5-119

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO:

YAO-6213
RES-9.00

Mr. Yusuf Farran
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - December

Dear Mr. Farran:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for December.

If you have any questions, please contact Mr. Alex Jimenez at 520-343-8290.

Sincerely,

/s/ Melvin Tsang

Edward J. Kandl
River Operations

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Office
International Boundary
and Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Ms. Vickie Doyle
Water Recourses
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
(w/encl)

TABLE 2
PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS
COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY
USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA
December 1999

		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
1999		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	22200	750	6270	1680	16600	730	2280	1470	153000	845	8690	1250	0	0	0	0	7120	3736	216160	920	150	850	216310	920	427290	840	80
	Accum	22200	750	6270	1680	16600	730	2280	1470	315900	409	8690	1250	0	0	0	0	7120	3736	216160	920	150	850	216310	920	427290	840	80
FEB	Actual	412600	628	5559	1687	23190	628	2162	1390	322900	628	7478	1458	0	0	0	0	-19893	355	753996	641	82	641	754078	641	927074	629	12
	Accum	434800	634	11829	1683	39790	671	4442	1431	638800	520	16168	1346	0	0	0	0	-12773	-1530	970156	703	232	776	970388	703	1354364	696	8
MAR	Actual	333920	629	6325	1702	21602	625	2390	1530	145761	623	4866	1407	0	0	0	0	13056	1628	527920	676	164	631	528084	676	936793	627	49
	Accum	768720	632	18154	1690	61392	655	6832	1466	784561	539	21034	1360	0	0	0	0	283	144190	1498076	694	396	716	1498472	694	2291157	668	26
APR	Actual	152990	642	6326	1693	15957	634	2670	1324	59557	658	8108	1342	0	0	0	0	31185	996	276793	736	97	644	276890	736	732297	651	85
	Accum	921710	634	24480	1691	77349	650	9502	1426	844118	547	29142	1355	0	0	0	0	31468	2284	1774869	700	493	702	1775362	700	3023454	664	37
MAY	Actual	47590	653	6577	1702	5306	656	2672	1470	125686	654	9265	982	350	3840	0	0	24385	1177	221831	771	81	658	221912	771	699332	656	115
	Accum	969300	635	31057	1693	82655	651	12174	1436	969804	561	38407	1265	350	3840	0	0	55853	1801	1996700	708	574	696	1997274	708	3722786	662	46
JUN	Actual	26510	644	5720	1687	35260	643	2720	1450	136600	643	11015	1012	0	0	0	0	-21580	311	196245	742	99	645	196344	742	660595	643	99
	Accum	995810	635	36777	1692	117915	648	14894	1438	1106404	571	49422	1209	350	3840	0	0	34273	2739	2192945	711	673	688	2193618	691	4383381	659	32
JUL	Actual	27550	661	6166	1778	4229	659	2487	1620	146600	663	8095	1464	0	0	0	0	7980	1067	203107	756	74	678	203181	756	736066	663	93
	Accum	1023360	636	42943	1704	122144	649	17381	1464	1253004	582	57517	1245	350	3840	0	0	42253	2423	2396052	715	747	687	2396799	695	5119447	660	35
AUG	Actual	28000	770	5100	1600	9500	780	2000	1400	32000	770	8800	1000	0	0	0	0	13100	1037	98500	800	80	960	98580	800	559800	720	80
	Accum	1051360	639	48043	1693	131644	658	19381	1458	1285004	587	66317	1212	350	3840	0	0	55353	2095	2494552	718	827	714	2495379	699	5679247	666	33
SEP	Actual	24600	850	4400	1600	9200	850	1700	1400	21000	855	9600	1100	0	0	0	0	9700	1460	80200	920	230	780	80430	920	556000	710	210
	Accum	1075960	644	52443	1686	140844	671	21081	1453	1306004	591	75917	1198	350	3840	0	0	65053	2001	2574752	725	1057	728	2575809	706	6235247	670	36
OCT	Actual	22800	845	5100	1700	49000	850	1700	1400	0	0	8900	1150	0	0	0	0	1400	2088	88900	860	170	800	89070	860	448050	850	10
	Accum	1098760	648	57543	1687	189844	717	22781	1449	1306004	591	84817	1193	350	3840	0	0	66453	2002	2663652	729	1227	738	2664879	711	6683297	682	29
NOV	Actual	11570	740	5100	1650	9800	740	1340	1360	0	0	10200	1300	0	0	0	0	50590	895	88600	860	130	850	88730	860	341315	830	30
	Accum	1110330	649	62643	1684	199644	718	24121	1444	1306004	591	95017	1204	350	3840	0	0	117043	1524	2752252	733	1357	749	2753609	716	7024612	689	27
DEC	Actual	22000	900	4500	1900	44000	880	3700	1500	0	0	11000	1300	0	0	0	0	3300	-685	88500	860	100	880	88600	860	309498	850	10
	Accum	1132330	654	67143	1698	243644	747	27821	1451	1306004	591	106017	1214	350	3840	0	0	120343	1463	2840752	737	1457	758	2842209	720	7334110	696	25

COLUMNS 1 THRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
COLUMN 6 ACRE FEET EQUALS SUM OF, MITTRY LAKE OUTLET CHANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1, BRUCE CHURCH DRAIN, NORTH GILA CANAL WASTEWAY, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
COLUMNS 1 THRU 7 ACTUAL SALINITIES IN PPM ARE MONTHLY AVERAGES BASED UPON CHEMICAL ANALYSIS
COLUMN 9 ACTUAL FLOWS IN ACRE FEET EQUAL COLUMN 10 MINUS COLUMNS 1 THRU 8.
COLUMNS 10 THRU 13 AS REPORTED BY IBWC.
COLUMN 14 EQUALS COLUMN 12 MINUS COLUMN 13. PROJECTED FLOWS AND SALINTIES ARE ESTIMATED BASED UPON HISTORICAL RECORDS.

United States Department of the Interior

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Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

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RES-9.00

10

RECEIVED
MAR 15 1999
IMPERIAL IRRIGATION DISTRICT
OFFICE OF WATER RESOURCES

Mr. Yusuf Farran
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - January 1999

Dear Mr. Farran:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for January 1999.

If you have any questions, please contact Mr. Alex Jimenez at 520-343-8290.

Sincerely,

Frank Macaluso/S/

Acting for
River Operations

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Office
International Boundary
and Water Commission
P.O. Box 5737
Yuma AZ 85366
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COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY
USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA
January 1999

1999		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	55700	681	6001	1822	27410	682	4199	1540	298372	672	13490	1215	0	0	0	0	3661	5042	408833	730	162	697	408995	730	623980	687	43
	Accum	55700	681	6001	1822	27410	682	4199	1540	315900	635	13490	1215	0	0	0	0	3661	5042	408833	730	162	697	408995	730	623980	687	43
FEB	Projected	20100	680	5400	1780	25800	680	2460	1240	315950	810	8490	1350	0	0	0	0	-3820	-4340	374380	850	130	800	374510	850	683100	800	50
	Accum	75800	681	11401	1802	53210	681	6659	1429	631850	722	21980	1267	0	0	0	0	-159	-220375	783213	787	292	823	783505	787	1307080	746	41
MAR	Projected	23450	670	6300	1600	26600	670	2800	1430	248000	700	9800	1300	0	0	0	0	10850	4442	327800	830	120	850	327920	830	758700	760	70
	Accum	99250	678	17701	1730	79810	677	9459	1429	879850	716	31780	1277	0	0	0	0	10691	7786	1111013	800	412	831	1111425	800	2065780	751	49
APR	Projected	34300	670	5900	1690	18800	670	2840	1240	126800	670	8600	1200	0	0	0	0	11660	3704	208900	850	80	960	208980	850	700800	670	180
	Accum	133550	676	23601	1720	98610	676	12299	1386	1006650	710	40380	1261	0	0	0	0	22351	5656	1319913	808	492	852	1320405	808	2766580	731	77
MAY	Projected	26100	700	5960	1690	12700	700	2950	1320	110100	760	9800	1200	0	0	0	0	20190	804	187800	760	90	920	187890	760	680900	750	10
	Accum	159650	680	29561	1714	111310	679	15249	1373	1116750	715	50180	1249	0	0	0	0	42541	3354	1507713	802	582	862	1508295	802	3447480	734	67
JUN	Projected	27250	680	5500	1700	10600	680	2700	1370	8800	680	8520	1100	0	0	0	0	86830	816	150200	770	60	950	150260	770	642800	680	90
	Accum	186900	680	35061	1712	121910	679	17949	1373	1125550	715	58700	1227	0	0	0	0	129371	1650	1657913	799	642	871	1658555	799	4090280	726	73
JUL	Projected	23150	680	5700	1580	15650	680	2680	1400	98000	680	8000	1100	0	0	0	0	32120	1098	185300	760	90	920	185390	760	700100	680	80
	Accum	210050	680	40761	1693	137560	679	20629	1376	1223550	712	66700	1212	0	0	0	0	161491	1541	1843213	795	732	877	1843945	795	4790380	719	76
AUG.	Projected	32100	660	5950	1650	28700	660	2800	1340	32000	770	8800	1000	0	0	0	0	-11850	-125	98500	800	80	960	98580	800	559800	720	80
	Accum	242150	677	46711	1688	166260	676	23429	1372	1255550	714	75500	1187	0	0	0	0	149641	1672	1941713	795	655	1097	1942525	795	5350180	719	76
SEP	Projected	88800	690	5100	1700	35200	690	1260	710	21000	855	9600	1100	0	0	0	0	-80760	510	80200	920	230	780	80430	920	556000	710	210
	Accum	330950	681	51811	1689	201460	678	24689	1338	1276550	716	85100	1177	0	0	0	0	68881	3035	2021913	800	655	1371	2022955	800	5906180	718	82
OCT	Projected	34500	710	5100	1650	38100	710	2180	1600	0	0	8900	1150	0	0	0	0	120	93208	88900	860	170	800	89070	860	448050	850	10
	Accum	365450	684	56911	1686	239560	683	26869	1359	1276550	716	94000	1175	0	0	0	0	69001	3192	2110813	803	825	1253	2112025	803	6354230	728	75
NOV	Projected	11570	740	5100	1650	9800	740	1340	1360	0	0	10200	1300	0	0	0	0	50590	895	88600	860	130	850	88730	860	341315	830	30
	Accum	377020	685	62011	1683	249360	685	28209	1359	1276550	716	104200	1187	0	0	0	0	119591	2221	2199413	805	955	1198	2200755	805	6695545	733	72
DEC	Projected	18800	770	5400	1680	9700	770	3100	1450	0	0	11000	1300	0	0	0	0	40500	873	88500	860	100	880	88600	860	309498	850	10
	Accum	395820	689	67411	1682	259060	689	31309	1368	1276550	716	115200	1198	0	0	0	0	160091	1880	2287913	807	1055	1168	2289355	807	7005043	738	69

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Yuma Area Office
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Yuma, Arizona 85366

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Mr. Yusuf Farran
International Boundary and
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The Commons, Building C,
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4171 North Mesa Street
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Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - February

Dear Mr. Farran:

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If you have any questions, please contact Mr. Alex Jimenez at 520-343-8290.

Sincerely,

/s/ Frank Macaluso

Acting River Operations

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Office
International Boundary
and Water Commission
P.O. Box 5737
Yuma AZ 85366
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		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	5610	681	6001	1822	27410	682	4199	1540	298372	672	13490	1215	0	0	0	0	53751	775	408833	730	162	697	408995	730	623980	687	43
	Accum	5610	681	6001	1822	27410	682	4199	1540	315900	635	13490	1215	0	0	0	0	53751	775	408833	730	162	697	408995	730	623980	687	43
FEB	Actual	41820	706	6395	1819	7800	702	3372	1580	91400	700	8014	1337	0	0	0	0	10885	2777	169686	856	144	704	169830	856	418274	701	155
	Accum	47430	703	12396	1820	35210	686	7571	1558	407300	649	21504	1260	0	0	0	0	64636	1112	578519	767	306	700	578825	767	1042254	693	74
MAR	Projected	23450	670	6300	1600	26600	670	2800	1430	248000	700	9800	1300	0	0	0	0	10850	4442	327800	830	120	850	327920	830	758700	760	70
	Accum	70880	692	18696	1746	61810	679	10371	1523	655300	669	31304	1273	0	0	0	0	75486	1591	906319	790	426	742	906745	790	1800954	721	69
APR	Projected	34300	670	5900	1690	18800	670	2840	1240	126800	670	8600	1200	0	0	0	0	11660	3704	208900	850	80	960	208980	850	700800	670	180
	Accum	105180	685	24596	1733	80610	677	13211	1462	782100	669	39904	1257	0	0	0	0	87146	1873	1115219	801	506	777	1115725	801	2501754	707	94
MAY	Projected	26100	700	5960	1690	12700	700	2950	1320	110100	760	9800	1200	0	0	0	0	20190	804	187800	760	90	920	187890	760	680900	750	10
	Accum	131280	688	30556	1724	93310	680	16161	1436	892200	680	49704	1246	0	0	0	0	107336	1672	1303019	795	596	798	1303615	795	3182654	716	79
JUN	Projected	27250	680	5500	1700	10600	680	2700	1370	8800	680	8520	1100	0	0	0	0	86830	816	150200	770	60	950	150260	770	642800	680	90
	Accum	158530	687	36056	1721	103910	680	18861	1427	901000	680	58224	1225	0	0	0	0	194166	1289	1453219	793	656	812	1453875	793	3825454	710	83
JUL	Projected	23150	680	5700	1580	15650	680	2680	1400	98000	680	8000	1100	0	0	0	0	32120	1098	185300	760	90	920	185390	760	700100	680	80
	Accum	181680	686	41756	1701	119560	680	21541	1424	999000	680	66224	1209	0	0	0	0	226286	1262	1638519	789	746	825	1639265	789	4525554	705	84
AUG	Projected	32100	660	5950	1650	28700	660	2800	1340	32000	770	8800	1000	0	0	0	0	-11850	-125	98500	800	80	960	98580	800	559800	720	80
	Accum	213780	682	47706	1695	148260	676	24341	1414	1031000	683	75024	1185	0	0	0	0	214436	1339	1737019	789	826	838	1737845	790	5085354	707	83
SEP	Projected	88800	690	5100	1700	35200	690	1260	710	21000	855	9600	1100	0	0	0	0	-80760	510	80200	920	230	780	80430	920	556000	710	210
	Accum	302580	684	52806	1696	183460	679	25601	1379	1052000	686	84624	1175	0	0	0	0	133676	1840	1817219	795	1056	826	1818275	795	5641354	707	88
OCT	Projected	34500	710	5100	1650	38100	710	2180	1600	0	0	8900	1150	0	0	0	0	120	93208	88900	860	170	800	89070	860	448050	850	10
	Accum	337080	687	57906	1692	221560	684	27781	1397	1052000	686	93524	1173	0	0	0	0	133796	1921	1906119	798	1226	822	1907345	798	6089404	718	81
NOV	Projected	11570	740	5100	1650	9800	740	1340	1360	0	0	10200	1300	0	0	0	0	50590	895	88600	860	130	850	88730	860	341315	830	30
	Accum	348650	689	63006	1688	231360	687	29121	1395	1052000	686	103724	1185	0	0	0	0	184386	1640	1994719	801	1356	825	1996075	801	6430719	724	77
DEC	Projected	18800	770	5400	1680	9700	770	3100	1450	0	0	11000	1300	0	0	0	0	40500	873	88500	860	100	880	88600	860	309498	850	10
	Accum	367450	693	68406	1688	241060	690	32221	1400	1052000	686	114724	1196	0	0	0	0	224886	1502	2083219	804	1456	829	2084675	804	6740217	729	74

COLUMNS 1 THRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
COLUMN 6 ACRE FEET EQUALS SUM OF, MITTRY LAKE OUTLET CHANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1, BRUCE CHURCH DRAIN, NORTH GILA CANAL WASTEWAY, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
COLUMNS 1 THRU 7 ACTUAL SALINITIES IN PPM ARE MONTHLY AVERAGES BASED UPON CHEMICAL ANALYSIS
COLUMN 9 ACTUAL FLOWS IN ACRE FEET EQUAL COLUMN 10 MINUS COLUMNS 1 THRU 8.
COLUMNS 10 THRU 13 AS REPORTED BY IBWC.
COLUMN 14 EQUALS COLUMN 12 MINUS COLUMN 13. PROJECTED FLOWS AND SALINTIES ARE ESTIMATED BASED UPON HISTORICAL RECORDS.

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO:

YAO-6213
RES-9.00

MAY - 4 1999

Mr. Yusuf Farran
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - March

Dear Mr. Farran:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for March 1999.

If you have any questions, please contact Mr. Alex Jimenez at 520-343-8290.

