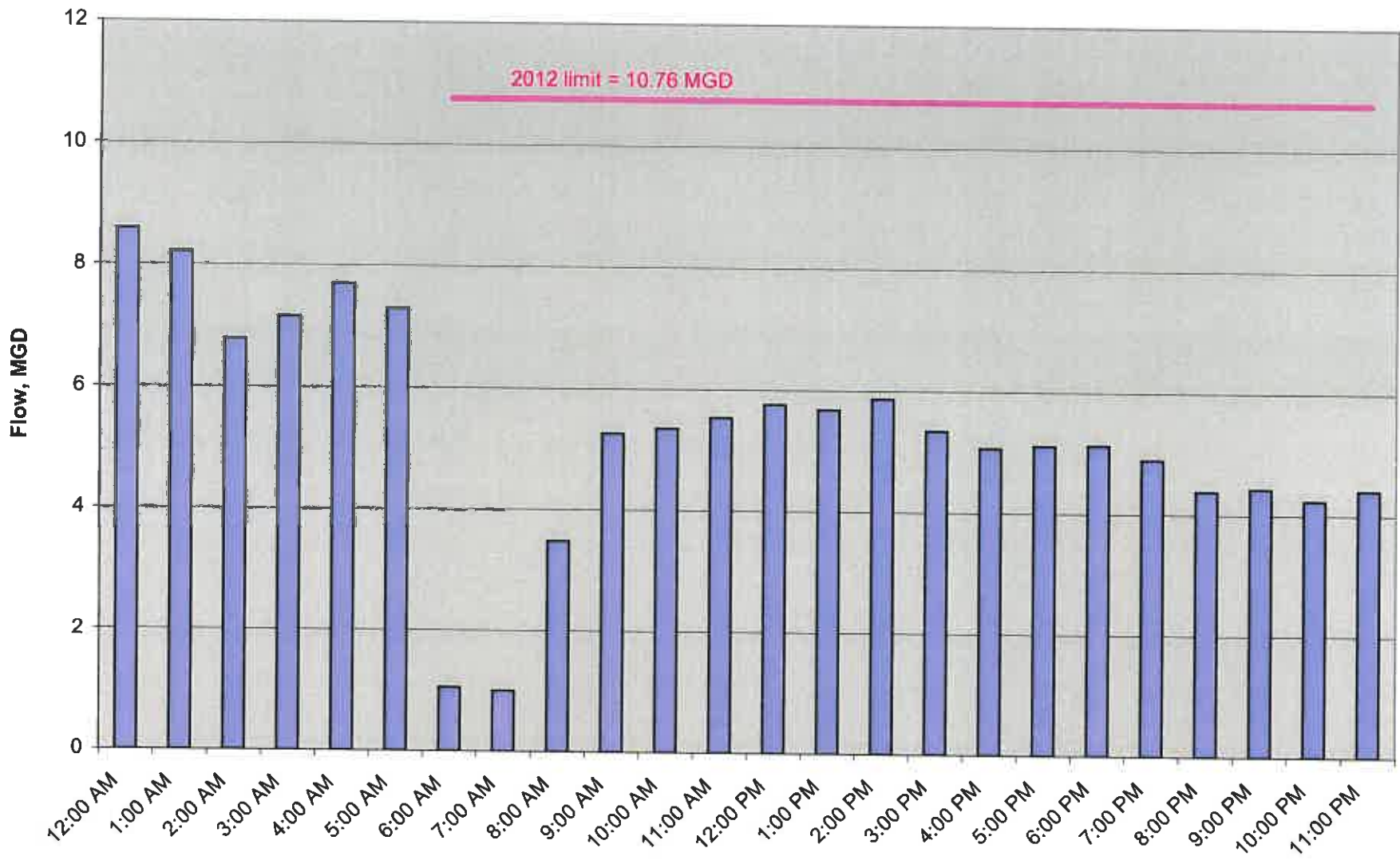
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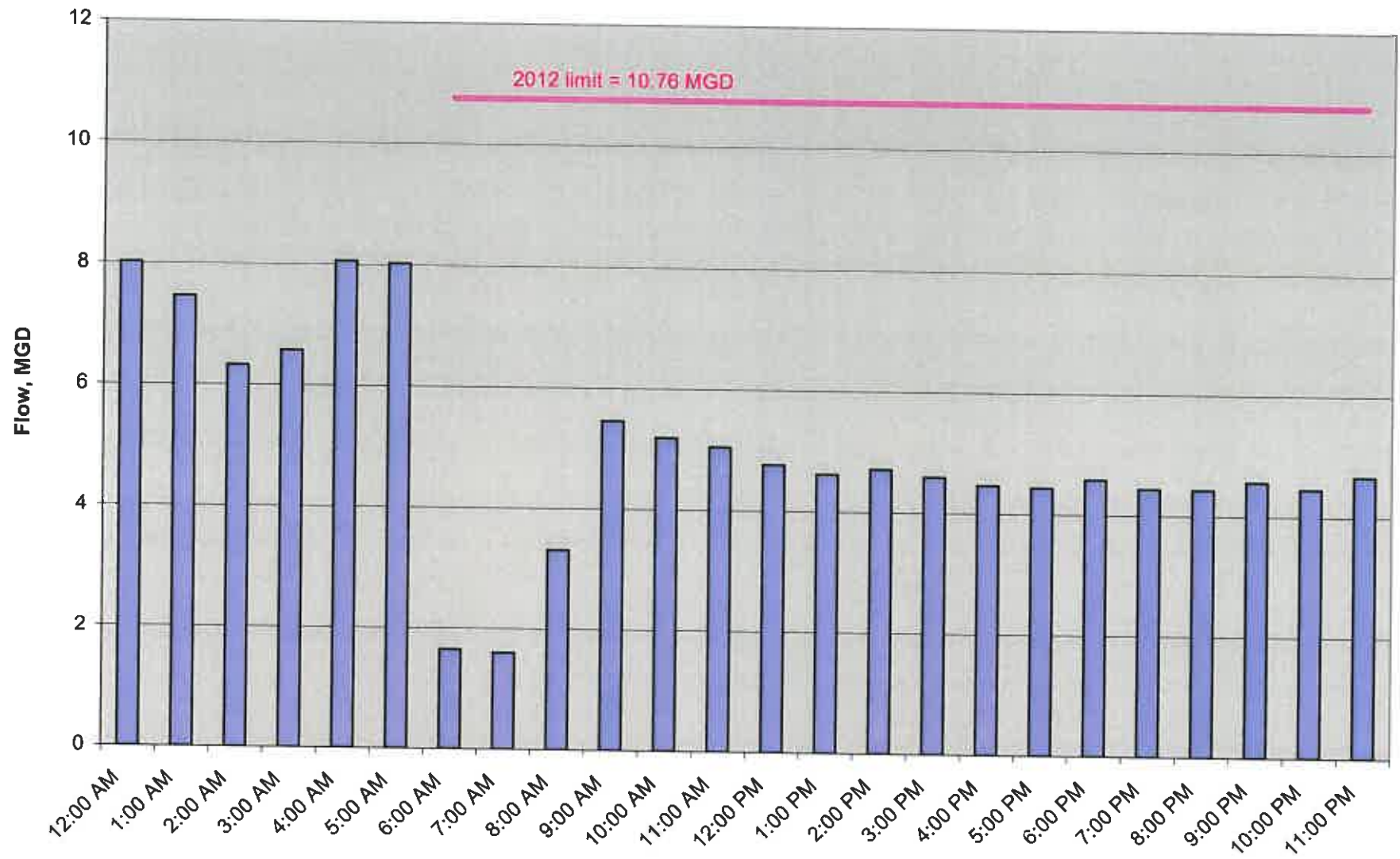
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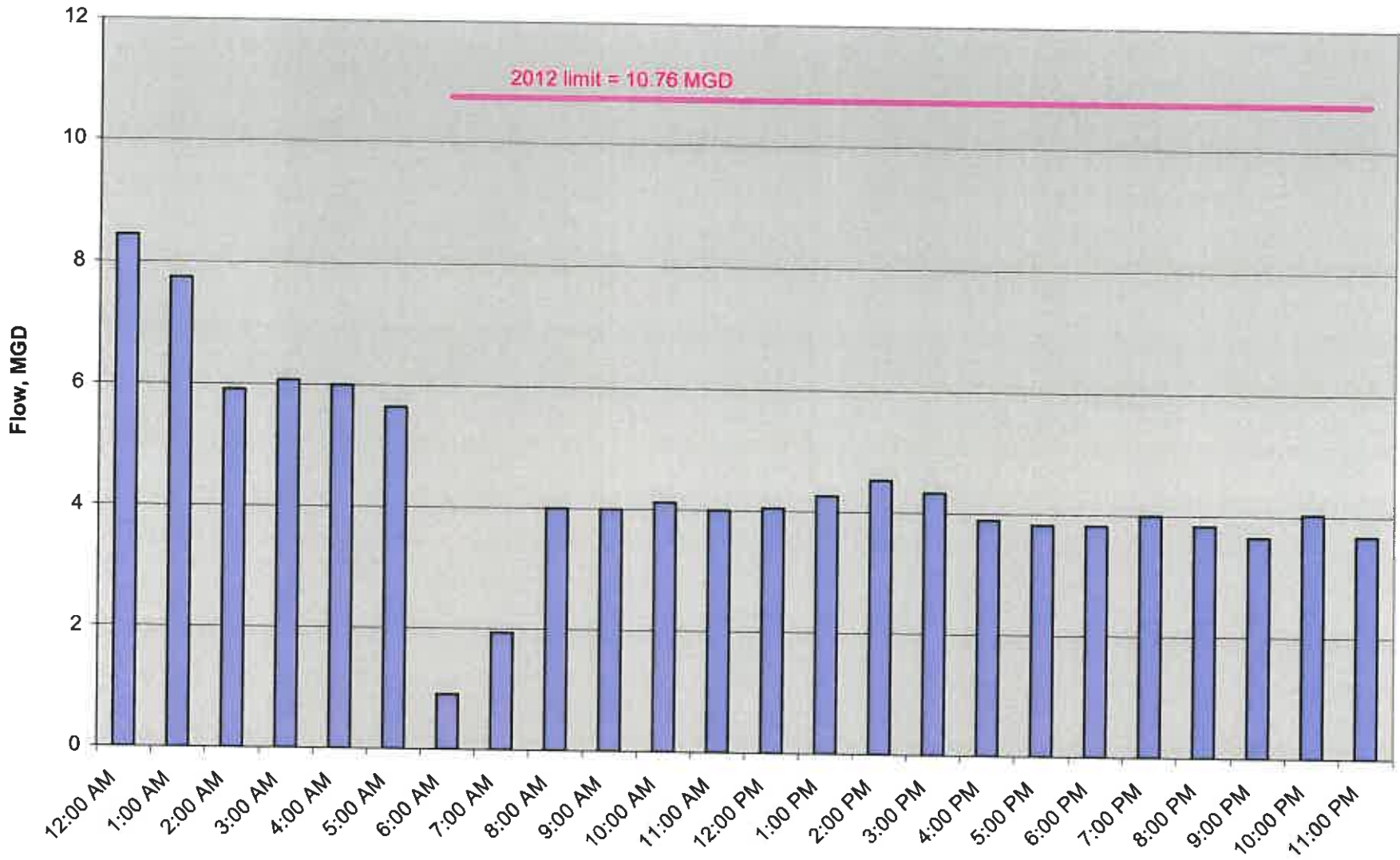
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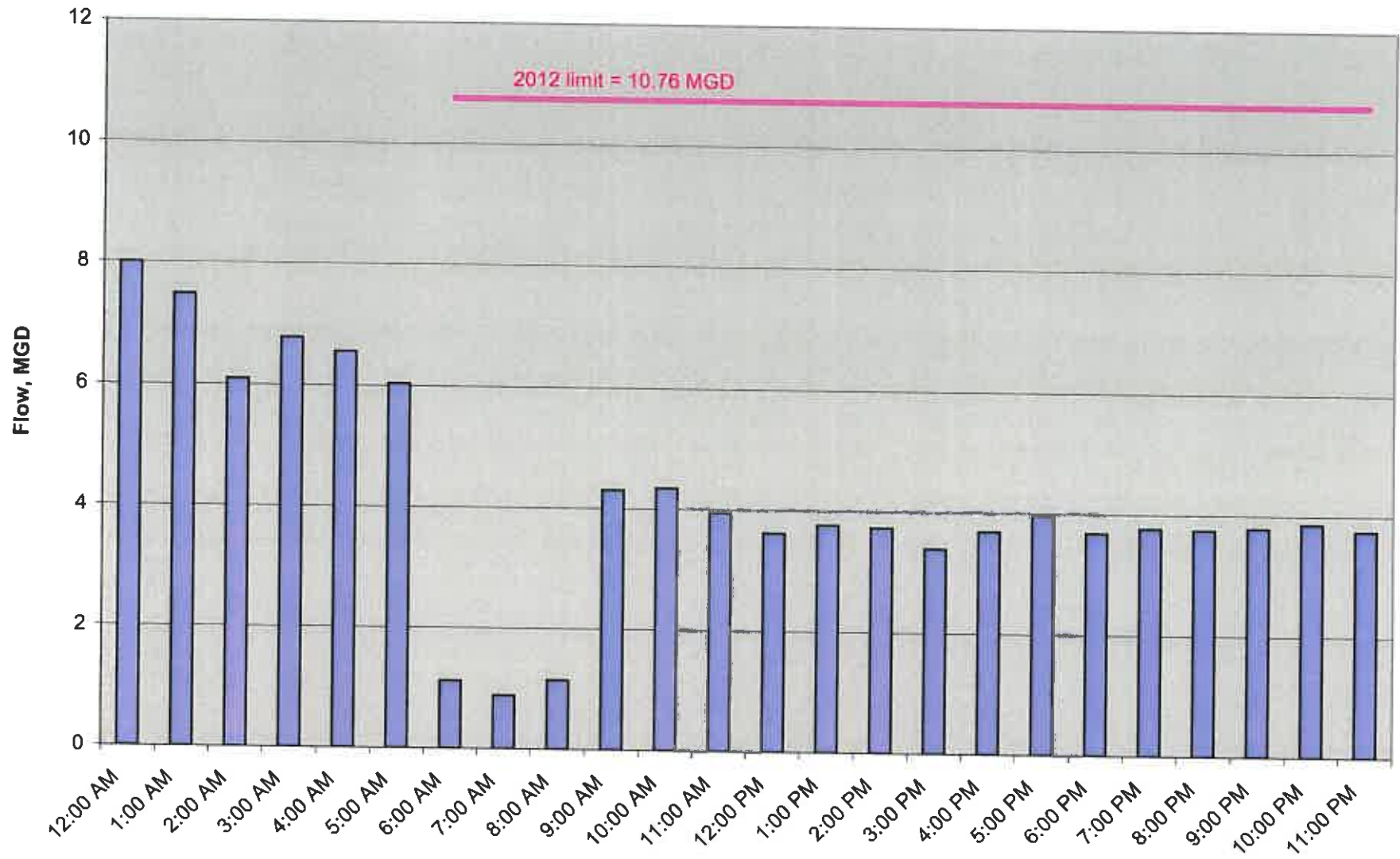
8/16/2013



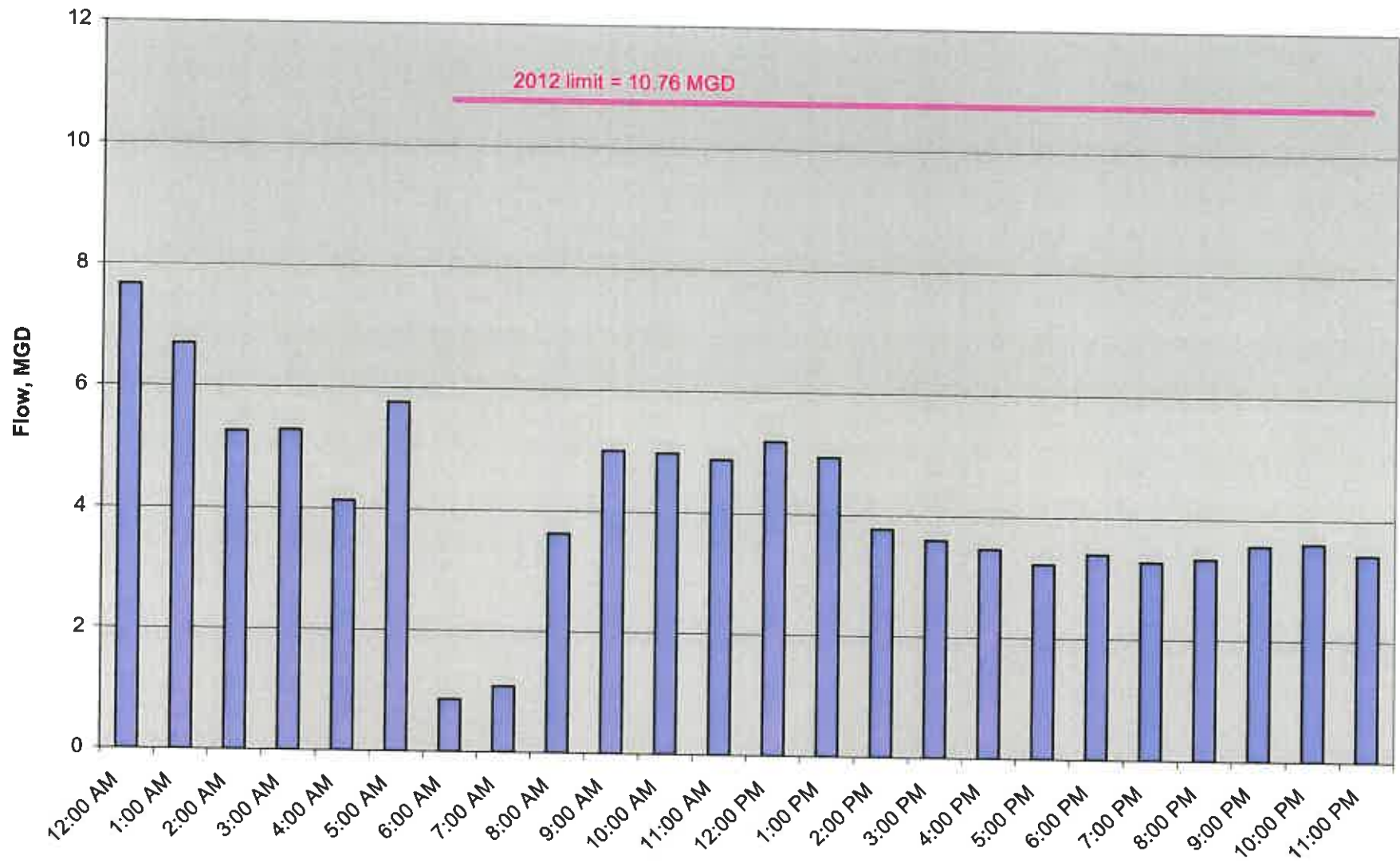
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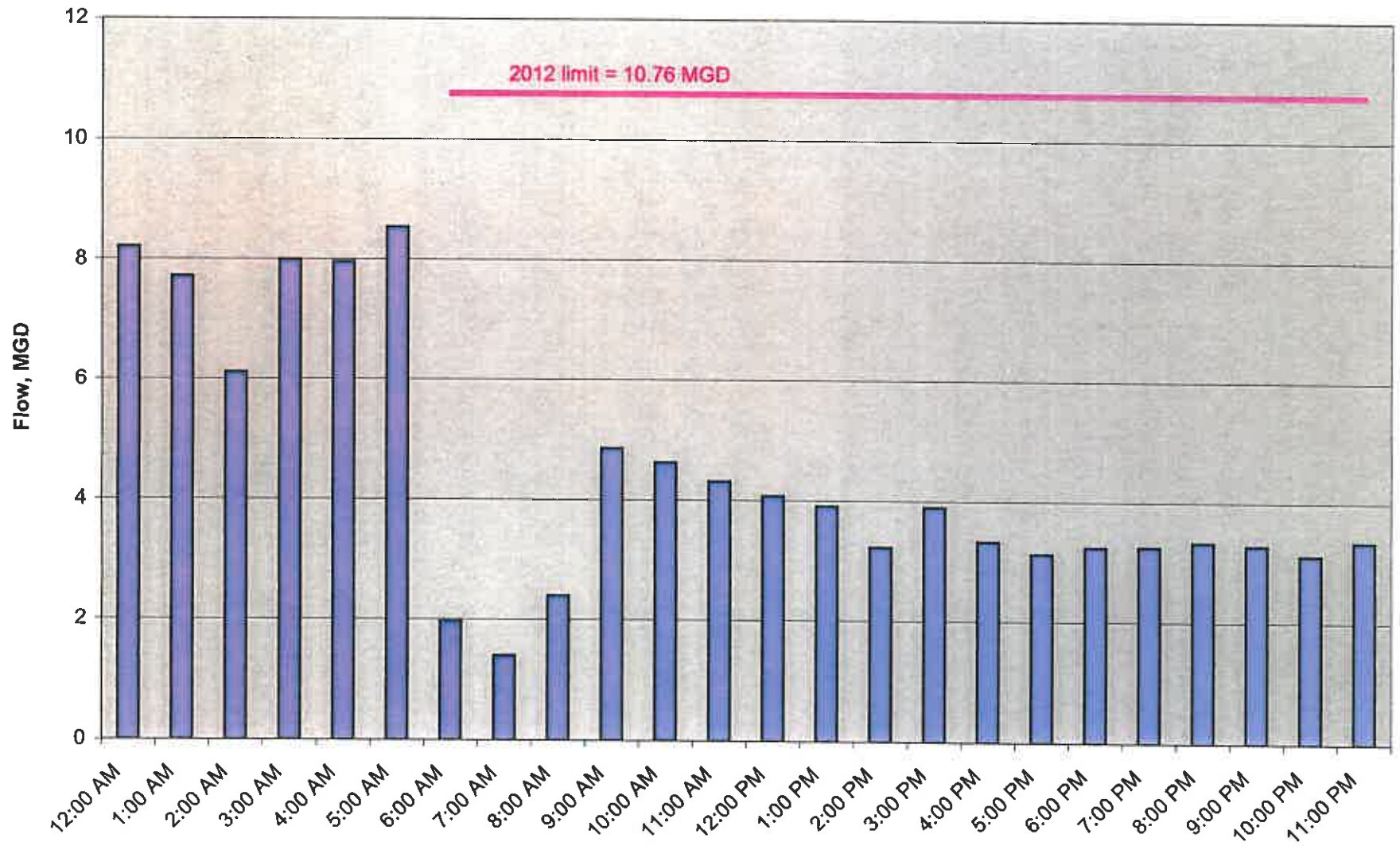
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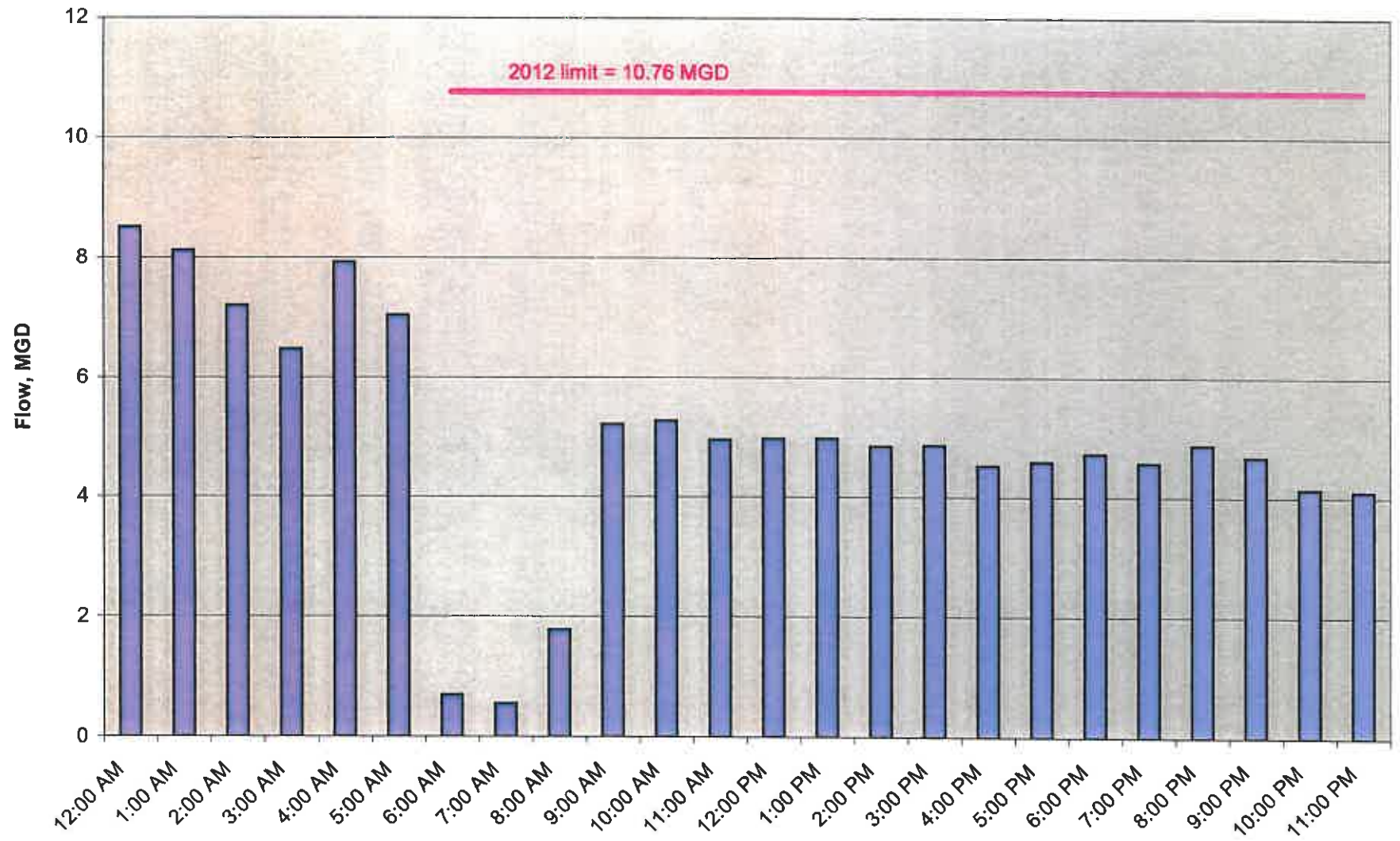
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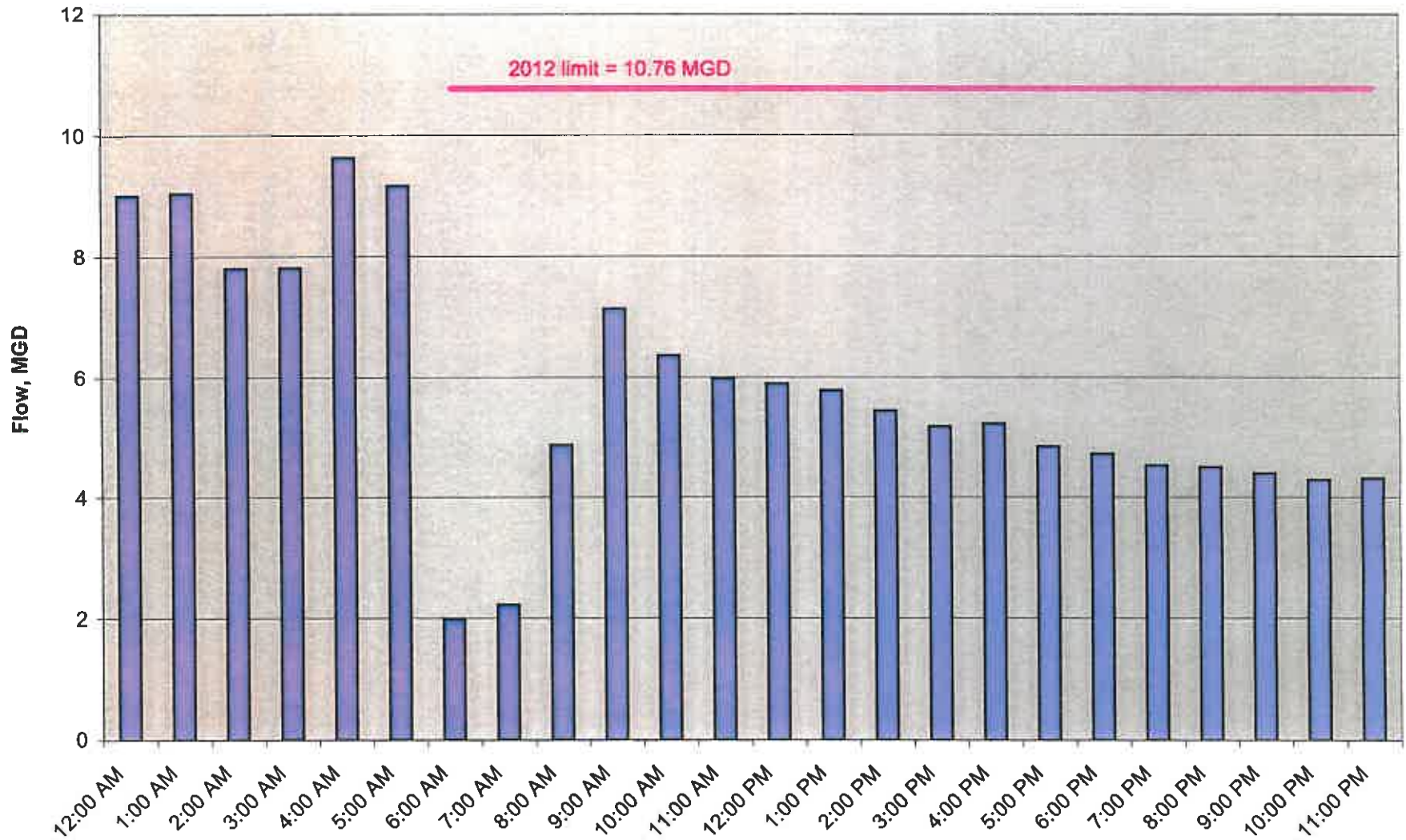
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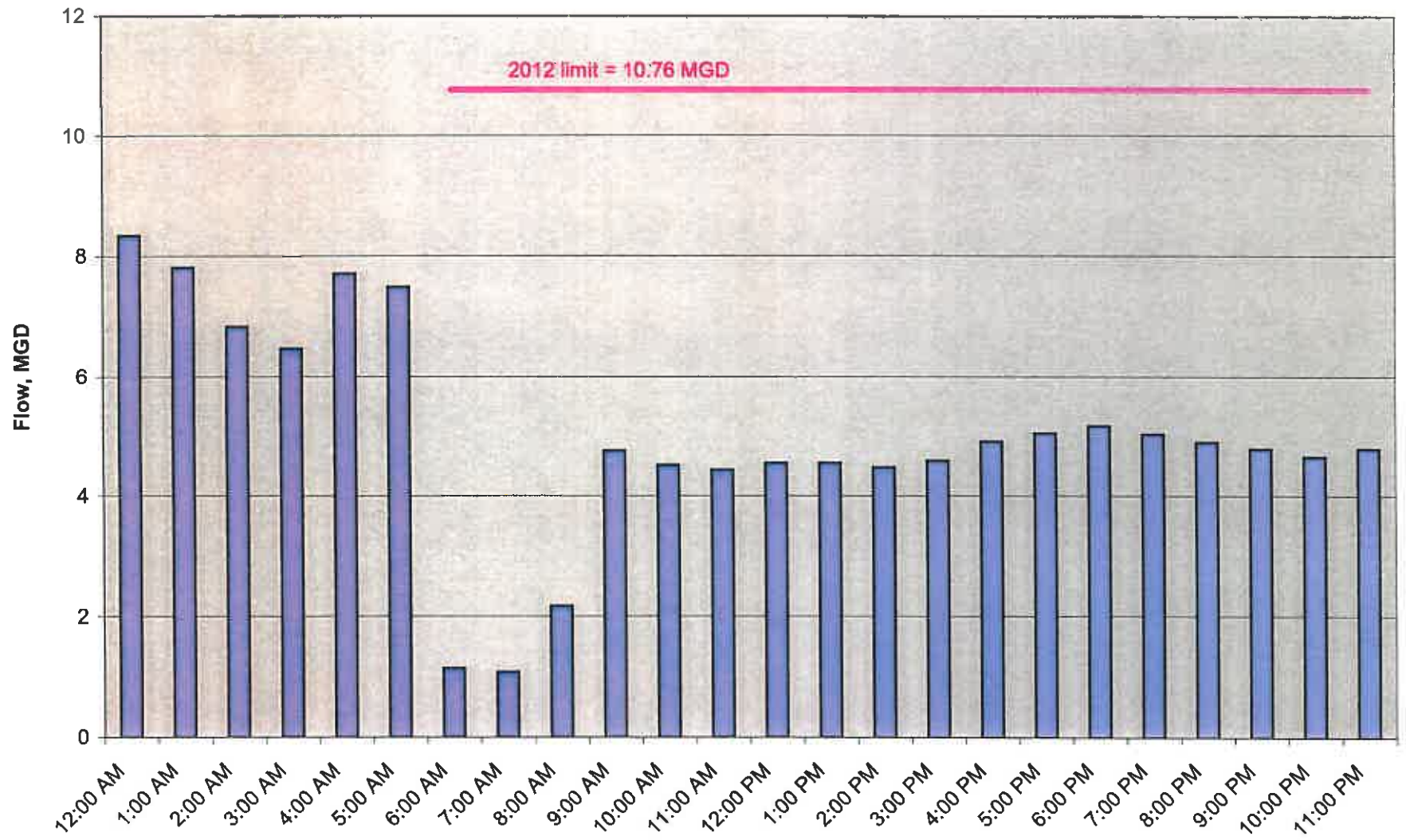
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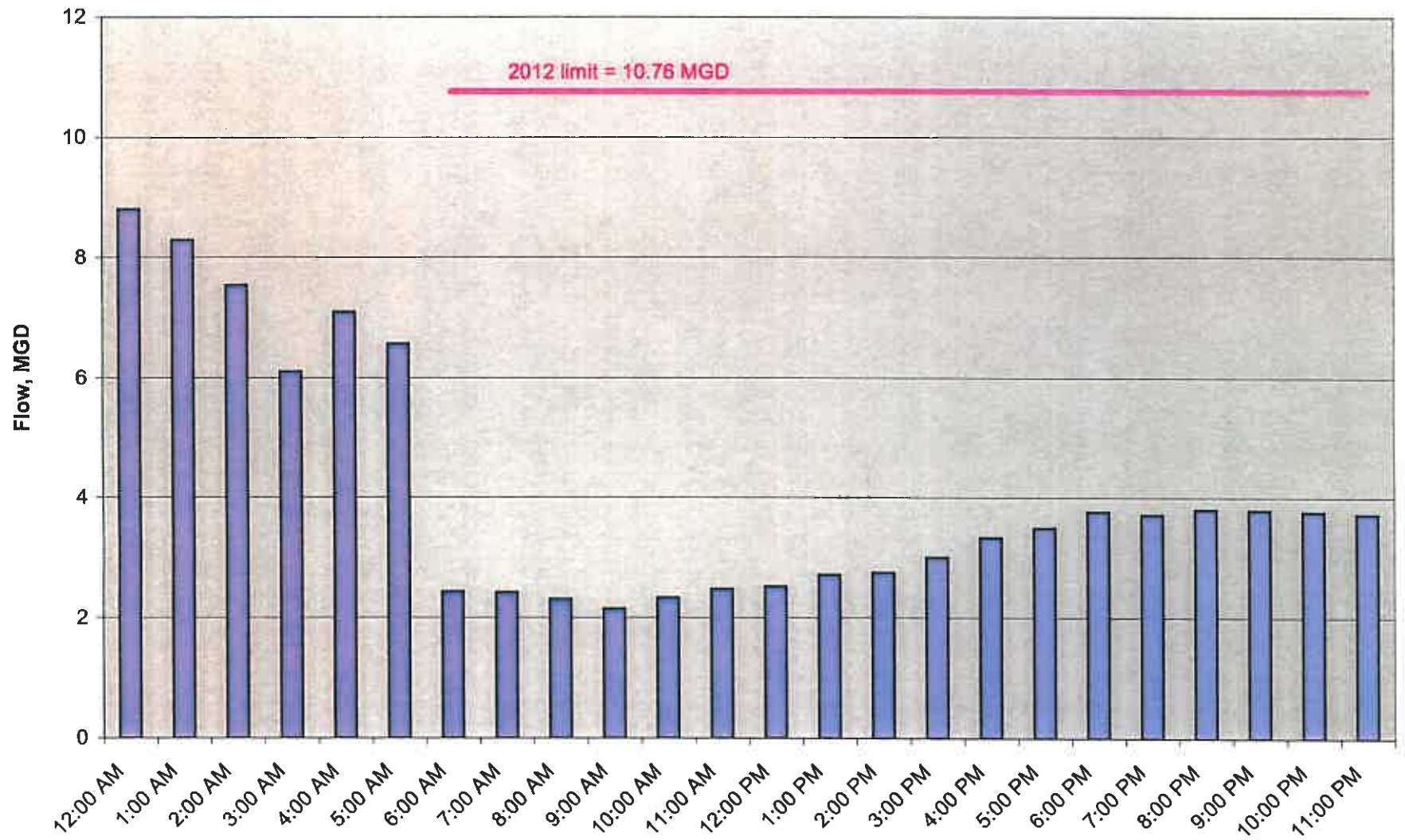
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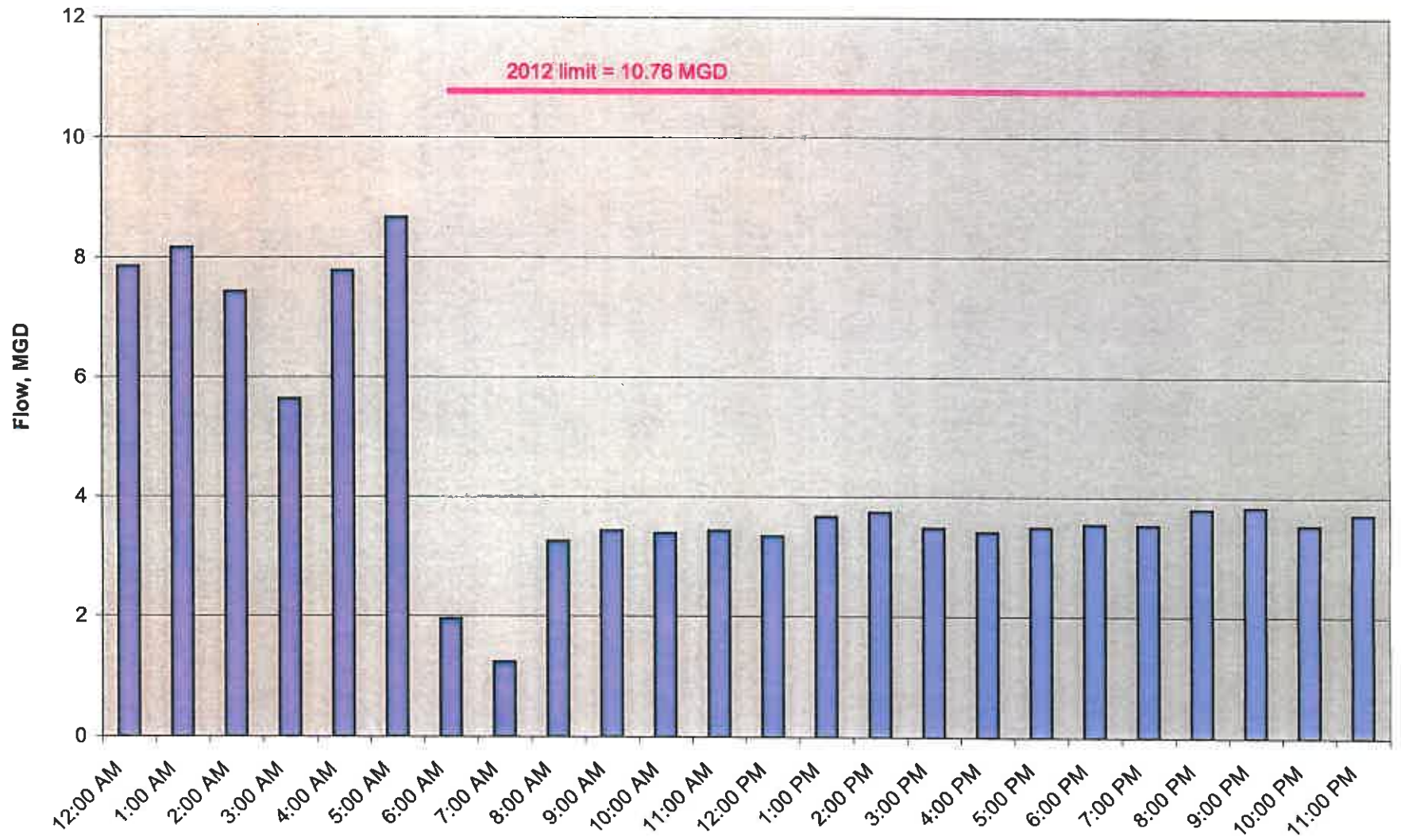
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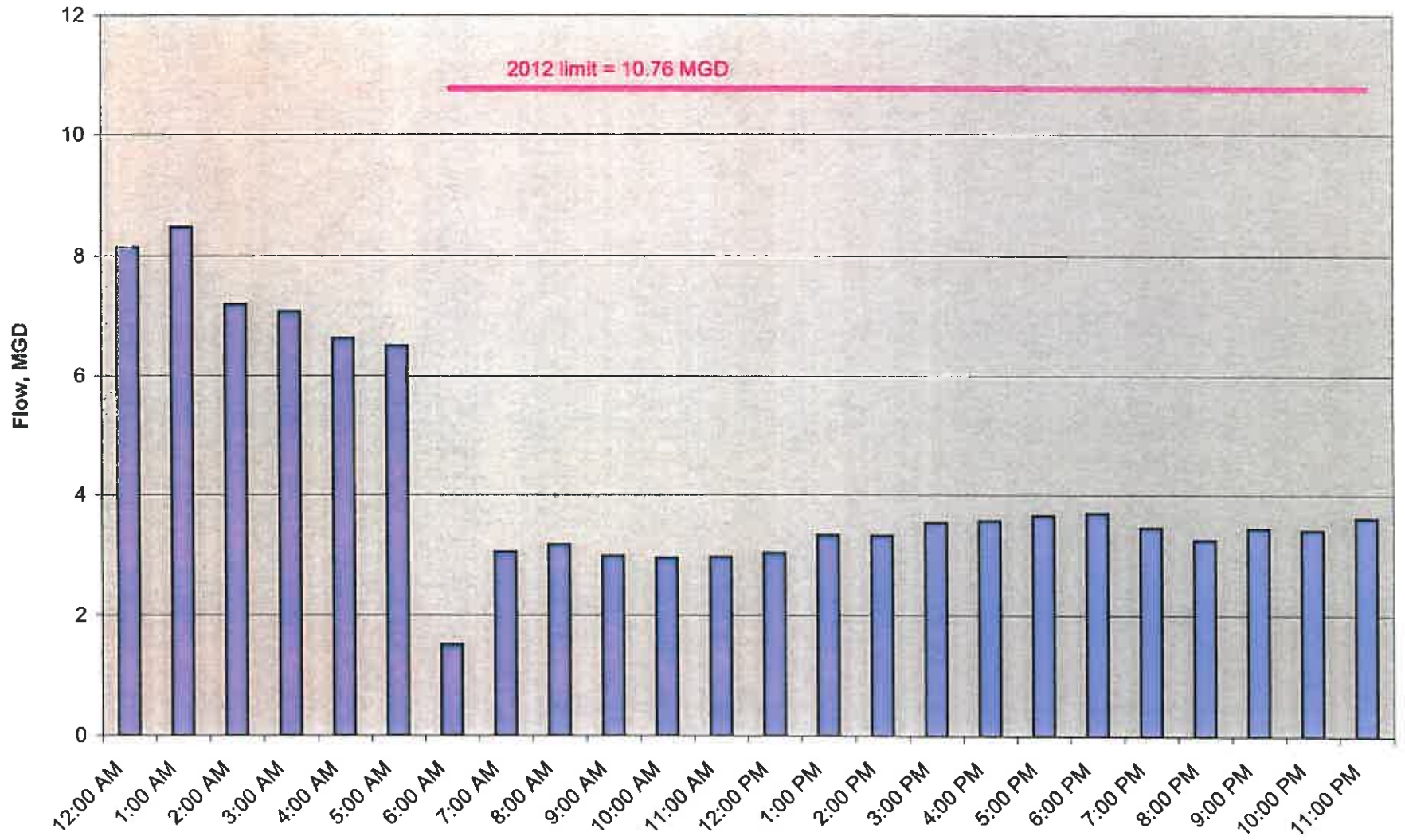
8/8/2013



