

TUOLUMNE RIVER TECHNICAL ADVISORY COMMITTEE
DON PEDRO PROJECT - FERC LICENSE 2299

MODESTO IRRIGATION DISTRICT
TURLOCK IRRIGATION DISTRICT
CITY & COUNTY OF SAN FRANCISCO
CALIFORNIA DEPARTMENT OF FISH & WILDLIFE
U. S. FISH & WILDLIFE SERVICE



333 East Canal Drive
Turlock, CA 95381-0949
Phone: (209) 883-8278
Fax: (209) 656-2191
Email: pemaloney@tid.org

TECHNICAL ADVISORY COMMITTEE MEETING
08 December 2016 at 9:30 AM
Turlock Irrigation District, Room 152

DRAFT AGENDA

1. INTRODUCTION AND ANNOUNCEMENTS
2. ADMINISTRATIVE ITEMS:
 - Review/revise agenda
 - Approve notes from Sep 2016 meeting
 - Items since last meeting
3. MONITORING/REPORTS:
 - Fall run information – status of weir and red surveys
 - Other technical reports for 2016 annual FERC report
 - Discuss winter temperature monitoring / logger issues
 - Discuss La Grange Fish Passage Study
4. FLOW OPERATIONS:
 - Review status of flow schedule/watershed conditions
5. AGENCY/NGO UPDATES
6. ADDITIONAL ITEMS
7. NEXT MEETING DATE: MARCH 09, 2017

TUOLUMNE RIVER TECHNICAL ADVISORY COMMITTEE
DON PEDRO PROJECT - FERC LICENSE 2299

MODESTO IRRIGATION DISTRICT
TURLOCK IRRIGATION DISTRICT
CITY & COUNTY OF SAN FRANCISCO
CALIFORNIA DEPARTMENT OF FISH & GAME
U. S. FISH & WILDLIFE SERVICE



333 East Canal Drive
Turlock, CA 95381-0949
Phone: (209) 883-8278
Fax: (209) 656-2191
Email: pemaloney@tid.org

TECHNICAL ADVISORY COMMITTEE MEETING

08 September 2016 at 10:00 AM
Turlock Irrigation District, Room 152

Summary

1. INTRODUCTION AND ANNOUNCEMENTS

- Participants made self-introductions.

2. ADMINISTRATIVE ITEMS:

- Review/Revise agenda – No changes.
- Approve notes from June meeting – No changes were identified. Notes for the last meeting are posted to the TRTAC website: <http://tuolumnerivertac.com/>
- Items since last meeting – A handout list posted at <http://tuolumnerivertac.com/> was reviewed.

3. MONITORING/REPORTS: (*Handouts were reviewed*)

- Ongoing summer monitoring – Routine snorkel and temperature monitoring were conducted this summer. Preliminary snorkel counts appeared low and all O. mykiss were observed upstream of Bobcat Flat. However, O. mykiss were notably larger than last year's survey. Thermographs were downloaded after the spring pulse. The Dos Rio's thermograph was found damaged. A replacement will be ordered and installed by Pat. Thermographs will again be downloaded after the fall pulse.
- In progress relicensing studies – La Grange passage study will be conducted again this fall and winter; weirs will be installed between September 12th and 16th. Numerous habitat studies will be conducted on the upper river.
- Primary counting weir to be installed September 19.
- Redd surveys will continue this spawning season.
- Bobcat Flat restoration Phase III may have monitoring this fall.
- Planned Annual FERC Report progress – compilation of studies is in progress. A request for earlier submittal this year was made by TID. However, progress is slow due to assimilation of Basin and other reports.
- Gretchen continues to monitor water hyacinth and notes that a reduction in the number and size of water hyacinth blockages may be due to 10 days below freezing this past winter.
- Assessment of chinook passage through Don Pedro Reservoir will be conducted by acoustic tagging next spring 2017.

4. **FLOW OPERATIONS:**
 - Base flows will continue to be 75cfs through October 1st, when the base flow will rise to 150cfs.
 - A fall pulse will be negotiated using interpolation water.
5. **AGENCY/NGO UPDATES**
 - None
6. **ADDITIONAL ITEMS**
 - None
7. **NEXT MEETING DATE** – DECEMBER 08, 2016.