Sincerely,

/s/ Janet Stork

Janet Stork
River Operations

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Office
International Boundary
and Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Ms. Vickie Doyle
Water Recourses
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
(w/encl)

TABLE 2
PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS
COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY
USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA
March1999

1999		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	5610	681	6001	1822	27410	682	4199	1540	298372	672	13490	1215	0	0	0	0	53751	775	408833	730	162	697	408995	730	623980	687	43
	Accum	5610	681	6001	1822	27410	682	4199	1540	298372	672	13490	1215	0	0	0	0	53751	775	408833	730	162	697	408995	730	623980	687	43
FEB	Actual	41820	706	6395	1819	7800	702	3372	1580	91400	700	8014	1337	0	0	0	0	10885	2777	169686	856	144	704	169830	856	418274	701	155
	Accum	47430	703	12396	1820	35210	686	7571	1558	389772	679	21504	1260	0	0	0	0	64636	1112	578519	767	306	700	578825	767	1042254	693	74
MAR	Actual	31790	714	7086	1706	11760	715	3348	1670	126012	710	8323	1283	0	0	0	0	13499	658	201818	782	53	709	201871	782	607874	710	72
	Accum	79220	707	19482	1779	46970	694	10919	1592	515784	686	29827	1267	0	0	0	0	78135	1034	780337	771	359	702	780696	771	1650128	699	72
APR	Projected	34300	670	5900	1690	18800	670	2840	1240	126800	670	8600	1200	0	0	0	0	11660	3704	208900	850	80	960	208980	850	700800	670	180
	Accum	113520	696	25382	1758	65770	687	13759	1520	642584	683	38427	1252	0	0	0	0	89795	1380	989237	788	439	749	989676	788	2350928	690	97
MAY	Projected	26100	700	5960	1690	12700	700	2950	1320	110100	760	9800	1200	0	0	0	0	20190	804	187800	760	90	920	187890	760	680900	750	10
	Accum	139620	697	31342	1745	78470	689	16709	1484	752684	694	48227	1241	0	0	0	0	109985	1275	1177037	783	529	778	1177566	783	3031828	704	79
JUN	Projected	27250	680	5500	1700	10600	680	2700	1370	8800	680	8520	1100	0	0	0	0	86830	816	150200	770	60	950	150260	770	642800	680	90
	Accum	166870	694	36842	1738	89070	688	19409	1468	761484	694	56747	1220	0	0	0	0	196815	1072	1327237	782	589	795	1327826	782	3674628	700	82
JUL	Projected	23150	680	5700	1580	15650	680	2680	1400	98000	680	8000	1100	0	0	0	0	32120	1098	185300	760	90	920	185390	760	700100	680	80
	Accum	190020	692	42542	1717	104720	687	22089	1460	859484	693	64747	1205	0	0	0	0	228935	1076	1512537	779	679	812	1513216	779	4374728	696	83
AUG	Projected	32100	660	5950	1650	28700	660	2800	1340	32000	770	8800	1000	0	0	0	0	-11850	-125	98500	800	80	960	98580	800	559800	720	80
	Accum	222120	688	48492	1709	133420	681	24889	1447	891484	695	73547	1181	0	0	0	0	217085	1141	1611037	780	759	827	1611796	780	4934528	699	81
SEP	Projected	88800	690	5100	1700	35200	690	1260	710	21000	855	9600	1100	0	0	0	0	-80760	510	80200	920	230	780	80430	920	556000	710	210
	Accum	310920	688	53592	1708	168620	683	26149	1411	912484	699	83147	1171	0	0	0	0	136325	1515	1691237	787	989	816	1692226	787	5490528	700	87
OCT	Projected	34500	710	5100	1650	38100	710	2180	1600	0	0	8900	1150	0	0	0	0	120	93208	88900	860	170	800	89070	860	448050	850	10
	Accum	345420	691	58692	1703	206720	688	28329	1426	912484	699	92047	1169	0	0	0	0	136445	1596	1780137	791	1159	814	1781296	791	5938578	712	79
NOV	Projected	11570	740	5100	1650	9800	740	1340	1360	0	0	10200	1300	0	0	0	0	50590	895	88600	860	130	850	88730	860	341315	830	30
	Accum	356990	692	63792	1699	216520	690	29669	1423	912484	699	102247	1182	0	0	0	0	187035	1407	1868737	794	1289	818	1870026	794	6279893	718	76
DEC	Projected	18800	770	5400	1680	9700	770	3100	1450	0	0	11000	1300	0	0	0	0	40500	873	88500	860	100	880	88600	860	309498	850	10
	Accum	375790	696	69192	1697	226220	694	32769	1425	912484	699	113247	1194	0	0	0	0	227535	1312	1957237	797	1389	822	1958626	797	6589391	724	73

COLUMNS 1 THRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
COLUMN 6 ACRE FEET EQUALS SUM OF, MITTRY LAKE OUTLET CHANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1, BRUCE CHURCH DRAIN, NORTH GILA CANAL WASTEWAY, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
COLUMNS 1 THRU 7 ACTUAL SALINITIES IN PPM ARE MONTHLY AVERAGES BASED UPON CHEMICAL ANALYSIS
COLUMN 9 ACTUAL FLOWS IN ACRE FEET EQUAL COLUMN 10 MINUS COLUMNS 1 THRU 8.
COLUMNS 10 THRU 13 AS REPORTED BY IBWC.
COLUMN 14 EQUALS COLUMN 12 MINUS COLUMN 13. PROJECTED FLOWS AND SALINTIES ARE ESTIMATED BASED UPON HISTORICAL RECORDS.
COLUMN 9 ACTUAL FLOWS IN ACRE FEET EQUAL COLUMN 10 MINUS COLUMNS 1 THRU 8.
COLUMNS 10 THRU 13 AS REPORTED BY IBWC.
COLUMN 14 EQUALS COLUMN 12 MINUS COLUMN 13. PROJECTED FLOWS AND SALINTIES ARE ESTIMATED BASED UPON HISTORICAL RECORDS.

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO

1848-1999

YAO-6213
RES-9.00

JUN - 1 '99

Mr. Yusuf Farran
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - April

Dear Mr. Farran:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for April 1999.

If you have any questions, please contact Mr. Alex Jimenez at 520-343-8290.

Sincerely,

/s/ Melvin Tsang

Melvin Tsang
River Operations

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Office
International Boundary
and Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Ms. Vickie Doyle
Water Recourses
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
(w/encl)

TABLE 2
PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS
COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY
USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA
April 1999

		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
1999		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	5610	681	6001	1822	27410	682	4199	1540	298372	672	13490	1215	0	0	0	0	53751	775	408833	730	162	697	408995	730	623980	687	43
	Accum	5610	681	6001	1822	27410	682	4199	1540	298372	672	13490	1215	0	0	0	0	53751	775	408833	730	162	697	408995	730	623980	687	43
FEB	Actual	41820	706	6395	1819	7800	702	3372	1580	91400	700	8014	1337	0	0	0	0	10885	2777	169686	856	144	704	169830	856	418274	701	155
	Accum	47430	703	12396	1820	35210	686	7571	1558	389772	679	21504	1260	0	0	0	0	64636	1112	578519	767	306	700	578825	767	1042254	693	74
MAR	Actual	31790	714	7086	1706	11760	715	3348	1670	126012	710	8323	1283	0	0	0	0	13499	658	201818	782	53	709	201871	782	607874	710	72
	Accum	79220	707	19482	1779	46970	694	10919	1592	515784	686	29827	1267	0	0	0	0	78135	1034	780337	771	359	702	780696	771	1650128	699	72
APR	Actual	39440	684	6936	1851	9739	689	3511	1640	140650	690	7693	1302	0	0	0	0	-597	-1591	207372	773	30	686	207402	773	641177	684	89
	Accum	118660	700	26418	1798	56709	693	14430	1604	656434	687	37520	1274	0	0	0	0	77538	1054	987709	771	389	700	988098	771	2291305	695	76
MAY	Projected	26100	700	5960	1690	12700	700	2950	1320	110100	760	9800	1200	0	0	0	0	20190	804	187800	760	90	920	187890	760	680900	750	10
	Accum	144760	700	32378	1778	69409	694	17380	1556	766534	698	47320	1259	0	0	0	0	97728	1002	1175509	769	479	742	1175988	769	2972205	707	62
JUN	Projected	27250	680	5500	1700	10600	680	2700	1370	8800	680	8520	1100	0	0	0	0	86830	816	150200	770	60	950	150260	770	642800	680	90
	Accum	172010	697	37878	1767	80009	692	20080	1531	775334	697	55840	1234	0	0	0	0	184558	915	1325709	770	539	765	1326248	770	3615005	703	67
JUL	Projected	23150	680	5700	1580	15650	680	2680	1400	98000	680	8000	1100	0	0	0	0	32120	1098	185300	760	90	920	185390	760	700100	680	80
	Accum	195160	695	43578	1742	95659	690	22760	1515	873334	695	63840	1218	0	0	0	0	216678	942	1511009	768	629	787	1511638	768	4315105	699	69
AUG	Projected	32100	660	5950	1650	28700	660	2800	1340	32000	770	8800	1000	0	0	0	0	-11850	-125	98500	800	80	960	98580	800	559600	720	80
	Accum	227260	690	49528	1731	124359	683	25560	1496	905334	698	72640	1191	0	0	0	0	204828	1003	1609509	770	709	807	1610218	770	4874905	701	69
SEP	Projected	88800	690	5100	1700	35200	690	1260	710	21000	855	9600	1100	0	0	0	0	-80760	510	80200	920	230	780	80430	920	556000	710	210
	Accum	316060	690	54628	1728	159559	685	26820	1459	926334	702	82240	1181	0	0	0	0	124068	1325	1689709	777	939	800	1690648	777	5430905	702	75
OCT	Projected	34500	710	5100	1650	38100	710	2180	1600	0	0	8900	1150	0	0	0	0	120	93208	88900	860	170	800	89070	860	448050	850	10
	Accum	350560	692	59728	1722	197659	690	29000	1470	926334	702	91140	1178	0	0	0	0	124188	1413	1778609	782	1109	800	1779718	782	5878955	713	68
NOV	Projected	11570	740	5100	1650	9800	740	1340	1360	0	0	10200	1300	0	0	0	0	50590	895	88600	860	130	850	88730	860	341315	830	30
	Accum	362130	693	64828	1716	207459	692	30340	1465	926334	702	101340	1190	0	0	0	0	174778	1264	1867209	785	1239	805	1868448	785	6220270	720	65
DEC	Projected	18800	770	5400	1680	9700	770	3100	1450	0	0	11000	1300	0	0	0	0	40500	873	88500	860	100	880	88600	860	309498	850	10
	Accum	380930	697	70228	1713	217159	695	33440	1464	926334	702	112340	1201	0	0	0	0	215278	1190	1955709	789	1339	811	1957048	789	6529768	726	63

COLUMNS 1 THRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
COLUMN 6 ACRE FEET EQUALS SUM OF, MITTRY LAKE OUTLET CHANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1. BRUCE CHURCH DRAIN, NORTH GILA CANAL WASTEWAY, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
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United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO

JUL -6 1999

YAO-6213
RES-9.00

Mr. Yusuf Farran
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - May 1999

Dear Mr. Farran:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for May 1999.

If you have any questions, please contact Mr. Alex Jimenez at 520-343-8290.

Sincerely,

Melvin Tsang

Melvin Tsang
Team Leader, River Scheduling
and Accounting Team

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Office
International Boundary
and Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Ms. Vickie Doyle
Water Recourses
Imperial Irrigation District
P.O. Box 937
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TABLE 2
PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS
COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY
USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA
May 1999

1999		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		*7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	56100	681	6001	1822	27410	682	4199	1540	298372	672	13490	1215	0	0	0	0	3261	2224	408833	730	162	697	408995	730	623980	687	43
	Accum	56100	681	6001	1822	27410	682	4199	1540	298372	672	13490	1215	0	0	0	0	3261	2224	408833	730	162	697	408995	730	623980	687	43
FEB	Actual	41820	706	6361	1819	7800	702	3372	1580	91400	700	8014	1337	0	0	0	0	10919	2768	169686	856	144	704	169830	856	418274	701	155
	Accum	97920	692	12362	1820	35210	686	7571	1558	389772	679	21504	1260	0	0	0	0	14180	2643	578519	767	306	700	578825	767	1042254	693	74
MAR	Actual	31790	714	7086	1706	11760	715	3348	1670	126012	710	8323	1283	0	0	0	0	13499	658	201818	782	53	709	201871	782	607874	710	72
	Accum	129710	697	19448	1779	46970	694	10919	1592	515784	686	29827	1267	0	0	0	0	27679	1675	780337	771	359	702	780696	771	1650128	699	72
APR	Actual	39440	684	6936	1851	9739	689	3511	1640	140650	690	7693	1302	0	0	0	0	-597	-1591	207372	773	30	686	207402	773	641177	684	89
	Accum	169150	694	26384	1798	56709	693	14430	1604	656434	687	37520	1274	0	0	0	0	27082	1747	987709	771	389	700	988098	771	2291305	695	76
MAY	Actual	34940	701	6532	1813	5324	704	3816	1490	103836	705	7925	1294	0	0	0	0	7234	775	169607	795	70	707	169677	795	670254	705	90
	Accum	204090	695	32916	1801	62033	694	18246	1580	760270	690	45445	1277	0	0	0	0	34316	1542	1157316	775	459	701	1157775	775	2961559	697	78
JUN	Projected	27250	680	5500	1700	10600	680	2700	1370	8800	680	8520	1100	0	0	0	0	86830	816	150200	770	60	950	150260	770	642800	680	90
	Accum	231340	693	38416	1786	72633	692	20946	1553	769070	689	53965	1249	0	0	0	0	121146	1022	1307516	774	519	730	1308035	774	3604359	694	80
JUL	Projected	23150	680	5700	1580	15650	680	2680	1400	98000	680	8000	1100	0	0	0	0	32120	1098	185300	760	90	920	185390	760	700100	680	80
	Accum	254490	692	44116	1760	86283	690	23626	1536	867070	688	61965	1230	0	0	0	0	153266	1038	1492816	772	609	758	1493425	773	4304459	692	81
AUG	Projected	32100	660	5950	1650	28700	660	2800	1340	32000	770	8800	1000	0	0	0	0	-11850	-125	98500	800	80	960	98580	800	559800	720	80
	Accum	286590	689	50066	1747	116983	682	26426	1515	899070	691	70765	1202	0	0	0	0	141416	1135	1591316	774	689	782	1592005	774	4864259	695	79
SEP	Projected	88800	690	5100	1700	35200	690	1260	710	21000	855	9600	1100	0	0	0	0	-80760	510	80200	920	230	780	80430	920	556000	710	210
	Accum	375390	689	55166	1742	152183	684	27686	1478	920070	695	80365	1189	0	0	0	0	60656	1967	1671516	781	919	781	1672435	781	5420259	697	85
OCT	Projected	34500	710	5100	1650	38100	710	2180	1600	0	0	8900	1150	0	0	0	0	120	93208	88900	860	170	800	89070	860	448050	850	10
	Accum	409890	691	60266	1735	190283	689	29866	1487	920070	695	89265	1185	0	0	0	0	60776	2148	1760416	785	1089	784	1761505	785	5868309	708	77
NOV	Projected	11570	740	5100	1650	9800	740	1340	1360	0	0	10200	1300	0	0	0	0	50590	895	88600	860	130	850	88730	860	341315	830	30
	Accum	421460	692	65366	1728	200083	692	31206	1482	920070	695	99465	1197	0	0	0	0	111366	1579	1849016	789	1219	791	1850235	789	6209624	715	74
DEC	Projected	18800	770	5400	1680	9700	770	3100	1450	0	0	11000	1300	0	0	0	0	40500	873	88500	860	100	880	88600	860	309498	850	10
	Accum	440260	695	70766	1724	209783	695	34306	1479	920070	695	110465	1207	0	0	0	0	151866	1391	1937516	792	1319	798	1938835	792	6519122	721	71

COLUMNS 1 THRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
COLUMN 6 ACRE FEET EQUALS SUM OF, MITTRY LAKE OUTLET CHANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1, BRUCE CHURCH DRAIN, NORTH GILA CANAL WASTEWAY, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
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United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO:

YAO-6213
RES-9.00

AUG - 2 1999

Mr. Yusuf Farran
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - June 1999

Dear Mr. Farran:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for June 1999.

If you have any questions, please contact Mr. Alex Jimenez at 520-343-8290.

