Water-Data Report 2013

15019990 TYEE LAKE OUTLET NEAR WRANGELL, AK

Southern Southeast Alaska Basin
Southeast Mainland Subbasin

LOCATION.--Lat 56°12′00″, long 131°30′24″ referenced to North American Datum of 1927, in SE ¼ SW ¼ sec.28, T.65 S., R.90 E., Wrangell-Petersburg Division, AK, Hydrologic Unit 19010101, (Bradfield Canal A-5 quad), in Tongass National Forest, on left bank at outlet of Tyee Lake, 1.5 mi south of Bradfield Canal and 37 mi southeast of Wrangell, Alaska.

DRAINAGE AREA.--14.7 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1979 to September 1981 and June 1992 to current year. Records for November 1922 to September 1927 and August 1963 to October 1969, published as Tyee Creek at Mouth near Wrangell (station 15020100) are not equivalent owing to inflow between sites.

GAGE.--Water-stage recorder. Elevation 1,630.5 ft. above sea level in Gate Valve House on north side of lake across from previous site. Elevation of gage 1,370 ft. above sea level from topographic map June 9, 1992 to September 7, 2011. Prior to June 9, 1992, at site 500 ft downstream at datum 13.66 ft. lower.

REMARKS.--Records poor. Water for power generation is diverted from Tyee Lake and discharged into Bradfield Canal. Diversion to hydropower plant began February 1984, and is not included in the discharge records.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1405.2 ft., Sept. 9, 2011; minimum elevation, 1282.6 ft., May 4, 2012.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1399.6 ft., Oct. 2, minimum elevation; 1287.6 ft. April 24 and 25.