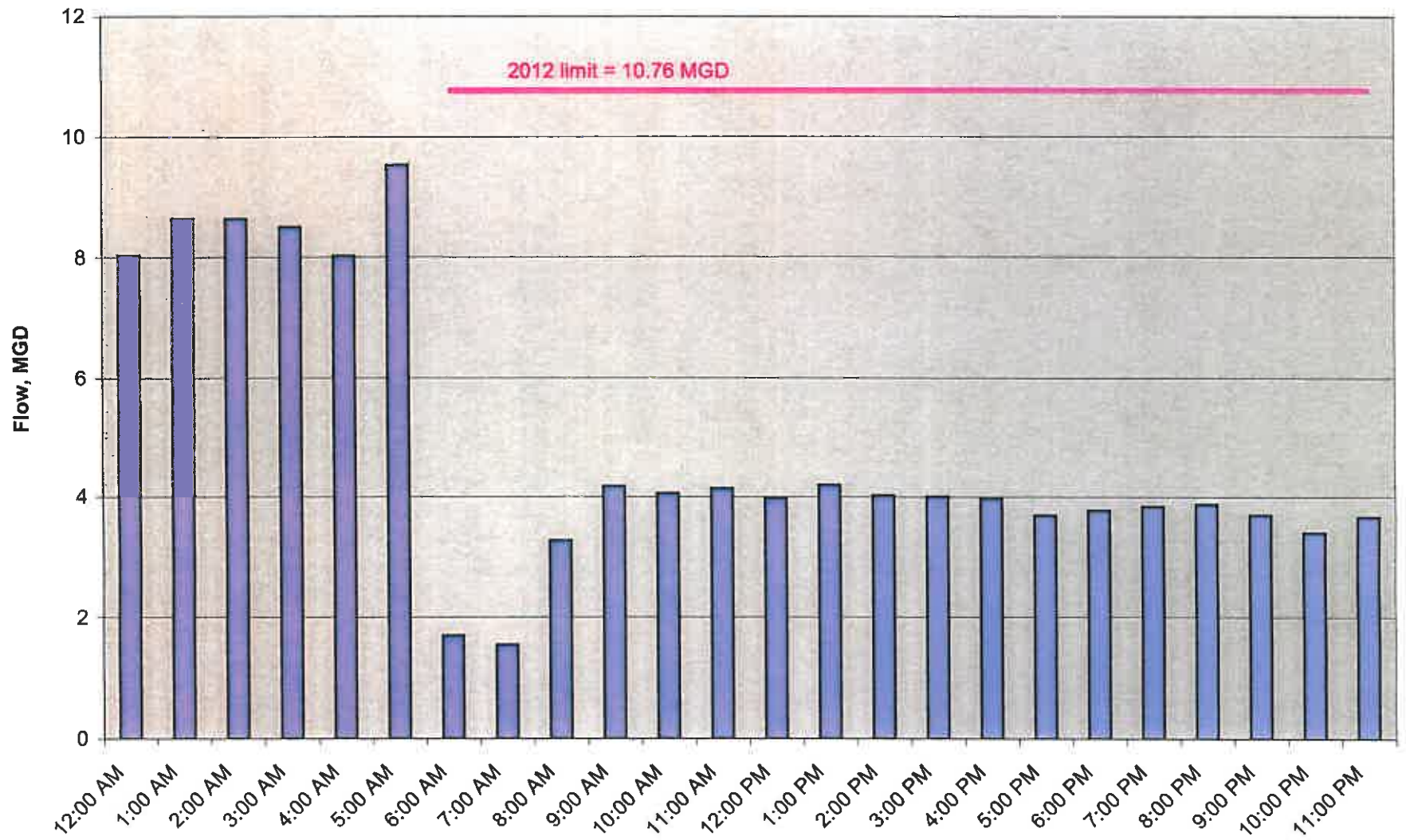
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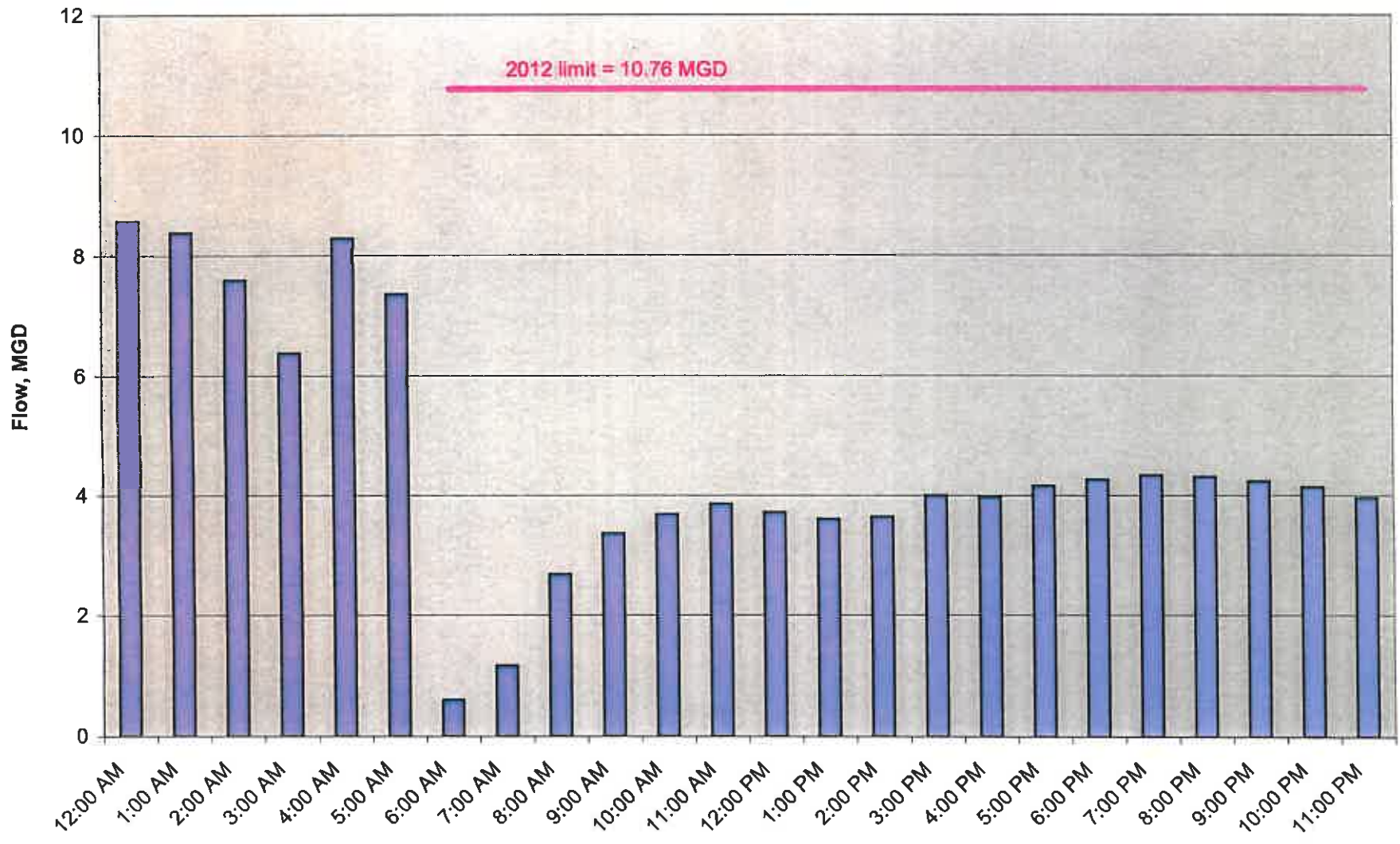
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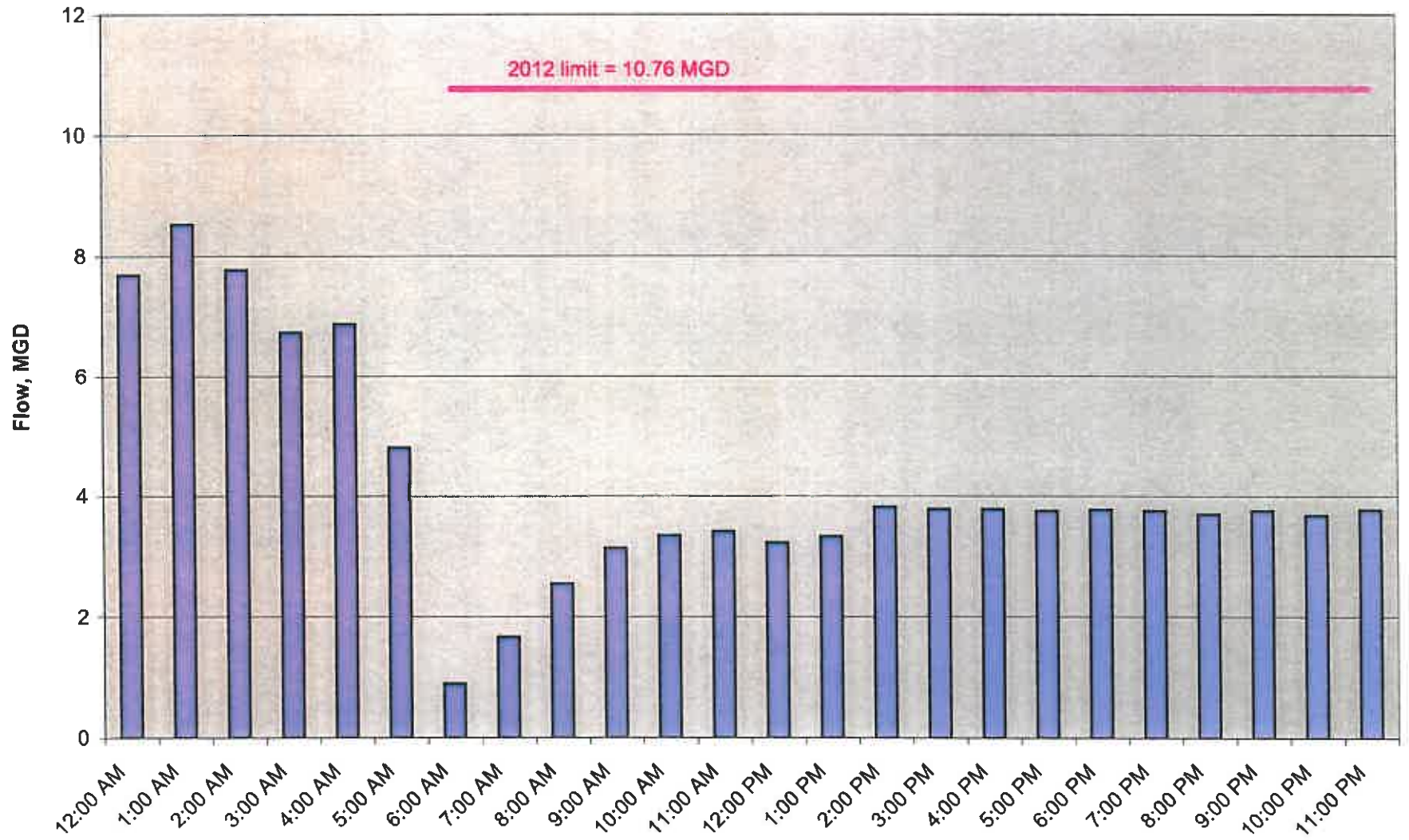
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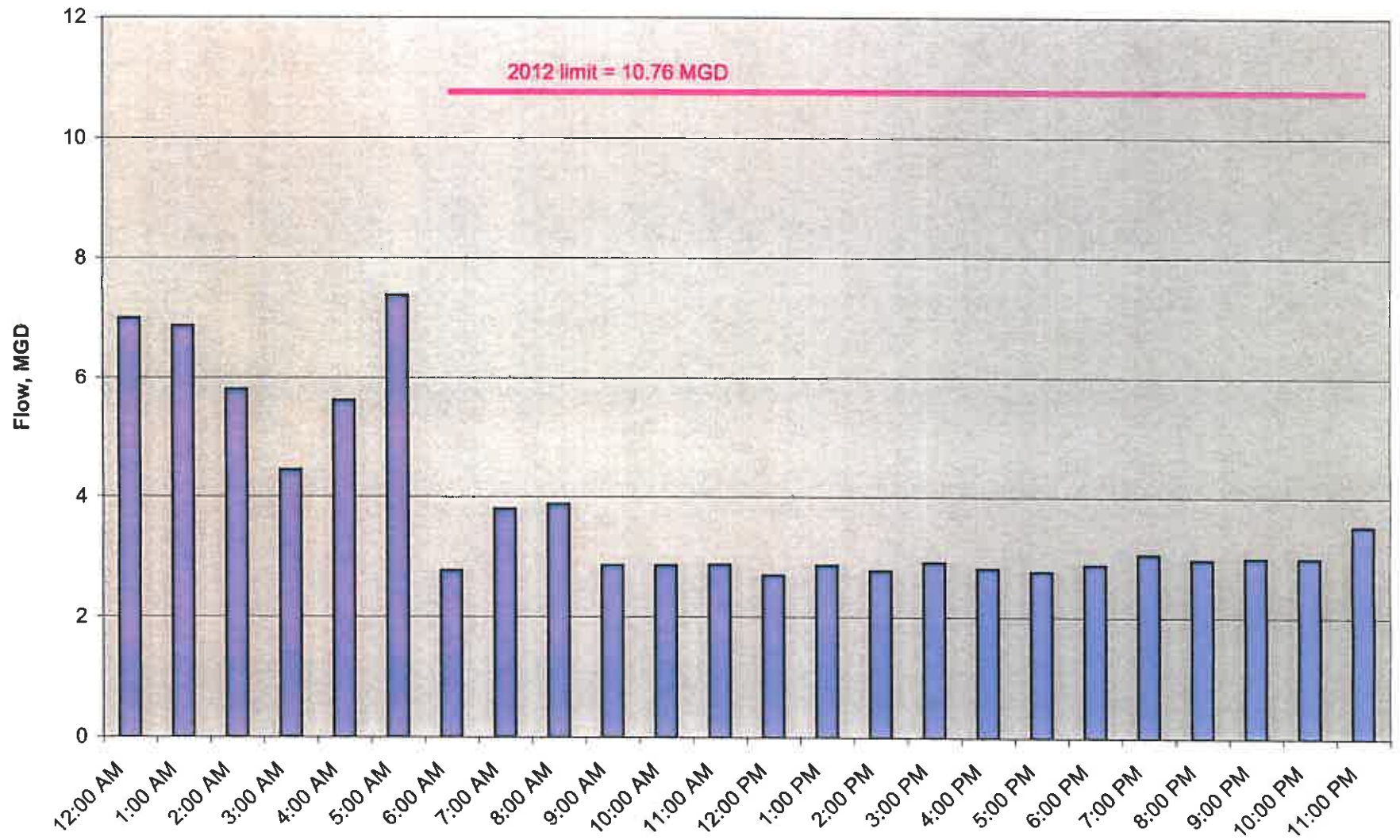
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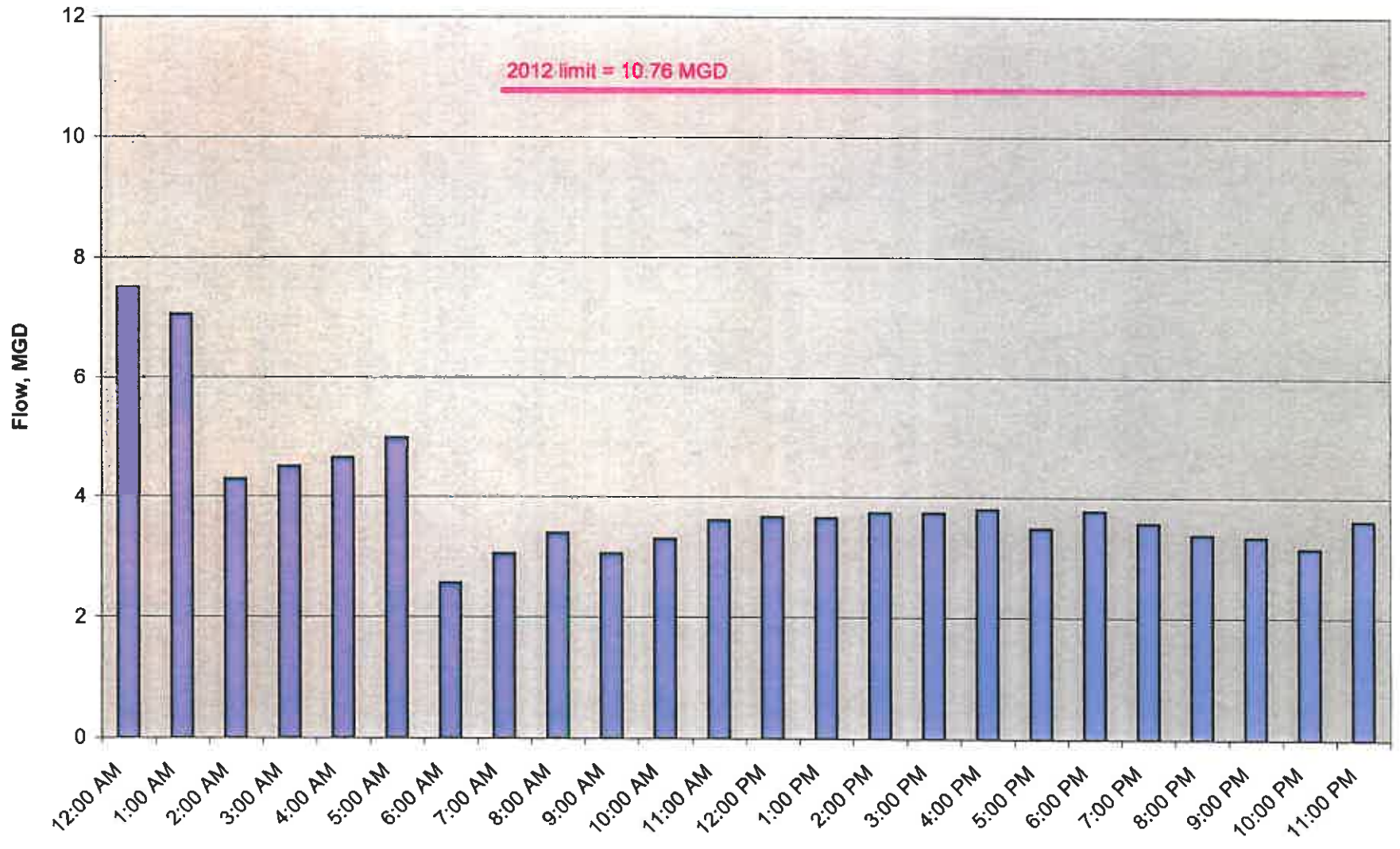
8/3/2013