TRTAC Meeting Attendees

	<u>Name</u>	<u>Organization</u>
1.	Patrick Maloney	TID
2.	Jason Guignard	FISHBIO (by phone)
3.	Noah Hume	Stillwater

Patrick E. Maloney

From: FISHBIO Updates <updates@fishbio.com>
Sent: Monday, December 05, 2016 2:10 PM
To: FISHBIO Updates
Subject: Tuolumne Weir Update
Attachments: pastedGraphic.pdf; pastedGraphic.pdf; Tuolumne Weir Update 2016.xlsx

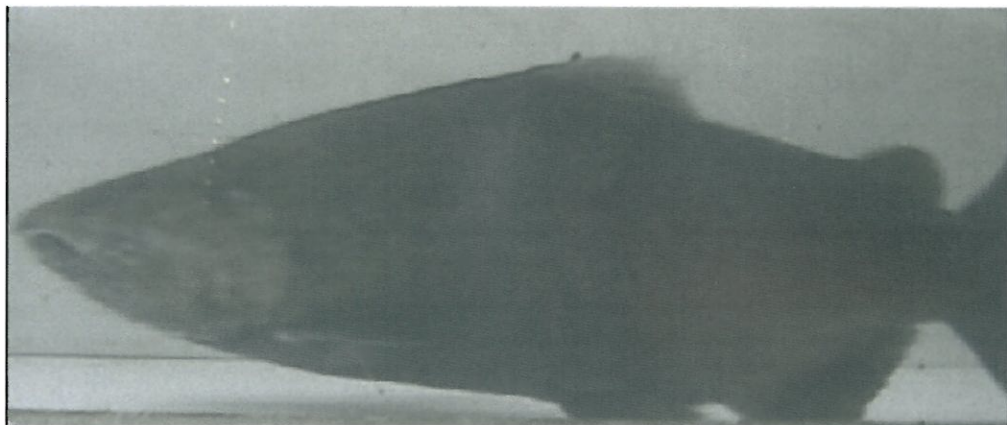
Updated: 12/5/16

Year	Monitoring Start Date	Net Passage to Date	Season Total
2016	9/19/16	3211	-
2015	9/28/15	275	438
2014	9/29/14	557	673
2013	9/24/13	3502	3744
2012	9/24/12	2131	2302
2011	9/16/11	2653	2907
2010	9/9/10	790	790
2009	9/22/09	228	301

To All:

The VAKI Riverwatcher recorded 25 Chinook salmon passages at the Tuolumne River weir between 12:00 AM on December 2 and 11:59 PM on December 4.

Regards, **FISHBIO**



FISHBIO
update@fishbio.com
(209) 847-6300
www.fishbio.com

Table 2
Tuolumne River Flow Schedule
 Based on DWR Final Values, 60-20-20 Index for 2016, Hydrologic Conditions
 Final Schedule For 2016-2017 Fish Flow Year