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GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,399.2	1,389.3	1,376.1	1,354.0	1,334.4	1,320.4	1,298.5	1,290.2	1,336.1	1,367.2	1,369.6	1,369.5
2	1,398.9	1,388.9	1,375.4	1,353.5	1,333.9	1,319.6	1,297.7	1,290.1	1,337.7	1,367.8	1,369.4	1,369.4
3	1,398.1	1,388.6	1,374.6	1,352.9	1,333.4	1,319.1	1,297.0	1,290.2	1,339.2	1,367.9	1,369.2	1,369.1
4	1,397.2	1,388.7	1,373.9	1,352.0	1,332.8	1,318.4	1,296.3	1,290.5	1,340.3	1,368.0	1,368.8	1,368.8
5	1,396.5	1,390.4	1,373.2	1,351.3	1,332.1	1,317.8	1,295.6	1,291.5	1,341.0	1,368.0	1,368.4	1,368.7
6	1,395.9	1,390.5	1,372.8	1,350.5	1,331.5	1,317.0	1,295.0	1,292.8	1,341.6	1,367.9	1,368.1	1,368.5
7	1,395.5	1,390.1	1,371.8	1,349.9	1,330.7	1,316.3	1,294.6	1,294.1	1,342.6	1,367.8	1,368.2	1,368.4
8	1,395.0	1,389.8	1,371.0	1,349.2	1,330.0	1,315.7	1,294.0	1,294.9	1,344.0	1,367.9	1,367.8	1,368.6
9	1,394.6	1,389.1	1,370.2	1,348.4	1,329.4	1,315.1	1,293.8	1,295.9	1,345.0	1,368.5	1,367.7	1,368.4
10	1,394.3	1,388.5	1,369.6	1,347.6	1,328.9	1,314.5	1,294.0	1,297.1	1,345.8	1,368.9	1,367.6	1,368.3
11	1,393.8	1,388.1	1,369.3	1,346.9	1,328.2	1,313.8	1,293.6	1,298.8	1,347.0	1,368.9	1,367.4	1,368.1
12	1,394.0	1,387.6	1,368.6	1,346.2	1,327.8	1,313.1	1,293.1	1,301.8	1,348.4	1,369.4	1,367.1	1,367.9
13	1,395.2	1,386.9	1,368.1	1,345.3	1,327.4	1,312.3	1,292.5	1,305.1	1,349.9	1,369.9	1,366.9	1,367.6
14	1,396.5	1,386.4	1,367.5	1,344.7	1,326.7	1,311.6	1,292.0	1,308.4	1,351.0	1,370.8	1,366.5	1,367.3
15	1,398.6	1,386.0	1,366.9	1,344.0	1,326.8	1,310.9	1,291.4	1,310.4	1,351.9	1,370.8	1,366.2	1,367.1
16	1,399.0	1,385.4	1,366.1	1,343.4	1,327.5	1,310.1	1,290.9	1,311.7	1,353.4	1,370.7	1,366.2	1,366.8
17	1,398.1	1,384.9	1,365.4	1,343.3	1,327.2	1,309.3	1,290.5	1,312.9	1,354.6	1,370.8	1,366.3	1,366.7
18	1,397.5	1,384.4	1,364.6	1,343.0	1,326.8	1,308.7	1,290.2	1,314.8	1,356.2	1,371.0	1,367.9	1,366.8
19	1,396.5	1,383.6	1,364.0	1,342.5	1,326.3	1,307.9	1,290.0	1,316.5	1,357.8	1,370.9	1,369.7	1,368.0
20	1,395.8	1,383.0	1,363.3	1,341.9	1,325.9	1,307.2	1,289.7	1,317.2	1,359.1	1,370.7	1,370.1	1,371.3
21	1,395.0	1,382.4	1,362.5	1,341.2	1,325.3	1,306.5	1,289.3	1,317.6	1,360.2	1,370.7	1,370.0	1,373.8
22	1,394.6	1,381.7	1,361.6	1,340.6	1,324.8	1,305.8	1,288.8	1,318.3	1,361.0	1,370.7	1,370.3	1,374.9
23	1,394.0	1,381.2	1,360.7	1,340.1	1,324.0	1,305.1	1,288.4	1,319.4	1,362.0	1,370.6	1,370.3	1,376.5
24	1,393.6	1,380.5	1,360.0	1,339.6	1,323.5	1,304.5	1,288.0	1,321.0	1,362.8	1,370.7	1,370.0	1,376.9
25	1,393.2	1,380.1	1,359.3	1,338.9	1,322.9	1,303.9	1,288.1	1,322.8	1,363.9	1,370.8	1,370.2	1,377.0
26	1,392.8	1,379.5	1,358.3	1,338.3	1,322.2	1,303.1	1,289.6	1,324.8	1,364.5	1,370.8	1,370.1	1,376.8
27	1,392.5	1,378.7	1,357.6	1,337.6	1,321.5	1,302.4	1,290.9	1,326.7	1,364.9	1,370.6	1,370.1	1,377.0
28	1,392.1	1,378.1	1,356.9	1,336.9	1,320.9	1,301.6	1,291.0	1,328.7	1,365.3	1,370.4	1,369.8	1,377.9
29	1,391.6	1,377.5	1,356.2	1,336.1	---	1,300.8	1,290.8	1,330.8	1,365.7	1,370.2	1,369.6	1,378.2
30	1,391.0	1,376.8	1,355.3	1,335.5	---	1,299.9	1,290.6	1,332.6	1,366.5	1,369.9	1,369.6	1,378.2
31	1,390.1	---	1,354.7	1,334.9	---	1,299.2	---	1,334.4	---	1,369.8	1,369.6	---
Mean	1,395.2	1,384.9	1,365.7	1,344.2	1,327.6	1,310.1	1,292.2	1,309.7	1,352.6	1,369.6	1,368.7	1,371.1
Max	1,399.2	1,390.5	1,376.1	1,354.0	1,334.4	1,320.4	1,298.5	1,334.4	1,366.5	1,371.0	1,370.3	1,378.2
Min	1,390.1	1,376.8	1,354.7	1,334.9	1,320.9	1,299.2	1,288.0	1,290.1	1,336.1	1,367.2	1,366.2	1,366.7

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	e322	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	e298	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	e235	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	e185	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	e149	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	e121	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	e100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	e81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	e64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	e50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	e37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	e43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	e96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	e155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	e304	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	e330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	e275	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	e227	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	e177	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	e135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	e100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	e72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	e52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	e38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	e23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	e13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	e8.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	e4.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	e1.1	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	e0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
Total	3,695.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mean	119	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Med	96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ac-ft	7,330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cfsm	8.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
In.	9.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2013, BY WATER YEAR (WY)#

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	157	47.1	14.7	6.69	1.17	0.11	2.53	76.6	225	182	113	175
Max	264	108	117	61.4	20.8	2.29	24.8	287	410	432	261	322
(WY)	(2000)	(1993)	(2005)	(2003)	(2005)	(2005)	(1993)	(2006)	(2007)	(2007)	(2008)	(2009)
Min	66.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(2003)	(2013)	(1995)	(1993)	(1993)	(1993)	(1994)	(2002)	(2012)	(2013)	(2013)	(2013)