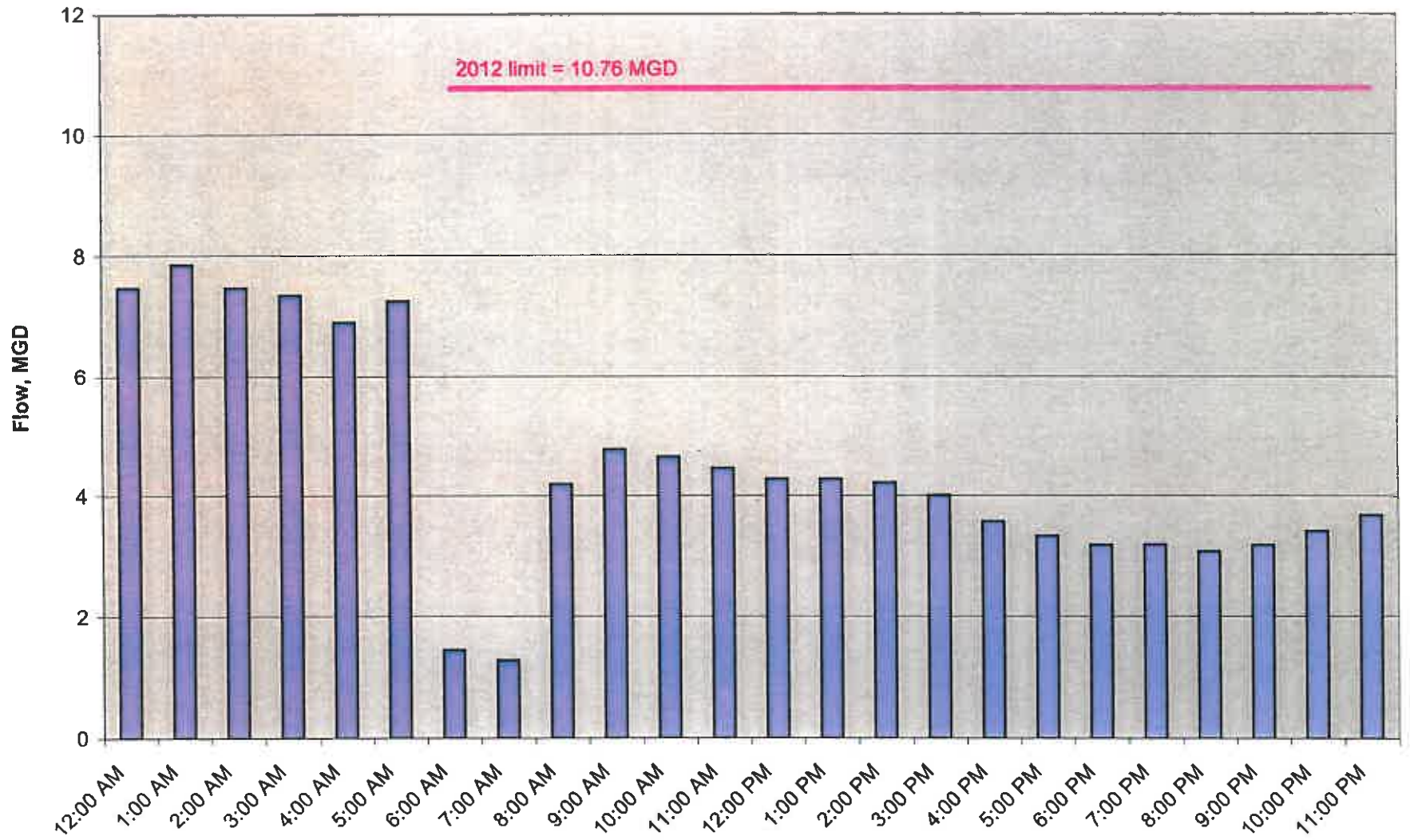
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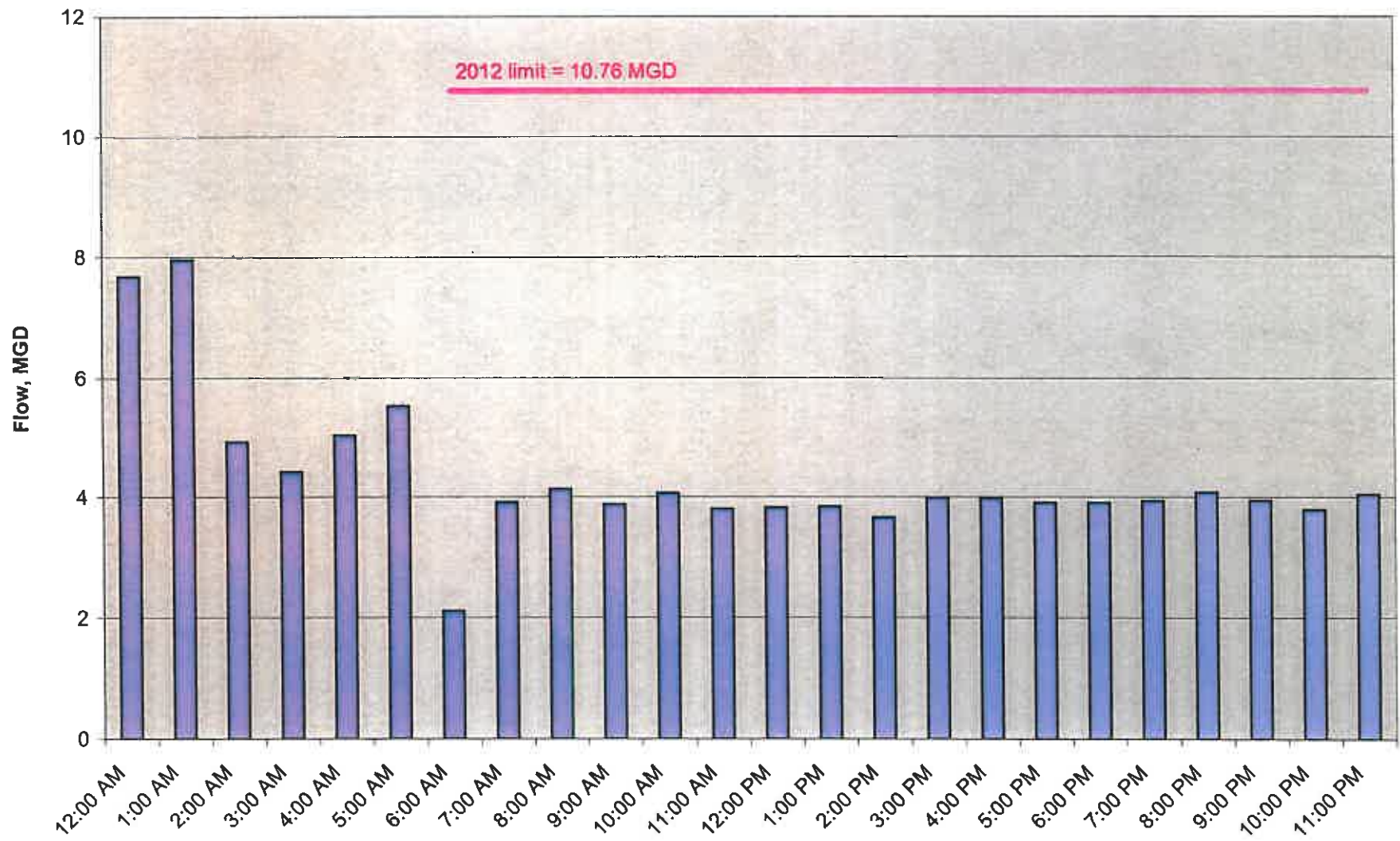
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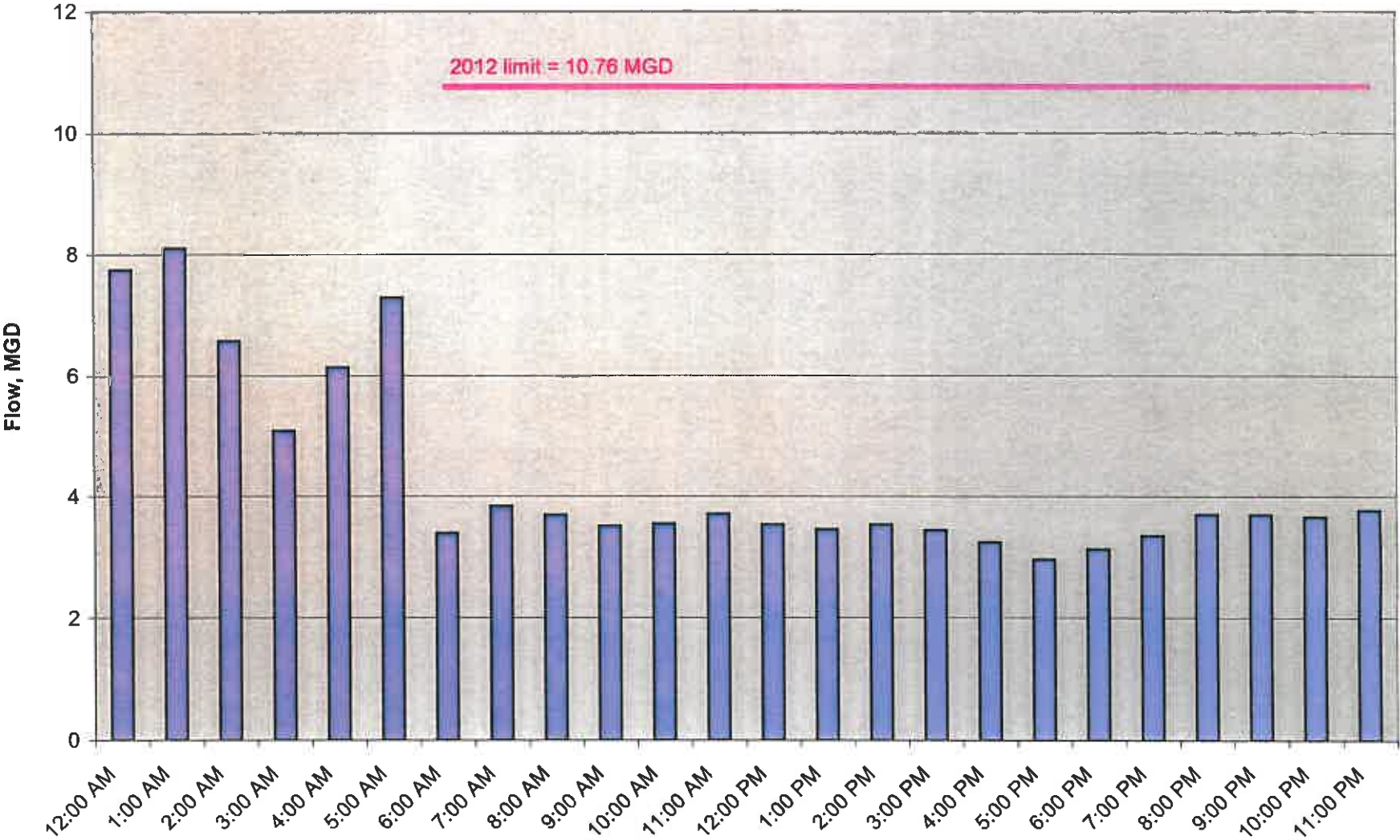
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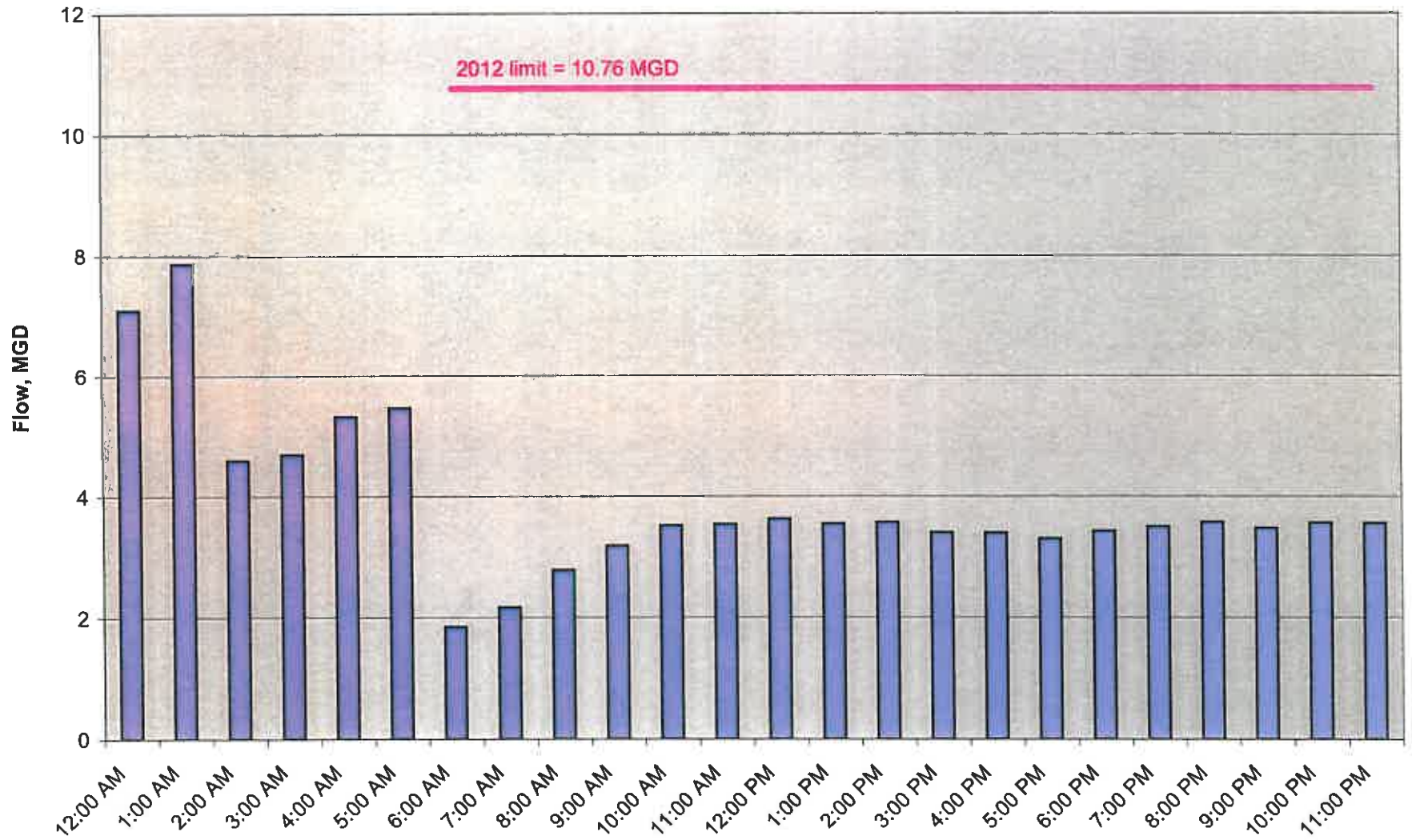
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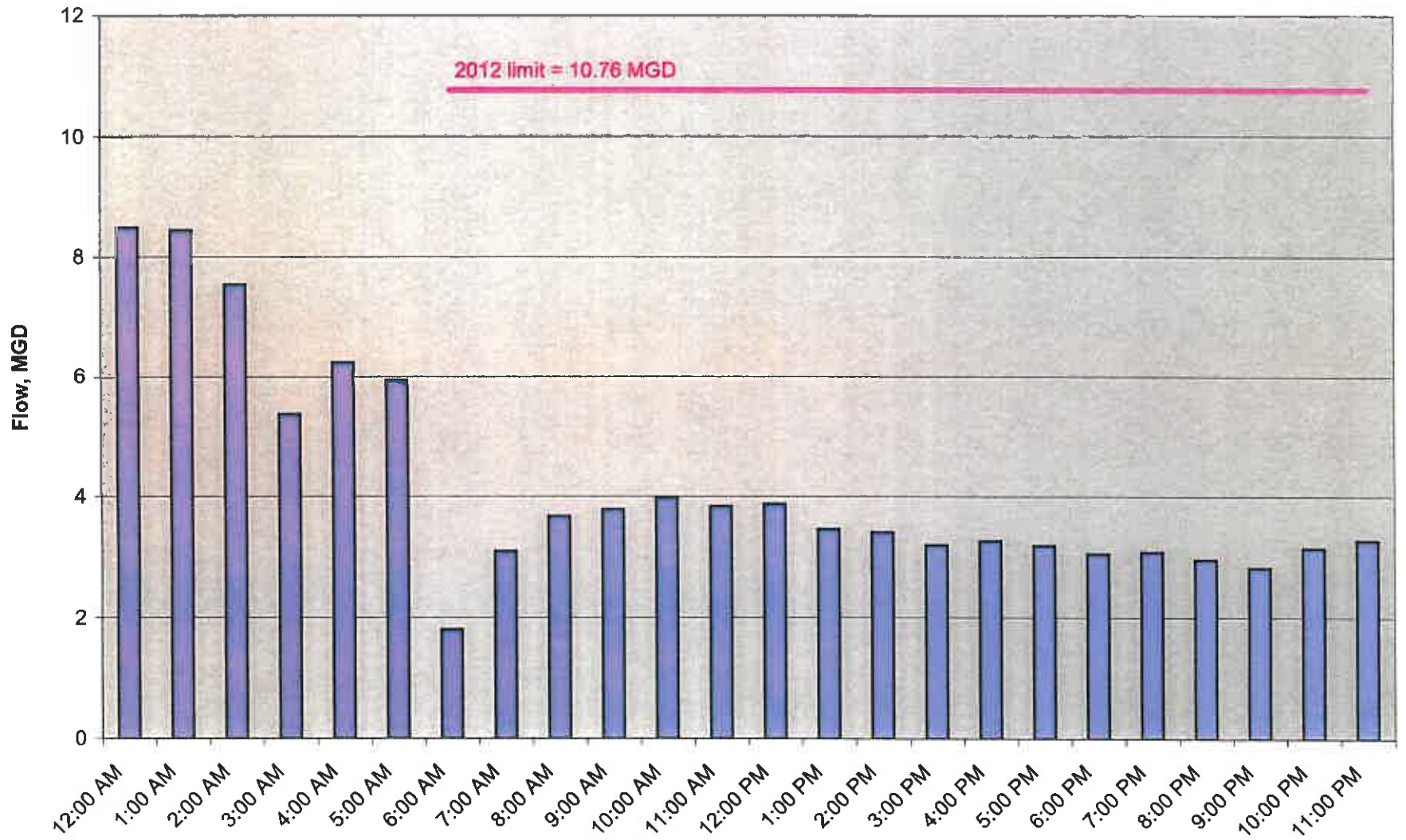
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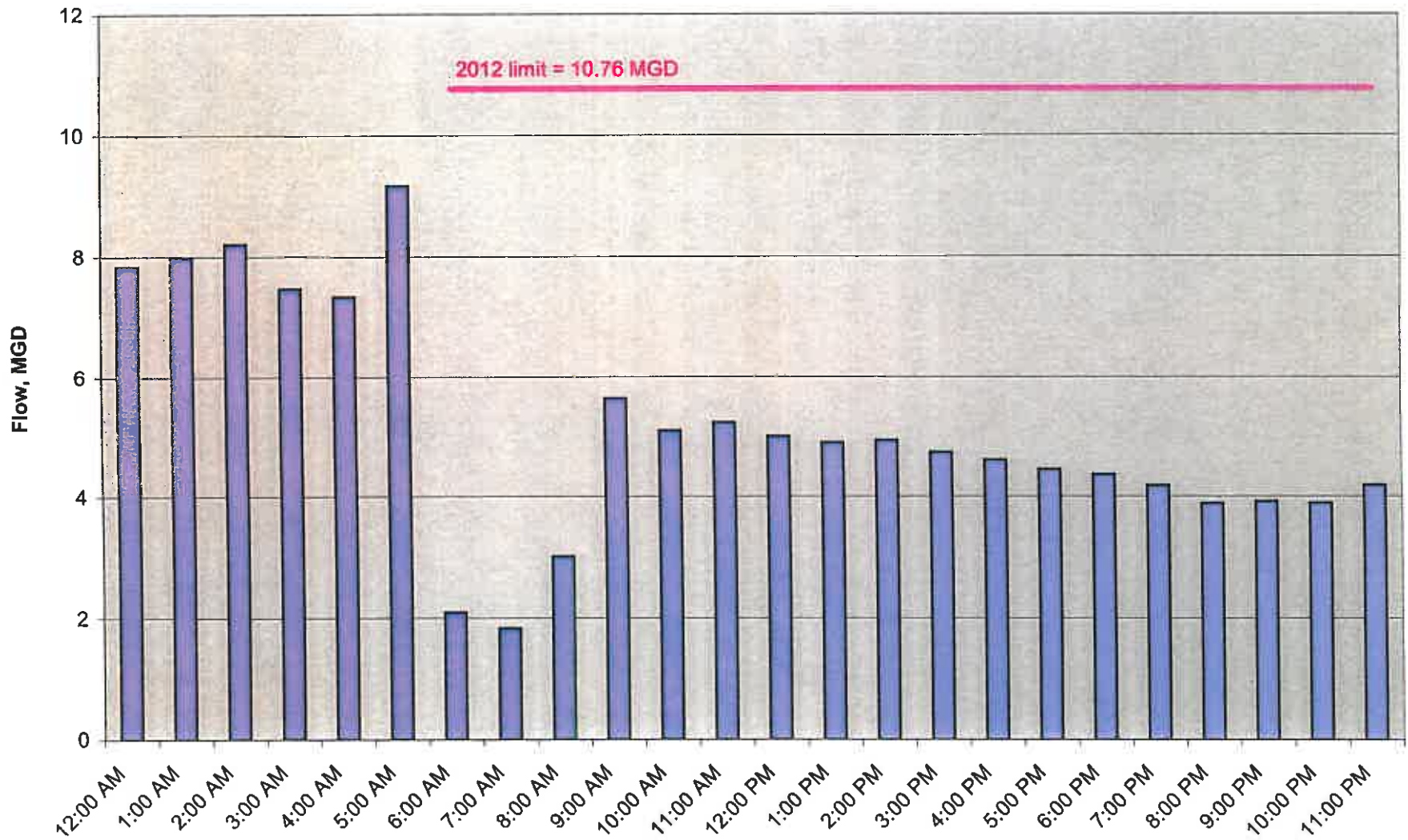
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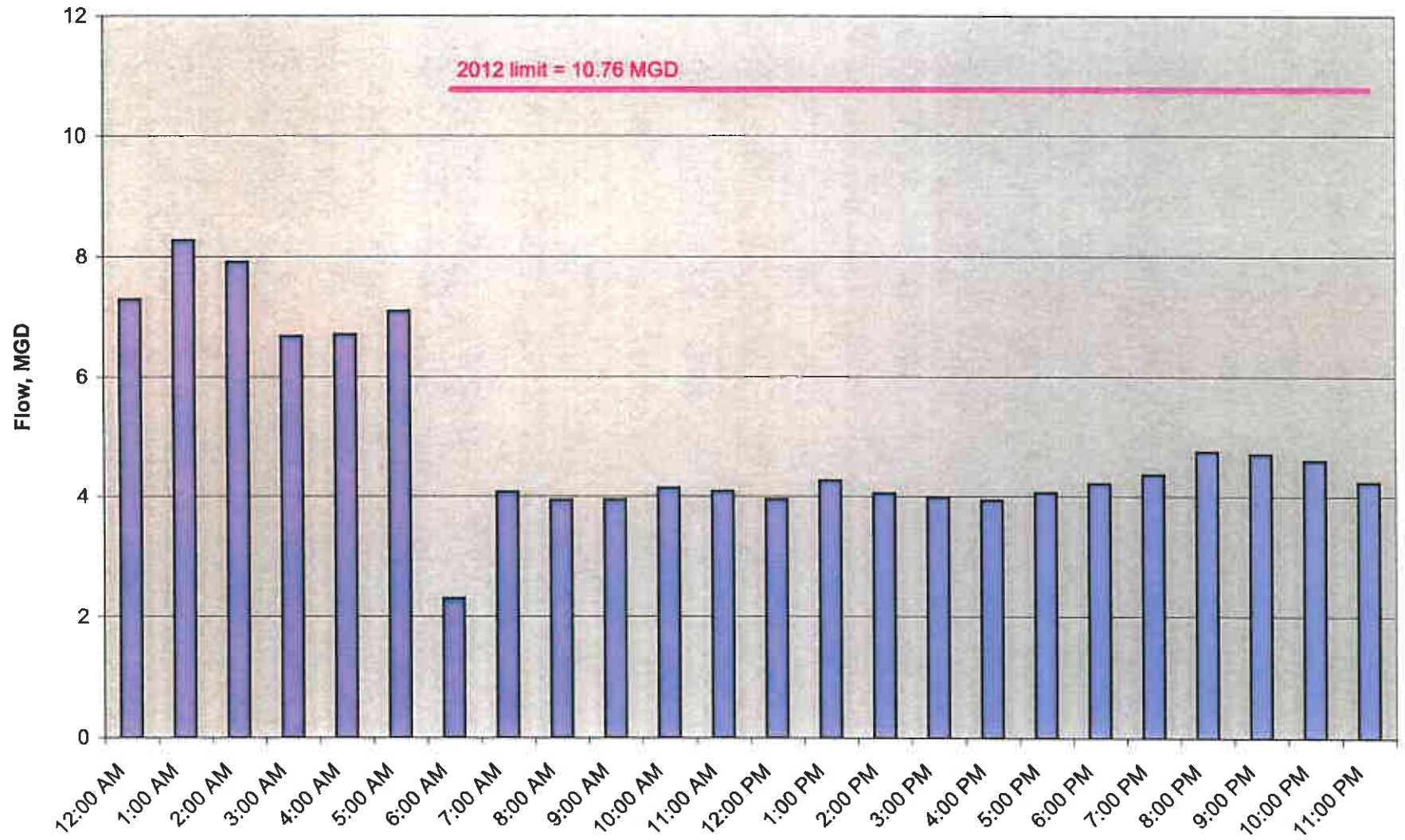
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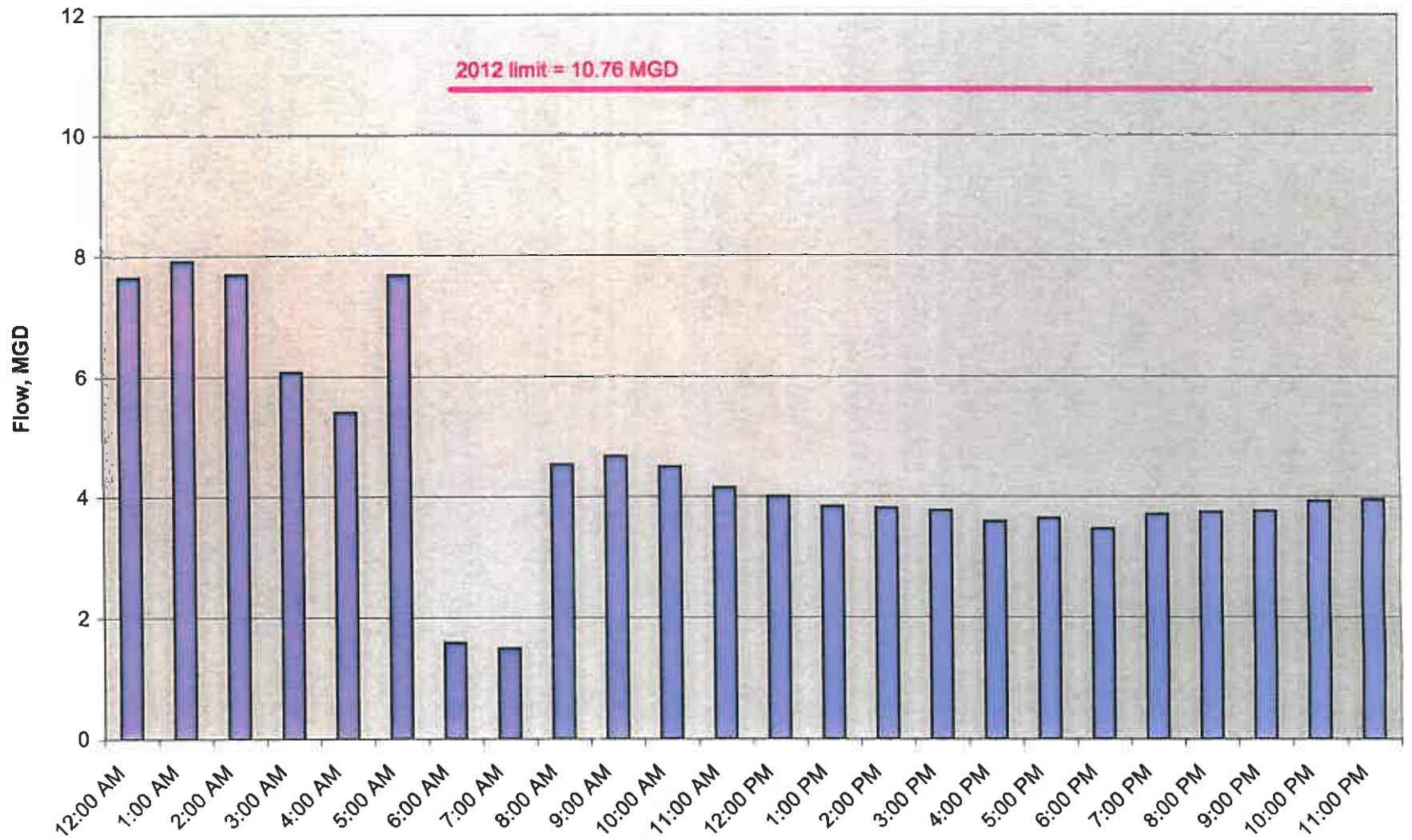
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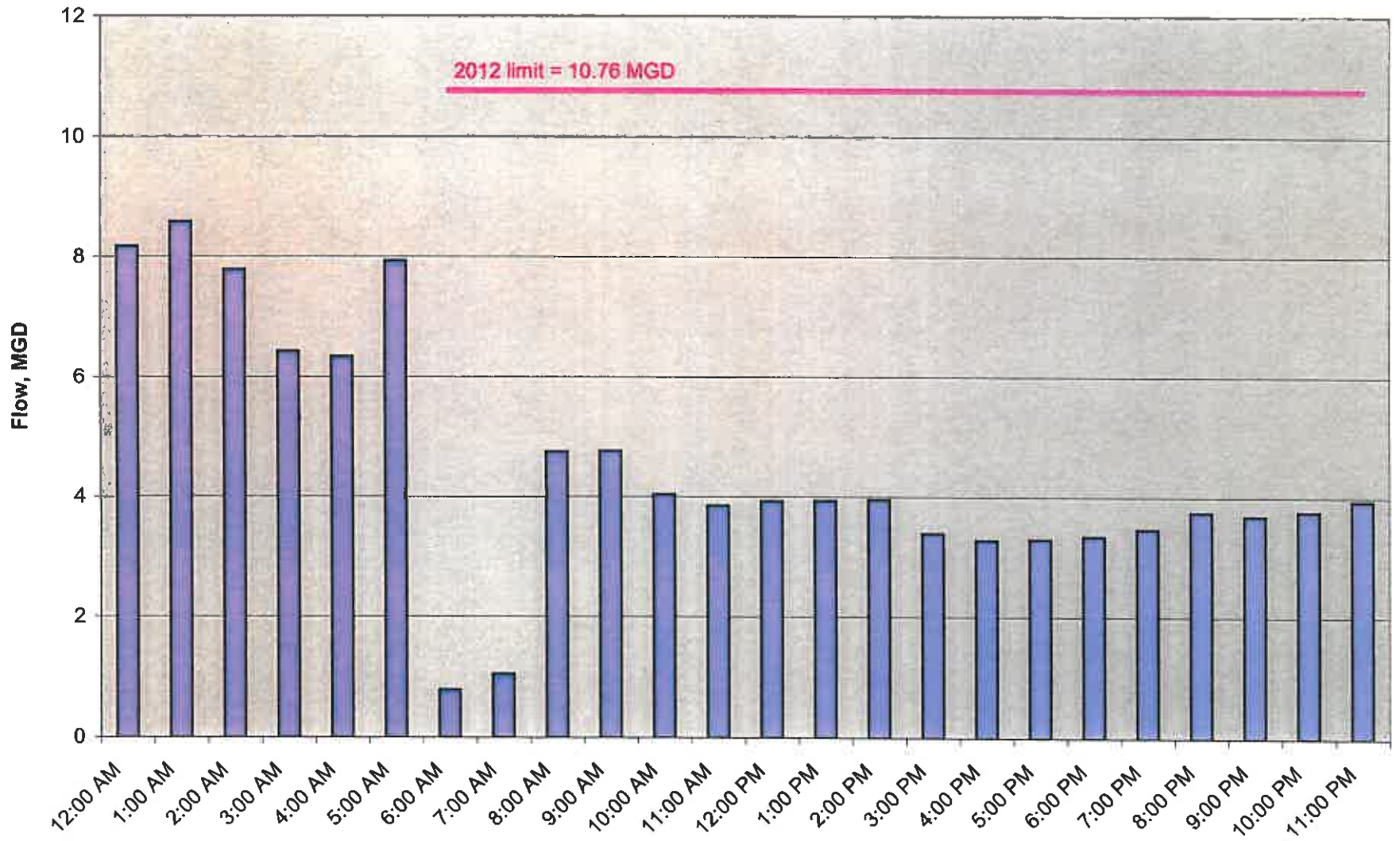
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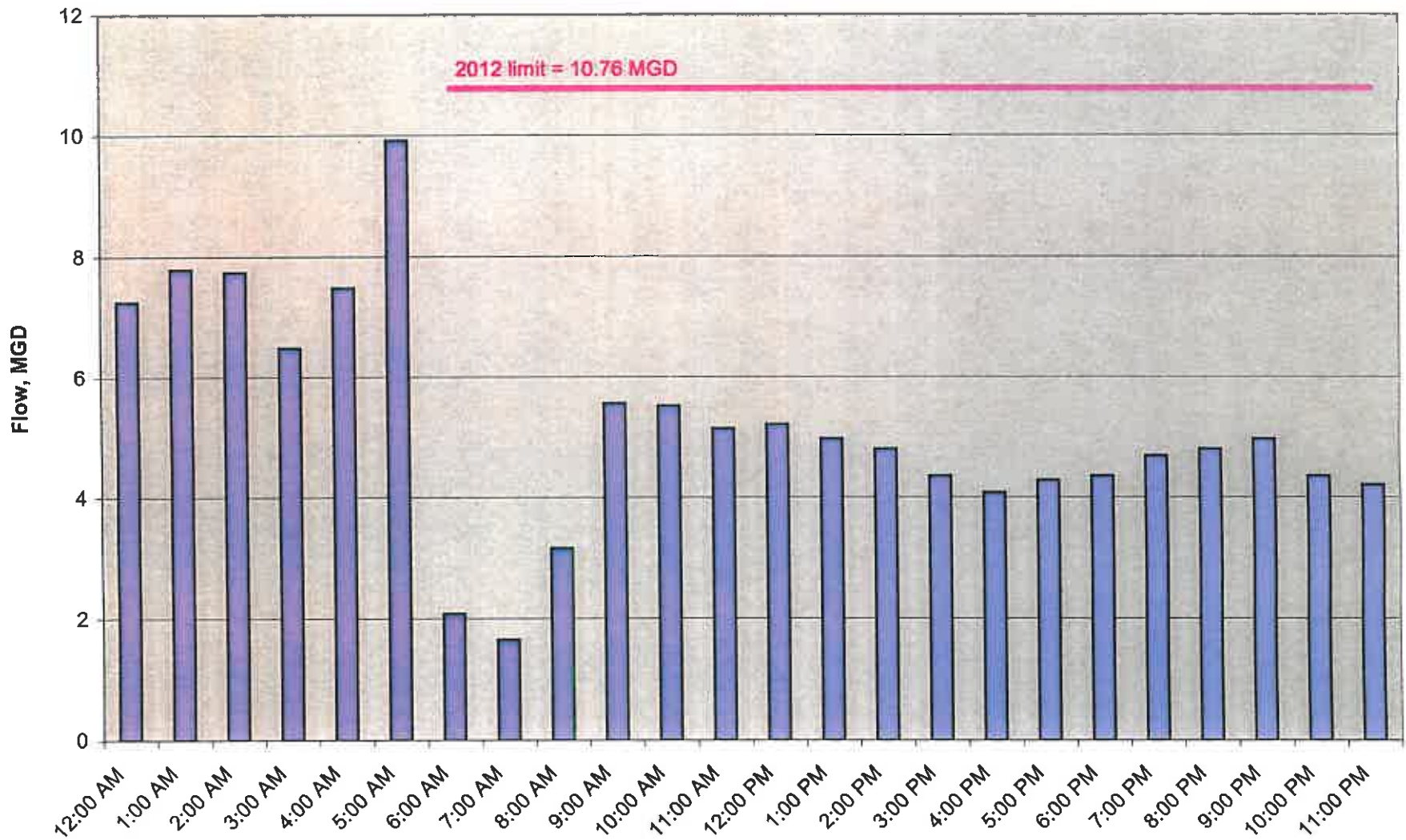