DATE		Number of DAYS	BASE FLOW ¹			PULSE FLOW ²			INTERPOLATION FLOW			Other Adjusted Flow			TOTAL FERC FLOW	
From:	To:		CFS	AF	ACCUM. A.F.	CFS	AF	ACCUM. A.F.	CFS	AF	ACCUM. A.F.	CFS	AF	ACCUM. A.F.	CFS	ACCUM. A.F.
15-Apr-2016	15-Apr-2016	1	180	357	357	792	1,572	1,572	0	0	0	0	0	0	972	1,929
16-Apr-2016	16-Apr-2016	1	180	357	714	2,438	4,836	6,408	0	0	0	0	0	0	2,618	7,122
17-Apr-2016	17-Apr-2016	1	180	357	1,071	2,371	4,703	11,111	0	0	0	0	0	0	2,551	12,182
18-Apr-2016	18-Apr-2016	1	180	357	1,428	771	1,530	12,640	0	0	0	0	0	0	951	14,068
19-Apr-2016	19-Apr-2016	1	180	357	1,785	201	398	13,039	0	0	0	0	0	0	381	14,824
20-Apr-2016	20-Apr-2016	1	180	357	2,142	201	398	13,437	0	0	0	0	0	0	381	15,579
21-Apr-2016	21-Apr-2016	1	180	357	2,499	201	398	13,836	0	0	0	0	0	0	381	16,335
22-Apr-2016	22-Apr-2016	1	180	357	2,856	1,151	2,283	16,118	0	0	0	0	0	0	1,331	18,975
23-Apr-2016	23-Apr-2016	1	180	357	3,213	1,832	3,633	19,751	0	0	0	0	0	0	2,012	22,965
24-Apr-2016	24-Apr-2016	1	180	357	3,570	413	818	20,570	0	0	0	0	0	0	593	24,140
25-Apr-2016	25-Apr-2016	1	180	357	3,927	201	398	20,968	0	0	0	0	0	0	381	24,895
26-Apr-2016	26-Apr-2016	1	180	357	4,284	201	398	21,366	0	0	0	0	0	0	381	25,651
27-Apr-2016	27-Apr-2016	1	180	357	4,641	201	398	21,765	0	0	0	0	0	0	381	26,406
28-Apr-2016	28-Apr-2016	1	180	357	4,998	201	398	22,163	0	0	0	0	0	0	381	27,162
29-Apr-2016	29-Apr-2016	1	180	357	5,355	1,103	2,188	24,352	0	0	0	0	0	0	1,283	29,707
30-Apr-2016	30-Apr-2016	1	180	357	5,712	705	1,398	25,750	0	0	0	0	0	0	885	31,463
01-May-2016	01-May-2016	1	180	357	6,069	301	597	26,347	0	0	0	0	0	0	481	32,416
02-May-2016	02-May-2016	1	180	357	6,426	301	597	26,944	0	0	0	0	0	0	481	33,370
03-May-2016	03-May-2016	1	180	357	6,783	301	597	27,540	0	0	0	0	0	0	481	34,324
04-May-2016	04-May-2016	1	180	357	7,140	301	597	28,137	0	0	0	0	0	0	481	35,278
05-May-2016	05-May-2016	1	180	357	7,498	301	597	28,734	0	0	0	0	0	0	481	36,232
06-May-2016	06-May-2016	1	180	357	7,855	658	1,304	30,038	0	0	0	0	0	0	838	37,893
07-May-2016	07-May-2016	1	180	357	8,212	401	795	30,833	0	0	0	0	0	0	581	39,045
08-May-2016	08-May-2016	1	180	357	8,569	401	795	31,628	0	0	0	0	0	0	581	40,197
09-May-2016	09-May-2016	1	180	357	8,926	401	795	32,423	0	0	0	0	0	0	581	41,349
10-May-2016	10-May-2016	1	180	357	9,283	401	795	33,219	0	0	0	0	0	0	581	42,501
11-May-2016	11-May-2016	1	180	357	9,640	401	795	34,014	0	0	0	0	0	0	581	43,653
12-May-2016	12-May-2016	1	180	357	9,997	401	795	34,809	0	0	0	0	0	0	581	44,805
13-May-2016	13-May-2016	1	180	357	10,354	401	795	35,604	0	0	0	0	0	0	581	45,958
14-May-2016	14-May-2016	1	180	357	10,711	159	316	35,920	0	0	0	0	0	0	339	46,631
15-May-2016	15-May-2016	1	180	357	11,068	0	0	35,920	0	0	0	0	0	0	180	46,988
16-May-2016	16-May-2016	1	180	357	11,425	0	0	35,920	0	0	0	0	0	0	180	47,345
17-May-2016	17-May-2016	1	180	357	11,782	0	0	35,920	0	0	0	0	0	0	180	47,702
18-May-2016	18-May-2016	1	180	357	12,139	0	0	35,920	0	0	0	0	0	0	180	48,059
19-May-2016	19-May-2016	1	180	357	12,496	0	0	35,920	0	0	0	0	0	0	180	48,416
20-May-2016	20-May-2016	1	180	357	12,853	0	0	35,920	0	0	0	0	0	0	180	48,773
21-May-2016	21-May-2016	1	180	357	13,210	0	0	35,920	0	0	0	0	0	0	180	49,130
22-May-2016	22-May-2016	1	180	357	13,567	0	0	35,920	0	0	0	0	0	0	180	49,487
23-May-2016	23-May-2016	1	180	357	13,924	0	0	35,920	0	0	0	0	0	0	180	49,844
24-May-2016	24-May-2016	1	180	357	14,281	0	0	35,920	0	0	0	0	0	0	180	50,201