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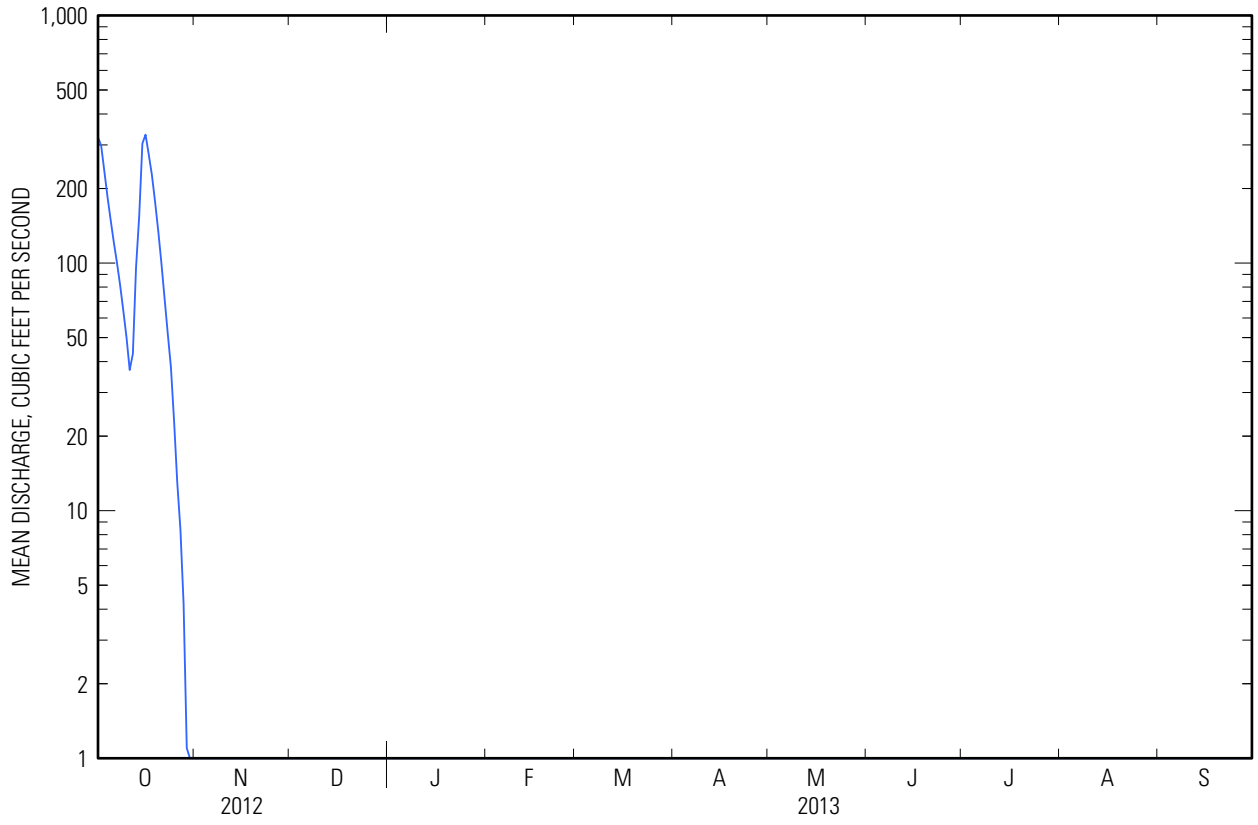
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1992 – 2013#	
Annual total	19,305.70		3,695.70			
Annual mean	52.7		10.1		83.1	
Highest annual mean					113	2001
Lowest annual mean					10.1	2013
Highest daily mean	600	Sep 14	330	Oct 16	789	Oct 26, 2003
Lowest daily mean	0.00	Jan 1	0.00	Oct 30	a0.00	Dec 30, 1992
Annual seven-day minimum	0.00	Jan 1	0.00	Oct 30	0.00	Dec 30, 1992
Maximum peak flow			345	Oct 16	975	Oct 26, 1993
Maximum peak stage			22.20	Oct 16	28.62	Oct 26, 1993
Instantaneous low flow					0.00	Dec 30, 1992
Annual runoff (ac-ft)	38,290		7,330		60,220	
Annual runoff (cfsm)	3.59		0.689		5.66	
Annual runoff (inches)	48.86		9.35		76.84	
10 percent exceeds	217		0.00		275	
50 percent exceeds	0.00		0.00		8.4	
90 percent exceeds	0.00		0.00		0.00	

See Period of Record; partial year was used in monthly statistics and break in record. Record for 1980 and 1981 water years, prior to diversion of 1984, not included

a Zero flow from lake outlet numerous days every year.