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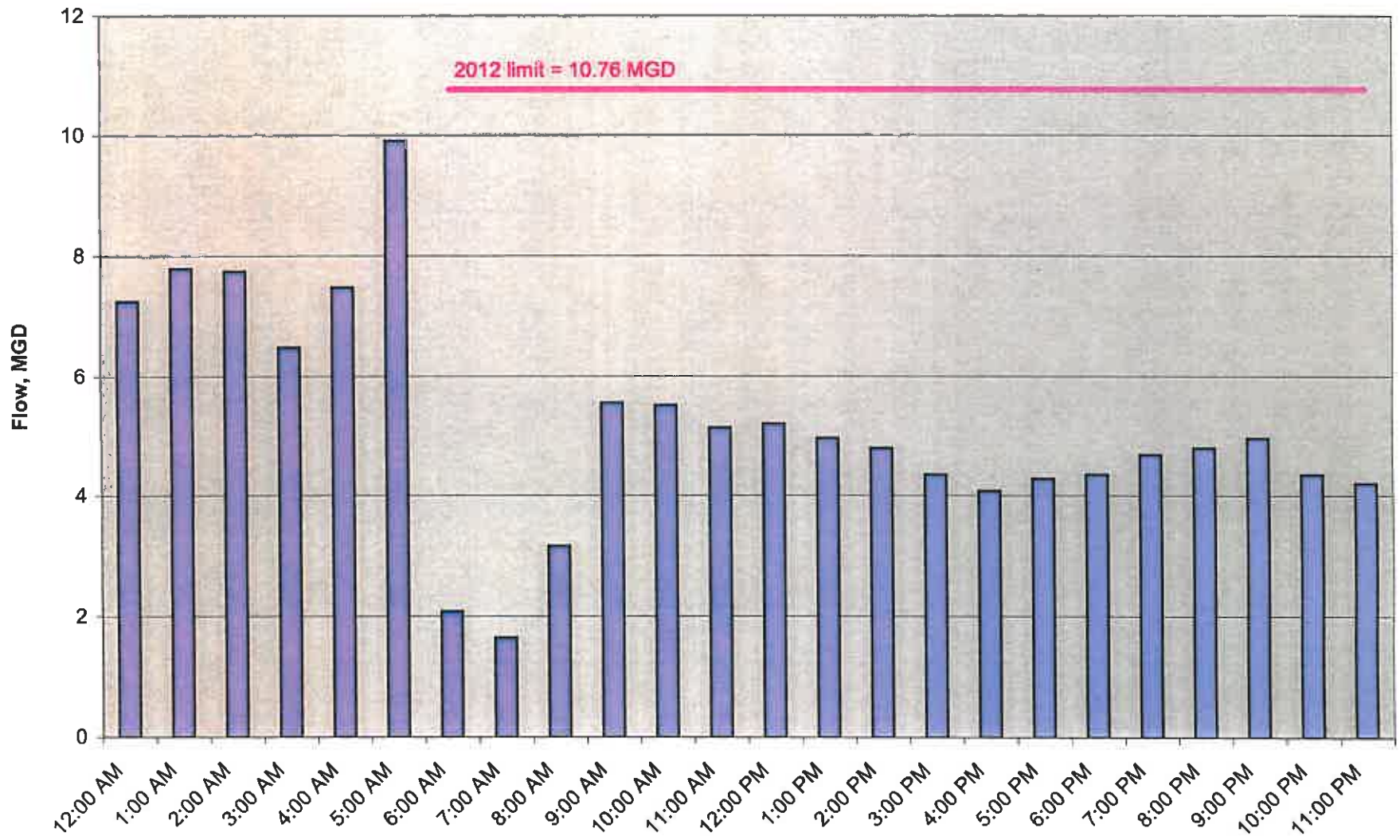
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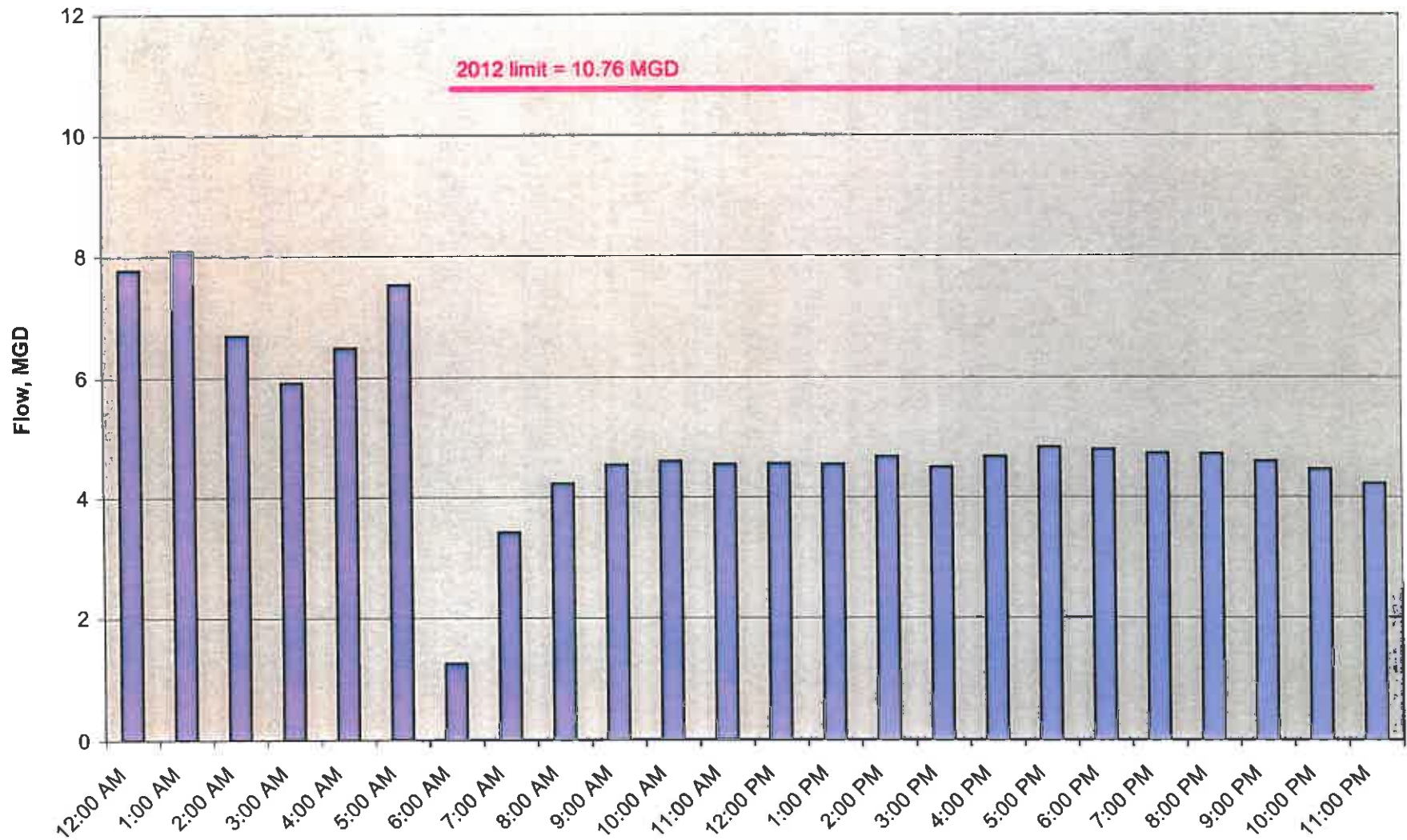
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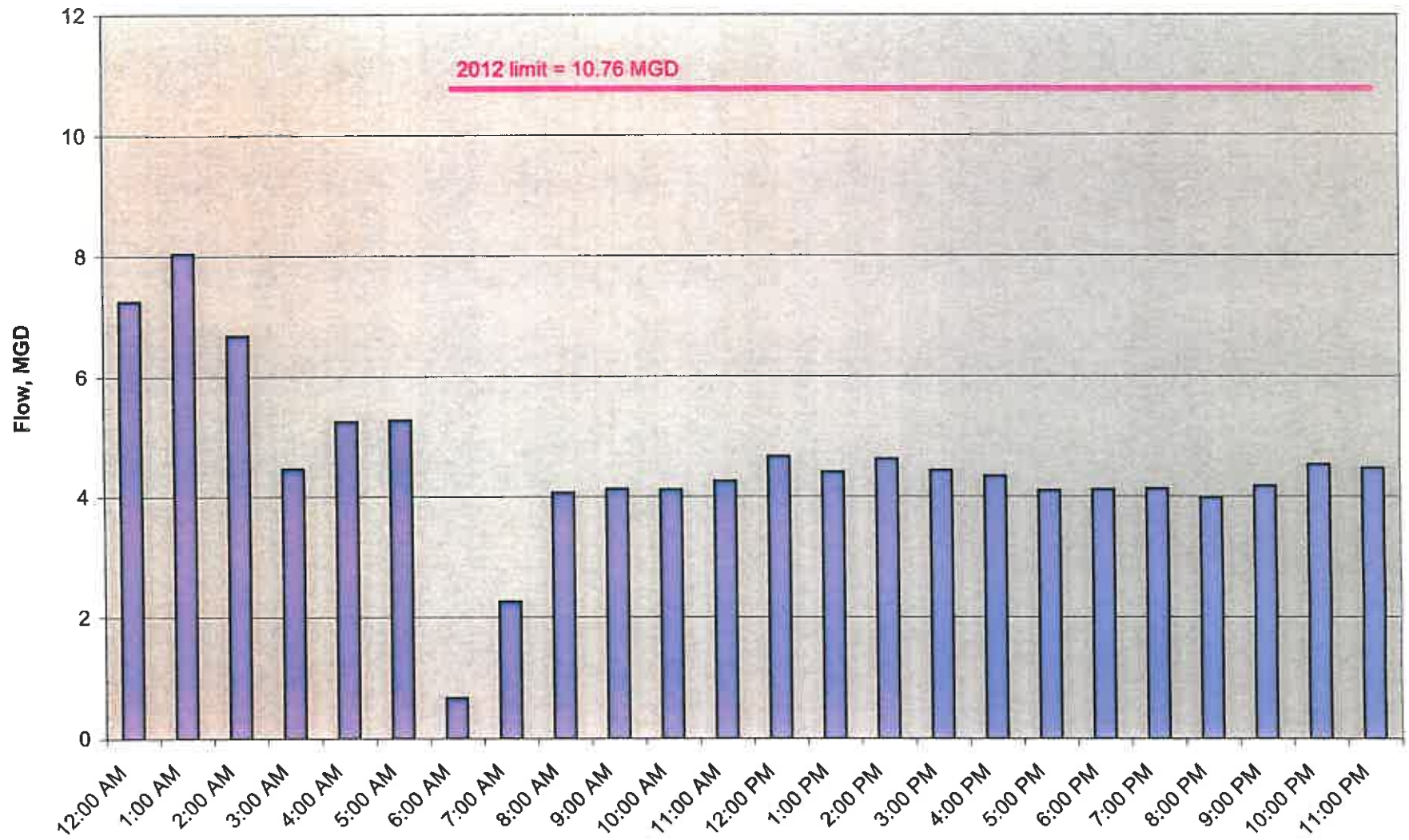
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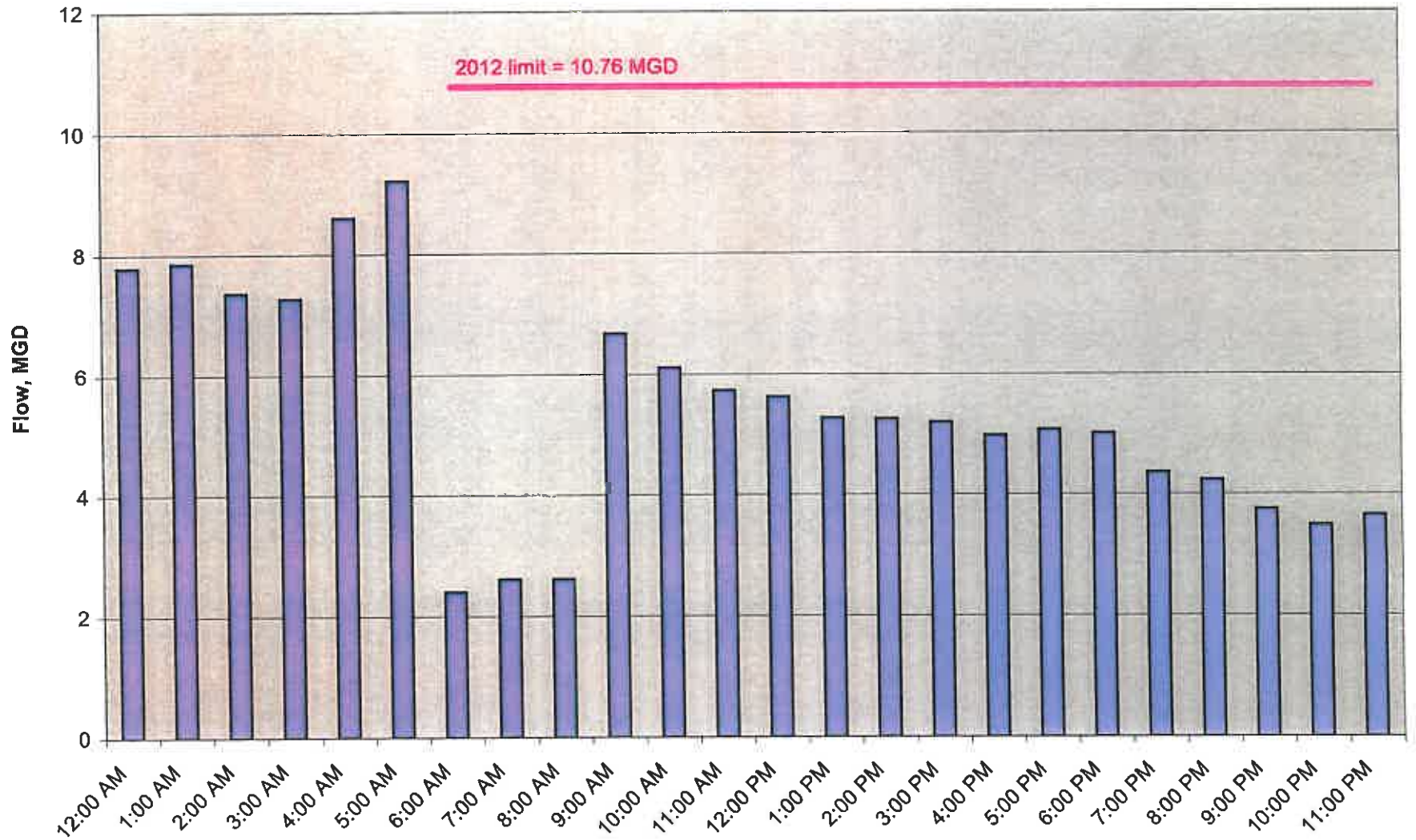
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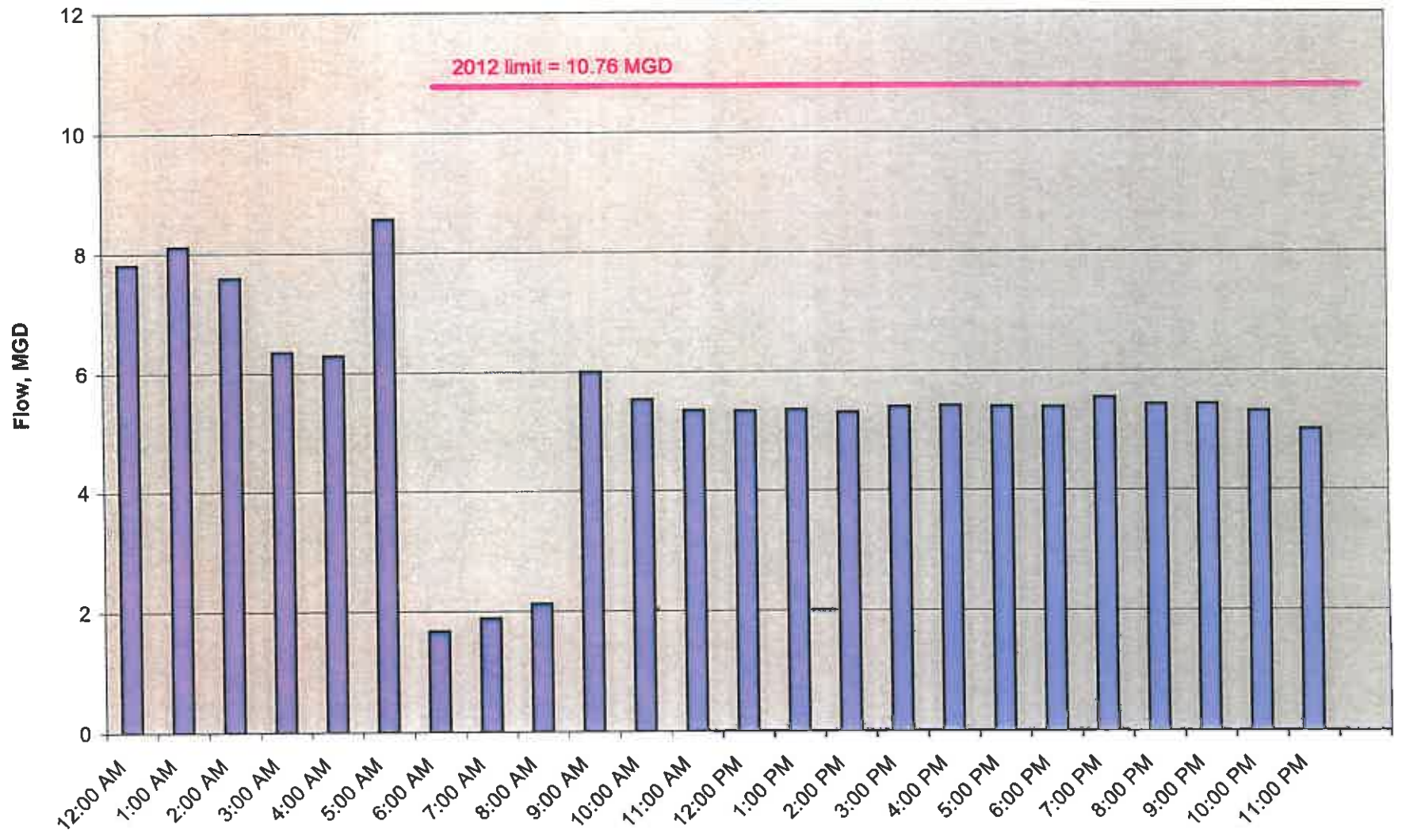
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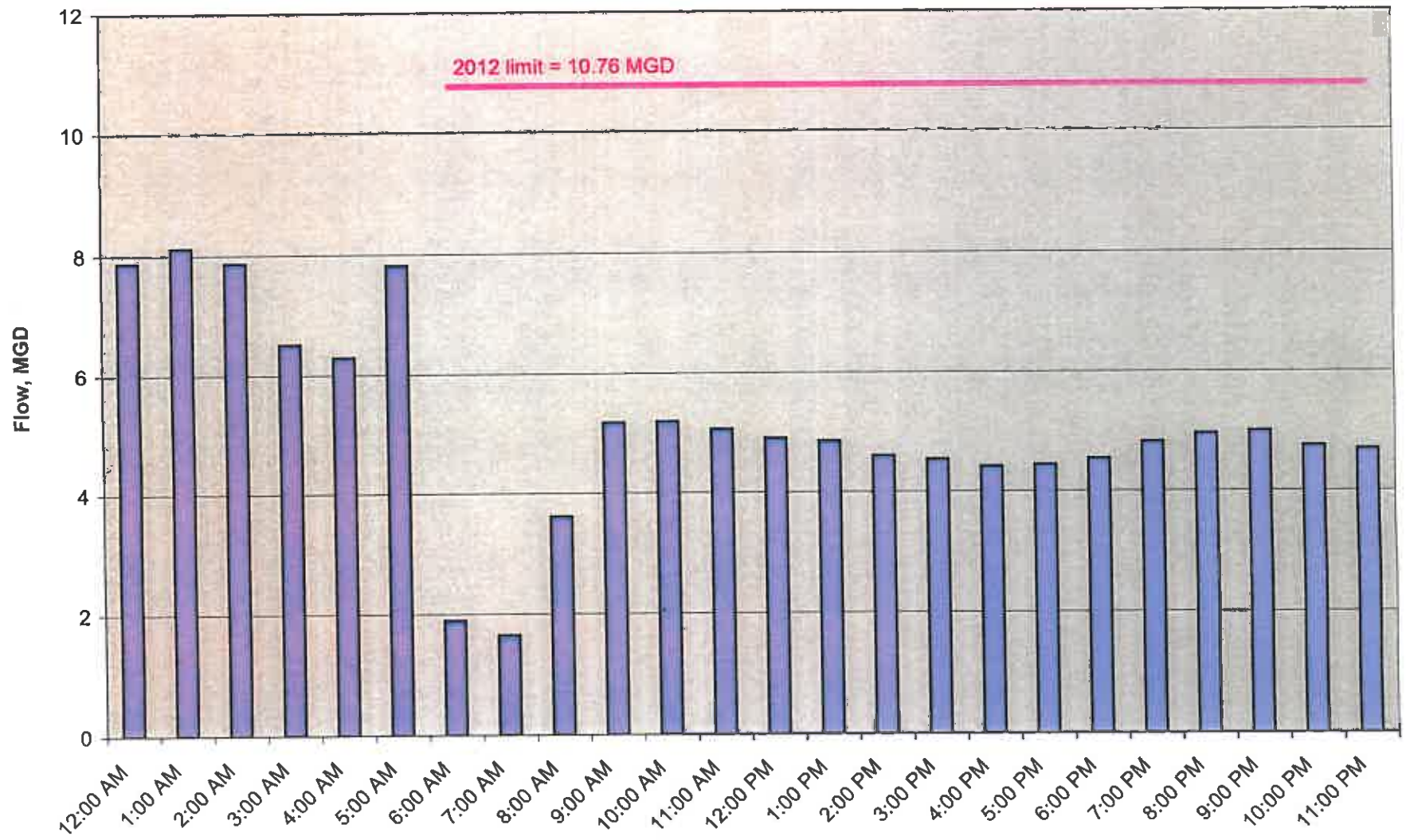
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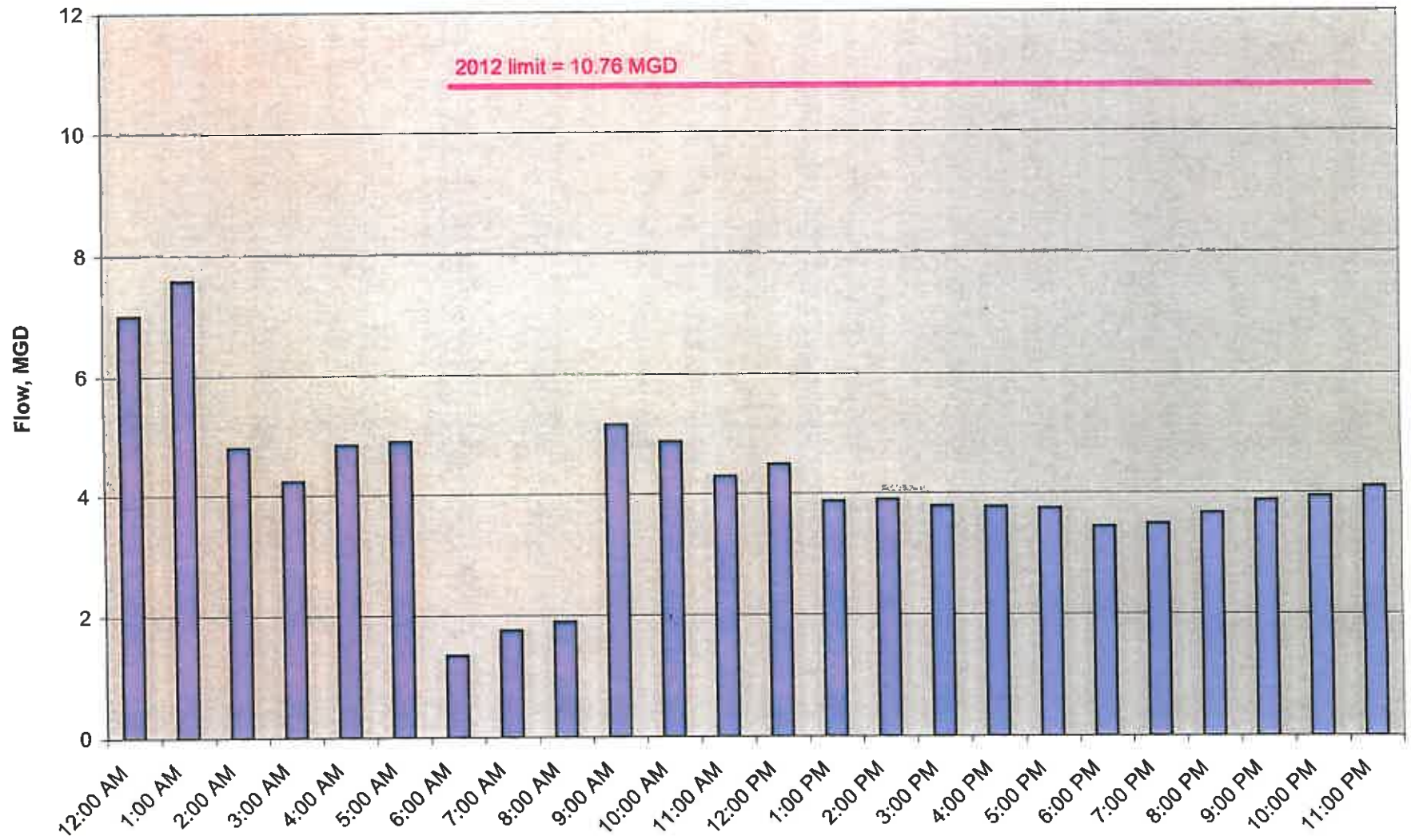
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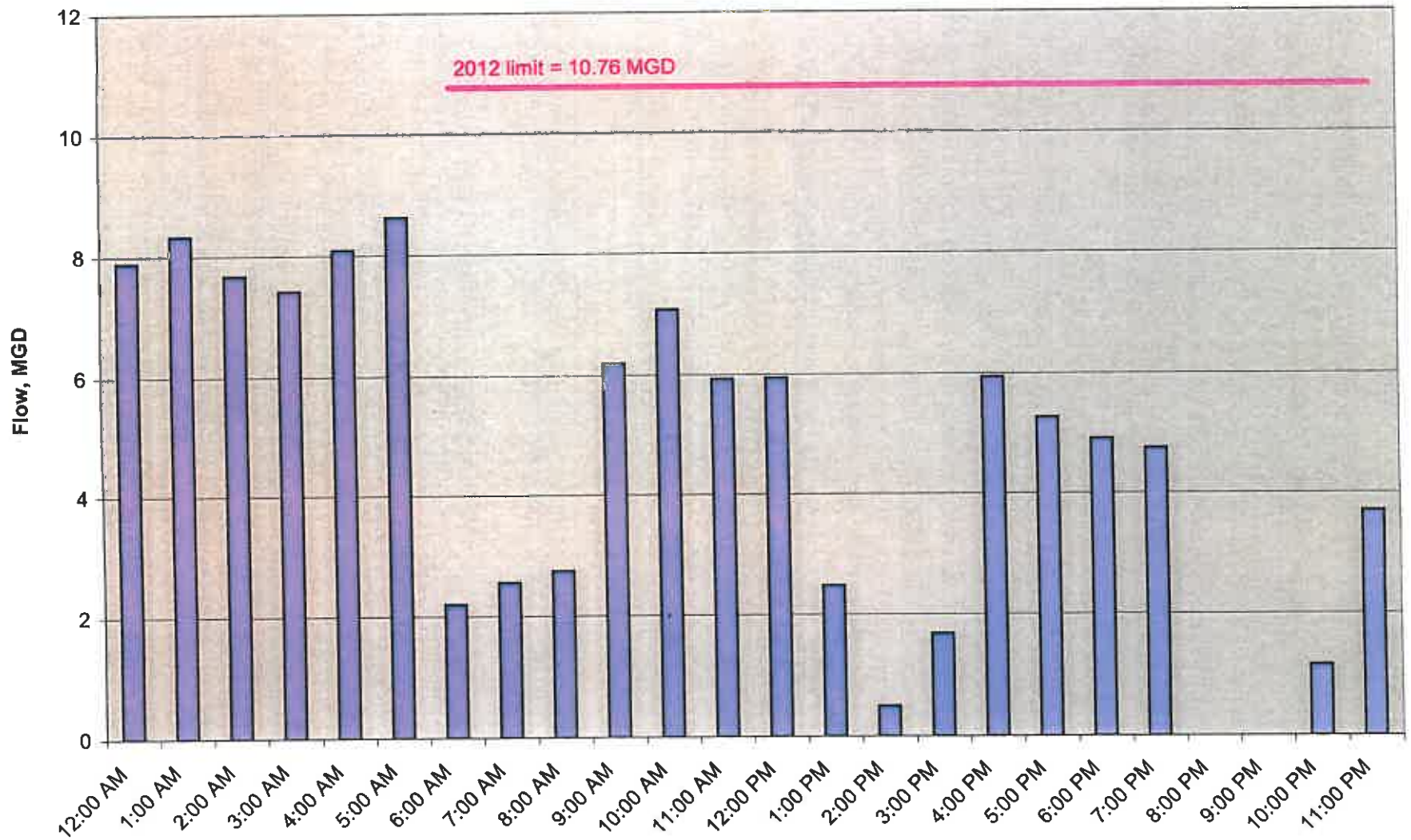
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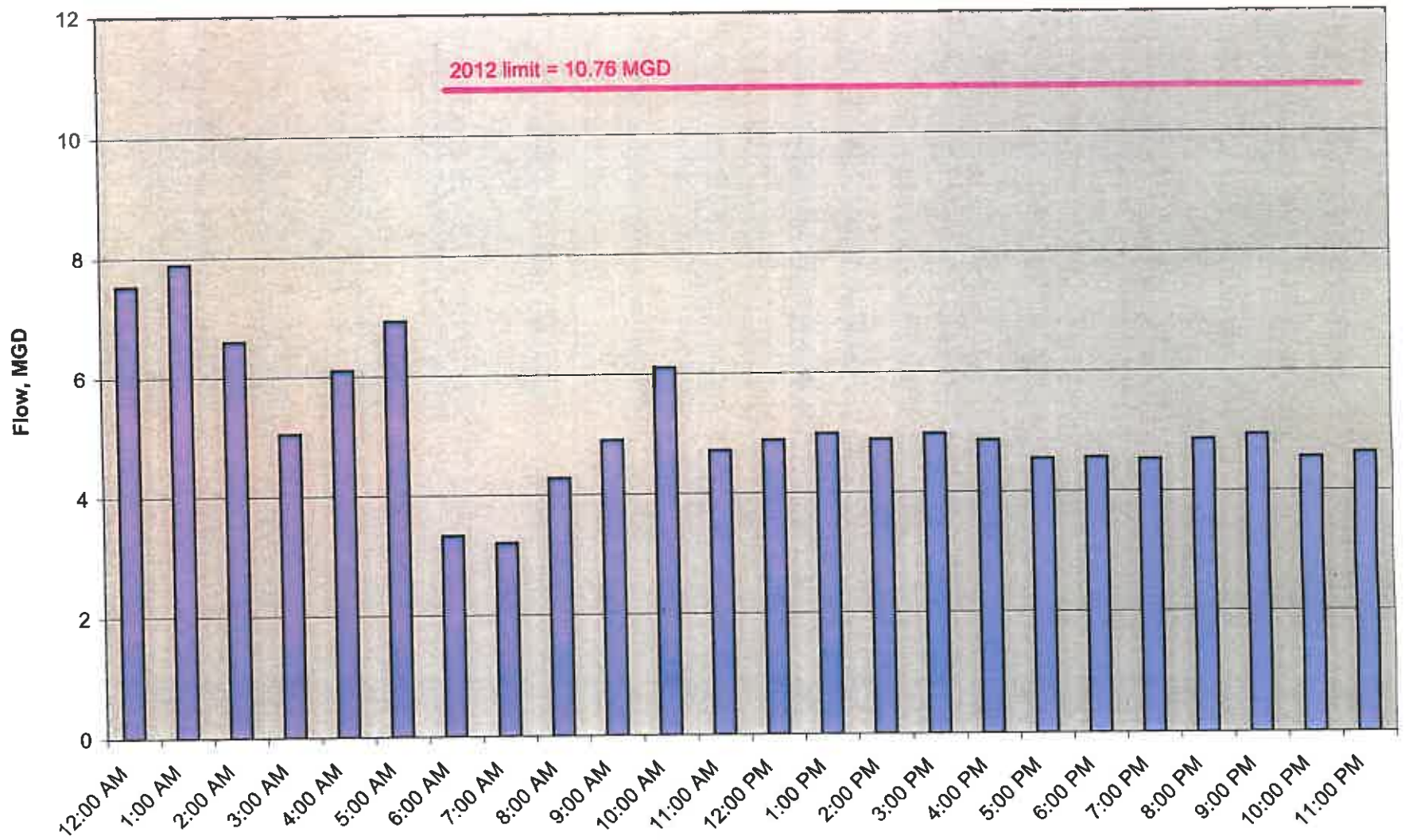
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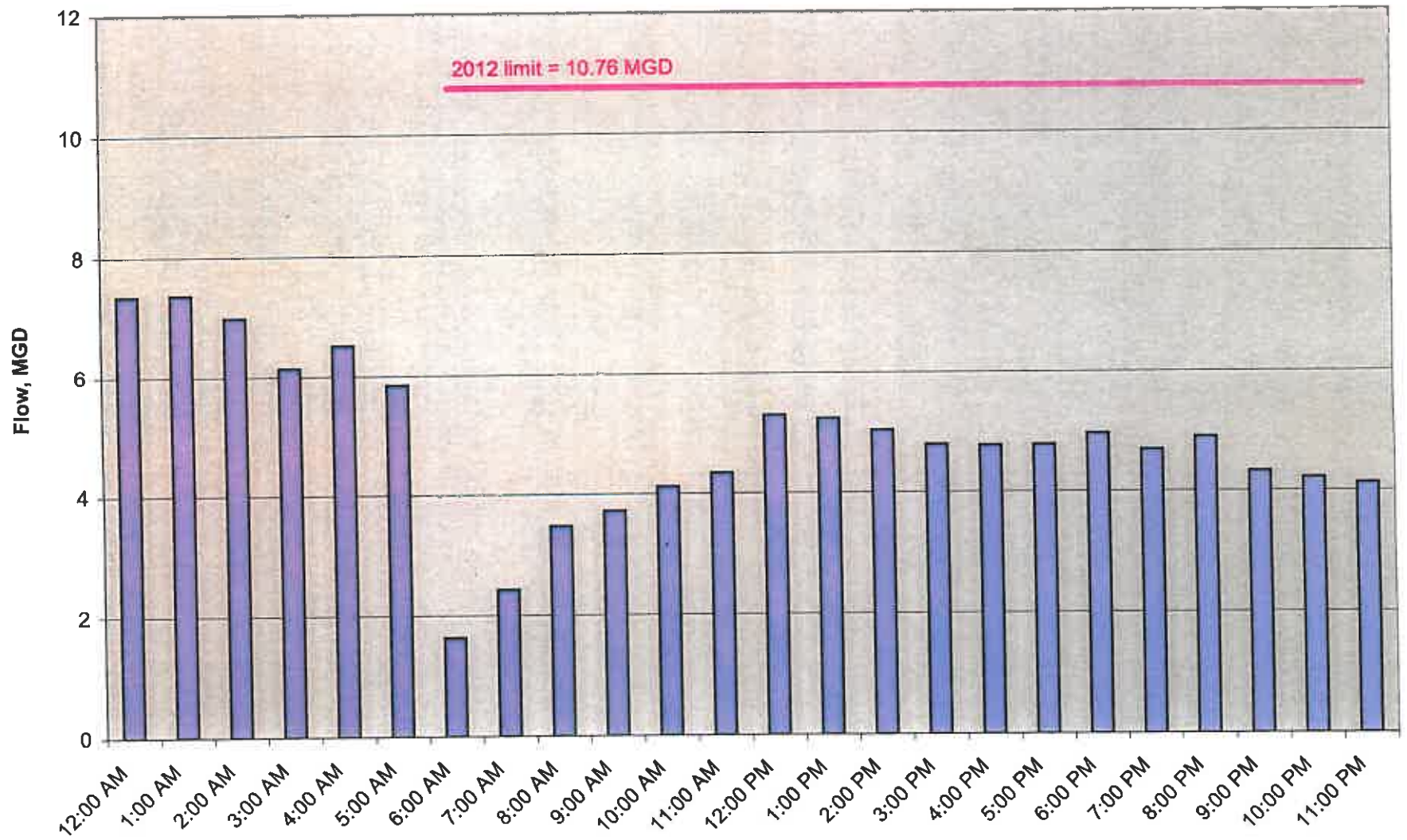