25-May-2016	25-May-2016	1	180	357	14,638	0	0	35,920	0	0	0	0	0	0	180	50,558
26-May-2016	26-May-2016	1	180	357	14,995	0	0	35,920	0	0	0	0	0	0	180	50,915
27-May-2016	27-May-2016	1	180	357	15,352	0	0	35,920	0	0	0	0	0	0	180	51,272
28-May-2016	28-May-2016	1	180	357	15,709	0	0	35,920	0	0	0	0	0	0	180	51,629
29-May-2016	29-May-2016	1	180	357	16,066	0	0	35,920	0	0	0	0	0	0	180	51,986
30-May-2016	30-May-2016	1	180	357	16,423	0	0	35,920	0	0	0	0	0	0	180	52,343
31-May-2016	31-May-2016	1	180	357	16,780	0	0	35,920	0	0	0	0	0	0	180	52,700
01-Jun-2016	01-Jun-2016	1	75	149	16,929	0	0	35,920	0	0	0	0	0	0	75	52,849
02-Jun-2016	02-Jun-2016	1	75	149	17,078	0	0	35,920	0	0	0	0	0	0	75	52,998
03-Jun-2016	03-Jun-2016	1	75	149	17,226	0	0	35,920	0	0	0	0	0	0	75	53,146
04-Jun-2016	04-Jun-2016	1	75	149	17,375	0	0	35,920	0	0	0	0	0	0	75	53,295
05-Jun-2016	05-Jun-2016	1	75	149	17,524	0	0	35,920	0	0	0	0	0	0	75	53,444
06-Jun-2016	06-Jun-2016	1	75	149	17,673	0	0	35,920	0	0	0	0	0	0	75	53,593
07-Jun-2016	07-Jun-2016	1	75	149	17,821	0	0	35,920	0	0	0	0	0	0	75	53,741
08-Jun-2016	08-Jun-2016	1	75	149	17,970	0	0	35,920	0	0	0	0	0	0	75	53,889
09-Jun-2016	09-Jun-2016	22	75	3,273	21,243	0	0	35,920	0	0	0	0	0	0	75	57,163
01-Jul-2016	01-Jul-2016	31	75	4,612	25,855	0	0	35,920	0	0	0	0	0	0	75	61,775
01-Aug-2016	01-Aug-2016	31	75	4,612	30,466	0	0	35,920	0	0	0	0	0	0	75	66,386
01-Sep-2016	01-Sep-2016	30	75	4,463	34,929	0	0	35,920	0	0	0	0	0	0	75	70,849
01-Oct-2016	01-Oct-2016	9	150	2,678	37,607	0	0	35,920	0	0	0	0	0	0	150	73,527
10-Oct-2016	10-Oct-2016	1	150	298	37,904	0	0	35,920	0	0	0	0	0	0	150	73,824
11-Oct-2016	11-Oct-2016	1	150	298	38,202	0	0	35,920	0	0	0	0	0	0	150	74,122
12-Oct-2016	12-Oct-2016	1	150	298	38,499	0	0	35,920	0	0	0	0	0	0	150	74,419
13-Oct-2016	13-Oct-2016	1	150	298	38,797	0	0	35,920	200	396	396	0	0	0	350	75,112
14-Oct-2016	14-Oct-2016	1	150	298	39,094	0	0	35,920	300	595	991	0	0	0	450	76,005
15-Oct-2016	15-Oct-2016	1	150	298	39,392	0	0	35,920	0	0	991	0	0	0	150	76,302
16-Oct-2016	16-Oct-2016	1	150	298	39,689	0	0	35,920	0	0	991	0	0	0	150	76,600
17-Oct-2016	17-Oct-2016	1	150	298	39,987	0	0	35,920	200	397	1387	-50	(99)	-99	300	77,195
18-Oct-2016	18-Oct-2016	1	150	298	40,284	0	0	35,920	400	793	2181	-85	(169)	-268	465	78,117
19-Oct-2016	19-Oct-2016	1	150	298	40,582	0	0	35,920	700	1,388	3569	-50	(99)	-367	800	79,704
20-Oct-2016	20-Oct-2016	1	150	298	40,879	0	0	35,920	300	595	4164	-50	(99)	-466	400	80,498
21-Oct-2016	21-Oct-2016	1	150	298	41,177	0	0	35,920	100	198	4363	-50	(99)	(565)	200	80,894
22-Oct-2016	22-Oct-2016	1	150	298	41,474	0	0	35,920	0	0	4363	0	0	(565)	150	81,192
23-Oct-2016	23-Oct-2016	1	150	298	41,772	0	0	35,920	0	0	4363	0	0	(565)	150	81,489
24-Oct-2016	24-Oct-2016	1	150	298	42,069	0	0	35,920	300	595	4958	-50	(99)	(664)	400	82,283
25-Oct-2016	25-Oct-2016	1	150	298	42,367	0	0	35,920	500	992	5949	-50	(99)	(764)	600	83,473
26-Oct-2016	26-Oct-2016	1	150	298	42,664	0	0	35,920	1000	1,983	7933	-50	(99)	(863)	1,100	85,655
27-Oct-2016	27-Oct-2016	1	150	298	42,962	0	0	35,920	600	1,190	9123	-100	(198)	(1,061)	650	86,944
28-Oct-2016	28-Oct-2016	1	150	298	43,260	0	0	35,920	300	595	9718	-50	(99)	(1,160)	400	87,737
29-Oct-2016	29-Oct-2016	1	150	298	43,557	0	0	35,920	0	0	9718	0	0	(1,160)	150	88,035
30-Oct-2016	30-Oct-2016	1	150	298	43,855	0	0	35,920	0	0	9718	0	0	(1,160)	150	8