Sincerely,

/s/ Melvin Tsang

Melvin Tsang
Team Leader, River Scheduling
and Accounting Team

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Office
International Boundary
and Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Ms. Vickie Doyle
Water Recourses
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
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TABLE 2

PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS
COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY
USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA
June 1999

		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
1999		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	56100	681	6001	1822	27410	682	4199	1540	298372	672	13490	1215	0	0	0	0	3261	2224	408833	730	162	697	408995	730	623980	687	43
	Accum	56100	681	6001	1822	27410	682	4199	1540	298372	672	13490	1215	0	0	0	0	3261	2224	408833	730	162	697	408995	730	623980	687	43
FEB	Actual	41820	706	6361	1819	7800	702	3372	1580	91400	700	8014	1337	0	0	0	0	10919	2768	169686	856	144	704	169830	856	418274	701	155
	Accum	97920	692	12362	1820	35210	686	7571	1558	389772	679	21504	1260	0	0	0	0	14180	2643	578519	767	306	700	578825	767	1042254	693	74
MAR	Actual	31790	714	7086	1706	11760	715	3348	1670	126012	710	8323	1283	0	0	0	0	13499	658	201818	782	53	709	201871	782	607874	710	72
	Accum	129710	697	19448	1779	46970	694	10919	1592	515784	686	29827	1267	0	0	0	0	27679	1675	780337	771	359	702	780696	771	1650128	699	72
APR	Actual	39440	684	6936	1851	9739	689	3511	1640	140650	690	7693	1302	0	0	0	0	-597	-1591	207372	773	30	686	207402	773	641177	684	89
	Accum	169150	694	26384	1798	56709	693	14430	1604	656434	687	37520	1274	0	0	0	0	27082	1747	987709	771	389	700	988098	771	2291305	695	76
MAY	Actual	34940	701	6532	1813	5324	704	3816	1490	103836	705	7925	1294	0	0	0	0	7234	775	169607	795	70	707	169677	795	670254	705	90
	Accum	204090	695	32916	1801	62033	694	18246	1580	760270	690	45445	1277	0	0	0	0	34316	1542	1157316	775	459	701	1157775	775	2961559	697	78
JUN	Actual	59570	670	6054	1827	1630	681	3850	1630	80050	685	10632	1131	0	0	0	0	3080	989.8	164866	778	51	681	164917	778	637348	680	98
	Accum	263660	690	38970	1805	63663	693	22096	1589	840320	689	56077	1250	0	0	0	0	37396	1497	1322182	775	510	699	1322692	775	3598907	694	81
JUL	Projected	23150	680	5700	1580	15650	680	2680	1400	98000	680	8000	1100	0	0	0	0	32120	1098	185300	760	90	920	185390	760	700100	680	80
	Accum	286810	689	44670	1776	79313	691	24776	1568	938320	688	64077	1231	0	0	0	0	69516	1312	1507482	773	600	732	1508082	773	4299007	692	82
AUG	Projected	32100	660	5950	1650	28700	660	2800	1340	32000	770	8800	1000	0	0	0	0	-11850	-125	98500	800	80	960	98580	800	559800	720	80
	Accum	318910	686	50620	1761	108013	683	27576	1545	970320	691	72877	1203	0	0	0	0	57666	1608	1605982	775	680	759	1606662	775	4858807	695	80
SEP	Projected	88800	690	5100	1700	35200	690	1260	710	21000	855	9600	1100	0	0	0	0	-80760	510	80200	920	230	780	80430	920	556000	710	210
	Accum	407710	687	55720	1756	143213	684	28836	1509	991320	694	82477	1191	0	0	0	0	-23094	-2231	1686182	782	910	764	1687092	782	5414807	697	85
OCT	Projected	34500	710	5100	1650	38100	710	2180	1600	0	0	8900	1150	0	0	0	0	120	93208	88900	860	170	800	89070	860	448050	850	10
	Accum	442210	689	60820	1747	181313	690	31016	1515	991320	694	91377	1187	0	0	0	0	-22974	-2730	1775082	786	1080	770	1776162	786	5862857	708	78
NOV	Projected	11570	740	5100	1650	9800	740	1340	1360	0	0	10200	1300	0	0	0	0	50590	895	88600	860	130	850	88730	860	341315	830	30
	Accum	453780	690	65920	1739	191113	692	32356	1509	991320	694	101577	1198	0	0	0	0	27616	3911	1863682	789	1210	779	1864892	789	6204172	715	74
DEC	Projected	18800	770	5400	1680	9700	770	3100	1450	0	0	11000	1300	0	0	0	0	40500	673	88500	860	100	880	88600	860	309498	850	10
	Accum	472580	693	71320	1735	200813	696	35456	1504	991320	694	112577	1208	0	0	0	0	68116	2105	1952182	792	1310	786	1953492	793	6513670	721	71

COLUMNS 1 THRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
COLUMN 6 ACRE FEET EQUALS SUM OF, MITTRY LAKE OUTLET CHANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1, BRUCE CHURCH DRAIN, NORTH GILA CANAL WASTEWAY, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
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United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO:

YAO-6213
RES-9.00

AUG 25 1999

Mr. Yusuf Farran
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - July 1999

Dear Mr. Farran:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for July 1999.

If you have any questions, please contact Mr. Alex Jimenez at 520-343-8290.

Sincerely,

/s/ Melvin Tsang

Melvin Tsang
River Operations

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Office
International Boundary
and Water Commission
P.O. Box 5737
Yuma AZ 85366
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USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA

July 1999

1999		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	56100	681	6001	1822	27410	682	4199	1540	298372	672	13490	1215	0	0	0	0	3261	2224	408833	730	162	697	408995	730	623980	687	43
	Accum	56100	681	6001	1822	27410	682	4199	1540	298372	672	13490	1215	0	0	0	0	3261	2224	408833	730	162	697	408995	730	623980	687	43
FEB	Actual	41820	706	6361	1819	7800	702	3372	1580	91400	700	8014	1337	0	0	0	0	10919	2768	169686	856	144	704	169830	856	418274	701	155
	Accum	97920	692	12362	1820	35210	686	7571	1558	389772	679	21504	1260	0	0	0	0	14180	2643	578519	767	306	700	578825	767	1042254	693	74
MAR	Actual	31790	714	7086	1706	11760	715	3348	1670	126012	710	8323	1283	0	0	0	0	13499	658	201818	782	53	709	201871	782	607874	710	72
	Accum	129710	697	19448	1779	46970	694	10919	1592	515784	686	29827	1267	0	0	0	0	27679	1675	780337	771	359	702	780696	771	1650128	699	72
APR	Actual	39440	684	6936	1851	9739	689	3511	1640	140650	690	7693	1302	0	0	0	0	-597	-1591	207372	773	30	686	207402	773	641177	684	89
	Accum	169150	694	26384	1798	56709	693	14430	1604	656434	687	37520	1274	0	0	0	0	27082	1747	987709	771	389	700	988098	771	2291305	695	76
MAY	Actual	34940	701	6532	1813	5324	704	3816	1490	103836	705	7925	1294	0	0	0	0	7234	775	169607	795	70	707	169677	795	670254	705	90
	Accum	204090	695	32916	1801	62033	694	18246	1580	760270	690	45445	1277	0	0	0	0	34316	1542	1157316	775	459	701	1157775	775	2961559	697	78
JUN	Actual	59570	670	6054	1827	1630	681	3850	1630	80050	685	10632	1131	0	0	0	0	3080	990	164866	778	51	681	164917	778	637348	680	98
	Accum	263660	690	38970	1805	63663	693	22096	1589	840320	689	56077	1250	0	0	0	0	37396	1497	1322182	775	510	699	1322692	775	3598907	694	81
JUL	Actual	29100	680	5185	1861	4739	678	3874	1580	146100	677	11772	1071	0	0	0	0	1425	-1601	202195	732	17	668	202212	732	647881	678	54
	Accum	292760	689	44155	1811	68402	692	25970	1587	986420	687	67849	1219	0	0	0	0	38821	1383	1524377	769	527	698	1524904	769	4246788	692	77
AUG	Projected	32100	660	5950	1650	28700	660	2800	1340	32000	770	8800	1000	0	0	0	0	-512	-20606	123545	800	80	960	109918	800	559800	720	80
	Accum	324860	686	50105	1792	97102	683	28770	1563	1018420	690	76649	1194	0	0	0	0	38309	1677	1647922	772	607	733	1634822	771	4806588	695	76
SEP	Projected	88800	690	5100	1700	35200	690	1260	710	21000	855	9600	1100	0	0	0	0	-51399	276	89190	920	230	780	109791	920	556000	710	210
	Accum	413660	687	55205	1784	132302	685	30030	1528	1039420	693	86249	1183	0	0	0	0	-13090	-3825	1737112	779	837	746	1744613	780	5362588	697	84
OCT	Projected	34500	710	5100	1650	38100	710	2180	1600	0	0	8900	1150	0	0	0	0	3680	3871	92460	860	170	800	92630	860	448050	850	10
	Accum	448160	688	60305	1772	170402	690	32210	1532	1039420	693	95149	1180	0	0	0	0	-9410	-6835	1829572	783	1007	755	1837243	784	5810638	708	76
NOV	Projected	11570	740	5100	1650	9800	740	1340	1360	0	0	10200	1300	0	0	0	0	75490	884	113500	860	130	850	113630	860	341315	830	30
	Accum	459730	690	65405	1763	180202	693	33550	1526	1039420	693	105349	1192	0	0	0	0	66080	1983	1943072	788	1137	766	1950873	789	6151953	715	74
DEC	Projected	18800	770	5400	1680	9700	770	3100	1450	0	0	11000	1300	0	0	0	0	65588	868	120252	860	100	880	113688	860	309498	850	10
	Accum	478530	693	70805	1757	189902	697	36650	1519	1039420	693	116349	1202	0	0	0	0	131668	1428	2063324	792	1237	775	2064561	793	6461451	722	71

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United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO

OCT

YAO-6213
RES-9.00

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The Commons, Building C,
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4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - August 1999

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Sincerely,

Melvin Tsang

Melvin Tsang
River Operations

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Office
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USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA

August 1999

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		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	56100	681	6001	1822	27410	682	4199	1540	298372	672	13490	1215	0	0	0	0	3261	2224	408833	730	162	697	408995	730	623980	687	43
	Accum	56100	681	6001	1822	27410	682	4199	1540	298372	672	13490	1215	0	0	0	0	3261	2224	408833	730	162	697	408995	730	623980	687	43
FEB	Actual	41820	706	6361	1819	7800	702	3372	1580	91400	700	8014	1337	0	0	0	0	10919	2768	169686	856	144	704	169830	856	418274	701	155
	Accum	97920	692	12362	1820	35210	686	7571	1558	389772	679	21504	1260	0	0	0	0	14180	2643	578519	767	306	700	578825	767	1042254	693	74
MAR	Actual	31790	714	7086	1706	11760	715	3348	1670	126012	710	8323	1283	0	0	0	0	13499	658	201818	782	53	709	201871	782	607874	710	72
	Accum	129710	697	19448	1779	46970	694	10919	1592	515784	686	29827	1267	0	0	0	0	27679	1675	780337	771	359	702	780696	771	1650128	699	72
APR	Actual	39440	684	6936	1851	9739	689	3511	1640	140650	690	7693	1302	0	0	0	0	-597	-1591	207372	773	30	686	207402	773	641177	684	89
	Accum	169150	694	26384	1798	56709	693	14430	1604	656434	687	37520	1274	0	0	0	0	27082	1747	987709	771	389	700	988098	771	2291305	695	76
MAY	Actual	34940	701	6532	1813	5324	704	3816	1490	103836	705	7925	1294	0	0	0	0	7234	775	169607	795	70	707	169677	795	670254	705	90
	Accum	204090	695	32916	1801	62033	694	18246	1580	760270	690	45445	1277	0	0	0	0	34316	1542	1157316	775	459	701	1157775	775	2961559	697	78
JUN	Actual	59570	670	6054	1827	1630	681	3850	1630	80050	685	10632	1131	0	0	0	0	3080	990	164866	778	51	681	164917	778	637348	680	98
	Accum	263660	690	38970	1805	63663	693	22096	1589	840320	689	56077	1250	0	0	0	0	37396	1497	1322182	775	510	699	1322692	775	3598907	694	81
JUL	Actual	29100	680	5185	1861	4739	678	3874	1580	146100	677	11772	1071	0	0	0	0	1425	-1601	202195	732	17	668	202212	732	647881	678	54
	Accum	292760	689	44155	1811	68402	692	25970	1587	986420	687	67849	1219	0	0	0	0	38821	1383	1524377	769	527	698	1524904	769	4246788	692	77
AUG	Actual	30268	696	5977	1856	16984	686	3723	1700	46780	712	7292	1161	0	0	0	0	7607	736	113631	822	11	682	118642	822	537163	698	124
	Accum	323028	689	50132	1817	85386	691	29693	1602	1033200	688	75141	1213	0	0	0	0	46428	1277	1643008	773	538	698	1643546	773	4783951	692	81
SEP	Projected	88800	690	5100	1700	35200	690	1260	710	21000	855	9600	1100	0	0	0	0	-51399	276	89190	920	230	780	109791	920	556000	710	210
	Accum	411828	689	55232	1806	120586	691	30953	1565	1054200	692	84741	1200	0	0	0	0	-4971	-9077	1732198	781	768	723	1753337	762	5339951	694	88
OCT	Projected	34500	710	5100	1650	38100	710	2180	1600	0	0	8900	1150	0	0	0	0	3680	3871	92460	860	170	800	92630	860	448050	850	10
	Accum	446328	691	60332	1793	158686	695	33133	1568	1054200	692	93641	1196	0	0	0	0	-1291	-45988	1824658	785	938	737	1845967	786	5788001	706	80
NOV	Projected	11570	740	5100	1650	9800	740	1340	1360	0	0	10200	1300	0	0	0	0	75490	884	113500	860	130	850	113630	860	341315	830	30
	Accum	457898	692	65432	1782	168486	698	34473	1559	1054200	692	103841	1206	0	0	0	0	74199	1699	1938158	789	1068	750	1959597	790	6129316	713	77
DEC	Projected	18800	770	5400	1680	9700	770	3100	1450	0	0	11000	1300	0	0	0	0	65588	868	120252	860	100	880	113688	860	309498	850	10
	Accum	476698	695	70832	1774	178186	702	37573	1550	1054200	692	114841	1215	0	0	0	0	139787	1309	2058410	793	1168	761	2073285	794	6438814	720	74

COLUMNS 1 THRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
COLUMN 6 ACRE FEET EQUALS SUM OF, MITTRY LAKE OUTLET CHANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1, BRUCE CHURCH DRAIN, NORTH GILA CANAL WASTEWAY, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
COLUMNS 1 THRU 7 ACTUAL SALINITIES IN PPM ARE MONTHLY AVERAGES BASED UPON CHEMICAL ANALYSIS
COLUMN 9 ACTUAL FLOWS IN ACRE FEET EQUAL COLUMN 10 MINUS COLUMNS 1 THRU 8.
COLUMNS 10 THRU 13 AS REPORTED BY IBWC.
COLUMN 14 EQUALS COLUMN 12 MINUS COLUMN 13. PROJECTED FLOWS AND SALINTIES ARE ESTIMATED BASED UPON HISTORICAL RECORDS.

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO

OCT 26 1999

YAO-6213
RES-9.00

Mr. Yusuf Farran
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - September 1999

Dear Mr. Farran:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for September 1999.

If you have any questions, please contact Mr. Alex Jimenez at 520-343-8290.