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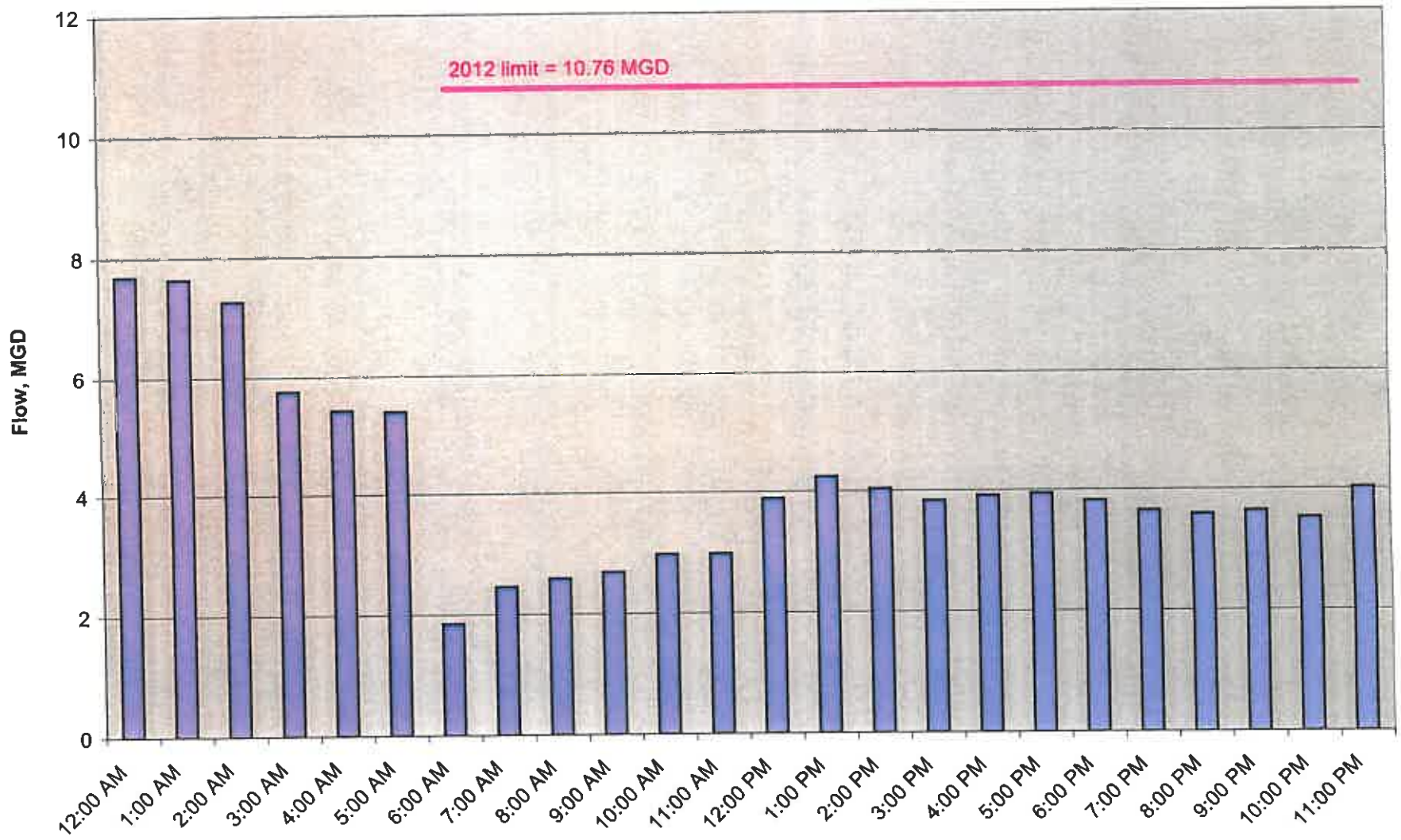
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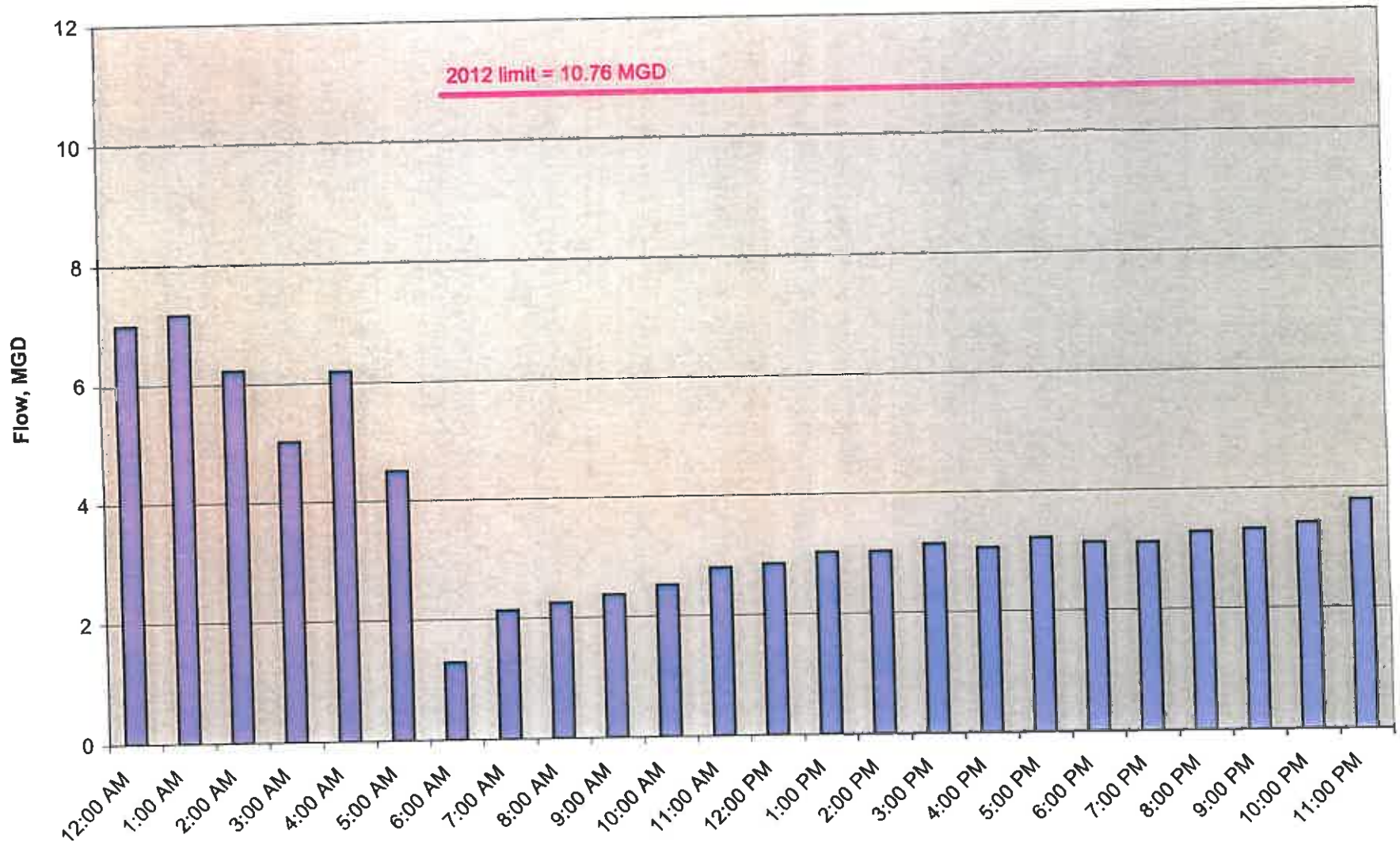
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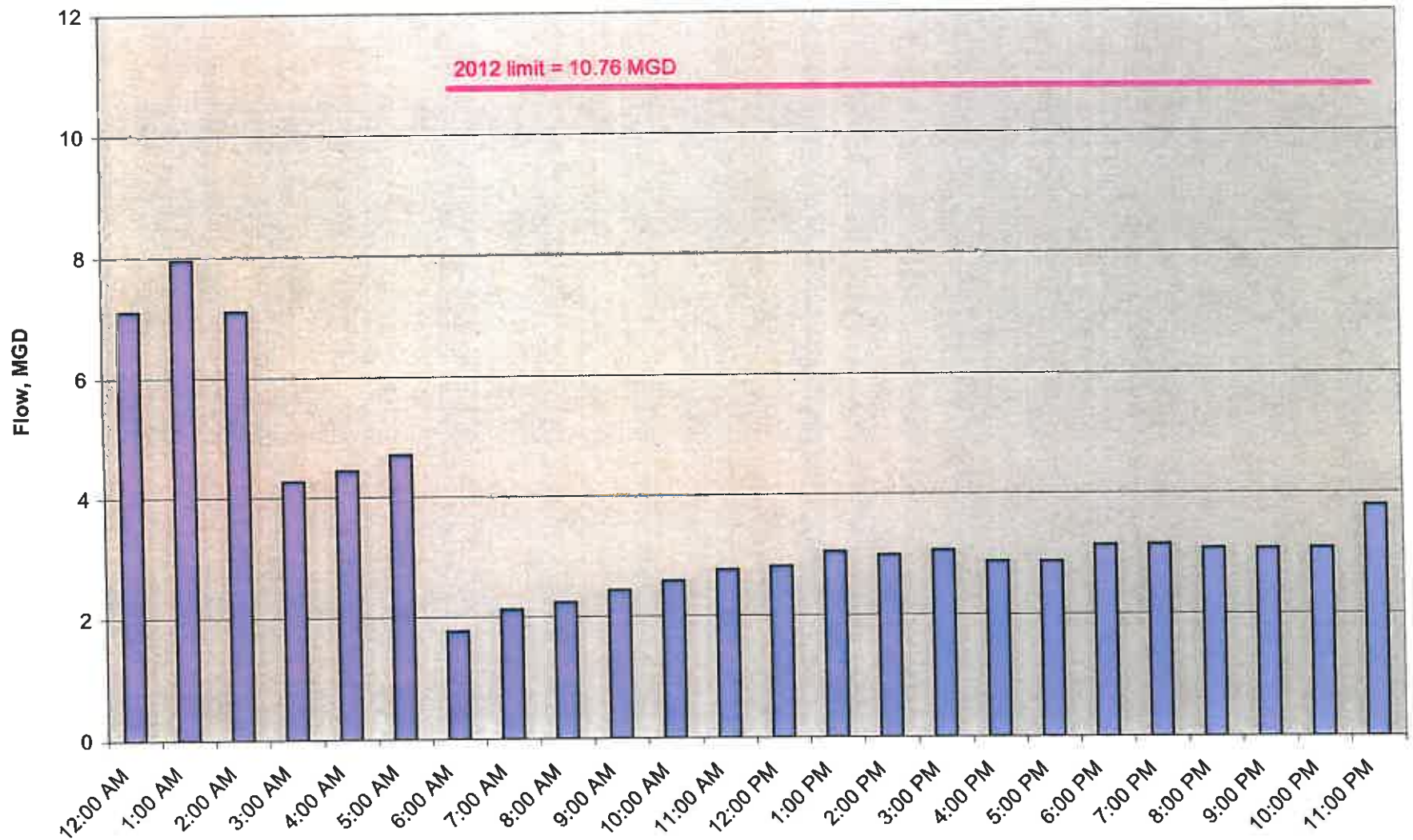
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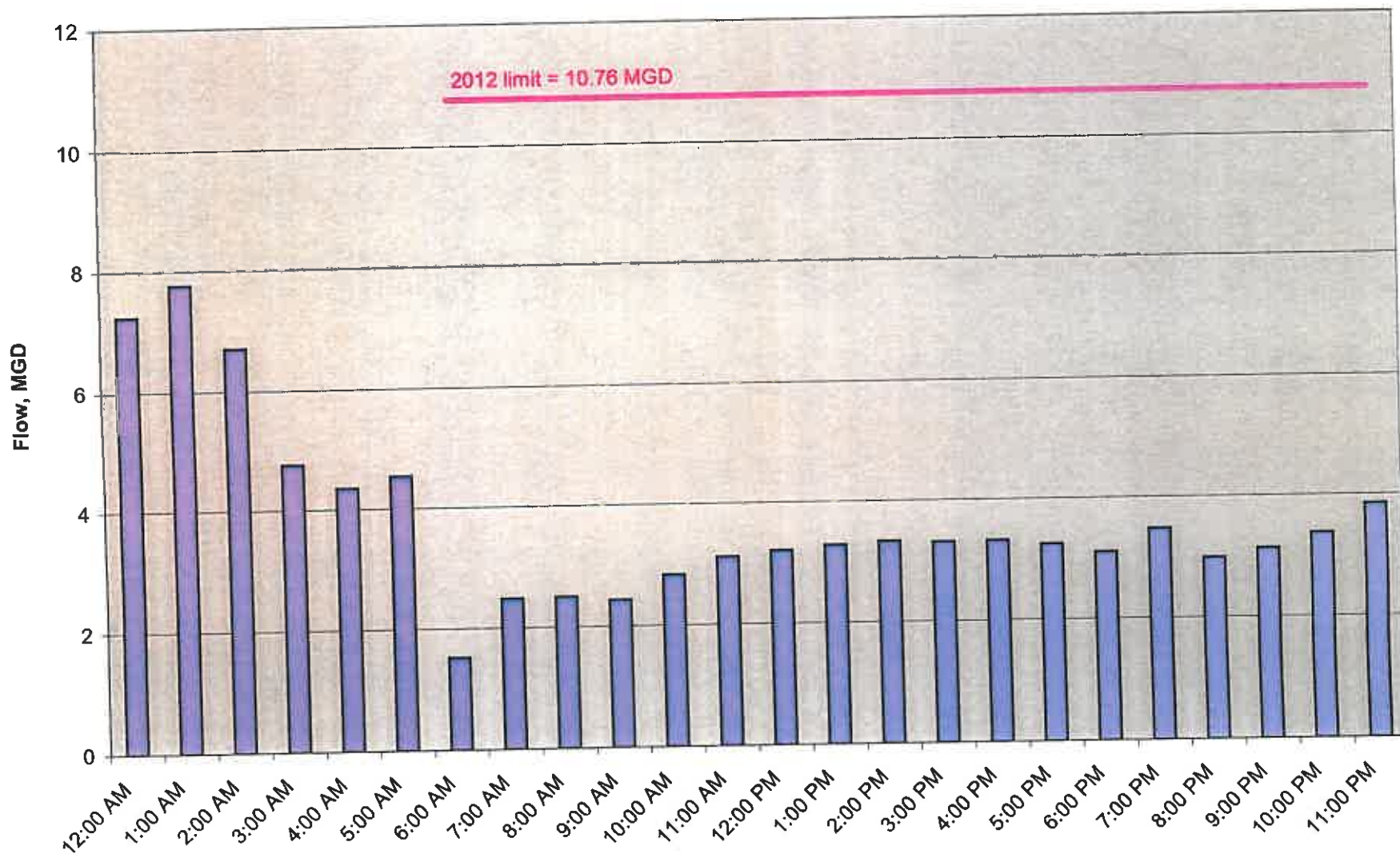
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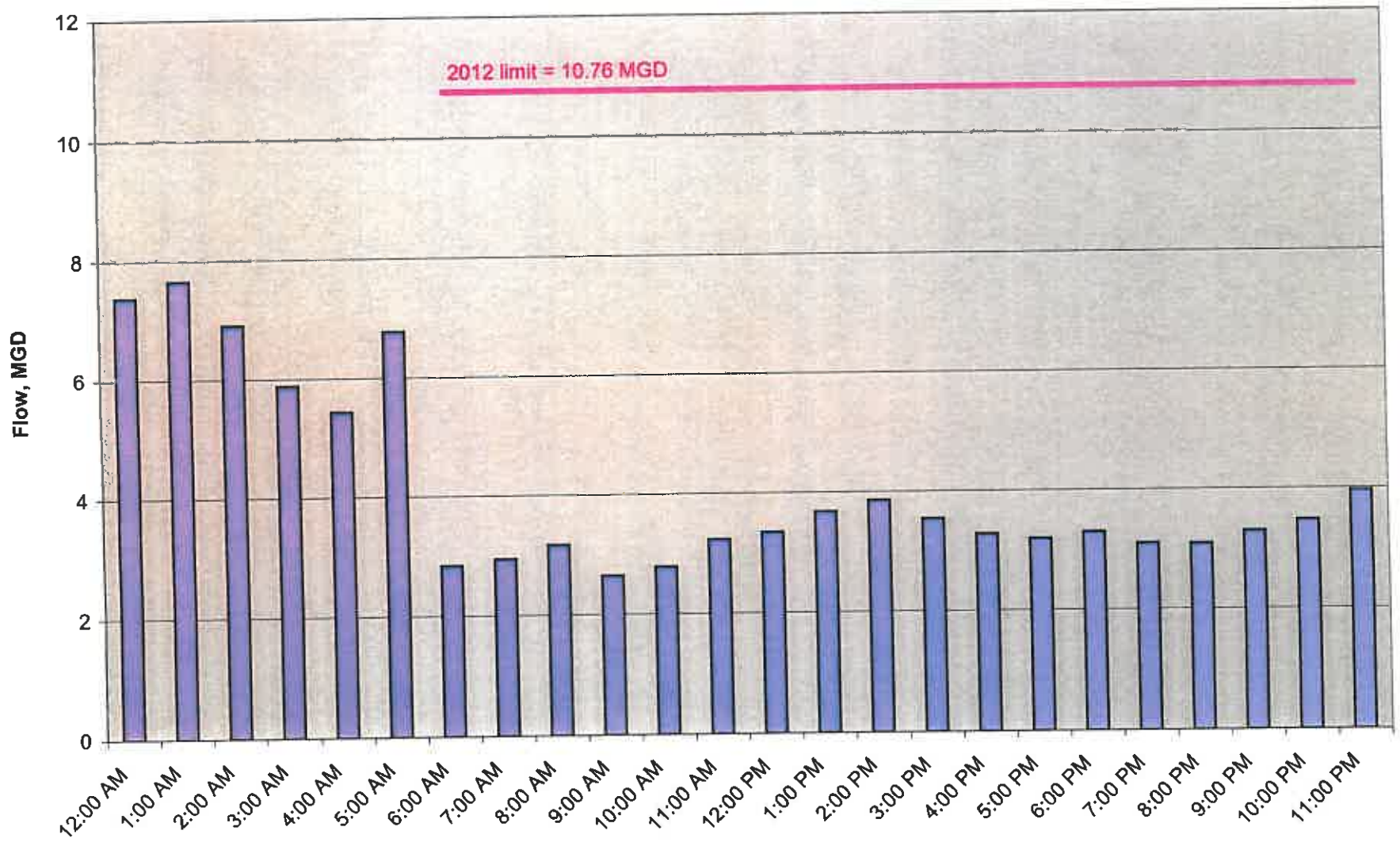
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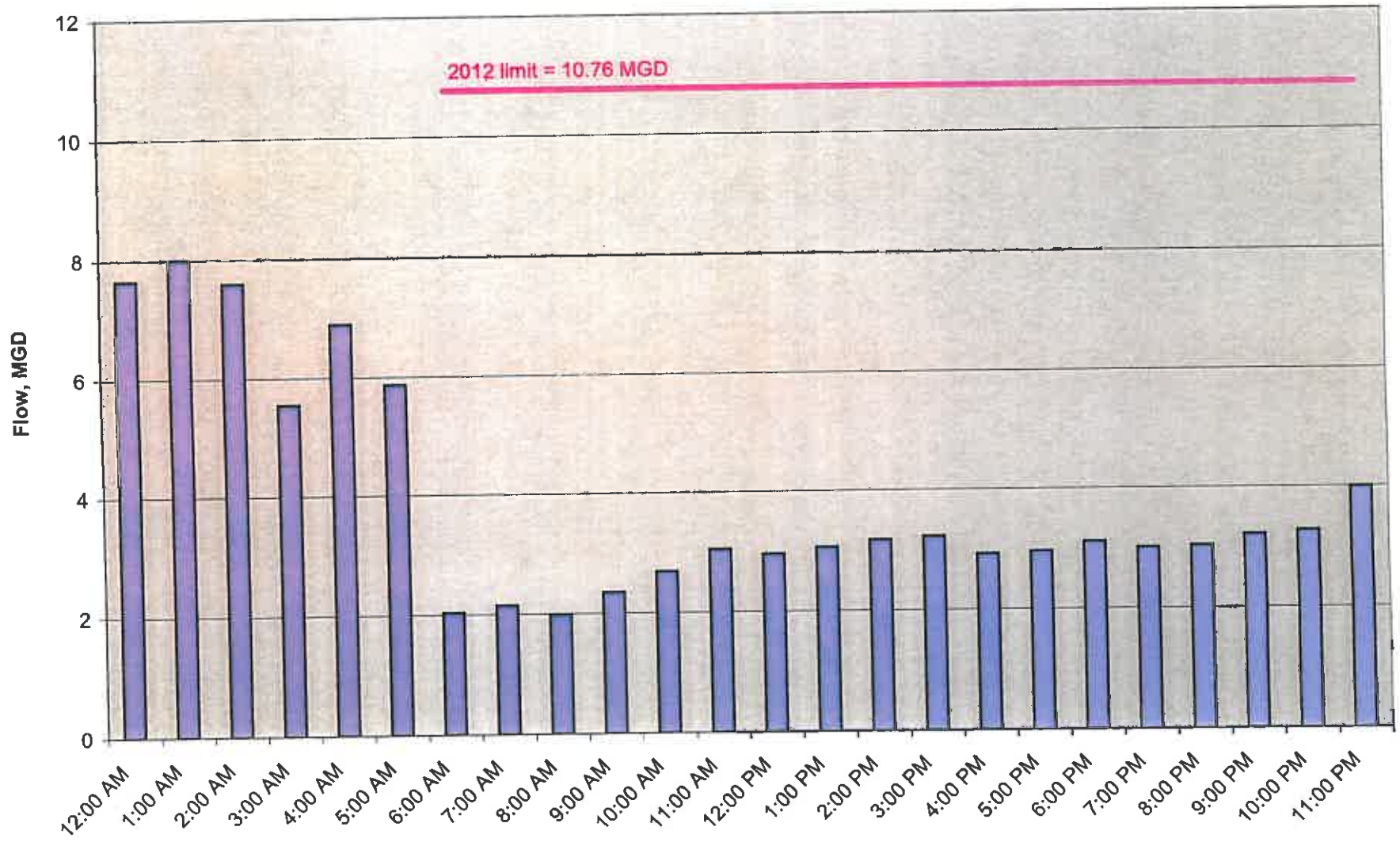
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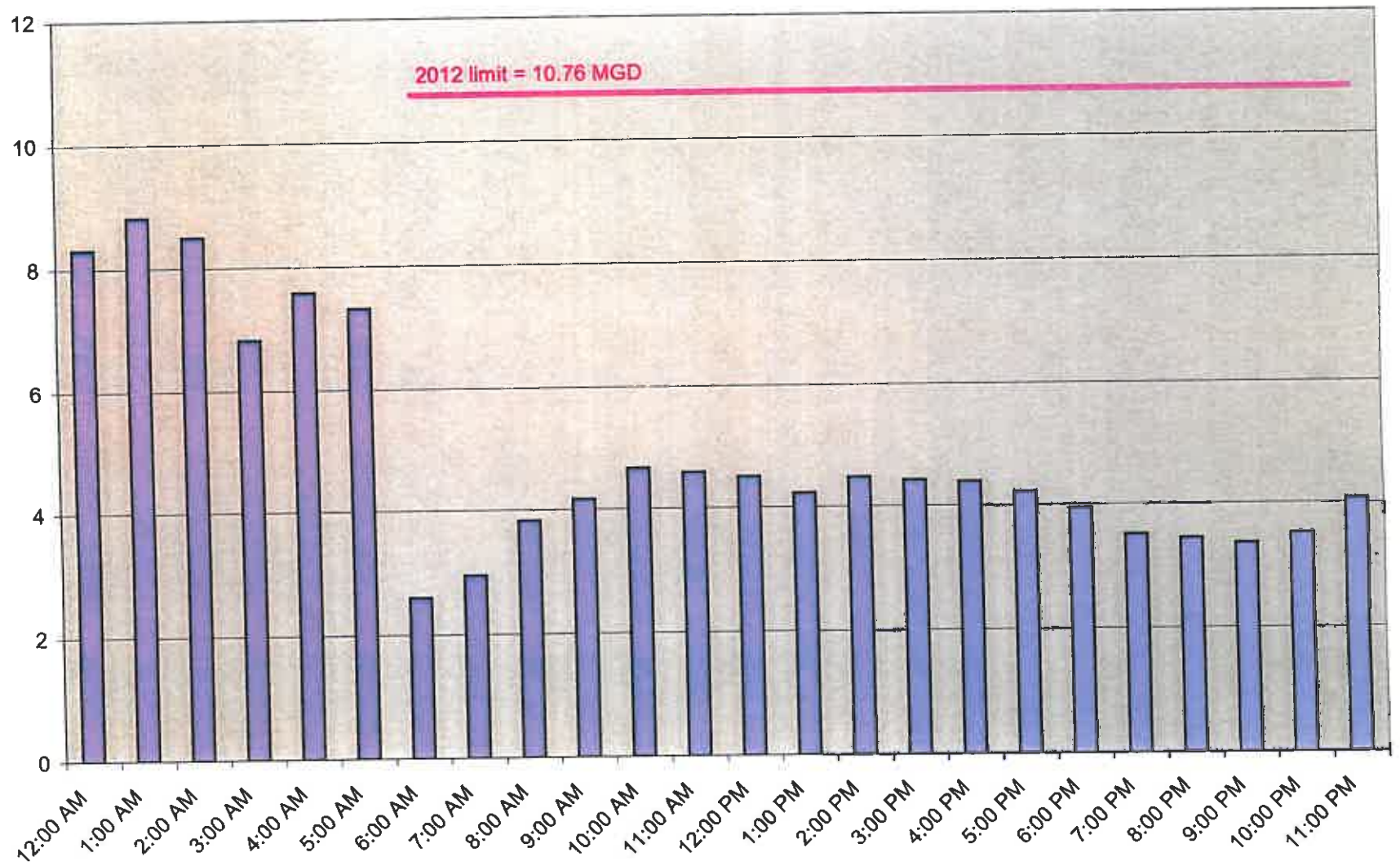
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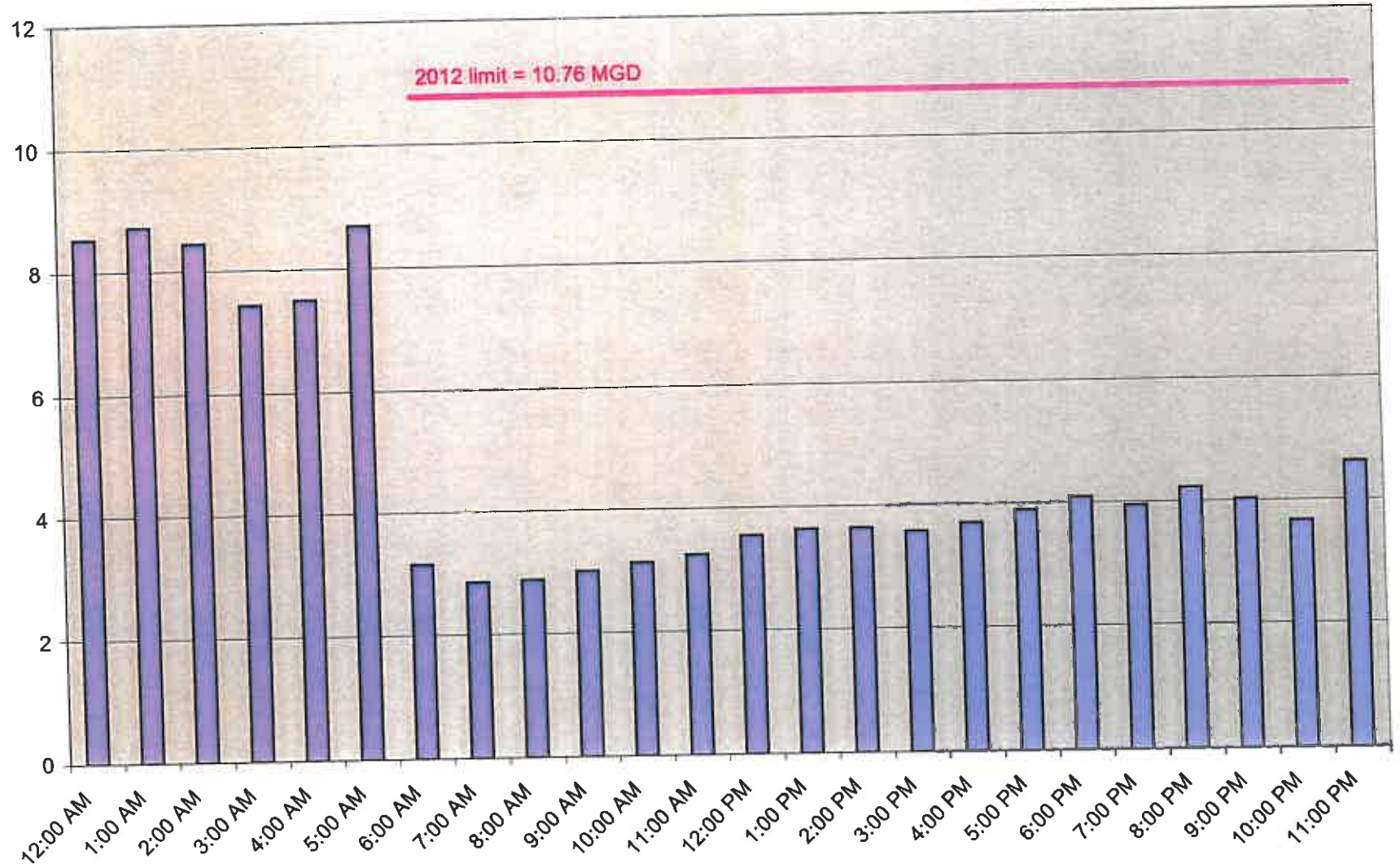
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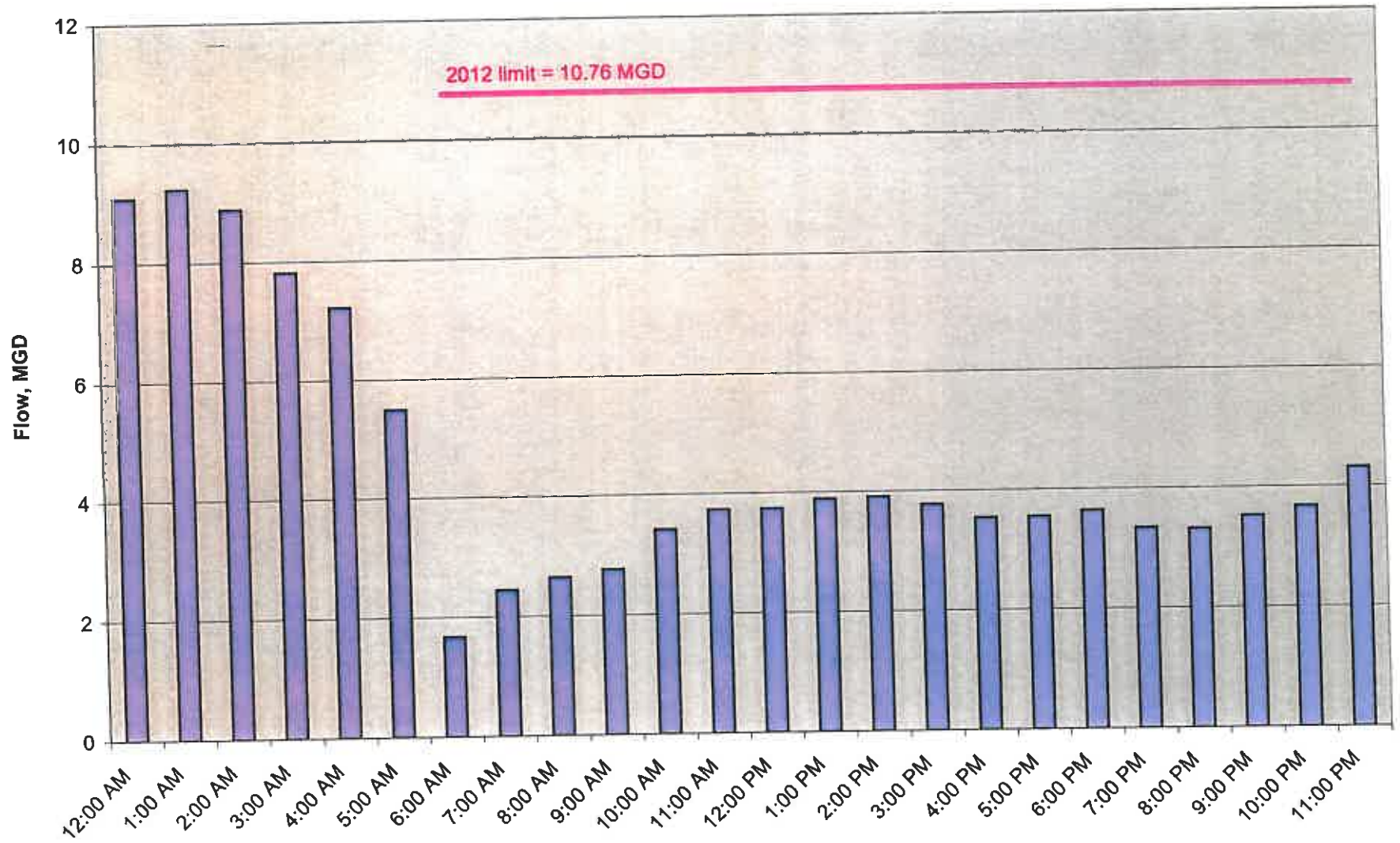