DON PEDRO / TUOLUMNE RIVER WATERSHED

	12/7/2016 Wednesday	12/6/2016 Tuesday	12/5/2016 Monday	12/4/2016 Sunday	12/3/2016 Saturday	12/2/2016 Friday	12/1/2016 Thursday
* Computed Natural Flow (cfs)	687	521	725	662	954	38	867
Don Pedro							
Elevation (Feet) ^{*(Max = 830.0 Min = 600.0)}	770.7	770.6	770.5	770.4	770.3	770.1	770.1
Storage (AF) ^{*(Max = 2,030,000 Min=309,000)}	1,365,873	1,364,917	1,363,961	1,363,006	1,362,051	1,360,143	1,360,143
Gain/(-Loss) (AF)	956	956	955	955	1,908	0	1,906
** Avg. Inflow (cfs)	695	662	677	660	1,141	179	1,139
Avg. Flows at La Grange							
TID Canal (cfs) ^{*(Max = 2500)}	35	1	18	1	1	1	1
MID Canal (cfs) ^{*(Max = 1800)}	0	0	0	0	0	0	0
River (cfs) ^{*(Max = 9000)}	178	178	178	177	177	177	176
Total (cfs)	213	180	196	178	179	179	178
Hetch Hetchy Reservoir							
Elevation (Feet) ^{*(Max = 3800 Min = 3520)}	3,781.7	3,781.7	3,781.8	3,781.7	3,781.6	3,781.7	3,781.8
Storage (AF) ^{*(Max = 360,360 Min=410)}	313,566	313,566	313,754	313,566	313,378	313,566	313,754
Gain/(-Loss) (AF)	0	-188	188	188	-188	-188	-188
Avg. Release (cfs)	299	302	116	188	323	348	382
** Avg. Inflow (cfs)	299	207	211	283	228	253	287
Cherry Valley Reservoir							
Elevation (Feet) ^{*(Max = 4700 Min = 4440)}	4,677.5	4,677.6	4,677.8	4,678.0	4,678.2	4,678.4	4,678.6
Storage (AF) ^{*(Max = 270,270 Min=0)}	229,900	230,067	230,401	230,735	231,069	231,403	231,737
Gain/(-Loss) (AF)	-167	-334	-334	-334	-334	-334	-501
Avg. Release (cfs)	401	429	498	500	456	483	486
** Avg. Inflow (cfs)	317	261	330	332	288	315	233
Lake Eleanor Reservoir							
Elevation (Feet) ^{*(Max = 4660.9 Min = 4620.9)}	4,651.0	4,651.2	4,651.3	4,651.4	4,651.6	4,651.8	4,651.9
Storage (AF) ^{*(Max = 27,016 Min=0)}	17,886	18,067	18,157	18,247	18,428	18,608	18,698
Gain/(-Loss) (AF)	-181	-90	-90	-181	-180	-90	-181
Avg. Release (cfs)	6	6	6	6	6	6	6
** Avg. Inflow (cfs)	-85	-39	-39	-85	-85	-39	-85
Avg. Div. to S.F. Pipeline (mgd) ^{*(Max = 300)}	109	109	109	109	109	109	109
Rain Fall (Inches)							
Hetch Hetchy	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Valley	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Moccasin	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sonora	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yosemite	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Don Pedro	0.00	0.00	0.00	0.00	0.00	0.00	0.00

* Computed Natural Flow is a calculated value representing what the flow in the river at La Grange would be without human diversion, storage, or release. Due to the nature of the calculation, this value may be negative.