Sincerely,

Melvin Tsang

Melvin Tsang
Team Leader, River Scheduling
and Accounting Team

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Office
International Boundary
and Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Ms. Vickie Doyle
Water Recourses
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
(w/encl)

TABLE 2

PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS

COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY

USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA

September 1999

		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
1999		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	56100	681	6001	1822	27410	682	4199	1540	298372	672	13490	1215	0	0	0	0	3261	2224	408833	730	162	697	408995	730	623980	687	43
	Accum	56100	681	6001	1822	27410	682	4199	1540	298372	672	13490	1215	0	0	0	0	3261	2224	408833	730	162	697	408995	730	623980	687	43
FEB	Actual	41820	706	6361	1819	7800	702	3372	1580	91400	700	8014	1337	0	0	0	0	10919	2768	169686	856	144	704	169830	856	418274	701	155
	Accum	97920	692	12362	1820	35210	686	7571	1558	389772	679	21504	1260	0	0	0	0	14180	2643	578519	767	306	700	578825	767	1042254	693	74
MAR	Actual	31790	714	7086	1706	11760	715	3348	1670	126012	710	8323	1283	0	0	0	0	13499	658	201818	782	53	709	201871	782	607874	710	72
	Accum	129710	697	19448	1779	46970	694	10919	1592	515784	686	29827	1267	0	0	0	0	27679	1675	780337	771	359	702	780696	771	1650128	699	72
APR	Actual	39440	684	6936	1851	9739	689	3511	1640	140650	690	7693	1302	0	0	0	0	-597	-1591	207372	773	30	686	207402	773	641177	684	89
	Accum	169150	694	26384	1798	56709	693	14430	1604	656434	687	37520	1274	0	0	0	0	27082	1747	987709	771	389	700	988098	771	2291305	695	76
MAY	Actual	34940	701	6532	1813	5324	704	3816	1490	103836	705	7925	1294	0	0	0	0	7234	775	169607	795	70	707	169677	795	670254	705	90
	Accum	204090	695	32916	1801	62033	694	18246	1580	760270	690	45445	1277	0	0	0	0	34316	1542	1157316	775	459	701	1157775	775	2961559	697	78
JUN	Actual	59570	670	6054	1827	1630	681	3850	1630	80050	685	10632	1131	0	0	0	0	3080	990	164866	778	51	681	164917	778	637348	680	98
	Accum	263660	690	38970	1805	63663	693	22096	1589	840320	689	56077	1250	0	0	0	0	37396	1497	1322182	775	510	699	1322692	775	3598907	694	81
JUL	Actual	29100	680	5185	1861	4739	678	3874	1580	146100	677	11772	1071	0	0	0	0	1425	-1601	202195	732	17	668	202212	732	647881	678	54
	Accum	292760	689	44155	1811	68402	692	25970	1587	986420	687	67849	1219	0	0	0	0	38821	1383	1524377	769	527	698	1524904	769	4246788	692	77
AUG	Actual	30268	696	5977	1856	16984	686	3723	1700	46780	712	7292	1161	0	0	0	0	7607	736	118631	822	11	682	118642	822	537163	698	124
	Accum	323028	689	50132	1817	85386	691	29693	1602	1033200	688	75141	1213	0	0	0	0	46428	1277	1643008	773	538	698	1643546	773	4783951	692	81
SEP	Actual	27300	642	5677	1802	24230	648	2300	1660	199600	636	8723	1106	0	0	0	0	-2680	144	265150	692	85	640	265235	692	653494	643	49
	Accum	350328	686	55809	1815	109616	682	31993	1606	1232800	680	83864	1202	0	0	0	0	43748	1347	1908158	762	623	690	1908781	762	5437445	686	76
OCT	Projected	34500	710	5100	1650	38100	710	2180	1600	0	0	8900	1150	0	0	0	0	3680	3871	92460	860	170	800	92630	860	448050	850	10
	Accum	384828	688	60909	1801	147716	689	34173	1605	1232800	680	92764	1197	0	0	0	0	47428	1543	2000618	766	793	714	2001411	767	5885495	699	68
NOV	Projected	11570	740	5100	1650	9800	740	1340	1360	0	0	10200	1300	0	0	0	0	75490	884	113500	860	130	850	113630	860	341315	830	30
	Accum	396398	689	66009	1790	157516	692	35513	1596	1232800	680	102964	1207	0	0	0	0	122918	1138	2114118	772	923	733	2115041	772	6226810	706	65
DEC	Projected	18800	770	5400	1680	9700	770	3100	1450	0	0	11000	1300	0	0	0	0	65588	868	120252	860	100	880	113688	860	309498	850	10
	Accum	415198	693	71409	1781	167216	697	38613	1584	1232800	680	113964	1216	0	0	0	0	188506	1044	2234370	776	1023	747	2228729	776	6536308	713	63

COLUMNS 1 THRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
COLUMN 6 ACRE FEET EQUALS SUM OF, MITTRY LAKE OUTLET CHANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1, BRUCE CHURCH DRAIN, NORTH GILA CANAL WASTEWAY, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
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COLUMN 9 ACTUAL FLOWS IN ACRE FEET EQUAL COLUMN 10 MINUS COLUMNS 1 THRU 8.
COLUMNS 10 THRU 13 AS REPORTED BY IBWC.
COLUMN 14 EQUALS COLUMN 12 MINUS COLUMN 13. PROJECTED FLOWS AND SALINTIES ARE ESTIMATED BASED UPON HISTORICAL RECORDS.

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO:

JAN 18 2000

YAO-6213
RES-9.00

Mr. Yusuf Farran
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - November 1999

Dear Mr. Farran:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for November 1999.

If you have any questions, please contact Mr. Alex Jimenez at 520-343-8290.

Sincerely,

FRANK A. MACALUSO JR.

Frank Macaluso
Team Leader, River Scheduling
and Accounting Team

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Office
International Boundary
and Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Ms. Vickie Doyle
Water Recourses
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
(w/encl)

TABLE 2

PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS

COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY

USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA

November 1999

		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
1999		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	56100	681	6001	1822	27410	682	4199	1540	298372	672	13490	1215	0	0	0	0	3261	2224	408833	730	162	697	408995	730	623980	687	43
	Accum	56100	681	6001	1822	27410	682	4199	1540	298372	672	13490	1215	0	0	0	0	3261	2224	408833	730	162	697	408995	730	623980	687	43
FEB	Actual	41820	706	6361	1819	7800	702	3372	1580	91400	700	8014	1337	0	0	0	0	10919	2768	169686	856	144	704	169830	856	418274	701	155
	Accum	97920	692	12362	1820	35210	686	7571	1558	389772	679	21504	1260	0	0	0	0	14180	2643	578519	767	306	700	578825	767	1042254	693	74
MAR	Actual	31790	714	7086	1706	11760	715	3348	1670	126012	710	8323	1283	0	0	0	0	13499	658	201818	782	53	709	201871	782	607874	710	72
	Accum	129710	697	19448	1779	46970	694	10919	1592	515784	686	29827	1267	0	0	0	0	27679	1675	780337	771	359	702	780696	771	1650128	699	72
APR	Actual	39440	684	6936	1851	9739	689	3511	1640	140650	690	7693	1302	0	0	0	0	-597	-1591	207372	773	30	686	207402	773	641177	684	89
	Accum	169150	694	26384	1798	56709	693	14430	1604	656434	687	37520	1274	0	0	0	0	27082	1747	987709	771	389	700	988098	771	2291305	695	76
MAY	Actual	34940	701	6532	1813	5324	704	3816	1490	103836	705	7925	1294	0	0	0	0	7234	775	169607	795	70	707	169677	795	670254	705	90
	Accum	204090	695	32916	1801	62033	694	18246	1580	760270	690	45445	1277	0	0	0	0	34316	1542	1157316	775	459	701	1157775	775	2961559	697	78
JUN	Actual	59570	670	6054	1827	1630	681	3850	1630	80050	685	10632	1131	0	0	0	0	3080	990	164866	778	51	681	164917	778	637348	680	98
	Accum	263660	690	38970	1805	63663	693	22096	1589	840320	689	56077	1250	0	0	0	0	37396	1497	1322182	775	510	699	1322692	775	3598907	694	81
JUL	Actual	29100	680	5185	1861	4739	678	3874	1580	146100	677	11772	1071	0	0	0	0	1425	-1601	202195	732	17	668	202212	732	647881	678	54
	Accum	292760	689	44155	1811	68402	692	25970	1587	986420	687	67849	1219	0	0	0	0	38821	1383	1524377	769	527	698	1524904	769	4246788	692	77
AUG	Actual	30268	696	5977	1856	16984	686	3723	1700	46780	712	7292	1161	0	0	0	0	7607	736	118631	822	11	682	118642	822	537163	698	124
	Accum	323028	689	50132	1817	85386	691	29693	1602	1033200	688	75141	1213	0	0	0	0	46428	1277	1643008	773	538	698	1643546	773	4783951	692	81
SEP	Actual	27300	642	5677	1802	24230	648	2300	1660	199600	636	8723	1106	0	0	0	0	-2680	144	265150	692	85	640	265235	692	653494	643	49
	Accum	350328	686	55809	1815	109616	682	31993	1606	1232800	680	83864	1202	0	0	0	0	43748	1347	1908158	762	623	690	1908781	762	5437445	686	76
OCT	Actual	74814	618	5830	1683	12718	620	2275	1630	259025	620	9194	1202	0	0	0	0	8322	2015	372178	688	192	621	372370	688	756892	620	68
	Accum	425142	674	61639	1803	122334	675	34268	1607	1491825	670	93058	1202	0	0	0	0	52070	1453	2280336	750	815	674	2281151	750	6194337	678	72
NOV	Actual	82056	673	6202	1691	27134	678	1968	1610	152549	675	9833	1101	0	0	0	0	25970	1321.7	305712	770	83	676	305795	770	575286	674	96
	Accum	507198	674	67841	1793	149468	676	36236	1608	1644374	670	102891	1192	0	0	0	0	78040	1410	2586048	752	898	674	2586946	752	6769623	678	74
DEC	Projected	18800	770	5400	1680	9700	770	3100	1450	0	0	11000	1300	0	0	0	0	65588	868	120252	860	100	880	113688	860	309498	850	10
	Accum	525998	677	73241	1784	159168	681	39336	1595	1644374	670	113891	1203	0	0	0	0	143628	1162	2706300	757	998	695	2700634	757	7079121	685	71

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United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO:

FEB - 3 2000

YAO-6213
RES-9.00

Ms. Sylvia Waggon
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - December 1999

Dear Ms. Waggon:

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If you have any questions, please contact Mr. Alex Jimenez at 520-343-8290.

Sincerely,

FRANK A. MACALUSO JR.

Frank Macaluso
Team Leader, River Scheduling
and Accounting Team

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Office
International Boundary
and Water Commission
P.O. Box 5737
Yuma AZ 85366
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~~Ms.~~ Vickie Doyle
Water Recourses
Imperial Irrigation District
P.O. Box 937
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PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS
COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY
USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA

December 1999

		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
1999		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	56100	681	6001	1822	27410	682	4199	1540	298372	672	13490	1215	0	0	0	0	3261	2224	408833	730	162	697	408995	730	623980	687	43
	Accum	56100	681	6001	1822	27410	682	4199	1540	298372	672	13490	1215	0	0	0	0	3261	2224	408833	730	162	697	408995	730	623980	687	43
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	Accum	97920	692	12362	1820	35210	686	7571	1558	389772	679	21504	1260	0	0	0	0	14180	2643	578519	767	306	700	578825	767	1042254	693	74
MAR	Actual	31790	714	7086	1706	11760	715	3348	1670	126012	710	8323	1283	0	0	0	0	13499	658	201818	782	53	709	201871	782	607874	710	72
	Accum	129710	697	19448	1779	46970	694	10919	1592	515784	686	29827	1267	0	0	0	0	27679	1675	780337	771	359	702	780696	771	1650128	699	72
APR	Actual	39440	684	6936	1851	9739	689	3511	1640	140650	690	7693	1302	0	0	0	0	-597	-1591	207372	773	30	686	207402	773	641177	684	89
	Accum	169150	694	26384	1798	56709	693	14430	1604	656434	687	37520	1274	0	0	0	0	27082	1747	987709	771	389	700	988098	771	2291305	695	76
MAY	Actual	34940	701	6532	1813	5324	704	3816	1490	103836	705	7925	1294	0	0	0	0	7234	775	169607	795	70	707	169677	795	670254	705	90
	Accum	204090	695	32916	1801	62033	694	18246	1580	760270	690	45445	1277	0	0	0	0	34316	1542	1157316	775	459	701	1157775	775	2961559	697	78
JUN	Actual	59570	670	6054	1827	1630	681	3850	1630	80050	685	10632	1131	0	0	0	0	3080	990	164866	778	51	681	164917	778	637348	680	98
	Accum	263660	690	38970	1805	63663	693	22096	1589	840320	689	56077	1250	0	0	0	0	37396	1497	1322182	775	510	699	1322692	775	3598907	694	81
JUL	Actual	29100	680	5185	1861	4739	678	3874	1580	146100	677	11772	1071	0	0	0	0	1425	-1601	202195	732	17	668	202212	732	647881	678	54
	Accum	292760	689	44155	1811	68402	692	25970	1587	986420	687	67849	1219	0	0	0	0	38821	1383	1524377	769	527	698	1524904	769	4246788	692	77
AUG	Actual	30268	696	5977	1856	16984	686	3723	1700	46780	712	7292	1161	0	0	0	0	7607	736	118631	822	11	682	118642	822	537163	698	124
	Accum	323028	689	50132	1817	85386	691	29693	1602	1033200	688	75141	1213	0	0	0	0	46428	1277	1643008	773	538	698	1643546	773	4783951	692	81
SEP	Actual	27300	642	5677	1802	24230	648	2300	1660	199600	636	8723	1106	0	0	0	0	-2680	144	265150	692	85	640	265235	692	653494	643	49
	Accum	350328	686	55809	1815	109616	682	31993	1606	1232800	680	83864	1202	0	0	0	0	43748	1347	1908158	762	623	690	1908781	762	5437445	686	76
OCT	Actual	74814	618	5830	1683	12718	620	2275	1630	259025	620	9194	1202	0	0	0	0	8322	2015	372178	688	192	621	372370	688	756892	620	68
	Accum	425142	674	61639	1803	122334	675	34268	1607	1491825	670	93058	1202	0	0	0	0	52070	1453	2280336	750	815	674	2281151	750	6194337	678	72
NOV	Actual	82056	673	6202	1691	27134	678	1968	1610	152549	675	9833	1101	0	0	0	0	25970	1322	305712	770	83	676	305795	770	575286	674	96
	Accum	507198	674	67841	1793	149468	676	36236	1608	1644374	670	102891	1192	0	0	0	0	78040	1410	2586048	752	898	674	2586946	752	6769623	678	74
DEC	Actual	31111	720	6390	1628	12769	724	2087	1630	98179	710	9609	1201	0	0	0	0	13309	1532.2	173454	848	103	715	173557	848	404727	725	123
	Accum	538309	676	74231	1778	162237	679	38323	1609	1742553	672	112500	1193	0	0	0	0	91349	1427	2759502	758	1001	678	2760503	758	7174350	681	77

COLUMNS 1 THRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
COLUMN 6 ACRE FEET EQUALS SUM OF, MITTRY LAKE OUTLET CHANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1, BRUCE CHURCH DRAIN, NORTH GILA CANAL WASTEWAY, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
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COLUMN 14 EQUALS COLUMN 12 MINUS COLUMN 13. PROJECTED FLOWS AND SALINTIES ARE ESTIMATED BASED UPON HISTORICAL RECORDS.

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO:

MAR 30 2000

YAO-6213
RES-9.00

Ms. Sylvia Waggoner
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - January 2000

Dear Ms. Waggoner:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for January 2000.

If you have any questions, please contact Mr. Alex Jimenez at 520-343-8290.

Sincerely,

FRANK A. MACALUSO JR.