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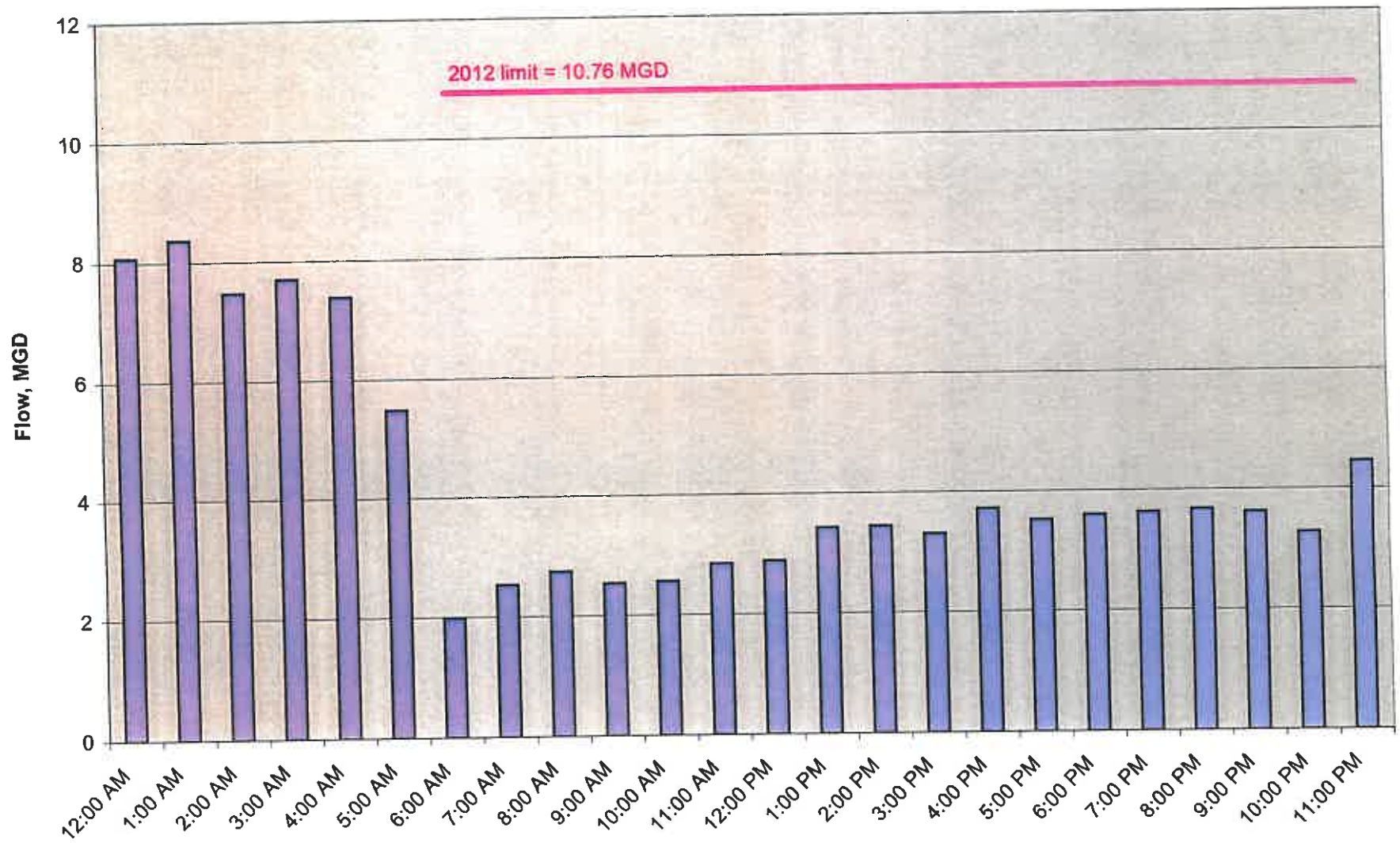
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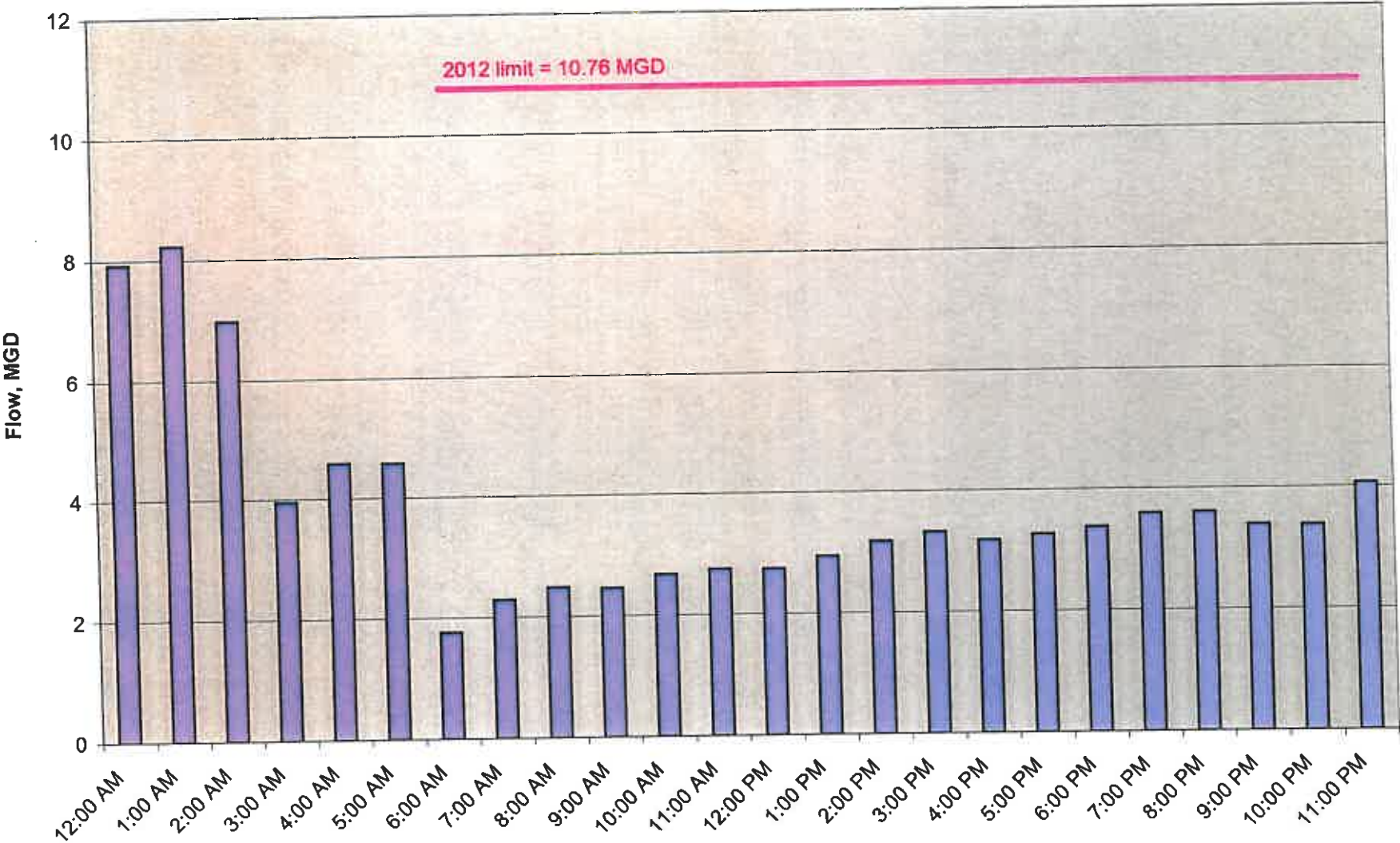
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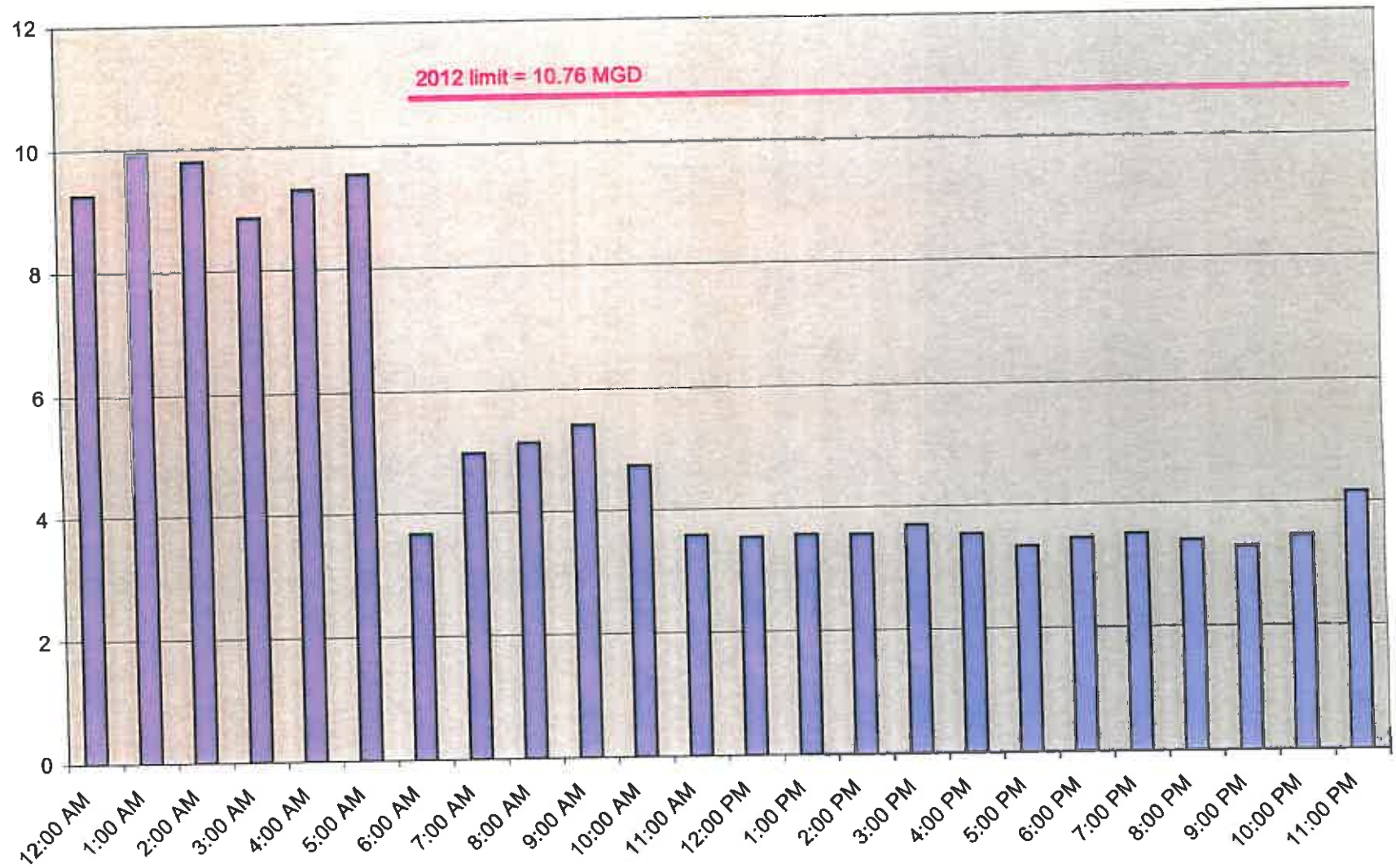
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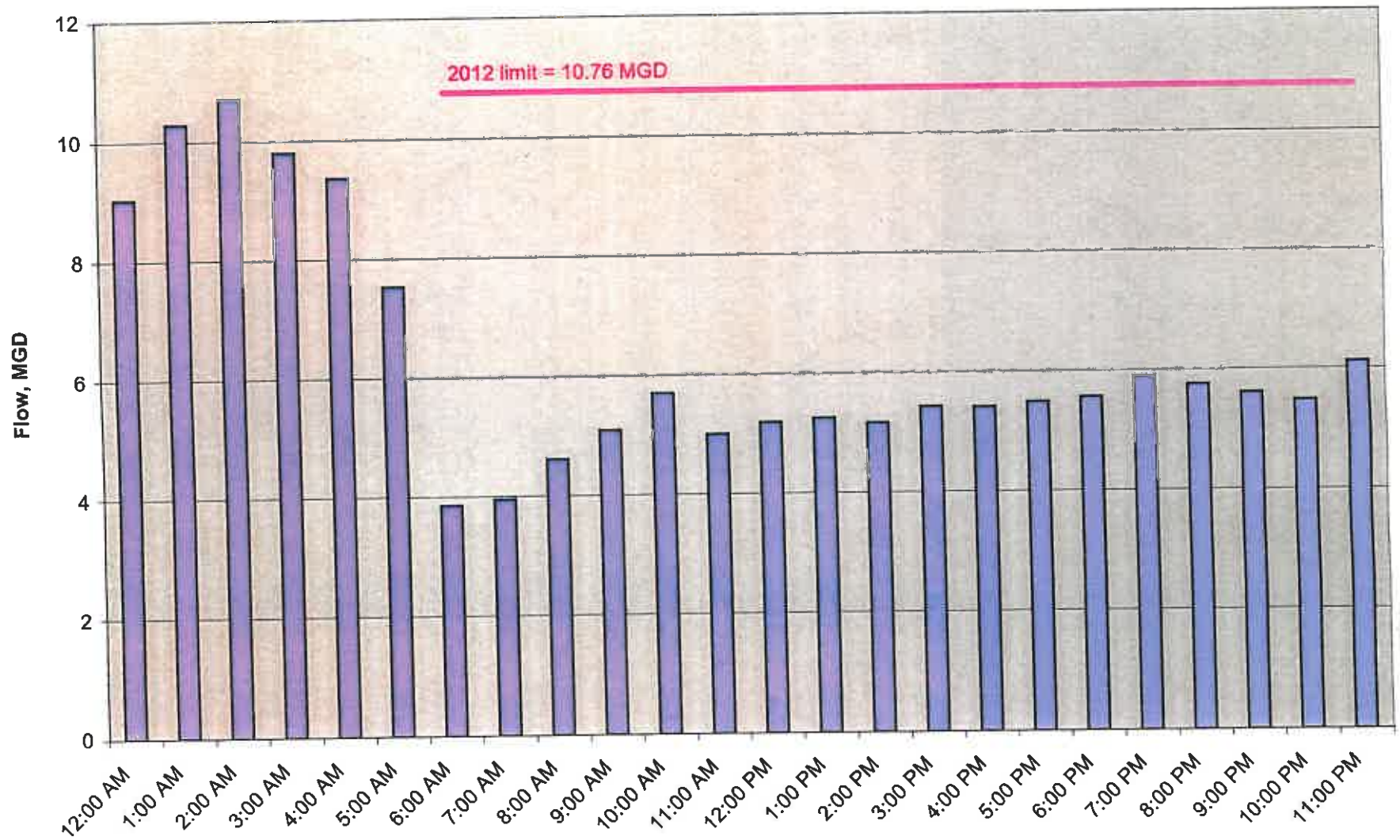
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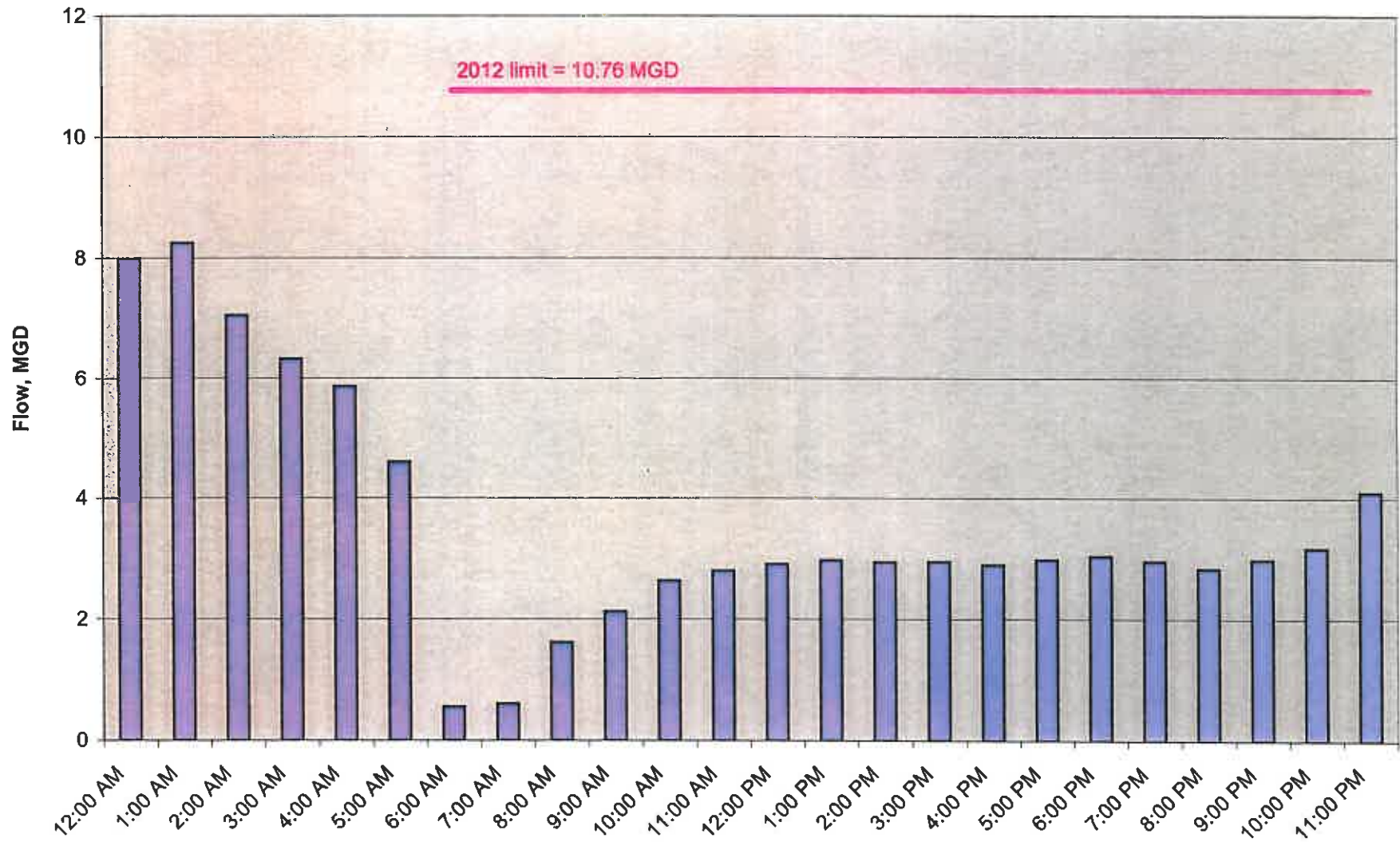
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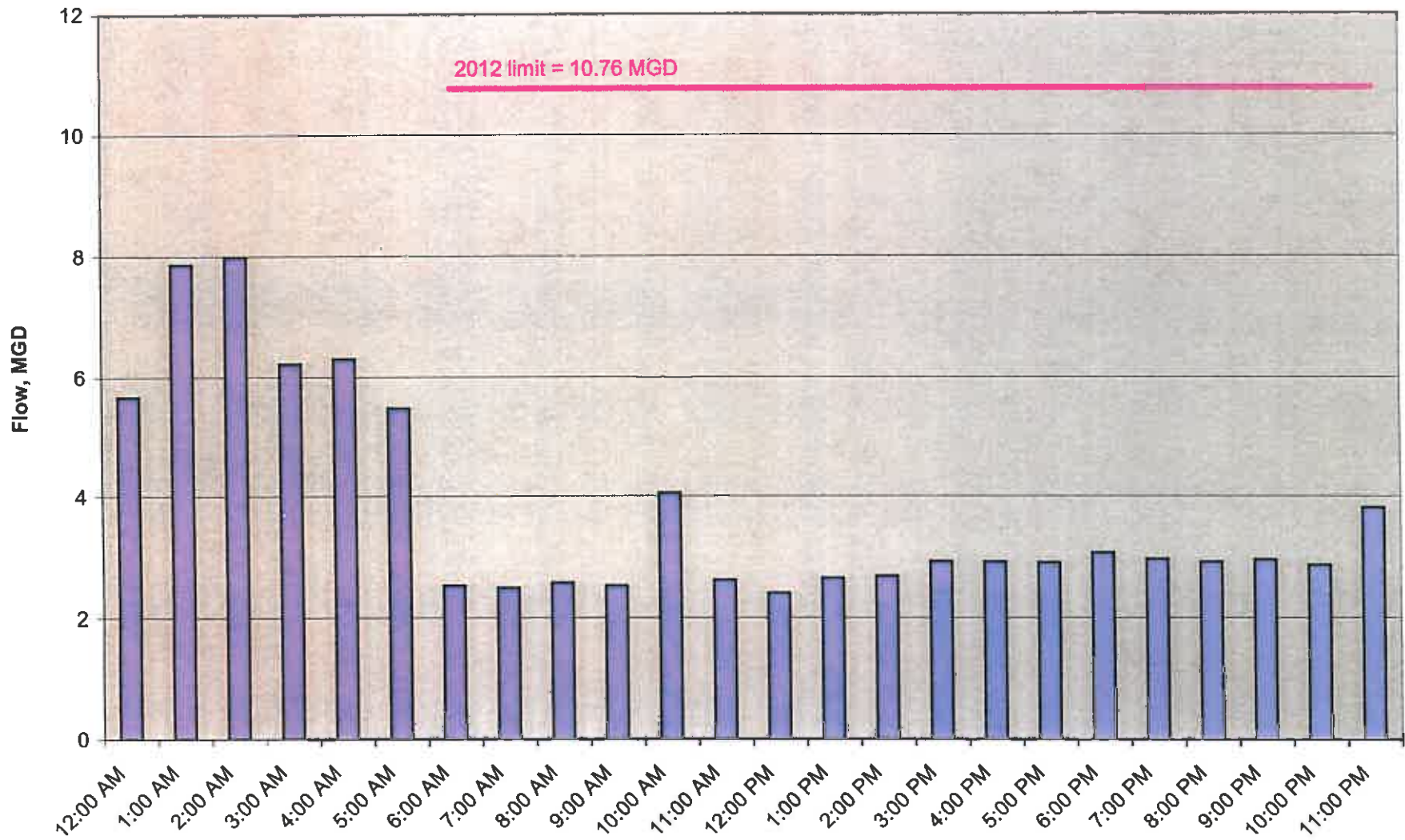
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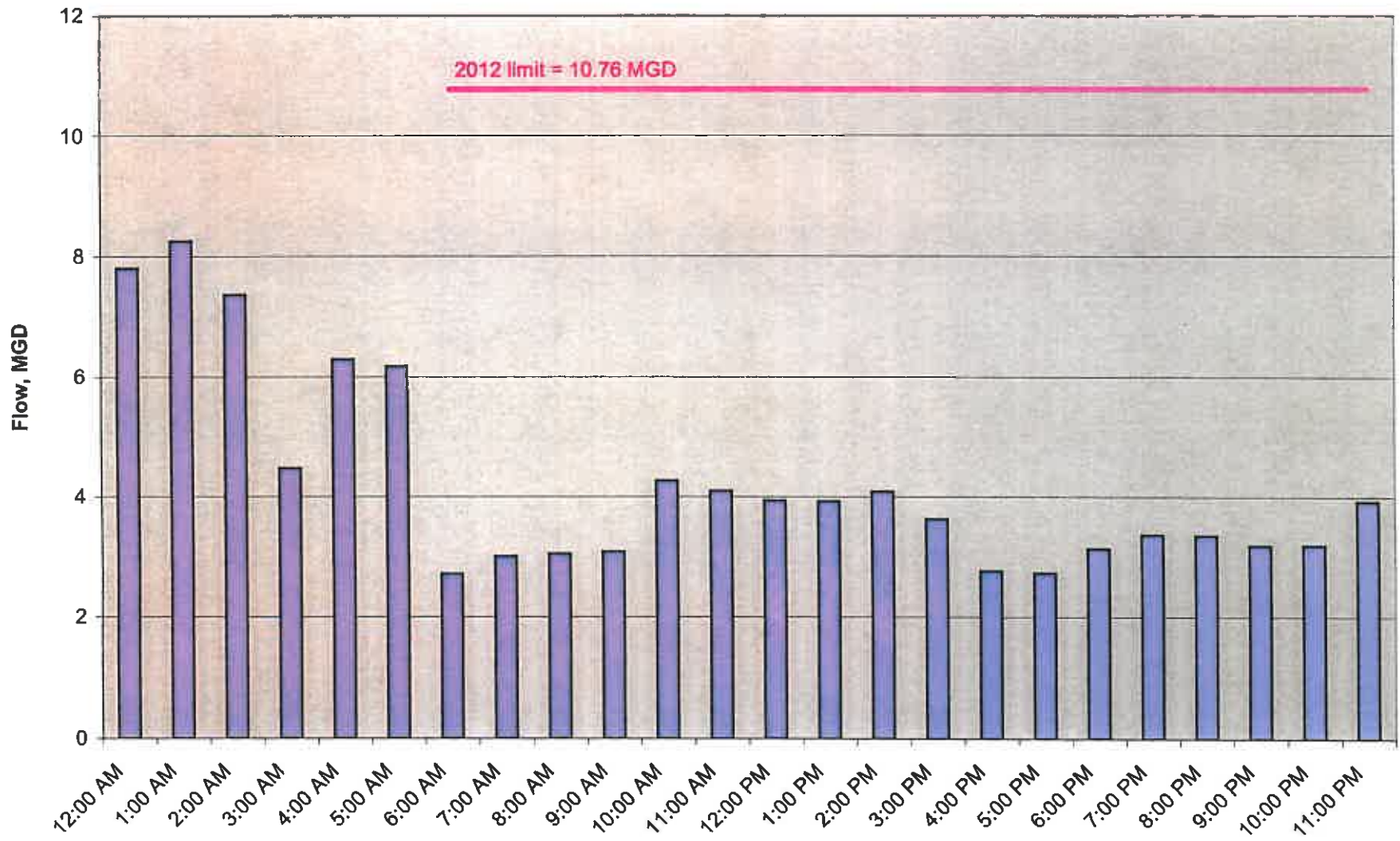
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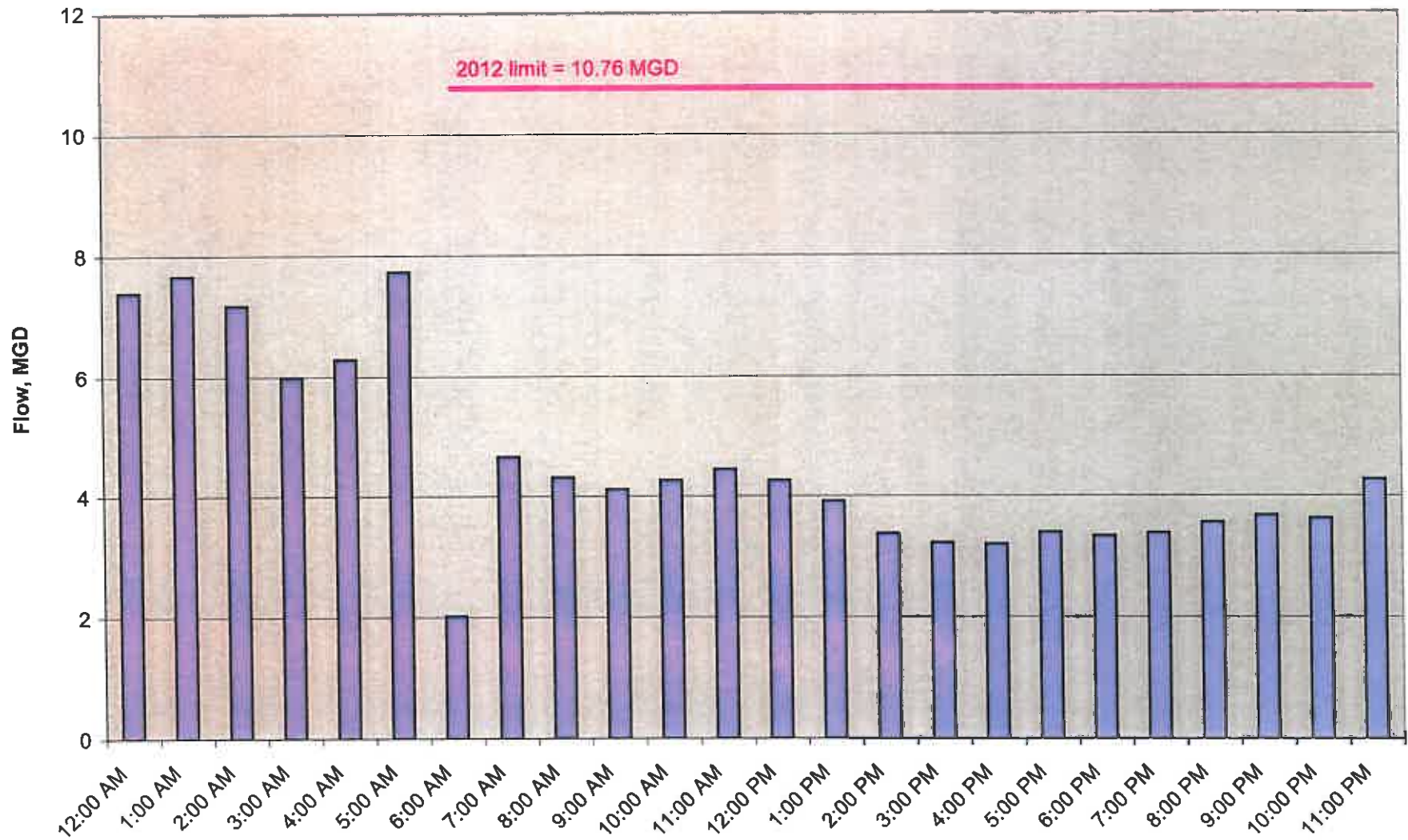
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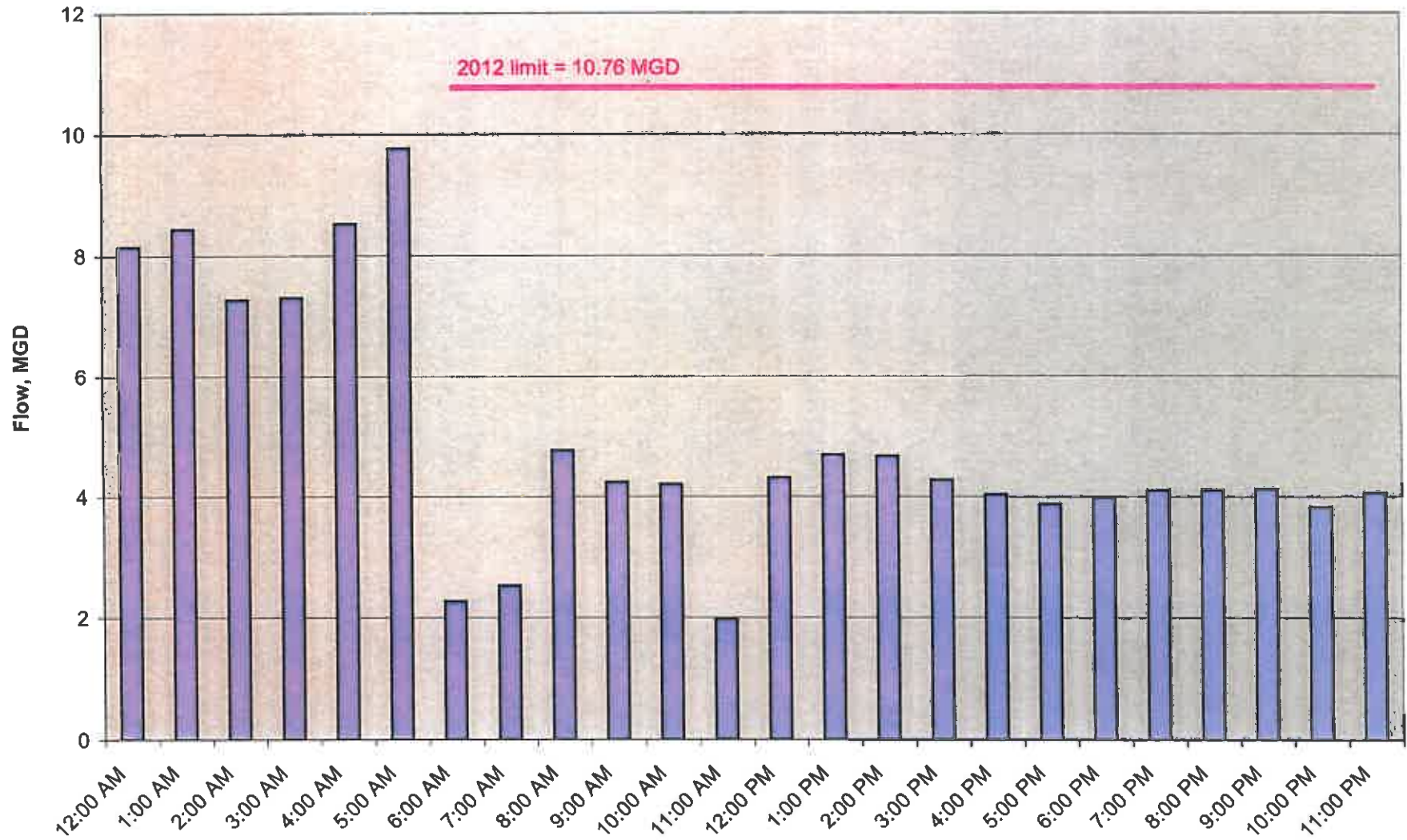
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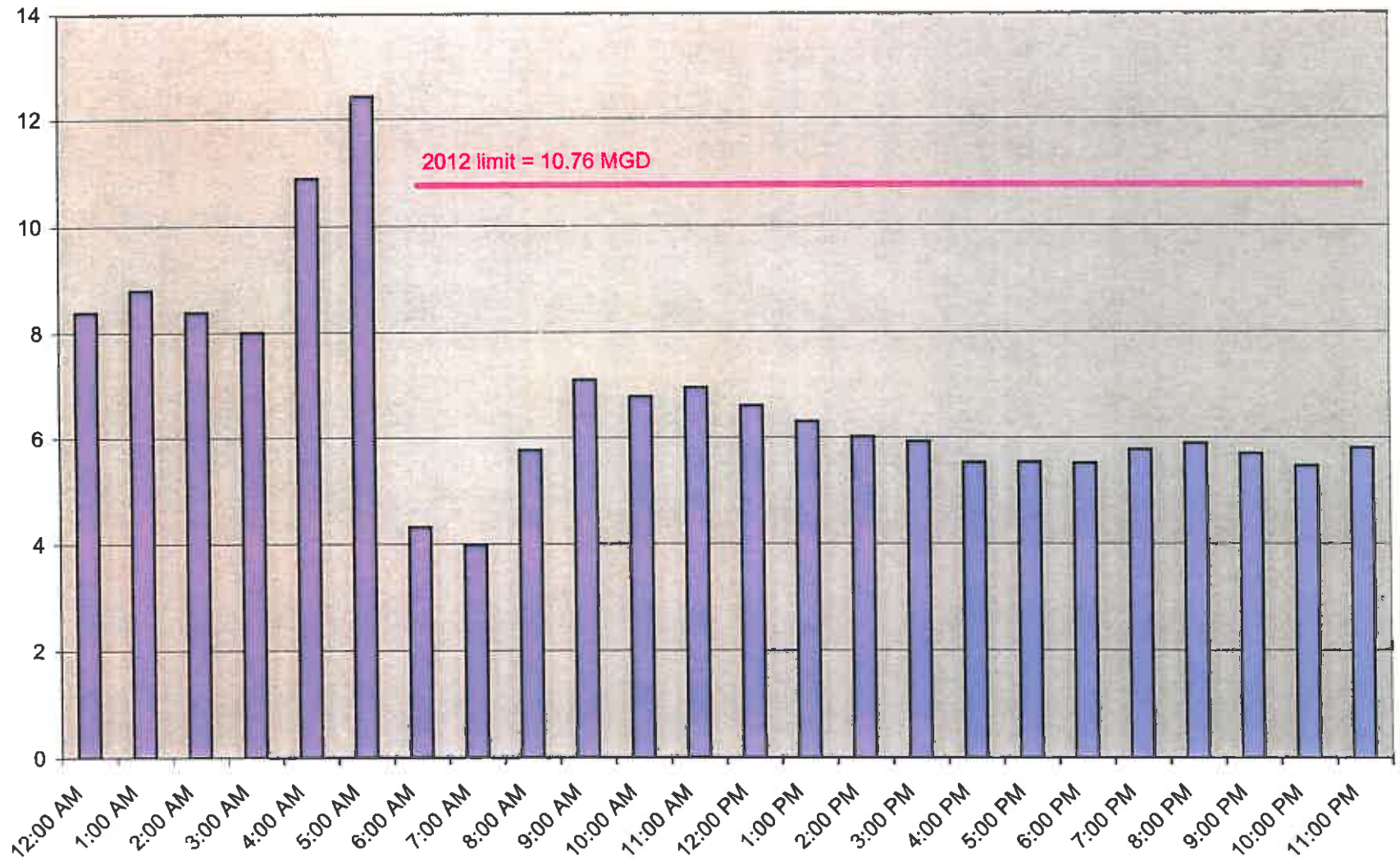