** Inflow is a calculated value representing the flow of water into a reservoir. Inflow to a reservoir is not necessarily equal to the Computed Natural Flow. Due to the nature of the calculation, this value may be negative.

Note: cfs is a rate of flow in cubic feet per second; a flow of 1 cfs over a 24-hour period (cfs/day) = 1.98 acre-feet (AF); mgd is a rate of flow in million gallons per day (megagallons per day); a flow rate of 1 mgd = 1.55 cfs; a flow of 1 mgd over a 24-hour period = 3.1 AF.

Tuolumne Basin Weighted Mean Precipitation for Fish Year 2017 (Inches Equivalent of Rainfall)

Compiled by Jason A. Carkeet

20161208

Precip. To Date	Sum of Hetch Hetchy	11.03	sum of the weighted mean to date	Sum of Sonora	Sum of Yosemite Basin	Mean	24-hr Precipitation
Date							
4/15/2016	0			0.06	0		0.03
4/16/2016	0			0	0		0.00
4/17/2016	0			0	0		0.00
4/18/2016	0			0	0		0.00
4/19/2016	0			0	0		0.00
4/20/2016	0			0	0		0.00
4/21/2016	0			0	0		0.00
4/22/2016	0			0	0		0.00
4/23/2016	1.42			0.48	1.31		1.07
4/24/2016	0			0	0		0.00
4/25/2016	0.3			0	0.41		0.21
4/26/2016	0			0	0		0.00
4/27/2016	0			0	0		0.00
4/28/2016	0.24			0.02	0.02		0.11
4/29/2016	0			0	0		0.00
4/30/2016	0			0.19	0		0.08
5/1/2016	0			0	0		0.00
5/2/2016	0.04			0	0.02		0.02
5/3/2016	0			0	0		0.00
5/4/2016	0			0	0		0.00
5/5/2016	0			0	0		0.00
5/6/2016	0.11			0	0		0.05
5/7/2016	0.08			0.03	0.09		0.07
5/8/2016	0.07			0.04	0.07		0.06
5/9/2016	0			0	0		0.00
5/10/2016	0			0	0		0.00
5/11/2016	0			0	0		0.00
5/12/2016	0			0	0		0.00
5/13/2016	0			0	0		0.00
5/14/2016	0			0	0		0.00
5/15/2016	0			0	0		0.00

5/16/2016	0	0	0	0.00
5/17/2016	0.07	0	0	0.03
5/18/2016	0	0	0	0.00
5/19/2016	0	0	0	0.00
5/20/2016	0	0	0	0.00
5/21/2016	0	0	0	0.00
5/22/2016	0.1	0	0.12	0.07
5/23/2016	0	0	0	0.00
5/24/2016	0	0	0	0.00
5/25/2016	0.04	0	0	0.02
5/26/2016	0.03	0	0	0.01
5/27/2016	0.01	0	0	0.00
5/28/2016	0	0	0	0.00
5/29/2016	0	0	0.21	0.04
5/30/2016	0	0	0.03	0.01
5/31/2016	0	0	0	0.00
6/1/2016	0	0	0	0.00
6/2/2016	0	0	0	0.00
6/3/2016	0	0	0	0.00
6/4/2016	0	0	0	0.00
6/5/2016	0	0	0	0.00
6/6/2016	0	0	0	0.00
6/7/2016	0	0	0	0.00
6/8/2016	0	0	0	0.00
6/9/2016	0	0	0	0.00
6/10/2016	0	0	0	0.00
6/11/2016	0	0	0	0.00
6/12/2016	0	0	0.14	0.03
6/13/2016	0.21	0	0.37	0.17
6/14/2016	0	0	0	0.00
6/15/2016	0	0	0	0.00
6/16/2016	0	0	0	0.00
6/17/2016	0	0	0	0.00
6/18/2016	0	0	0	0.00
6/19/2016	0	0	0	0.00
6/20/2016	0	0	0	0.00