Frank Macaluso
Team Leader, River Scheduling
and Accounting Team

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Office
International Boundary
and Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Ms. Vickie Doyle
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
(w/encl)

TABLE 2

PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS
COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY
USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA
January 2000

2000		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	22223	697	6408	1691	8870	692	6408	1691	107526	691	9539	1205	0	0	0	0	-392	-13963	160582	838	40	689	160622	838	383841	688	150
	Accum	22223	697	6408	1691	8870	692	6408	1691	107526	691	9539	1205	0	0	0	0	-392	-13963	160582	838	40	689	160622	838	383841	688	150
FEB	Projected	27175	805	5500	1780	9800	810	3580	1240	295600	810	1500	1350	0	0	0	0	-163607	752	179548	850	130	800	179678	850	790100	800	50
	Accum	49398	756	11908	1732	18670	754	9988	1529	403126	778	11039	1225	0	0	0	0	-163999	717	340130	844	170	774	340300	844	1173941	763	81
MAR	Projected	26180	770	4890	1800	9500	780	3200	1400	268500	760	1270	1300	0	0	0	0	-118970	641	194570	830	120	760	194690	830	810200	760	70
	Accum	75578	761	16798	1752	28170	763	13188	1498	671626	771	12309	1232	0	0	0	0	-282969	685	534700	839	290	768	534990	839	1984141	762	77
APR	Projected	28760	775	5800	1850	9600	780	3500	1200	148500	670	1580	1200	0	0	0	0	-32944	307	164796	760	80	750	164876	760	865000	750	10
	Accum	104338	765	22598	1777	37770	767	16688	1435	820126	753	13889	1229	0	0	0	0	-315913	646	699496	820	370	764	699866	820	2849141	758	62
MAY	Projected	26800	740	6000	1600	10900	745	3650	1400	125500	690	1570	1200	0	0	0	0	-22965	280	151455	760	90	750	151545	760	830100	750	10
	Accum	131138	760	28598	1740	48670	762	20338	1429	945626	744	15459	1226	0	0	0	0	-338878	621	850951	810	460	761	851411	810	3679241	756	53
JUN	Projected	27450	690	5500	1700	9500	680	3500	1400	90500	680	1300	1100	0	0	0	0	5652	3034	143402	770	60	680	143462	770	790500	680	90
	Accum	158588	748	34098	1733	58170	749	23838	1425	1036126	739	16759	1216	0	0	0	0	-333226	580	994353	804	520	752	994873	804	4469741	743	61
JUL	Projected	28350	685	5700	1750	7550	690	2950	1400	105000	680	1500	1100	0	0	0	0	-5407	-1642	145643	760	90	680	145733	760	700100	680	80
	Accum	186938	738	39798	1736	65720	742	26788	1422	1141126	733	18259	1207	0	0	0	0	-338633	545	1139996	798	610	741	1140606	798	5169841	734	64
AUG	Projected	28000	770	5100	1600	9500	780	2800	1400	40500	770	1400	1000	0	0	0	0	5218	1637	92518	800	80	770	92598	800	559800	770	30
	Accum	214938	742	44898	1720	75220	747	29588	1420	1181626	735	19659	1192	0	0	0	0	-333415	528	1232514	798	690	745	1233204	798	5729641	738	61
SEP	Projected	24600	850	4400	1600	9200	850	1700	1400	36500	855	1100	1100	0	0	0	0	15641	1417	93141	920	230	850	93371	920	530800	850	70
	Accum	239538	753	49298	1710	84420	758	31288	1419	1218126	738	20759	1187	0	0	0	0	-317774	484	1325655	807	920	771	1326575	807	6260441	747	60
OCT	Projected	22800	845	5100	1700	9870	850	1700	1400	0	0	1150	1150	0	0	0	0	52611	928	93231	860	170	850	93401	860	480600	850	10
	Accum	262338	761	54398	1709	94290	768	32988	1418	1218126	738	21909	1185	0	0	0	0	-265163	396	1418886	811	1090	783	1419976	810	6741041	755	56
NOV	Projected	21850	850	5100	1600	10500	850	1900	1500	0	0	1500	1300	0	0	0	0	88668	892	129518	860	130	840	129648	860	341300	840	20
	Accum	284188	768	59498	1699	104790	776	34888	1422	1218126	738	23409	1192	0	0	0	0	-176495	146	1548404	815	1220	789	1549624	815	7082341	759	56
DEC	Projected	22000	870	4500	1900	9500	880	2000	1500	0	0	1400	1300	0	0	0	0	115787	874	155187	860	100	850	155287	860	309500	850	10
	Accum	306188	776	63998	1714	114290	785	36888	1427	1218126	738	24809	1198	0	0	0	0	-60708	-1241	1703591	819	1320	794	1704911	819	7391841	763	56

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United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO:

YAO-6213
RES-9.00

APR 24

Ms. Sylvia Waggoner
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - February 2000

Dear Ms. Waggoner:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for February 2000.

If you have any questions, please contact Mr. Alex Jimenez at 520-343-8290.

Sincerely,

FRANK A. MACALUSO JR.

Frank Macaluso
Team Leader, River Scheduling
and Accounting Team

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Office
International Boundary
and Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Ms. Vickie Doyle
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
(w/encl)

TABLE 2

PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS
COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY
USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA
March 2000

2000		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Welton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	22223	697	6408	1691	8870	692	2682	1596	107526	691	9539	1205	0	0	0	0	3334	3608	160582	838	40	689	160622	838	383841	688	150
	Accum	22223	697	6408	1691	8870	692	2682	1596	107526	691	9539	1205	0	0	0	0	3334	3608	160582	838	40	689	160622	838	383841	688	150
FEB	Actual	25240	664	6002	1685	9880	670	2866	1571	127700	668	7828	1294	0	0	0	0	-2174	-9026	177342	806	47	664	177389	806	439398	666	140
	Accum	47463	679	12410	1688	18750	680	5548	1583	235226	679	17367	1245	0	0	0	0	1160	27286	337924	821	87	675	338011	821	823239	676	145
MAR	Actual	46251	653	6425	1735	8095	658	3481	1638	130256	652	8801	1227	0	0	0	0	5174	1314	208483	743	24	657	208507	743	622948	650	93
	Accum	93714	666	18835	1704	26845	674	9029	1604	365482	669	26168	1239	0	0	0	0	6334	6071	546407	791	111	671	546518	791	1446187	665	126
APR	Projected	28760	775	5800	1850	9600	780	3500	1200	148500	670	1580	1200	0	0	0	0	-32944	307	185874	760	80	750	164876	760	865000	750	10
	Accum	122474	692	24635	1738	36445	702	12529	1491	513982	669	27748	1237	0	0	0	0	-26610	-1065	732281	783	191	704	711394	784	2311187	697	87
MAY	Projected	26800	740	6000	1600	10900	745	3650	1400	125500	690	1570	1200	0	0	0	0	-22965	280	140916	760	90	750	151545	760	830100	750	10
	Accum	149274	701	30635	1711	47345	712	16179	1471	639482	673	29318	1235	0	0	0	0	-49575	-442	873197	780	281	719	862939	780	3141287	711	69
JUN	Projected	27450	690	5500	1700	9500	680	3500	1400	90500	680	1300	1100	0	0	0	0	5652	3034	143402	770	60	680	143462	770	790500	680	90
	Accum	176724	699	36135	1710	56845	706	19679	1458	729982	674	30618	1229	0	0	0	0	-43923	-889	1016599	778	341	712	1006401	778	3931787	705	74
JUL	Projected	28350	685	5700	1750	7550	690	2950	1400	105000	680	1500	1100	0	0	0	0	-5407	-1642	145643	760	90	680	145733	760	700100	680	80
	Accum	205074	697	41835	1715	64395	704	22629	1451	834982	675	32118	1223	0	0	0	0	-49330	-971	1162242	776	431	705	1152134	776	4631887	701	75
AUG	Projected	28000	770	5100	1600	9500	780	2800	1400	40500	770	1400	1000	0	0	0	0	5218	1637	92518	800	80	770	92598	800	559800	770	30
	Accum	233074	706	46935	1703	73895	714	25429	1445	875482	679	33518	1214	0	0	0	0	-44112	-1280	1254760	778	511	716	1244732	778	5191687	708	70
SEP	Projected	24600	850	4400	1600	9200	850	1700	1400	36500	855	1100	1100	0	0	0	0	15641	1417	93141	920	230	850	93371	920	530800	850	70
	Accum	257674	720	51335	1694	83095	729	27129	1442	911982	686	34618	1210	0	0	0	0	-28471	-2762	1347901	788	741	757	1338103	788	5722487	722	66
OCT	Projected	22800	845	5100	1700	9870	850	1700	1400	0	0	1150	1150	0	0	0	0	52611	928	82692	860	170	850	93401	860	480600	850	10
	Accum	280474	730	56435	1694	92965	742	28829	1440	911982	686	35768	1208	0	0	0	0	24140	5279	1430593	792	911	775	1431504	792	6203087	731	61
NOV	Projected	21850	850	5100	1600	10500	850	1900	1500	0	0	1500	1300	0	0	0	0	88668	892	129518	860	130	840	129648	860	341300	840	20
	Accum	302324	738	61535	1687	103465	753	30729	1443	911982	686	37268	1212	0	0	0	0	112808	1831	1560111	797	1041	783	1561152	798	6544387	737	61
DEC	Projected	22000	870	4500	1900	9500	880	2000	1500	0	0	1400	1300	0	0	0	0	115787	874	155187	860	100	850	155287	860	309500	850	10
	Accum	324324	747	66035	1701	112965	764	32729	1447	911982	686	38668	1215	0	0	0	0	228595	1346	1715298	803	1141	789	1716439	804	6853887	742	61

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United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
7301 Calle Agua Salada
Yuma, Arizona 85364

IN REPLY REFER TO

YAO-4600
RES-9.00

JAN 2 9 2003

RECEIVED
FEB - 5 2003
RESOURCES PLANNING & MANAGEMENT DEPARTMENT

Ms. Sylvia Waggoner
International Boundary and
Water Commission
United States Section
The Commons Building C,
Suite 310
4171 North Mesa
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - November 2002

Dear Ms. Waggoner:

Enclosed is a corrected copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for November 2002.

Sincerely,

HONG NGUYEN-DECORSE

Hong Nguyen-DeCorse
Manager, Water Operations
Group

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Hydro Office
International Boundary and
Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Mr. Elston Grubaugh
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
(w/encl)

Mr. Gerald R. Zimmerman
Executive Director
Colorado River Board
of California
770 Fairmont Avenue
Suite 100
Glendale CA 91203-1035
(w/encl)

02 DPOC 1 FOR 14 DAYS + 2 & 3 (30 DAYS

E. 2 NS @ TING NT	UNMEASURED FLOWS		NORTHERLY INT'L BOUNDARY		COOPER WASTEWAY		N.I.B. & COOPER WASTEWAY		COLORADO RIVER ABOVE IMPERIAL DAM		SAL DIF
PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
0	1188	3660	132535	856	191	725	132726	856	361388	708	148
0	1188	3660	132535	856	191	725	132726	856	361388	708	148
0	4407	2455	149514	839	32	681	149546	839	421190	676	163
0	5595	2711	282049	847	223	719	282272	847	782578	691	156
0	-14	103279	205487	783	74	675	205561	783	603054	676	107
0	5561	2459	487536	820	297	708	487833	820	1385632	684	136
0	4572	2063	197197	781	54	672	197251	781	679694	658	123
0	10153	2281	684733	809	351	702	685084	809	2065526	675	134
0	8246	1390	110618	871	30	691	110648	871	628502	679	192
0	18399	1882	795351	818	381	701	795732	818	2694028	676	142
0	-26150	386	112641	855	22	679	112663	855	588476	684	171
0	-7751	3165	807992	823	403	700	808395	823	3282504	677	146
0	3642	1903	117124	821	10	693	117134	821	643160	684	137
0	4109	7657	1025116	823	413	700	1025529	823	3925664	678	145
0	6430	927	93679	828	47	704	93726	828	563543	701	127
0	2321	16124	1118795	823	460	700	1119255	823	4489207	681	142
0	6209	1182	99967	820	120	707	100087	820	495153	699	121
0	8530	5246	1218762	823	580	701	1219342	823	4984360	683	140
0	-11934	409	64157	900	218	724	64375	899	455920	711	188
0	-3404	11717	1282919	827	798	707	1283717	827	5440280	685	142
0	6069	938	89534	850	137	726	89671	850	378763	719	131
0	2665	17102	1372453	829	935	710	1373388	829	5819043	687	142
0	-3400	498	115250	838	100	742	115350	838	335000	742	96
0	-735	59706	1487703	830	1035	713	1488738	830	6154043	690	140

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
7301 Calle Agua Salada
Yuma, Arizona 85364

IN REPLY REFER TO:

Return to
Lupe Cavazos
— XPM

YAO-4600
RES-9.00

JAN - 8 2003

EXS

Ms. Sylvia Waggoner
International Boundary and
Water Commission
United States Section
The Commons Building C,
Suite 310
4171 North Mesa
El Paso TX 79902

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JAN 23 2003
RESOURCES PLANNING
& MANAGEMENT DEPARTMENT

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - Corrected Copy for October 2002

Dear Ms. Waggoner:

Enclosed is a corrected copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for October 2002.

Sincerely,

HONG NGUYEN-DECORSE

Hong Nguyen-DeCorse
Manager, Water Operations
Group

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Hydro Office
International Boundary and
Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Mr. Elston Grubaugh
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
(w/encl)

Mr. Gerald R. Zimmerman
Executive Director
Colorado River Board
of California
770 Fairmont Avenue
Suite 100
Glendale CA 91203-1035
(w/encl)

C TO RIVER

NMEASURED FLOWS		NORTHERLY INT'L BOUNDARY		COOPER WASTEWAY		N.I.B. & COOPER WASTEWAY		COLORADO RIVER ABOVE IMPERIAL DAM		SAL DIF
AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
1188	3660	132535	856	191	725	132726	856	361388	708	148
1188	3660	132535	856	191	725	132726	856	361388	708	148
4407	2455	149514	839	32	681	149546	839	421190	676	163
5595	2711	282049	847	223	719	282272	847	782578	691	156
-14	103279	205487	783	74	675	205561	783	603054	676	107
5581	2459	487536	820	297	708	487833	820	1385632	684	136
4572	2063	197197	781	54	672	197251	781	679894	658	123
10153	2281	684733	809	351	702	685084	809	2065526	675	134
8246	1390	110618	871	30	685	110648	871	628502	679	192
18399	1882	795351	818	381	701	795732	818	2694028	676	142
-26150	386	112641	855	22	679	112663	855	588476	684	171
-7751	-3165	907992	823	403	700	908395	823	3282504	677	146
3642	1903	117124	821	10	693	117134	821	643160	684	137
-4109	-7657	1025116	823	413	700	1025529	823	3925664	678	145
6430	927	93679	828	47	704	93726	828	563543	701	127
2321	16124	1118795	823	460	700	1119255	823	4489207	681	142
6209	1182	99967	820	120	707	100087	820	495153	699	121
8530	5248	1218762	823	580	701	1219342	823	4984360	683	140
-22268	552	64157	900	218	724	64375	899	455920	711	188
-13738	-2364	1282919	827	798	707	1283717	827	5440280	685	142
-4500	401	77735	840	125	728	77860	840	377242	728	112
-18238	-1682	1360654	828	923	710	1361577	828	5817522	688	140
-3400	486	121067	847	100	742	121167	847	335000	742	105
-21638	-1341	1481721	830	1023	713	1482744	830	6152522	691	138

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
7301 Calle Agua Salada
Yuma, Arizona 85364

IN REPLY REFER TO:

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DEC 18 2002

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DEC 24 2002
PLANNING DEPARTMENT

Ms. Sylvia Waggoner
International Boundary and
Water Commission
United States Section
The Commons Building C,
Suite 310
4171 North Mesa
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - October 2002

Dear Ms. Waggoner:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for October 2002.

Sincerely,

HONG NGUYEN-DECORSE

Hong Nguyen-DeCorse
Manager, Water Operations
Group

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Hydro Office
International Boundary and
Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Mr. Elston Grubaugh
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
(w/encl)

Mr. Gerald R. Zimmerman
Executive Director
Colorado River Board
of California
770 Fairmont Avenue
Suite 100
Glendale CA 91203-1035
(w/encl)

Table 2 With Projections Fr
2002 - ANNUAL FORECAST /8 OCT 16, 2002 DPOC 1 FOR 14 DAYS + 2 & 3 (30 . /S