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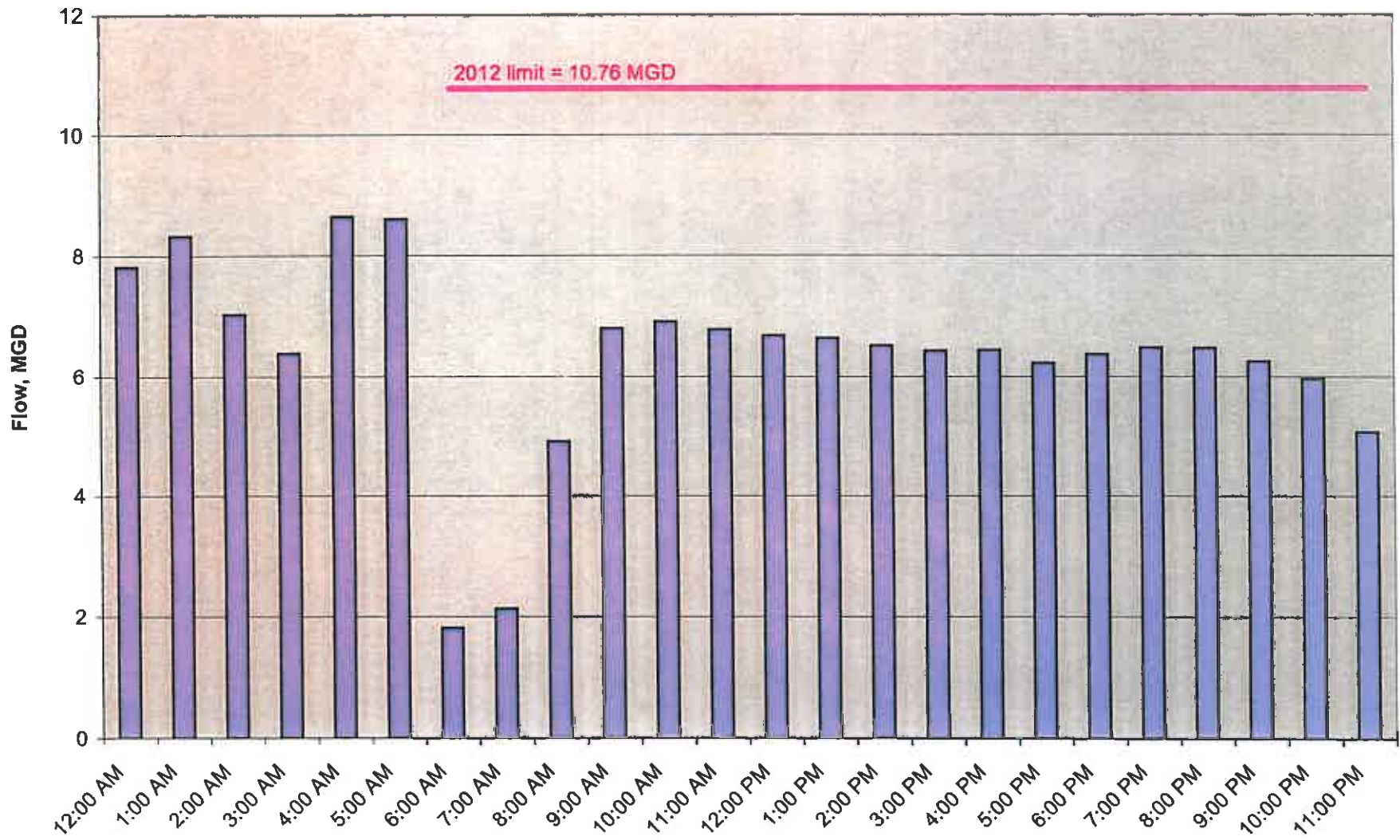
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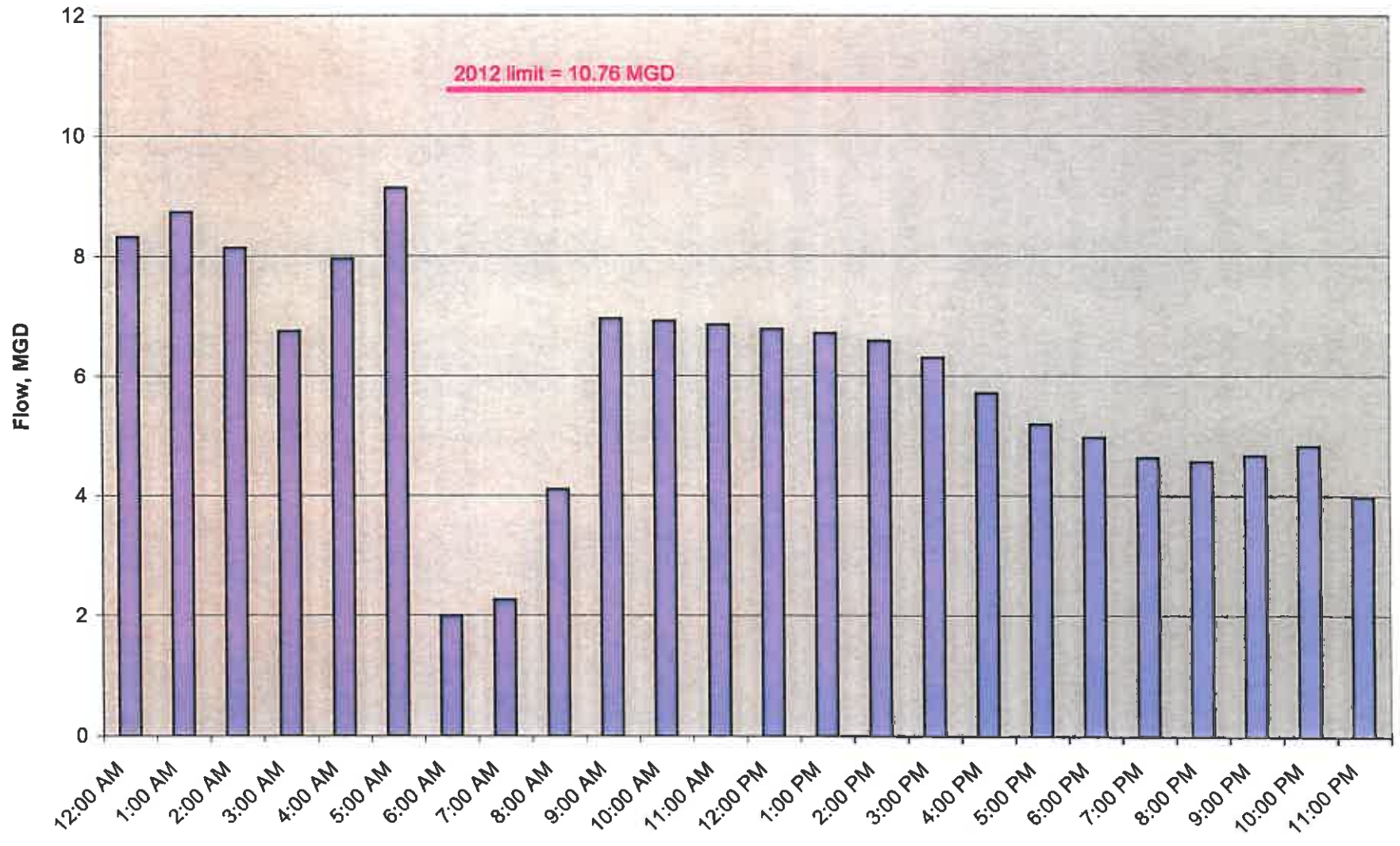
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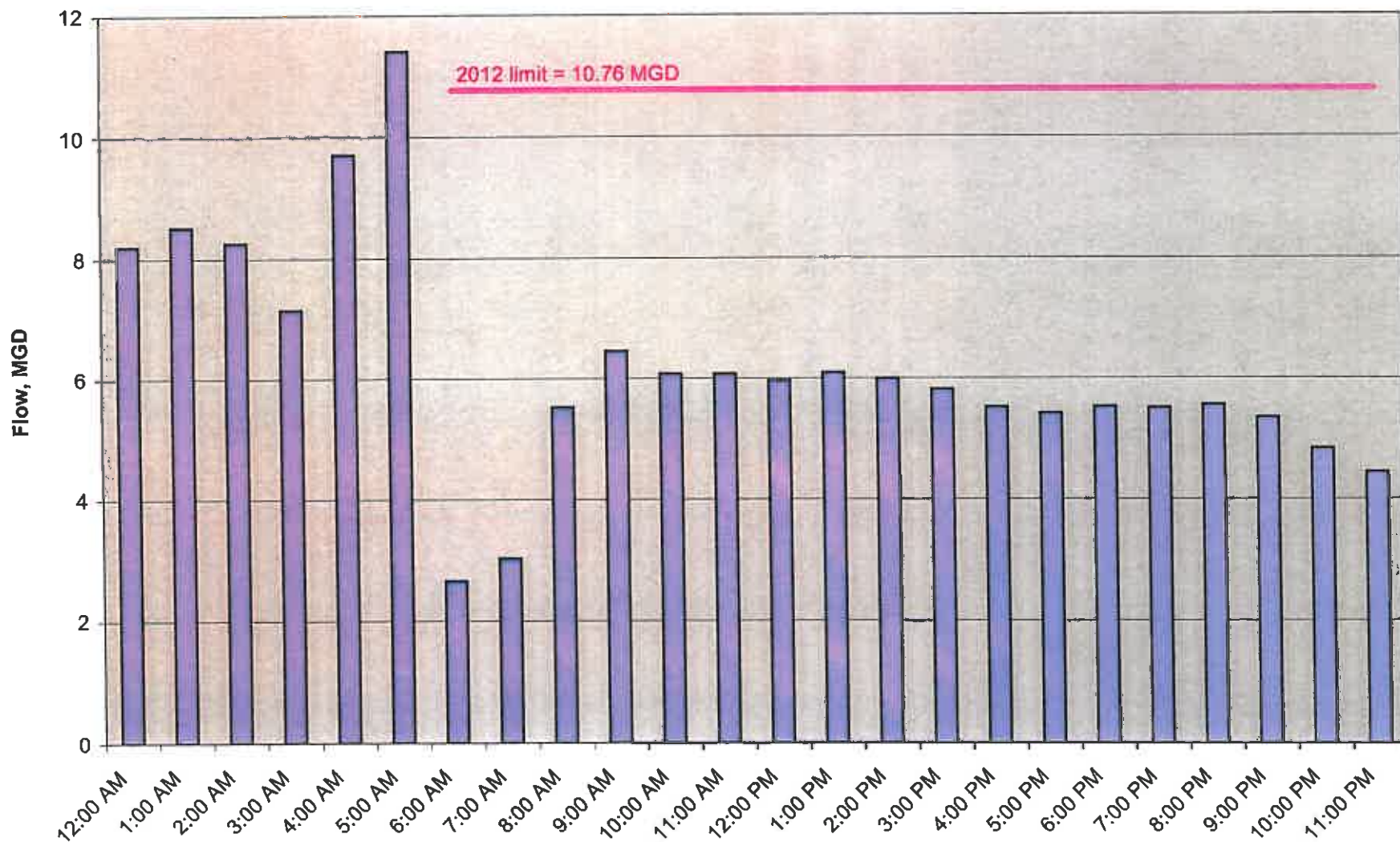
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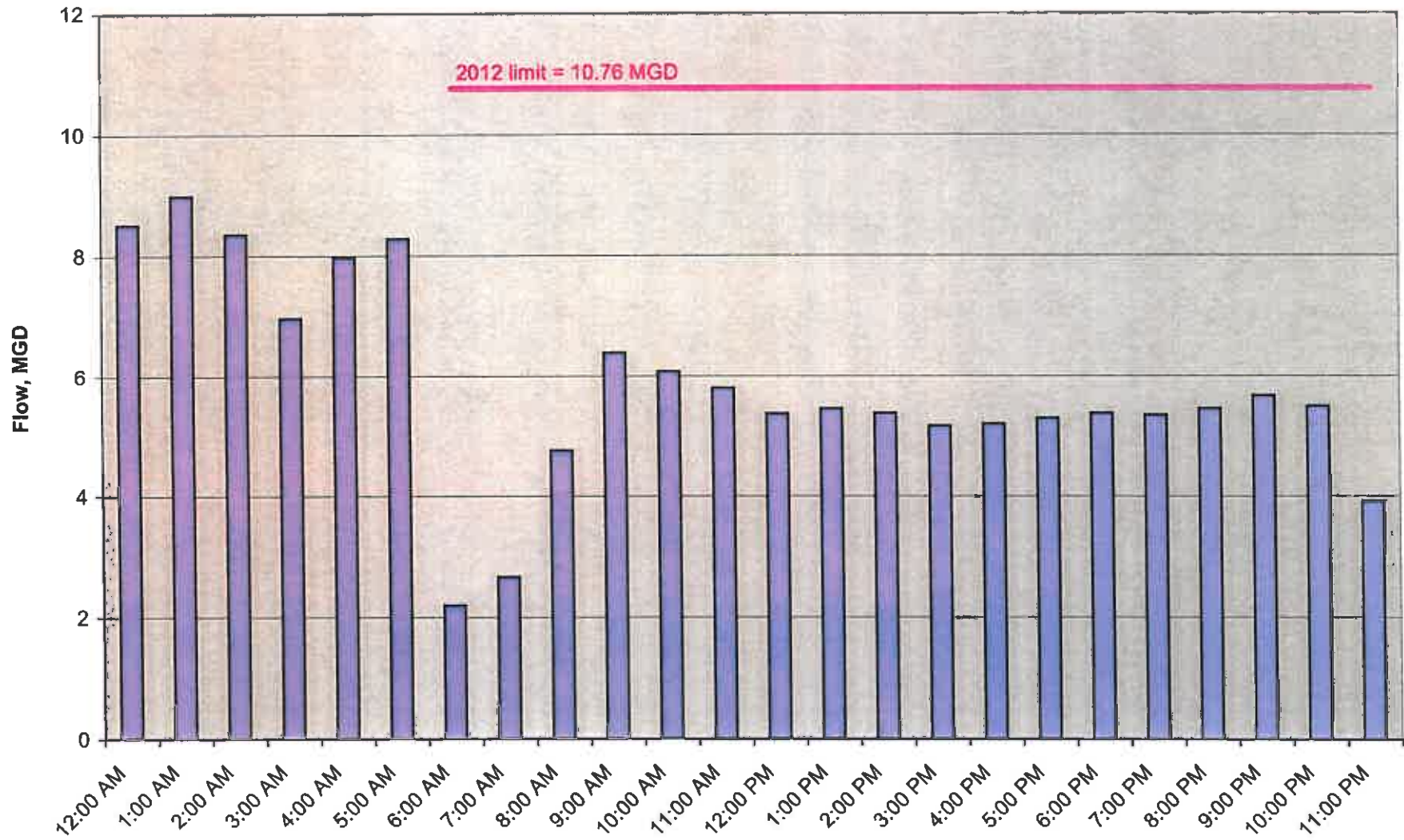
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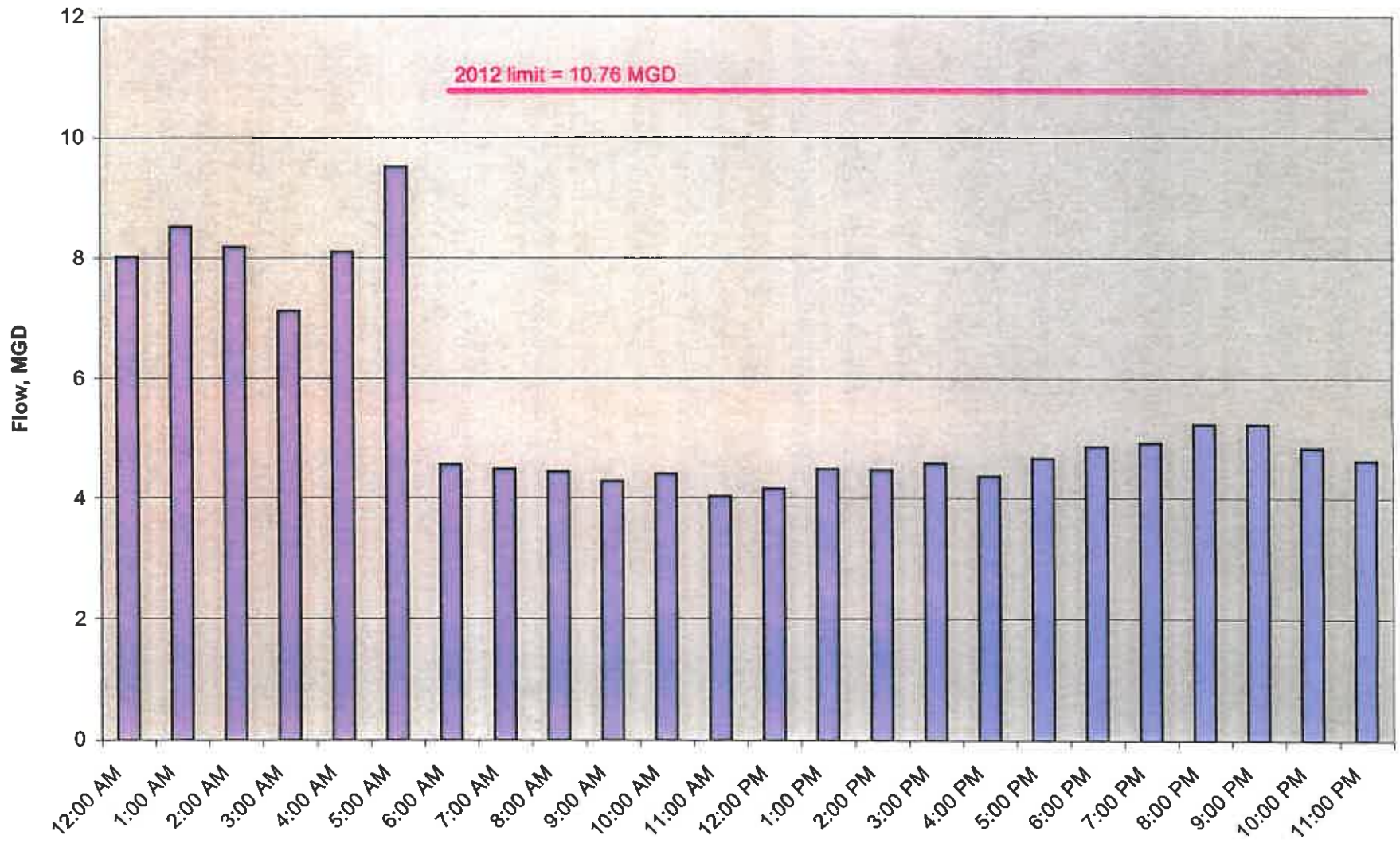
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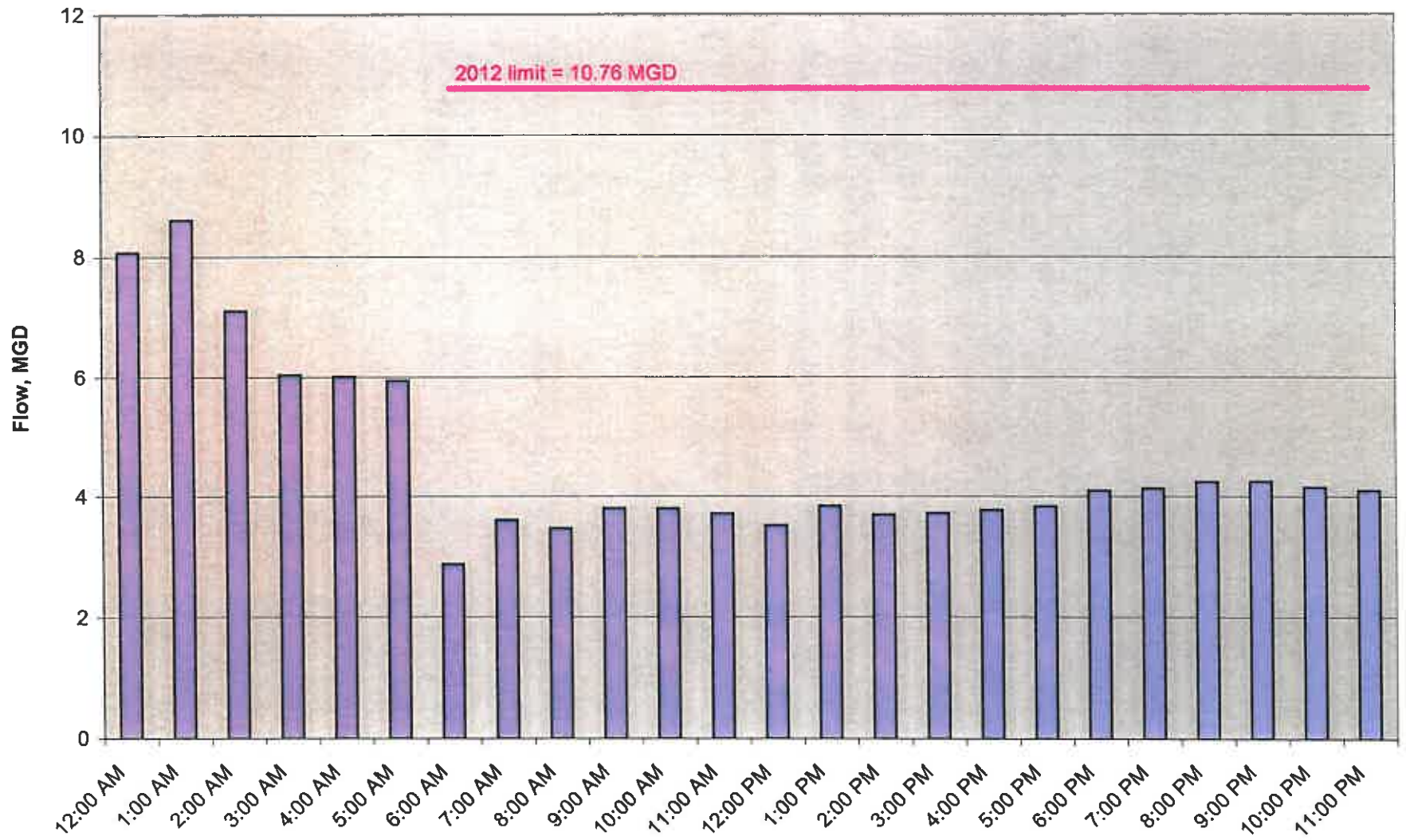
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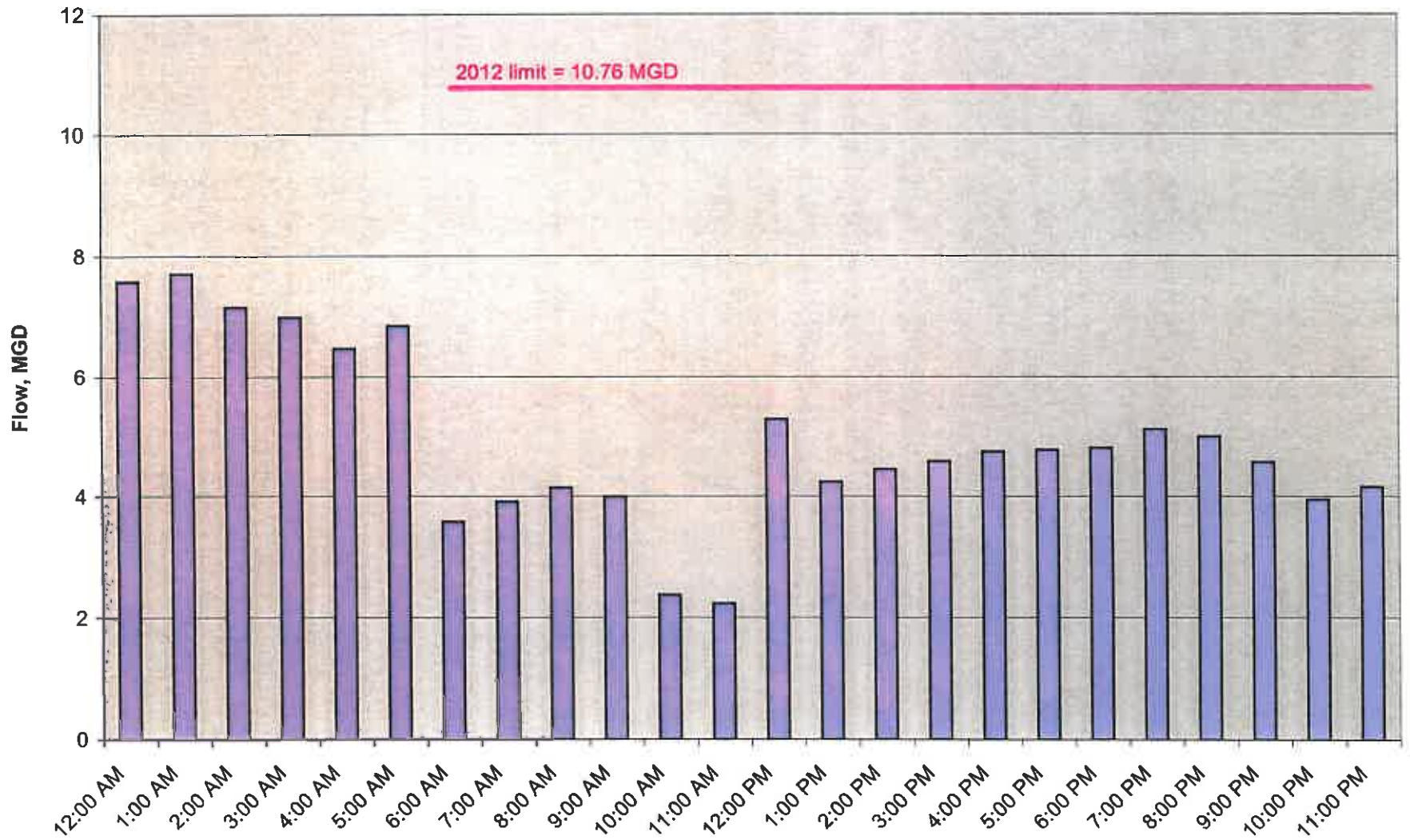
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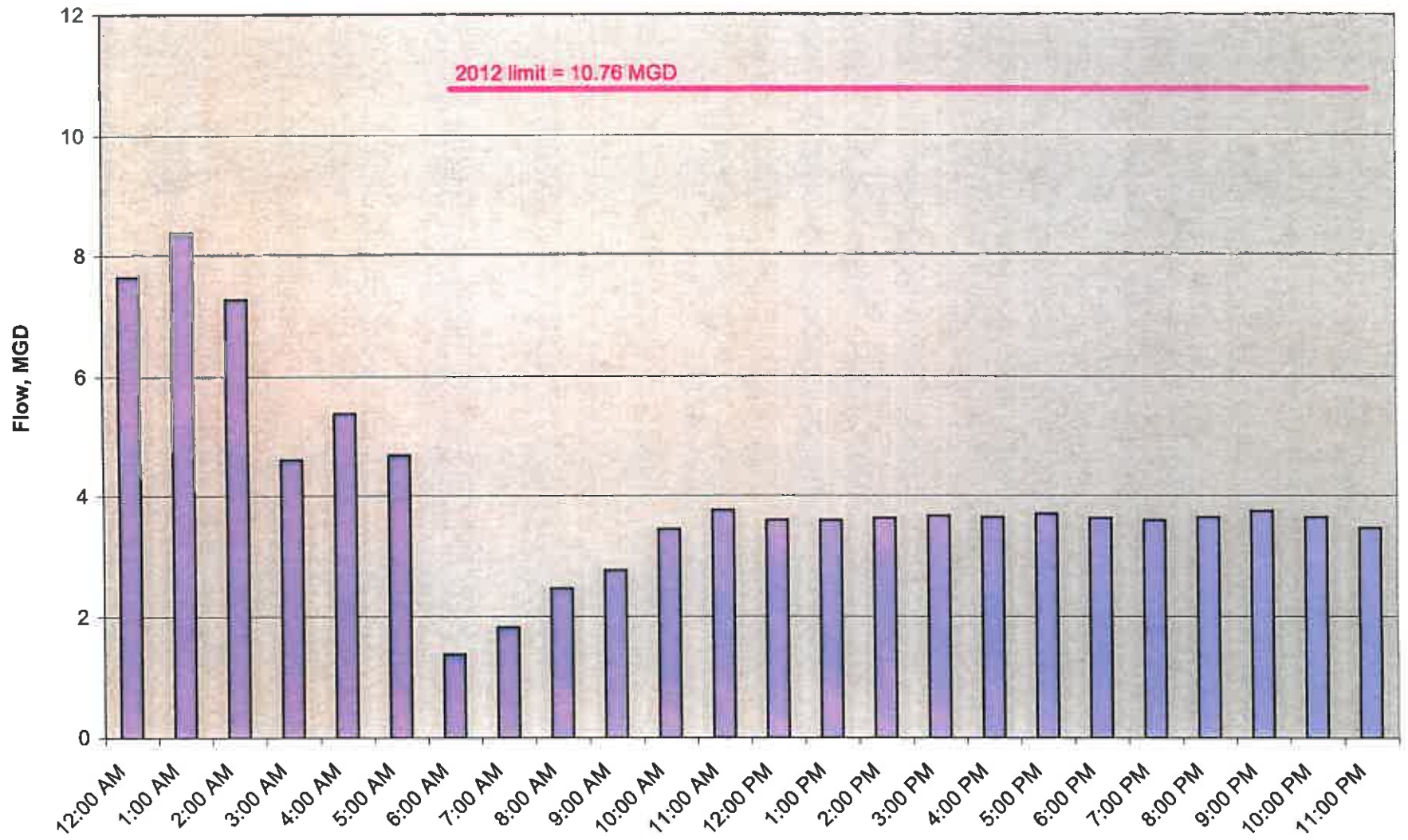
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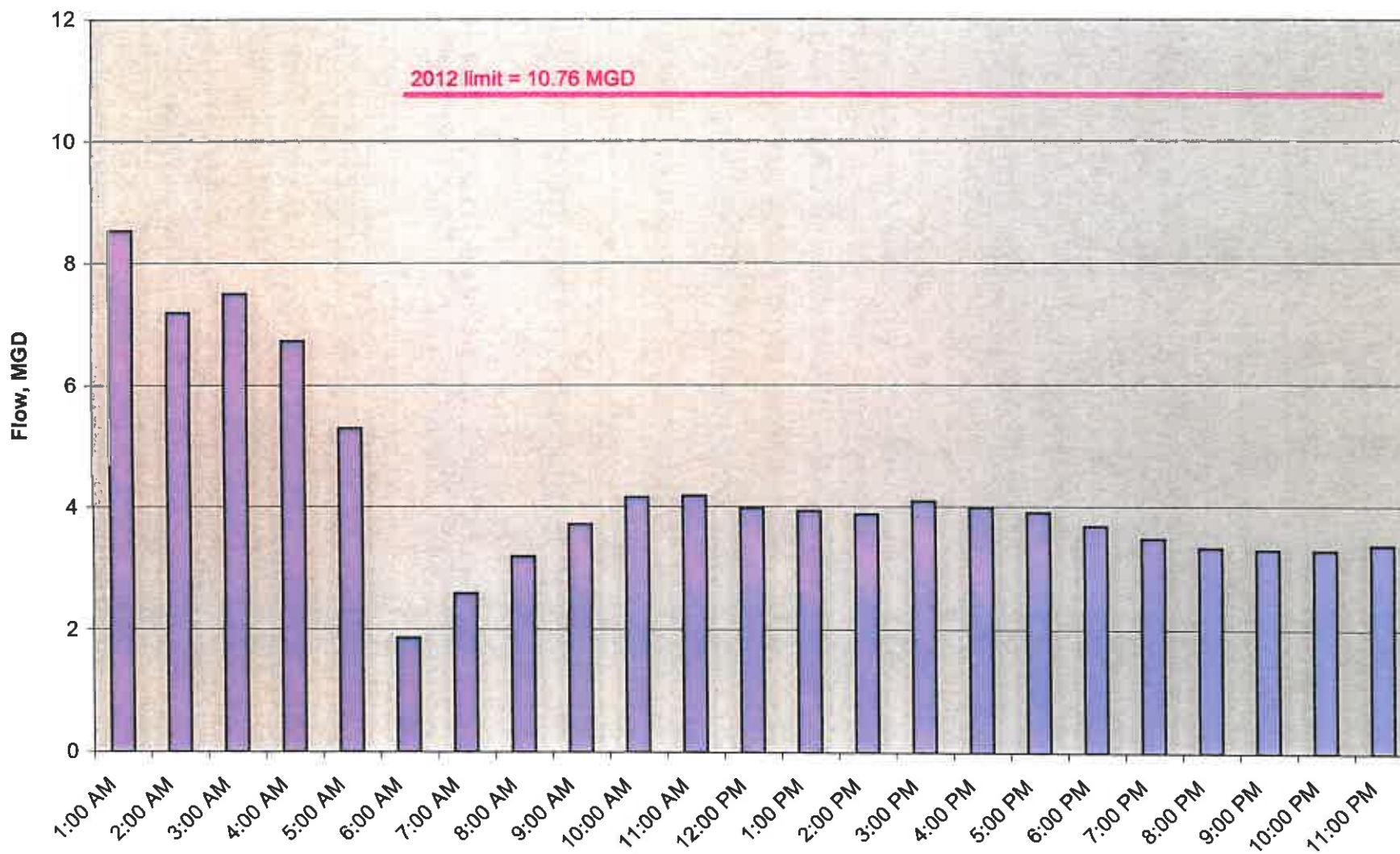
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6/15/2013