7/27/2016	0	0	0	0	0	0.00
7/28/2016	0	0	0	0	0	0.00
7/29/2016	0	0	0	0	0	0.00
7/30/2016	0	0	0	0	0	0.00
7/31/2016	0	0	0	0	0	0.00
8/1/2016	0	0	0	0	0	0.00
8/2/2016	0	0	0	0	0	0.00
8/3/2016	0	0	0	0	0	0.00
8/4/2016	0	0	0	0	0	0.00
8/5/2016	0	0	0	0	0	0.00
8/6/2016	0	0	0	0	0	0.00
8/7/2016	0	0	0	0	0	0.00
8/8/2016	0	0	0	0	0	0.00
8/9/2016	0	0	0	0	0	0.00
8/10/2016	0	0	0	0	0	0.00
8/11/2016	0	0	0	0	0	0.00
8/12/2016	0	0	0	0	0	0.00
8/13/2016	0	0	0	0	0	0.00
8/14/2016	0	0	0	0	0	0.00
8/15/2016	0	0	0	0	0	0.00
8/16/2016	0	0	0	0	0	0.00
8/17/2016	0	0	0	0	0	0.00
8/18/2016	0	0	0	0	0	0.00
8/19/2016	0	0	0	0	0	0.00
8/20/2016	0	0	0	0	0	0.00
8/21/2016	0	0	0	0	0	0.00
8/22/2016	0	0	0	0	0	0.00
8/23/2016	0	0	0	0	0	0.00
8/24/2016	0	0	0	0	0	0.00
8/25/2016	0	0	0	0	0	0.00
8/26/2016	0	0	0	0	0	0.00
8/27/2016	0	0	0	0	0	0.00
8/28/2016	0	0	0	0	0	0.00
8/29/2016	0	0	0	0	0	0.00
8/30/2016	0	0	0	0	0	0.00
8/31/2016	0	0	0	0	0	0.00

10/7/2016	0	0	0	0.00
10/8/2016	0	0	0	0.00
10/9/2016	0	0	0	0.00
10/10/2016	0	0	0	0.00
10/11/2016	0	0	0	0.00
10/12/2016	0	0	0	0.00
10/13/2016	0	0	0	0.00
10/14/2016	0	0	0	0.00
10/15/2016	0.27	0.3	0.12	0.26
10/16/2016	0.87	0.62	1.3	0.90
10/17/2016	1.61	1.33	1.91	1.64
10/18/2016	0	0	0	0.00
10/19/2016	0	0	0	0.00
10/20/2016	0	0	0	0.00
10/21/2016	0	0	0	0.00
10/22/2016	0	0	0	0.00
10/23/2016	0	0	0	0.00
10/24/2016	0.19	0.05	0.4	0.18
10/25/2016	0	0	0.01	0.00
10/26/2016	0	0	0	0.00
10/27/2016	0	0	0	0.00
10/28/2016	0.88	0.57	0.96	0.81
10/29/2016	0.48	0.45	0.47	0.49
10/30/2016	0.8	0.11	0.3	0.45
10/31/2016	1.37	1	1.11	1.23
11/1/2016	0.3	0.08	0.07	0.17
11/2/2016	0.06	0	0.03	0.03
11/3/2016	0	0	0	0.00
11/4/2016	0	0	0	0.00
11/5/2016	0	0	0	0.00
11/6/2016	0	0	0	0.00
11/7/2016	0	0	0	0.00
11/8/2016	0	0	0	0.00
11/9/2016	0	0	0	0.00
11/10/2016	0	0	0	0.00
11/11/2016	0	0	0	0.00

11/12/2016	0	0	0	0.00
11/13/2016	0	0	0	0.00
11/14/2016	0	0	0	0.00
11/15/2016	0	0	0	0.00
11/16/2016	0	0.18	0	0.08
11/17/2016	0.05	0	0	0.02
11/18/2016	0	0	0	0.00
11/19/2016	0	0	0	0.00
11/20/2016	0	0.19	0	0.08
11/21/2016	0.32	0.64	0.14	0.43
11/22/2016	0	0	0.01	0.00
11/23/2016	0.32	0.52	0.18	0.39
11/24/2016	0	0	0.14	0.03
11/25/2016	0	0	0	0.00
11/26/2016	0	0	0	0.00
11/27/2016	1.45	1.6	0.41	1.37
11/28/2016	0.09	0.13	1.04	0.31
11/29/2016	0.01	0.04	0.18	0.06
11/30/2016	0	0	0	0.00
12/1/2016	0	0	0	0.00
12/2/2016	0	0	0	0.00
12/3/2016	0	0	0	0.00
12/4/2016	0	0	0	0.00
12/5/2016	0	0	0	0.00
12/6/2016	0	0	0	0.00
12/7/2016	0	0	0	0.00
12/8/2016	0	0	0	0.00