YEAR: 2002

	COLORADO RIVER BELOW IMPERIAL DAM		SOUTH GILA VALLEY DPOC TOTALS		YUMA MAIN CANAL WASTEWAY		YUMA MESA PUMP OUTLET DRAIN		PILOT KNOB POWER PLANT AND WASTEWAY		OTHER MEASURED FLOWS		MODE SPILLS TO COLORADO RIVER ABOVE NIB		M.O.D.E. 2 RETURNS @ DESALTING PLANT		UNMEASURED FLOWS		NORTHERLY INT'L BOUNDARY		COOPER WASTEWAY		N.I.B. & COOPER WASTEWAY		COLORADO RIVER ABOVE IMPERIAL DAM		SAL DIF
	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	19184	711	5775	1600	5915	714	5381	1660	86652	709	8440	1378	0	0	0	0	1188	3660	132535	856	191	725	132726	856	361388	708	148
Act	19184	711	5775	1600	5915	714	5381	1660	86652	709	8440	1378	0	0	0	0	1188	3660	132535	856	191	725	132726	856	361388	708	148
FEB	20565	677	5841	1738	7263	677	4945	1610	98559	676	7934	1392	0	0	0	0	4407	2455	149514	839	32	681	149546	839	421190	676	163
Act	39749	693	11616	1669	13178	694	10326	1636	185211	691	16374	1385	0	0	0	0	5595	2711	282049	847	223	719	282272	847	782578	691	156
MAR	72272	677	3639	1666	8342	676	3896	1600	104422	675	10026	1595	2904	3100	0	0	-14	103279	205487	783	74	675	205561	783	603054	676	107
Act	112021	683	15255	1668	21520	687	14222	1626	289633	685	26400	1465	2904	3100	0	0	5581	2459	487536	820	297	708	487833	820	1385632	684	136
APR	41954	660	6446	1771	6534	659	5232	1610	124600	658	7859	1369	0	0	0	0	4572	2063	197197	781	54	672	197251	781	679894	658	123
Act	153975	677	21701	1699	28054	680	19454	1622	414233	677	34259	1443	2904	3100	0	0	10153	2281	684733	809	351	702	685084	809	2065526	675	134
MAY	60339	680	5941	1671	13660	684	5506	1600	8265	660	8661	1192	0	0	0	0	8246	1390	110618	871	30	685	110648	871	628502	679	192
Act	214314	678	27642	1693	41714	681	24960	1617	422498	677	42920	1392	2904	3100	0	0	18399	1882	795351	818	381	701	795732	818	2694028	676	142
JUN	59546	678	5044	1583	3919	686	5171	1517	57410	686	7701	1057	0	0	0	0	-26150	386	112641	855	22	679	112663	855	588476	684	171
Act	273860	678	32686	1676	45633	681	30131	1600	479908	678	50621	1341	2904	3100	0	0	-7751	3165	907992	823	403	700	908395	823	3282504	677	146
JUL	28629	683	5179	1731	4897	683	4861	1494	62396	684	7520	987	0	0	0	0	3642	1903	117124	821	10	693	117134	821	643160	684	137
Act	302489	678	37865	1684	50530	681	34992	1585	542304	679	58141	1295	2904	3100	0	0	-4109	-7657	1025116	823	413	700	1025529	823	3925684	678	145
AUG	29534	702	4457	1693	22614	699	4304	1494	18686	706	7654	1032	0	0	0	0	6430	927	93679	828	47	704	93726	828	563543	701	127
Act	332023	680	42322	1685	73144	687	39296	1575	560990	680	65795	1264	2904	3100	0	0	2321	16124	1118785	823	460	700	1119255	823	4489207	681	142
SEP	41409	701	4368	1735	23762	700	4558	1751	15892	698	6677	1027	0	0	0	0	3301	849	99967	820	120	707	100087	820	495153	699	121
Act	373432	682	46690	1690	96906	690	43854	1593	576882	680	72472	1242	2904	3100	0	0	5622	7155	1218762	823	580	701	1219342	823	4984360	683	140
OCT	30900	715	814	1706	21236	715	3600	1600	0	0	8300	1200	0	0	0	0	150	52561	65000	958	170	715	65170	957	456000	715	242
Pro	404332	685	47504	1690	118142	694	47454	1594	576882	680	80772	1238	2904	3100	0	0	5772	8335	1283762	830	750	704	1284512	830	5440360	686	144
NOV	31000	728	2604	1558	20946	728	3600	1600	32800	728	9800	1300	0	0	0	0	-4500	392	96250	857	80	728	96330	857	369000	728	129
Pro	435332	688	50108	1683	139088	699	51054	1594	609682	683	90572	1245	2904	3100	0	0	1272	36435	1380012	832	830	706	1380842	832	5809360	689	143
DEC	29000	742	2604	1558	13646	742	3600	1600	60800	742	9000	1300	0	0	0	0	-3400	498	115250	838	100	742	115350	838	335000	742	96
Pro	464332	691	52712	1677	152734	703	54654	1594	670482	688	99572	1250	2904	3100	0	0	-2128	-20983	1495262	832	930	710	1496192	832	6144360	692	140

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
7301 Calle Agua Salada
Yuma, Arizona 85364

IN REPLY REFER TO:

YAO-4600
RES-9.00

OCT 30 2002

NOV - 5 2002

Ms. Sylvia Waggoner
International Boundary and
Water Commission
United States Section
The Commons Building C,
Suite 310
4171 North Mesa
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - September 2002

Dear Ms. Waggoner:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for September 2002.

Sincerely,

HONG NGUYEN-DECORSE

Hong Nguyen-DeCorse
Manager, Water Operations
Group

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Hydro Office
International Boundary and
Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Mr. Elston Grubaugh
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
(w/encl)

Table 2 With Projections From:
2002 - ANNUAL FORECAST REV8 OCT 16, 2002 DPOC 1 FOR 14 DAYS + 2 & 3 (30 DAYS

YEAR: 2002

	COLORADO RIVER BELOW IMPERIAL DAM		SOUTH GILA VALLEY DPOC TOTALS		YUMA MAIN CANAL WASTEWAY		YUMA MESA PUMP OUTLET DRAIN		PILOT KNOB POWER PLANT AND WASTEWAY		OTHER MEASURED FLOWS		MODE SPILLS TO COLORADO RIVER ABOVE NIB		M.O.D.E. 2 RETURNS @ DESALTING PLANT		UNMEASURED FLOWS		NORTHERLY INT'L BOUNDARY		COOPER WASTEWAY		N.I.B. & COOPER WASTEWAY		COLORADO RIVER ABOVE IMPERIAL DAM		SAL DIF
	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	19184	711	5775	1600	5915	714	5381	1660	86652	709	8440	1378	0	0	0	0	1188	3660	132535	856	191	725	132726	856	361388	708	148
Act	19184	711	5775	1600	5915	714	5381	1660	86652	709	8440	1378	0	0	0	0	1188	3660	132535	856	191	725	132726	856	361388	708	148
FEB	20565	677	5841	1738	7263	677	4945	1610	98559	676	7934	1392	0	0	0	0	4407	2455	149514	839	32	681	149546	839	421190	676	163
Act	39749	693	11616	1689	13178	694	10326	1636	185211	691	16374	1385	0	0	0	0	5595	2711	282049	847	223	719	282272	847	782578	691	156
MAR	72272	677	3639	1666	8342	676	3896	1600	104422	675	10026	1595	2904	3100	0	0	-14	103279	205487	783	74	675	205561	783	603054	676	107
Act	112021	683	15255	1668	21520	687	14222	1626	289633	685	26400	1485	2904	3100	0	0	5581	2459	487536	820	297	708	487833	820	1381632	684	136
APR	41954	660	6446	1771	6534	659	5232	1610	124600	658	7859	1369	0	0	0	0	4572	2063	197197	781	54	672	197251	781	679894	658	123
Act	153975	677	21701	1698	28054	680	19454	1622	414233	677	34259	1443	2904	3100	0	0	10153	2281	684733	809	351	702	685084	809	2085526	675	134
MAY	60339	680	5941	1671	13660	684	5506	1600	8265	660	8661	1192	0	0	0	0	8246	1390	110618	871	30	685	110648	871	628502	679	192
Act	214314	678	27642	1693	41714	681	24960	1617	422498	677	42920	1392	2904	3100	0	0	18399	1882	765351	818	381	701	765732	818	2694028	676	142
JUN	59546	678	5044	1583	3919	686	5171	1517	57410	686	7701	1057	0	0	0	0	-26150	386	112641	855	22	679	112663	855	588476	684	171
Act	273860	678	32686	1676	45633	681	30131	1600	479908	678	50621	1341	2904	3100	0	0	7751	-3185	807992	823	403	700	808395	823	3282504	677	146
JUL	28629	683	5179	1731	4897	683	4861	1494	62396	684	7520	987	0	0	0	0	3642	1903	117124	821	10	693	117134	821	643160	684	137
Act	302489	678	37865	1684	50530	681	34992	1585	542304	679	58141	1285	2904	3100	0	0	4109	-7657	1025116	823	413	700	1025529	823	3925664	678	145
AUG	29534	702	4457	1693	22614	699	4304	1494	18686	706	7654	1032	0	0	0	0	6430	927	93679	828	47	704	93726	828	563543	701	127
Act	332023	680	42322	1685	73144	687	39298	1575	560990	680	65795	1284	2904	3100	0	0	2321	76124	1118795	823	460	700	1119255	823	4486207	681	142
SEP	41409	701	4368	1735	23762	700	4558	1751	15892	698	6677	1027	0	0	0	0	3301	849	99967	820	120	707	100087	820	495153	699	121
Act	373432	682	46690	1690	96906	690	43854	1693	576882	680	72472	1242	2904	3100	0	0	5622	-7165	1218762	823	580	701	1219342	823	4981360	683	140
OCT	30900	715	814	1706	21236	715	3600	1600	0	0	8300	1200	0	0	0	0	150	52561	65000	958	170	715	65170	957	456000	715	242
Pro	404332	685	47504	1690	118142	694	47454	1594	576882	680	80772	1238	2904	3100	0	0	5772	-8335	1283762	830	750	704	1284512	830	5440360	686	144
NOV	31000	728	2604	1558	20946	728	3600	1600	32800	728	9800	1300	0	0	0	0	-4500	392	96250	857	80	728	96330	857	369000	728	129
Pro	435332	688	50108	1683	139088	698	51054	1594	609682	683	90572	1245	2904	3100	0	0	1272	36435	1380012	832	830	706	1380842	832	5809360	689	143
DEC	29000	742	2604	1558	13646	742	3600	1600	60800	742	9000	1300	0	0	0	0	-3400	498	115250	838	100	742	115350	838	335000	742	96
Pro	464332	691	52712	1677	152734	703	54654	1594	670482	688	99572	1250	2904	3100	0	0	2128	-20983	1495262	832	930	710	1496192	832	6144360	692	140

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
7301 Calle Agua Salada
Yuma, Arizona 85364

IN REPLY REFER TO:

NIB
Salinity
File

YAO-4600
RES-9.00

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OCT - 9 2002

Ms. Sylvia Waggoner
International Boundary and
Water Commission
United States Section
The Commons Building C,
Suite 310
4171 North Mesa
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - July and August 2002

Dear Ms. Waggoner:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for July and August 2002.

Sincerely,

HONG NGUYEN-DECORSE

Hong Nguyen-DeCorse
Manager, Water Operations
Group

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Hydro Office
International Boundary and
Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Mr. Elston Grubaugh
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
(w/encl)

Table 2 With Projections From:
2002 - ANNUAL FORECAST REV1 SEPT 17, 2002

YEAR: 2002

	COLORADO RIVER BELOW IMPERIAL DAM		SOUTH GILA VALLEY DPOC TOTALS		YUMA MAIN CANAL WASTEWAY		YUMA MESA PUMP OUTLET DRAIN		PILOT KNOB POWER PLANT AND WASTEWAY		OTHER MEASURED FLOWS		MODE SPILLS TO COLORADO RIVER ABOVE NIB		M.O.D.E. 2 RETURNS @ DESALTING PLANT		UNMEASURED FLOWS		NOR I BOU
	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF
JAN	19184	711	5775	1600	5915	714	5381	1660	86652	709	8440	1378	0	0	0	0	1188	3660	1325
Act	19184	711	5775	1600	5915	714	5381	1660	86652	709	8440	1378	0	0	0	0	1188	3660	1325
FEB	20565	677	5841	1738	7263	677	4945	1610	98559	676	7934	1392	0	0	0	0	4407	2455	1495
Act	139746	693	11616	1669	13178	694	10326	1636	185211	691	16374	1385	0	0	0	0	5595	2711	2820
MAR	72272	677	3639	1666	8342	676	3896	1600	104422	675	10026	1595	2904	3100	0	0	-14	103279	2054
Act	112021	683	15255	1668	21520	687	14222	1626	289633	685	26400	1465	2904	3100	0	0	5581	2459	4876
APR	41954	660	6446	1771	6534	659	5232	1610	124600	658	7859	1369	0	0	0	0	4572	2063	1971
Act	153975	677	21701	1699	28054	680	19454	1622	414233	677	34259	1443	2904	3100	0	0	10153	2281	6847
MAY	60339	680	5941	1671	13660	684	5506	1600	8265	660	8661	1192	0	0	0	0	8246	1390	1106
Act	214314	678	27842	1693	41714	681	24960	1617	422498	677	42920	1392	2904	3100	0	0	18399	1882	79535
JUN	59546	678	5044	1583	3919	686	5171	1517	57410	686	7701	1057	0	0	0	0	-26150	386	11264
Act	273860	678	32686	1676	45633	681	30131	1600	479908	678	50621	1341	2904	3100	0	0	-7751	-3165	90795
JUL	28629	683	5179	1731	4897	683	4861	1494	62396	684	7520	987	0	0	0	0	3642	1903	11712
Act	302489	678	37865	1684	50530	681	34992	1585	542304	678	58141	1285	2904	3100	0	0	-4109	-7657	102511
AUG	29534	702	4457	1693	22614	699	4304	1494	18686	706	7654	1032	0	0	0	0	6430	927	9367
Act	332023	680	42322	1685	73144	687	39296	1575	560990	680	65795	1264	2904	3100	0	0	2321	-16124	111679
SEP	58300	712	3000	1500	12850	712	3600	1600	0	0	7800	960	0	0	0	0	6910	1741	9246
Pro	390323	685	45322	1673	85994	691	42896	1577	560990	680	73595	1232	2904	3100	0	0	9231	5357	121125
OCT	30900	715	0	0	22050	715	3600	1600	0	0	8300	1200	0	0	0	0	6546	2133	7139
Pro	421223	687	45322	1673	108044	696	46496	1579	560990	680	81895	1229	2904	3100	0	0	15777	4018	128265
NOV	31000	728	3000	1500	18300	728	3600	1600	32800	728	9800	1300	0	0	0	0	-945	-1297	9755
Pro	452223	690	48322	1662	126344	701	50096	1581	593790	683	91695	1237	2904	3100	0	0	14832	4358	138020
DEC	29000	742	4000	1500	10000	742	3600	1600	60800	742	9000	1300	0	0	0	0	5262	1075	121662
Pro	481223	693	52322	1650	136344	704	53696	1582	654590	688	100695	1243	2904	3100	0	0	20094	3498	150186

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
7301 Calle Agua Salada
Yuma, Arizona 85364

IN REPLY REFER TO:

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YAO-4600
RES-9.00

MAY 3 0 2002

Ms. Sylvia Waggoner
International Boundary and
Water Commission
United States Section
The Commons Building C,
Suite 310
4171 North Mesa
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - March 2002

Dear Ms. Waggoner:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for March 2002.

Sincerely,

HONG NGUYEN-DECORSE

Hong Nguyen-DeCorse
Manager, Water Operations
Group

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Hydro Office
International Boundary and
Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Mr. Elston Grubaugh
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
(w/encl)

TABLE 2

PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS

COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY

USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA

March 2002

		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
2002		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	19184	699	5775	1600	5915	704	5381	1660	86652	696	4489	1256	0	0	0	0	5139	2288	132535	856	191	725	132726	856	361388	708	148
	Accum	19184	699	5775	1600	5915	704	5381	1660	86652	696	4489	1256	0	0	0	0	5139	2288	132535	856	191	725	132726	856	361388	708	148
FEB	Actual	20565	677	5842	1640	7263	677	4945	1610	98559	676	7934	1324	0	0	0	0	4406	4882	149514	839	32	681	149546	839	421190	676	163
	Accum	39749	688	11617	1620	13178	689	10326	1636	185211	685	12423	1299	0	0	0	0	9545	3485	282049	847	223	719	282272	847	782578	691	156
MAR	Actual	72272	677	3621	1547	8342	676	3896	1596	104422	675	10005	1542	2904	3361	0	0	25	-46545	205487	783	74	675	205561	783	603054	675	108
	Accum	112021	681	15238	1603	21520	684	14222	1625	289633	682	22428	1408	2904	3361	0	0	9570	3355	487536	820	297	708	487833	820	1385632	684	136
APR	Projected	34500	675	6220	1665	4100	675	3450	1255	123280	685	8300	1200	0	0	0	0	7171	714	187021	750	100	675	191323	750	694100	680	70
	Accum	146521	679	21458	1621	25620	683	17672	1553	412913	683	30728	1352	2904	3361	0	0	16741	2223	674557	801	397	700	679156	800	2079732	683	118
MAY	Projected	38200	648	5320	1710	18000	645	6170	1309	55860	650	7200	1350	0	0	0	0	-27941	730	102809	770	90	648	102899	770	647500	650	120
	Accum	184721	673	26778	1639	43620	667	23842	1490	468773	679	37928	1351	2904	3361	0	0	-11200	-1502	777366	797	487	690	782055	796	2727232	675	121
JUN	Projected	28500	635	5100	2018	10500	645	5840	1385	58800	650	7300	1310	0	0	0	0	3657	-342	119777	750	65	648	119842	750	603100	640	110
	Accum	213221	668	31878	1699	54200	663	29682	1469	527573	676	45228	1345	2904	3361	0	0	-7543	-2064	897143	790	552	685	901897	790	3330332	669	122
JUL	Projected	47900	650	2810	1675	10300	650	3950	1320	43700	660	9800	1108	0	0	0	0	7481	1105	125941	760	55	652	125996	760	655900	655	105
	Accum	261121	665	34688	1697	64500	661	33632	1452	571273	674	55028	1302	2904	3361	0	0	-62	-384344	1023084	787	607	682	1027893	786	3986232	666	120
AUG	Projected	50700	658	4970	1725	10980	660	4270	1240	14100	665	7500	1150	0	0	0	0	3890	700	96410	780	85	660	96495	780	557500	660	120
	Accum	311821	664	39658	1701	75480	661	37902	1428	585373	674	62528	1284	2904	3361	0	0	3828	6936	1119494	786	692	679	1124388	786	4543732	666	120
SEP	Projected	58300	670	5350	1583	11250	670	5100	1390	10900	680	6800	1088	0	0	0	0	-8392	445	89308	820	95	673	89403	820	506100	675	145
	Accum	370121	665	45008	1687	86730	662	43002	1423	596273	674	69328	1265	2904	3361	0	0	-4564	-5000	1208802	789	787	679	1213791	788	5049832	666	122
OCT	Projected	30900	681	5950	1585	6200	680	5700	1240	11500	690	8300	1120	0	0	0	0	5438	2758	73988	1000	170	680	74158	999	460700	684	315
	Accum	401021	666	50958	1675	92930	663	48702	1402	607773	675	77628	1249	2904	3361	0	0	874	43269	1282790	801	957	679	1287949	800	5510532	668	133
NOV	Projected	82100	672	6200	2018	3200	675	2200	1400	52600	680	9800	1450	0	0	0	0	-77129	651	78971	920	80	672	79051	920	385100	675	245
	Accum	483121	667	57158	1712	96130	663	50902	1402	660373	675	87428	1272	2904	3361	0	0	-76255	163	1361761	808	1037	678	1367000	807	5895632	668	139
DEC	Projected	24800	730	5400	1980	25600	730	2200	1450	14200	740	8600	1400	0	0	0	0	43244	659	124044	820	100	732	124144	820	205500	735	85
	Accum	507921	670	62558	1735	121730	677	53102	1404	674573	676	96028	1283	2904	3361	0	0	-33011	-487	1485805	809	1137	683	1491144	808	6101132	671	138

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
7301 Calle Agua Salada
Yuma, Arizona 85364

IN REPLY REFER TO:

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RES-9.00

MAR 13 2002

Ms. Sylvia Waggoner
International Boundary and
Water Commission
United States Section
The Commons Building C,
Suite 310
4171 North Mesa
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - December 2001

Dear Ms. Waggoner:

Enclosed is a correct copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for December 2001. Please disregard prior letter with enclosure.