**CHARTER TOWNSHIP OF PLYMOUTH
STAFF REQUEST FOR BOARD ACTION**

Meeting date: October 1, 20123

ITEM: Salem Township USD Water and Sanitary Sewer

BRIEF:

ACTION: Work Session

DEPARTMENT/PRESENTER(S): Supervisor Richard M. Reaume
HRC – Hubbell, Roth & Clark – Consulting Engineers

BACKGROUND: Salem Township elected officials approached Plymouth Township regarding providing water and sanitary sewer to service the Salem Township USD – Urban Service District. The USD is generally located near the M-14 and Godfredson freeway intersection and westerly to Napier Road which is the dividing line between the two townships.

HRC - Hubbel, Roth and Clark the current Plymouth Township water and sanitary sewer engineering firm was commissioned by Salem Township and the primary developer Schostak Brothers to conduct a broader study with an analysis for Water service and Sanitary Sewer Capacity. A letter detailing the Scope of Services is attached and HRC will be presenting their initial results to the Board this evening.

BUDGET/TIME LINE: Water and Sewer

RECOMMENDATION: Work Session

PROPOSED MOTION:

RECOMMENDATION: Moved by: _____ Seconded by: _____

VOTE: __ KA __ CC __ RD __ MK __ RE __ NC __ RR

MOTION CARRIED _____ **MOTION DEFEATED** _____

The Plato Law Firm

30500 NORTHWESTERN HIGHWAY SUITE 425
FARMINGTON HILLS, MI 48334 (248) 855-6650 FAX (248) 865-0002

Edward D. Plato

eplato@platolawfirm.com

September 20, 2013

Mr. Richard M. Reaume
Plymouth Township Supervisor
9955 North Haggerty Road
Plymouth, MI 48170-4673

Re: Plymouth Township's Supply of Water and Sanitary Sewer for Salem Township's Urban Service District

Dear Supervisor Reaume:

Pursuant to the request of Steve Fisher of Schostak Brothers, this letter will confirm that Salem Township desires to have Plymouth Township extend its DWSD water supply into Salem Township to service Salem Township's entire Urban Service District. Similarly, Salem Township desires to have Plymouth Township proceed with the sanitary sewer study to determine if Plymouth Township has adequate sanitary sewer capacity to service the entire Urban Service District in Salem Township.

Salem Township requests that you please keep us advised of the results of these studies and the conclusions that are reached.

Thank you for your continued kind cooperation in this matter.

Sincerely,

THE PLATO LAW FIRM

Edward D. Plato
EDWARD D. PLATO

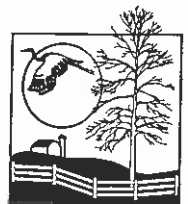
EP:lmj

cc: Steve Fisher, Shostak Brothers
Gary Whitaker, Salem Township - Supervisor

**SALEM
TOWNSHIP**

GARY WHITTAKER
Township Supervisor

PHONE 248-349-1690 EXT. 7
FAX 248-349-9350
E-MAIL gary@saalem-mi.org



9600 SIX MILE ROAD
PO BOX 75002
SALEM, MI 48175



HUBBELL, ROTH & CLARK, INC
Consulting Engineers

Principals
George E. Hubbell
Thomas E. Blehl
Walter H. Alix
Peter T. Roth
Michael D. Waring
Keith D. McCormack
Nancy M.D. Faught
Daniel W. Mitchell

Senior Associates
Gary J. Tressel
Kenneth A. Melchior
Randal L. Ford
Timothy H. Sullivan

Associates
Jonathan E. Booth
Michael C. MacDonald
Marvin A. Olano
William R. Davis
Jesse B. VanDeCreek
Robert F. DeFraim
Marshall J. Graziop
Thomas D. LaCross
Dennis J. Benoit
James F. Burton
Jane M. Graham
Donna M. Martin
Charles E. Hart

August 23, 2013

Charter Township of Plymouth
9955 North Haggerty Road
Plymouth, Michigan 48170-6074

Attn: Richard Reaume, Supervisor

Re: Salem Township USD Water and Sanitary Sewer Study

HRC Job No. 20130366.02

Dear Mr. Reaume:

In accordance with your telephone conversations and direction, HRC is pleased to provide this scope of services to provide an analysis on the ability of Plymouth Township to service Salem Township USD as well as the JCI site located on the northwest corner of Joy Road and Napier. HRC has previously provided a study for the water and sanitary sewer services to the Salem Springs site located north of M-14 between Godfredson and Napier and have found that Plymouth Township has the capability of providing those services. Our scope of services for this additional area would be as follows:

Sanitary Sewer Capacity Analysis

1. HRC would meet with Aaron Sprague of WTUA to review sewer districts and points of connections to the WTUA interceptor and the Part 41 tracking system.
2. For the Joy Road sanitary sewer HRC would calculate the existing and future flows to determine based on future land use the capacity within this interceptor.
3. HRC would determine the capacity of Joy Road sewer easterly approximately 1 ¼ miles from Napier Road where it becomes a 24 inch interceptor.
4. HRC would compare the future flow from Plymouth Township to the Joy Road sewer in order to insure that there was adequate capacity to meet Plymouth Township needs and if there is excess capacity in the sewer for service to Salem Township.
5. HRC would review the sanitary sewer needs of the entire USD and separately the JCI property as it was prepared for Salem Township as a part of their Master Plan.
6. HRC would meet with the Township to discuss the results of the sewer capacity analysis and how they would like to proceed with negotiations with Salem Township.
7. HRC would meet with WTUA to also discuss the results of the sanitary sewer study and insure that they are in agreement with how the Township has decided to proceed about potentially serving Salem Township if adequate capacity exists.

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555 Hulet Drive, PO Box 824
Bloomfield Hills, Michigan 48303-0824
Telephone 248 454 6300 Fax 248 454 6312
www.hrc-engr.com

SEP 16 2013

Charter Township of Plymouth

8. HRC would meet with Salem Township and the Schostak Development team to review the results of the sewer capacity analysis and respond to any questions that may arise.
9. HRC would prepare a summary letter of the conclusions of the sewer capacity analysis and present that to all parties upon approval of Plymouth Township. As a note HRC has not included within our current scope of services a complete capacity analysis for Plymouth Township sanitary sewer system to determine if the total allocated flow of what Plymouth Township is currently utilizing is approaching the town outlet capacity authorized by WTUA.

Water Analysis

1. HRC would develop a water model for the proposed areas to be serviced from the Salem Township Master Water Plan for the entire USD as well as segmenting that for the JCI portion only.
2. Once the model is prepared, HRC would evaluate the analysis for fire flows as well as average day and peak flows in order to ensure there is no negative impact on the operations of the Plymouth Township water system from the proposed extension.
3. HRC would prepare a draft report and exhibits. An in house review of the report and its analysis would be completed in order to ensure quality control has been met.
4. Draft revisions of the report would be issued to Plymouth Township for their review and input prior to issuing to Salem Township or the Developers team.
5. Once authorized by Plymouth Township, HRC would prepare the Final Report for issuance to Salem Township and the Developers for their review.
6. Once review has been completed, HRC will meet with the team in order to review any questions or issues that may arise from that review.

Should you find this scope acceptable please advise as we are prepared to commence work immediately understanding the urgency for Salem Township and the developers to determine whether or not Plymouth Township can service the proposed developments. As you are aware, costs for this study will not be paid for by Plymouth Township.

Very truly yours,

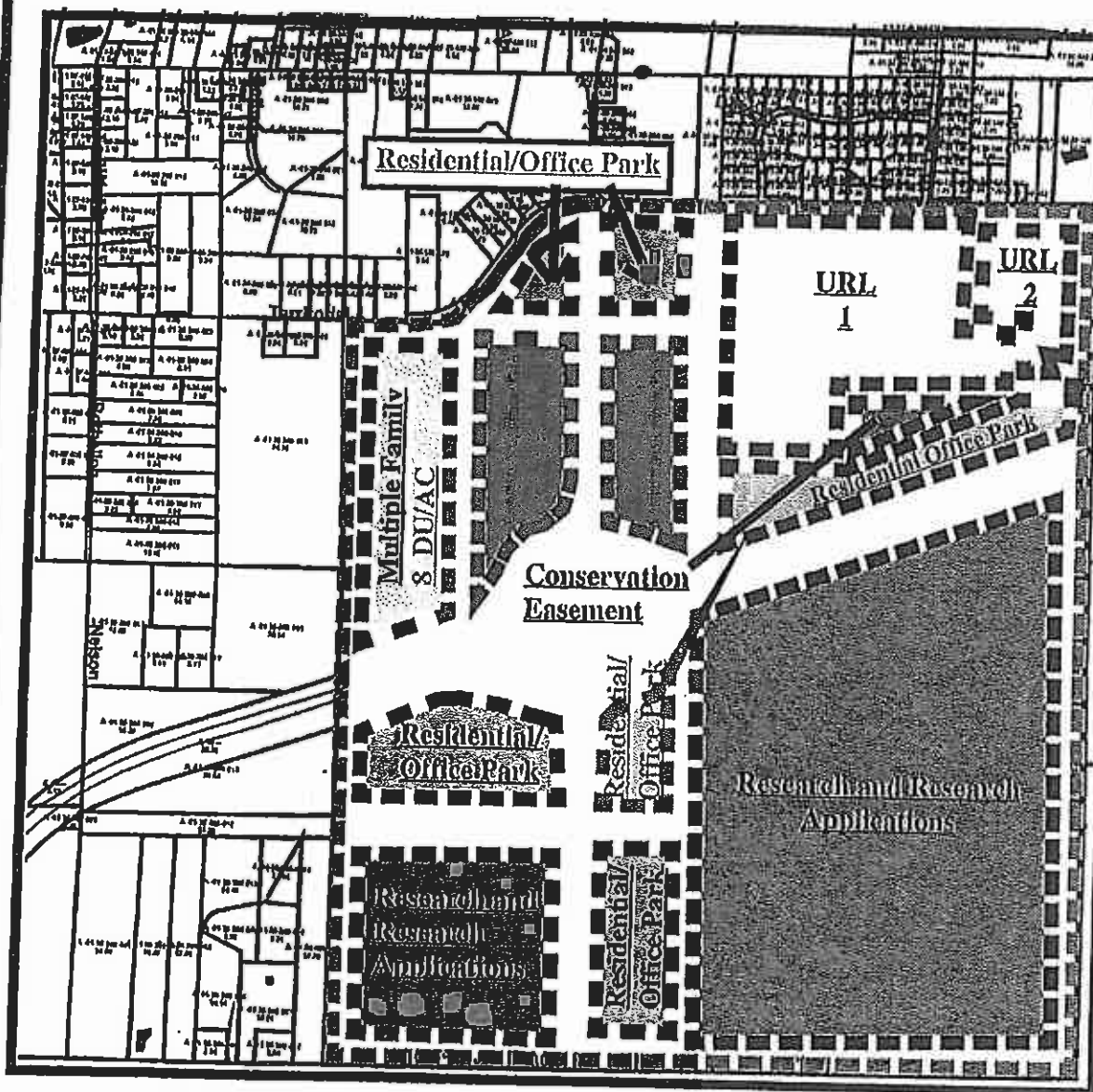
HUBBELL, ROTH & CLARK, INC.










Walter H. Alix, P.E., P.S.
Vice President

GJT/nf

pc: Salem Township; Bill McFarland
Schostak; David Schostak, Steve Fisher, Steve Duczynski,
HRC; Tom Biehl, Mike MacDonald, Brad Shepler, Matt Slicker, File



Map 19 Urban Service District Development Concept

- | | | | |
|---|---|--|--|
|  | Conservation Easement |  | ROP - Residential Office Park |
|  | URL 1 - Single-Family Urban Residential |  | RRA - Research and Research Applications |
|  | URL 2 - Single Family Urban Residential |  | CCP - Commercial Commons Park |
|  | MR - Multiple Family Residential | | |



**CHARTER TOWNSHIP OF PLYMOUTH
STAFF REQUEST FOR BOARD ACTION**

Meeting date: October 1, 2013

ITEM: Budget Study Session – Law Enforcement and 911 Communications Center

BRIEF:

**ACTION: Study Session covering the police department Law Enforcement and 911
Communications Center budgets.**

DEPARTMENT/PRESENTER(S): Supervisor Richard M. Reaume
Treasurer Ron Edwards
Police Chief Thomas Tiderington

BACKGROUND: See attached

BUDGET/TIME LINE: General Fund – Law Enforcement & Communications Center

RECOMMENDATION: Study Session

PROPOSED MOTION:

RECOMMENDATION: Moved by: _____ Seconded by: _____

VOTE: ___ KA ___ CC ___ RD ___ MK ___ RE ___ NC ___ RR

MOTION CARRIED _____ MOTION DEFEATED _____

Law Enforcement

Acct #	Account Name	Actual <u>2010</u>	Actual <u>2011</u>	Actual <u>2012</u>	Current 2013 <u>Budget</u>	August YTD	Amended 2013 <u>Budget</u>	Recommended 2014 <u>Budget</u>	% <u>Increase</u>
703	Salary - Managerial	298,035	235,647	278,541	310,905	235,588	365,000	377,500	3%
705	Salary - Supervisory	455,556	372,849	470,720	470,000	293,433	435,000	445,000	2%
706	Salary - Non - Supervisory	1,384,353	1,220,262	1,246,407	1,393,200	779,343	1,393,200	1,420,000	2%
707	Salary - Non - Supervisory Office	112,100	118,452	120,900	127,500	81,708	127,500	130,000	2%
709	Overtime	63,177	50,449	7,856	95,000	30,000	35,000	35,000	0%
714	Fringe Benefits	363,915	353,104	416,124	430,000	300,672	420,000	452,000	8%
714.01	Pension - Non Rep.	56,425	49,604	54,474	57,750	33,638	73,800	75,000	2%
714.03	Pension - Police	265,952	222,146	233,911	264,357	101,969	244,500	249,000	2%
715	Social Security	176,979	154,428	161,067	183,340	106,056	180,211	184,174	2%
720	Workmen's Compensation	50,737	9,282	9,817	60,000	35,751	45,000	45,000	0%
727	Office Supplies	10,660	13,668	9,902	15,000	6,870	15,000	15,000	0%
758	Laundry / Uniforms	8,021	29,315	11,393	10,000	6,486	10,000	32,000	220%
776	Maintenance - Grounds	25,627	22,362	23,056	23,000	12,062	23,000	25,000	9%
818	Contractual Services	3,870	25,255	9,683	12,000	11,396	15,000	30,000	100%
819	Dog Pound Fees	3,640	2,359	1,935	2,000	75	2,000	2,000	0%
826	Legal	76,174	64,279	63,953	75,000	43,151	75,000	75,000	0%
832	Correction Charges	2,590	2,940	5,075	8,000	2,870	8,000	8,000	0%
851	Equipment Repair & Maint	13,321	18,442	12,444	15,500	4,517	15,500	17,700	14%
853	Telephone	12,564	13,649	17,333	18,500	9,973	18,500	18,500	0%
863	Auto Expense	98,776	108,867	119,804	115,000	58,215	115,000	115,000	0%
921	Utilities	37,859	36,921	35,655	41,750	19,194	41,750	41,750	0%
958	Membership/Dues	415	515	807	1,500	635	1,500	1,500	0%
960	Education / Training	9,411	27,891	21,698	25,000	7,757	25,000	25,000	0%
961	TEAM	0	315	0	0	0	0	0	0%
963	Other Sundry	1,440	1,089	1,080	2,000	206	2,000	2,000	0%
978	Equipment Purchases	56,614	79,044	0	0	0	15,000	0	0%
Total Expenditures		3,588,211	3,233,134	3,333,635	3,756,302	2,181,565	3,701,461	3,821,124	3%

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Plymouth Community Communications Center

Acct #	Account Name	Actual 2010	Actual 2011	Actual 2012	Current 2013 Budget	August YTD	Amended 2013 Budget	Recommended 2013 Budget	% Increase
705	Salary - Supervisory	54,643	54,643	54,643	54,643	0	56,282	58,000	3%
706	Salary - Non - Supervisory	492,694	484,358	514,268	525,000	338,133	525,000	525,000	0%
707	Salary - Non - Supervisory Office	39,886	41,098	42,515	44,000	28,805	45,000	46,000	2%
708	Part Time	0	0	0	40,000	0	25,000	40,000	60%
709	Overtime	36,878	27,357	25,335	15,000	16,503	30,000	15,000	-50%
709.004	Holiday	22,270	22,270	23,380	25,400	1,590	25,400	25,400	0%
714	Fringe Benefits	113,582	96,842	110,130	115,500	70,723	115,500	115,500	0%
714.05	Pension - Police/Comm	92,544	84,769	88,156	83,706	34,693	85,952	93,510	9%
715	Social Security	48,706	47,659	49,708	50,799	28,539	54,061	54,269	0%
720	Workmen's Compensation	18,831	11,241	13,787	15,000	1,621	15,000	15,000	0%
727	Office Supplies	10,909	9,917	6,257	10,000	3,282	10,000	10,000	0%
758	Laundry / Uniforms	1,428	1,048	1,641	3,000	1,600	3,000	3,000	0%
818	Contractual Services	54,573	50,757	45,216	42,500	19,618	50,000	50,000	0%
828	Legal- Labor	3,507	1,274	290	2,500	1,487	5,000	2,500	-50%
835	Physicals	0	0	78	500	0	500	500	0%
851	Equipment Repair & Maint	11,139	14,740	23,273	25,000	6,595	25,000	25,000	0%
853	Telephone	4,535	5,175	7,978	8,000	6,813	12,000	12,000	0%
921	Utilities	15,760	15,370	14,843	18,522	7,990	18,522	18,522	0%
958	Membership / Dues	0	0	35	1,000	0	1,000	1,000	0%
960	Education / Training	2,679	7,343	5,170	5,000	5,021	8,000	8,000	0%
963	Other Sundry	628	1,259	1,554	1,500	838	1,500	1,500	0%
978	Equipment Purchases	156,935	2,722	17,631	0	0	0	0	0%
Total Expenditures		1,182,127	979,842	1,045,888	1,086,570	573,851	1,111,717	1,119,701	1%

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