Sincerely,

FRANK A MACALUSO JR

For Hong Nguyen-DeCorse
Manager, Water Operations
Group

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Hydro Office
International Boundary and
Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Mr. Elston Grubaugh
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251

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RESOURCES PLANNING
& MANAGEMENT DEPARTMENT

A Century of Water for the West
1902-2002

TABLE 2

PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS
COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY
USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA
December 2001

2001		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	19785	708	5083	1740	6303	712	3489	1794	110459	710	7610	1308	0	0	0	0	2914	3380	155643	847	42	692	155685	847	339431	707	140
	Accum	19785	708	5083	1740	6303	712	3489	1794	110459	710	7610	1308	0	0	0	0	2914	3380	155643	847	42	692	155685	847	339431	707	140
FEB	Actual	37286	654	4637	1718	8148	655	2900	1790	123056	656	7465	1323	0	0	0	0	-715	-18225	182777	758	30	655	182807	758	420555	655	103
	Accum	57071	673	9720	1730	14451	680	6389	1792	233515	682	15075	1315	0	0	0	0	2199	10406	338420	799	72	677	338492	799	759986	678	121
MAR	Actual	32807	663	4875	1507	19972	663	2791	1682	147094	667	7851	1352	0	0	0	0	16557	1057	231947	747	4	847	231951	747	522942	659	88
	Accum	89878	669	14595	1655	34423	670	9180	1759	380609	676	22926	1328	0	0	0	0	18756	2153	570367	778	76	686	570443	778	1282928	670	107
APR	Actual	34490	622	6218	1735	4120	625	3545	1622	129285	623	8280	1171	0	0	0	0	2888	1913	188826	722	22	653	188848	722	694076	642	80
	Accum	124368	656	20813	1679	38543	665	12725	1721	509894	663	31206	1286	0	0	0	0	21644	2121	759193	764	98	678	759291	764	1977004	660	103
MAY	Actual	38212	649	5321	1797	20551	652	6173	1625	14107	650	7204	1033	0	0	0	0	6832	1078	98400	831	56	660	98456	831	647543	651	180
	Accum	162580	654	26134	1703	59094	661	18898	1689	524001	662	38410	1239	0	0	0	0	28476	1871	857593	772	154	672	857747	772	2624547	658	114
JUN	Actual	28532	655	5096	1858	5314	656	5841	1602	61285	654	7314	1086	0	0	0	0	-899	-2948	112483	815	35	653	112518	815	602955	655	160
	Accum	191112	655	31230	1728	64408	660	24739	1669	585286	661	45724	1214	0	0	0	0	27577	2028	970076	777	189	668	970265	777	3227502	658	119
JUL	Actual	47978	677	2810	1920	10358	693	5423	1619	58760	682	11816	1080	0	0	0	0	-4272	-37	132873	804	25	676	132898	804	655874	682	122
	Accum	239090	659	34040	1744	74766	665	30162	1660	644046	663	57540	1187	0	0	0	0	23305	2407	1102949	780	214	669	1103163	780	3883376	662	118
AUG	Actual	50659	704	4973	1760	12274	705	4270	1660	14112	692	7467	1192	0	0	0	0	11190	1171	104945	876	16	704	104961	876	557454	702	174
	Accum	289749	667	39013	1746	87040	670	34432	1660	658158	664	65007	1187	0	0	0	0	34495	2006	1207894	788	230	672	1208124	788	4440830	667	121
SEP	Actual	58325	707	5355	1793	6208	703	5143	1610	0	0	6801	1102	0	0	0	0	10994	1126	92826	898	16	714	92842	898	506082	707	191
	Accum	348074	674	44368	1752	93248	673	39575	1653	658158	664	71808	1179	0	0	0	0	45489	1793	1300720	796	246	674	1300966	796	4946912	671	125
OCT	Actual	30891	712	5947	1801	3231	716	5758	1160	0	0	8333	1225	0	0	0	0	16880	1176	71040	1010	171	712	71211	1010	460701	712	298
	Accum	378965	677	50315	1758	96479	674	45333	1591	658158	664	80141	1184	0	0	0	0	62369	1626	1371760	807	417	690	1372177	807	5407613	674	133
NOV	Actual	27564	712	5651	1727	27134	678	1968	1610	152549	675	9833	1101	0	0	0	0	-140342	621	84357	920	40	737	84397	920	385071	714	206
	Accum	406529	679	55966	1755	123613	675	47301	1591	810707	666	89974	1175	0	0	0	0	-77973	-183	1456117	814	457	694	1456574	814	5792684	677	137
DEC	Actual	31111	720	6390	1628	12769	724	2087	1630	98179	710	9609	1201	0	0	0	0	13309	1532.2	173454	848	103	715	173557	848	404727	725	123
	Accum	437640	682	62356	1742	136382	680	49388	1593	908886	671	99583	1177	0	0	0	0	-64664	-536	1629571	817	560	698	1630131	817	6197411	680	137

HRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
HANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1,
Y, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
HRU 7 ACTUAL SALINITIES IN PPM ARE MONTHLY AVERAGES BASED UPON CHEMICAL ANALYSIS
LUMN 9 ACTUAL FLOWS IN ACRE FEET EQUAL COLUMN 10 MINUS COLUMNS 1 THRU 8.
COLUMNS 10 THRU 13 AS REPORTED BY IBWC.
12 MINUS COLUMN 13. PROJECTED FLOWS AND SALINTIES ARE ESTIMATED BASED UPON HISTORICAL RECORDS.

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
7301 Calle Agua Salada
Yuma, Arizona 85364

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United States Section
The Commons Building C,
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El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - January 2002

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Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for January 2002.

Sincerely,

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For Hong Nguyen-DeCorse
Manager, Water Operations
Group

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Hydro Office
International Boundary and
Water Commission
P.O. Box 5737
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USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA

January 2002

2002		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Welton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	19184	699	5775	1600	5915	704	5381	1660	86652	696	4489	1256	0	0	0	0	5139	2288	132535	856	191	725	132726	856	361388	708	148
	Accum	19184	699	5775	1600	5915	704	5381	1660	86652	696	4489	1256	0	0	0	0	5139	2288	132535	856	191	725	132726	856	361388	708	148
FEB	Projected	37300	695	4640	2218	8200	690	2900	1391	91200	700	7470	1355	0	0	0	0	-296	16196	151414	760	125	690	151539	760	420500	698	62
	Accum	56484	696	10415	1875	14115	696	8281	1566	177852	698	11959	1318	0	0	0	0	4843	1437	283949	805	316	711	284265	805	781888	703	102
MAR	Projected	32800	660	4900	1950	9650	660	2790	1380	109500	660	7900	1465	0	0	0	0	36571	1319	204111	850	110	664	204221	850	522900	665	185
	Accum	89284	683	15315	1899	23765	681	11071	1519	287352	684	19859	1376	0	0	0	0	41414	1333	488060	824	426	699	488486	824	1304788	688	136
APR	Projected	34500	675	6220	1665	4100	675	3450	1255	123280	685	8300	1200	0	0	0	0	7171	714	187021	750	100	675	187121	750	694100	680	70
	Accum	123784	681	21535	1832	27865	680	14521	1456	410632	684	28159	1324	0	0	0	0	48585	1241	675081	803	526	694	675607	803	1998888	685	118
MAY	Projected	38200	648	5320	1710	18000	645	6170	1309	55860	650	7200	1350	0	0	0	0	-27941	730	102809	770	90	648	102899	770	647500	650	120
	Accum	161984	673	26855	1807	45865	666	20691	1412	466492	680	35359	1330	0	0	0	0	20644	1933	777890	799	616	688	778506	799	2646388	676	122
JUN	Projected	28500	635	5100	2018	10580	645	6840	1385	58800	650	7300	1310	0	0	0	0	3657	-342	119777	750	65	648	119842	750	603100	640	110
	Accum	190484	667	31955	1841	56445	662	26531	1406	525292	677	42659	1326	0	0	0	0	24301	1591	897667	792	681	684	898348	792	3249488	670	123
JUL	Projected	47900	650	2810	1675	10300	650	3950	1320	43700	660	9800	1108	0	0	0	0	7481	1105	125941	760	55	652	125996	760	655900	655	105
	Accum	238384	664	34765	1828	66745	661	30481	1395	568992	675	52459	1285	0	0	0	0	31782	1476	1023608	788	736	681	1024344	788	3905388	667	121
AUG	Projected	50700	658	4970	1725	10980	660	4270	1240	14100	665	7500	1150	0	0	0	0	3890	700	96410	780	85	660	96495	780	557500	660	120
	Accum	289084	663	39735	1815	77725	660	34751	1376	583092	675	59959	1269	0	0	0	0	35672	1392	1120018	788	821	679	1120839	788	4462888	666	121
SEP	Projected	58300	670	5350	1583	11250	670	5100	1390	10900	680	6800	1088	0	0	0	0	-8392	445	89308	820	95	673	89403	820	506100	675	145
	Accum	347384	664	45085	1787	88975	662	39851	1378	593992	675	66759	1250	0	0	0	0	27280	1683	1209326	790	916	679	1210242	790	4968988	667	123
OCT	Projected	30900	681	5950	1585	6200	680	5700	1240	11500	690	8300	1120	0	0	0	0	5438	2758	73988	1000	170	680	74158	999	460700	684	315
	Accum	378284	665	51035	1764	95175	663	45551	1361	605492	675	75059	1236	0	0	0	0	32718	1861	1283314	802	1086	679	1284400	802	5429688	669	133
NOV	Projected	82100	672	6200	2018	3200	675	2200	1400	52600	680	9800	1450	0	0	0	0	-77129	651	78971	920	80	672	79051	920	385100	675	245
	Accum	460384	667	57235	1791	98375	663	47751	1362	658092	676	84859	1260	0	0	0	0	-44411	-240	1362285	809	1166	678	1363451	809	5814788	669	140
DEC	Projected	24800	730	5400	1980	25600	730	2200	1450	14200	740	8600	1400	0	0	0	0	43244	659	124044	820	100	732	124144	820	205500	735	85
	Accum	485184	670	62635	1808	123975	677	49951	1366	672292	677	93459	1273	0	0	0	0	-1167	-33549	1486329	810	1266	683	1487595	810	6020288	671	139

HRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.

HANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1,

Y, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN

HRU 7 ACTUAL SALINITIES IN PPM ARE MONTHLY AVERAGES BASED UPON CHEMICAL ANALYSIS

LUMN 9 ACTUAL FLOWS IN ACRE FEET EQUAL COLUMN 10 MINUS COLUMNS 1 THRU 8.

COLUMNS 10 THRU 13 AS REPORTED BY IBWC.

12 MINUS COLUMN 13. PROJECTED FLOWS AND SALINTIES ARE ESTIMATED BASED UPON HISTORICAL RECORDS.

N/B

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO:

YAO-4600
RES-9.00

FEB - 5 2002

Ms. Sylvia Waggoner
International Boundary and
Water Commission
United States Section
The Commons Building C,
Suite 310
4171 North Mesa
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - December 2001

Dear Ms. Waggoner:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for December 2001.

Sincerely,

HONG NGUYEN-DECORSE

Hong Nguyen-DeCorse
Manager, Water Operations
Group

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Hydro Office
International Boundary and
Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Mr. Elston Grubaugh
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251

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TABLE 2

PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS

COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY

USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA

Estimate 2002

		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
2001		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Projected	19800	600	5080	1825	6300	680	3490	1390	83500	690	7610	1450	0	0	0	0	6676	816	132456	800	45	685	132501	800	339400	685	115
	Accum	19800	600	5080	1825	6300	680	3490	1390	83500	690	7610	1450	0	0	0	0	6676	816	132456	800	45	685	132501	800	339400	685	115
FEB	Projected	37300	695	4640	2218	8200	690	2900	1391	91200	700	7470	1355	0	0	0	0	5191	-120	156901	760	125	690	157026	760	420500	698	62
	Accum	57100	690	9720	2013	14500	686	6390	1390	174700	695	15080	1403	0	0	0	0	11867	406	289357	778	170	689	289527	778	759900	692	86
MAR	Projected	32800	660	4900	1950	9650	660	2790	1380	109500	660	7900	1465	0	0	0	0	36571	1319	204111	850	110	664	204221	850	522900	665	185
	Accum	89900	679	14620	1992	24150	675	9180	1387	284200	682	22980	1424	0	0	0	0	48438	1095	493468	808	280	679	493748	808	1282800	681	127
APR	Projected	34500	675	6220	1665	4100	675	3450	1255	123280	685	8300	1200	0	0	0	0	7171	714	187021	750	100	675	187121	750	694100	680	70
	Accum	124400	678	20840	1894	28250	675	12630	1351	407480	683	31280	1365	0	0	0	0	55609	1046	680489	792	380	678	680869	792	1976900	681	111
MAY	Projected	38200	648	5320	1710	18000	645	6170	1309	55860	650	7200	1350	0	0	0	0	-27941	730	102809	770	90	648	102899	770	647500	650	120
	Accum	162600	671	26160	1857	46250	664	18800	1337	463340	679	38480	1362	0	0	0	0	27668	1365	783298	789	470	672	783768	789	2624400	673	116
JUN	Projected	28500	635	5100	2018	10580	645	5840	1385	58800	650	7300	1310	0	0	0	0	3657	-342	119777	750	65	648	119842	750	603100	640	110
	Accum	191100	665	31260	1883	56830	660	24640	1349	522140	675	45780	1354	0	0	0	0	31325	1166	903075	784	535	669	903610	784	3227500	667	117
JUL	Projected	47900	650	2810	1675	10300	650	3950	1320	43700	660	9800	1108	0	0	0	0	7481	1105	125941	760	55	652	125996	760	655900	655	105
	Accum	239000	662	34070	1866	67130	659	28590	1345	565840	674	55580	1310	0	0	0	0	38806	1154	1029016	781	590	668	1029606	781	3883400	665	116
AUG	Projected	50700	658	4970	1725	10980	660	4270	1240	14100	665	7500	1150	0	0	0	0	3890	700	96410	780	85	660	96495	780	557500	660	120
	Accum	289700	662	39040	1848	78110	659	32860	1331	579940	674	63080	1291	0	0	0	0	42696	1112	1125426	781	675	667	1126101	781	4440900	664	117
SEP	Projected	58300	670	5350	1583	11250	670	5100	1390	10900	680	6800	1088	0	0	0	0	-8392	445	89308	820	95	673	89403	820	506100	675	145
	Accum	348000	663	44390	1816	89360	660	37960	1339	590840	674	69880	1272	0	0	0	0	34304	1276	1214734	784	770	667	1215504	784	4947000	665	118
OCT	Projected	30900	681	5950	1585	6200	680	5700	1240	11500	690	8300	1120	0	0	0	0	2846	4360	71396	1000	170	680	71566	999	460700	684	315
	Accum	378900	664	50340	1789	95560	661	43660	1326	602340	674	78180	1255	0	0	0	0	37150	1512	1286130	796	940	670	1287070	796	5407700	667	129
NOV	Projected	82100	672	6200	2018	3200	675	2200	1400	52600	680	9800	1450	0	0	0	0	-61930	586	94170	920	80	672	94250	920	385100	675	245
	Accum	461000	666	56540	1814	98760	662	45860	1330	654940	675	87980	1277	0	0	0	0	-24780	-803	1380300	804	1020	670	1381320	804	5792800	668	137
DEC	Projected	24800	730	5400	1980	25600	730	2200	1450	14200	740	8600	1400	0	0	0	0	38901	641	119701	820	100	732	119801	820	205500	735	85
	Accum	485800	669	61940	1828	124360	676	48060	1335	669140	676	96580	1288	0	0	0	0	14121	3175	1500001	806	1120	675	1501121	805	5998300	670	136

HRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
HANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1,
AY. GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
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LUMN 9 ACTUAL FLOWS IN ACRE FEET EQUAL COLUMN 10 MINUS COLUMNS 1 THRU 8.
COLUMNS 10 THRU 13 AS REPORTED BY IBWC.
12 MINUS COLUMN 13. PROJECTED FLOWS AND SALINTIES ARE ESTIMATED BASED UPON HISTORICAL RECORDS.

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United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO:

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RESOURCES PLANNING
& MANAGEMENT DEPARTMENT

Ms. Sylvia Waggoner
International Boundary and
Water Commission
United States Section
The Commons Building C,
Suite 310
4171 North Mesa
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - November 2001

Dear Ms. Waggoner:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for November 2001.

Sincerely,

HONG NGUYEN-DECORSE

Hong Nguyen-DeCorse
Manager, Water Operations
Group

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Hydro Office
International Boundary and
Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Mr. Elston Grubaugh
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
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TABLE 2

PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS
COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY
USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA

November 2001

2001		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	19785	708	5083	1740	6303	712	3489	1794	110459	710	7610	1308	0	0	0	0	2914	3380	155643	847	42	692	155685	847	339431	707	140
	Accum	19785	708	5083	1740	6303	712	3489	1794	110459	710	7610	1308	0	0	0	0	2914	3380	155643	847	42	692	155685	847	339431	707	140
FEB	Actual	37286	654	4637	1718	8148	655	2900	1790	123056	656	7465	1323	0	0	0	0	-715	-18225	182777	758	30	655	182807	758	420555	655	103
	Accum	57071	673	9720	1730	14451	680	6389	1792	233515	682	15075	1315	0	0	0	0	2199	10406	338420	799	72	677	338492	799	759986	678	121
MAR	Actual	32807	663	4875	1507	19972	663	2791	1682	147094	667	7851	1352	0	0	0	0	16557	1057	231947	747	4	847	231951	747	522942	659	88
	Accum	89878	669	14595	1655	34423	670	9180	1759	380609	676	22926	1328	0	0	0	0	18756	2153	570367	778	76	686	570443	778	1282928	670	107
APR	Actual	34490	622	6218	1735	4120	625	3545	1622	129285	623	8280	1171	0	0	0	0	2888	1913	188826	722	22	653	188848	722	694076	642	80
	Accum	124368	656	20813	1679	38543	665	12725	1721	509894	663	31206	1286	0	0	0	0	21644	2121	759193	764	98	678	759291	764	1977004	660	103
MAY	Actual	38212	649	5321	1797	20551	652	6173	1625	14107	650	7204	1033	0	0	0	0	6832	1078	98400	831	56	660	98456	831	647543	651	180
	Accum	162580	654	26134	1703	59094	661	18898	1689	524001	662	38410	1239	0	0	0	0	28476	1871	857593	772	154	672	857747	772	2624547	658	114
JUN	Actual	28532	655	5096	1858	5314	656	5841	1602	61285	654	7314	1086	0	0	0	0	-899	-2948	112483	815	35	653	112518	815	602955	655	160
	Accum	191112	655	31230	1728	64408	660	24739	1669	585286	661	45724	1214	0	0	0	0	27577	2028	970076	777	189	668	970265	777	3227502	658	119
JUL	Actual	47978	677	2810	1920	10358	693	5423	1619	58760	682	11816	1080	0	0	0	0	-4272	-37	132873	804	25	676	132898	804	656874	682	122
	Accum	239090	659	34040	1744	74766	665	30162	1660	644046	663	57540	1187	0	0	0	0	23305	2437	1102949	780	214	669	1103163	780	3883376	662	118
AUG	Actual	50659	704	4973	1760	12274	705	4270	1660	14112	692	7467	1192	0	0	0	0	11190	1171	104945	876	16	704	104961	876	557454	702	174
	Accum	289749	667	39013	1746	87040	670	34432	1660	658158	664	65007	1187	0	0	0	0	34495	2096	1207894	788	230	672	1208124	788	4440830	667	121
SEP	Actual	58325	707	5355	1793	6208	703	5143	1610	0	0	6801	1102	0	0	0	0	10994	1126	92826	898	16	714	92842	898	506082	707	191
	Accum	348074	674	44368	1752	93248	673	39575	1653	658158	664	71808	1179	0	0	0	0	45489	1793	1300720	796	246	674	1300966	796	4946912	671	125
OCT	Actual	30891	712	5947	1801	3231	716	5758	1160	0	0	8333	1225	0	0	0	0	16880	1176	71040	1010	171	712	71211	1010	460701	712	298
	Accum	378965	677	50315	1758	96479	674	45333	1591	658158	664	80141	1184	0	0	0	0	62369	1626	1371760	807	417	690	1372177	807	5407613	674	133
NOV	Actual	82056	673	6202	1691	27134	678	1968	1610	152549	675	9833	1101	0	0	0	0	-195385	631.91	84357	920	40	737	84397	920	385071	714	206
	Accum	461021	676	56517	1750	123613	675	47301	1591	810707	666	89974	1175	0	0	0	0	-133016	156	1456117	814	457	694	1456574	814	5792684	677	137
DEC	Projected	24785	730	5460	1980	26895	731	2170	1450	14580	741	8565	1400	0	0	0	0	41589	654	124044	820	100	732	124144	820	205252	735	85
	Accum	485806	679	61977	1771	150508	685	49471	1585	825287	667	98539	1195	0	0	0	0	-91427	-57	1580161	814	557	701	1580718	814	5997936	679	135

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HANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1,
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United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

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RESOURCES PLANNING
& MANAGEMENT DEPARTMENT

Ms. Sylvia Waggoner
International Boundary and
Water Commission
United States Section
The Commons Building C,
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4171 North Mesa
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Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - September 2001

Dear Ms. Waggoner:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for September 2001.

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Hong Nguyen-DeCorse
Manager, Water Operations
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cc: Mr. Alton L. Goff
Chief, Yuma Hydro Office
International Boundary and
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P.O. Box 5737
Yuma AZ 85366
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Mr. Elston Grubaugh
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251

TABLE 2

PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS

COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY

USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA

September 2001

		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
2001		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	19785	708	5083	1740	6303	712	3489	1794	110459	710	7610	1308	0	0	0	0	2914	3380	155643	847	42	692	155685	847	339431	707	140
	Accum	19785	708	5083	1740	6303	712	3489	1794	110459	710	7610	1308	0	0	0	0	2914	3380	155643	847	42	692	155685	847	339431	707	140
FEB	Actual	37286	654	4637	1718	8148	655	2900	1790	123056	656	7465	1323	0	0	0	0	-715	-18225	182777	758	30	655	182807	758	420555	655	103
	Accum	57071	673	9720	1730	14451	680	6389	1792	233515	682	15075	1315	0	0	0	0	2199	10406	338420	799	72	677	338492	799	759986	678	121
MAR	Actual	32807	663	4875	1507	19972	663	2791	1682	147094	667	7851	1352	0	0	0	0	16557	1057	231947	747	4	847	231951	747	522942	659	88
	Accum	89878	669	14595	1655	34423	670	9180	1759	380609	676	22926	1328	0	0	0	0	18756	2153	570367	778	76	686	570443	778	1282928	670	107
APR	Actual	34490	622	6218	1735	4120	625	3545	1622	129285	623	8280	1171	0	0	0	0	2888	1913	188826	722	22	653	188848	722	694076	642	80
	Accum	124368	656	20813	1679	38543	665	12725	1721	509894	663	31206	1286	0	0	0	0	21644	2121	759193	764	98	678	759291	764	1977004	660	103
MAY	Actual	38212	649	5321	1797	20551	652	6173	1625	14107	650	7204	1033	0	0	0	0	6832	1078	98400	831	56	660	98456	831	647543	651	180
	Accum	162580	654	26134	1703	59094	661	18898	1689	524001	662	38410	1239	0	0	0	0	28476	1871	857593	772	154	672	857747	772	2624547	658	114
JUN	Actual	28532	655	5096	1858	5314	656	5841	1602	61285	654	7314	1086	0	0	0	0	-899	-2948	112483	815	35	653	112518	815	602955	655	160
	Accum	191112	655	31230	1728	64408	660	24739	1669	585286	661	45724	1214	0	0	0	0	27577	2028	970076	777	189	668	970265	777	3227502	658	119
JUL	Actual	47978	677	2810	1920	10358	693	5423	1619	58760	682	11816	1080	0	0	0	0	-4272	-37	132873	804	25	676	132898	804	655874	682	122
	Accum	239090	659	34040	1744	74766	665	30162	1660	644046	663	57540	1187	0	0	0	0	23305	2407	1102949	780	214	669	1103163	780	3883376	662	118
AUG	Actual	50659	704	4973	1760	12274	705	4270	1660	14112	692	7467	1192	0	0	0	0	11190	1171	104945	876	16	704	104961	876	557454	702	174
	Accum	289749	667	39013	1746	87040	670	34432	1660	658158	664	65007	1187	0	0	0	0	34495	2006	1207894	788	230	672	1208124	788	4440830	667	121
SEP	Actual	58325	707	5355	1793	6208	703	5143	1610	0	0	6801	1102	0	0	0	0	10994	1126.2	92826	898	16	714	92842	898	506082	707	191
	Accum	348074	674	44368	1752	93248	673	39575	1653	658158	664	71808	1179	0	0	0	0	45489	1793	1300720	796	246	674	1300966	796	4946912	671	125
OCT	Projected	25650	681	5875	1585	21930	678	2085	1240	13580	689	8500	1120	0	0	0	0	-3632	1894	73988	760	170	680	74158	760	411417	684	76
	Accum	373724	674	50243	1732	115178	674	41660	1633	671738	664	80308	1173	0	0	0	0	41857	1785	1374708	794	416	677	1375124	794	5358329	672	122
NOV	Projected	24560	672	5150	2018	25670	665	2235	1400	15580	682	8560	1450	0	0	0	0	-2784	3010	78971	782	80	672	79051	782	374699	675	107
	Accum	398284	674	55393	1759	140848	672	43895	1621	687318	665	88868	1200	0	0	0	0	39073	1697	1453679	794	496	676	1454175	793	5733028	672	121
DEC	Projected	24785	730	5460	1980	26895	731	2170	1450	14580	741	8565	1400	0	0	0	0	41589	654	124044	820	100	732	124144	820	205252	735	85
	Accum	423069	677	60853	1779	167743	682	46065	1613	701898	666	97433	1217	0	0	0	0	80662	1160	1577723	796	596	685	1578319	795	5938280	674	121

HRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
HANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1,
Y, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
HRU 7 ACTUAL SALINITIES IN PPM ARE MONTHLY AVERAGES BASED UPON CHEMICAL ANALYSIS
LUMN 9 ACTUAL FLOWS IN ACRE FEET EQUAL COLUMN 10 MINUS COLUMNS 1 THRU 8.
COLUMNS 10 THRU 13 AS REPORTED BY IBWC.
12 MINUS COLUMN 13. PROJECTED FLOWS AND SALINTIES ARE ESTIMATED BASED UPON HISTORICAL RECORDS.

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

File

IN REPLY REFER TO:

YAO-6213
RES-9.00

OCT - 4 2001

Ms. Silvia Waggoner
International Boundary and
Water Commission
United States Section
The Commons Building C,
Suite 310
4171 North Mesa
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - August 2001

Dear Ms. Waggoner:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for August 2001.

Sincerely,

FRANK A. MACALUSO JR.

Frank Macaluso
Team Leader, River Scheduling
and Accounting Team

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Hydro Office
International Boundary and
Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Mr. Elston Grubaugh
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251

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RESOURCES PLANNING
& MANAGEMENT DEPARTMENT

TABLE 2

PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS
COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY
USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA
August 2001

		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
2001		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	19785	708	5083	1740	6303	712	3489	1794	110459	710	7610	1308	0	0	0	0	2914	3380	155643	847	42	692	155685	847	339431	707	140
	Accum	19785	708	5083	1740	6303	712	3489	1794	110459	710	7610	1308	0	0	0	0	2914	3380	155643	847	42	692	155685	847	339431	707	140
FEB	Actual	37286	654	4637	1718	8148	655	2900	1790	123056	656	7465	1323	0	0	0	0	-715	-18225	182777	758	30	655	182807	758	420555	655	103
	Accum	57071	673	9720	1730	14451	680	6389	1792	233515	682	15075	1315	0	0	0	0	2199	10406	338420	799	72	677	338492	799	759986	678	121
MAR	Actual	32807	663	4875	1507	19972	663	2791	1682	147094	667	7851	1352	0	0	0	0	16557	1057	231947	747	4	847	231951	747	522942	659	88
	Accum	89878	669	14595	1655	34423	670	9180	1759	380609	676	22926	1328	0	0	0	0	18756	2153	570367	778	76	686	570443	778	1282928	670	107
APR	Actual	34490	622	6218	1735	4120	625	3545	1622	129285	623	8280	1171	0	0	0	0	2888	1913	188826	722	22	653	188848	722	694076	642	80
	Accum	124368	656	20813	1679	38543	665	12725	1721	509894	663	31206	1286	0	0	0	0	21644	2121	759193	764	98	678	759291	764	1977004	660	103
MAY	Actual	38212	649	5321	1797	20551	652	6173	1625	14107	650	7204	1033	0	0	0	0	6832	1078	98400	831	56	660	98456	831	647543	651	180
	Accum	162580	654	26134	1703	59094	661	18898	1689	524001	662	38410	1239	0	0	0	0	28476	1871	857593	772	154	672	857747	772	2624547	658	114
JUN	Actual	28532	655	5096	1858	5314	656	5841	1602	61285	654	7314	1086	0	0	0	0	-899	-2948	112483	815	35	653	112518	815	602955	655	160
	Accum	191112	655	31230	1728	64408	660	24739	1669	585286	661	45724	1214	0	0	0	0	27577	2028	970076	777	189	668	970265	777	3227502	658	119
JUL	Actual	47978	677	2810	1920	10358	693	5423	1619	58760	682	11816	1080	0	0	0	0	-4272	-37	132873	804	25	676	132898	804	655874	682	122
	Accum	239090	659	34040	1744	74766	665	30162	1660	644046	663	57540	1187	0	0	0	0	23305	2407	1102949	780	214	669	1103163	780	3883376	662	118
AUG	Actual	50659	704	4973	1760	12274	705	4270	1660	14112	692	7467	1192	0	0	0	0	11190	1171.39	104945	876	16	704	104961	876	557454	702	174
	Accum	289749	667	39013	1746	87040	670	34432	1660	658158	664	65007	1187	0	0	0	0	34495	2006	1207894	788	230	672	1208124	788	4440830	667	121
SEP	Projected	25980	670	6090	1583	11250	667	2260	1390	26890	681	9870	1088	0	0	0	0	6968	419	89308	780	95	673	89403	780	391652	675	105
	Accum	315729	667	45103	1724	98290	670	36692	1643	685048	664	74877	1174	0	0	0	0	41463	1739	1297202	788	325	672	1297527	788	4832482	667	120
OCT	Projected	25650	681	5875	1585	21930	678	2085	1240	13580	689	8500	1120	0	0	0	0	-3632	1894	73988	760	170	680	74158	760	411417	684	76
	Accum	341379	668	50978	1708	120220	672	38777	1622	698628	665	83377	1169	0	0	0	0	37831	1724	1371190	786	495	675	1371685	786	5243899	669	118
NOV	Projected	24560	672	5150	2018	25670	665	2235	1400	15580	682	8560	1450	0	0	0	0	-2784	3010	78971	782	80	672	79051	782	374699	675	107
	Accum	365939	668	56128	1737	145890	670	41012	1609	714208	665	91937	1195	0	0	0	0	35047	1622	1450161	786	575	674	1450736	786	5618598	669	117
DEC	Projected	24785	730	5460	1980	26895	731	2170	1450	14580	741	8565	1400	0	0	0	0	41589	654	124044	820	100	732	124144	820	205252	735	85
	Accum	390724	672	61588	1758	172785	680	43182	1601	728788	667	100502	1212	0	0	0	0	76636	1097	1574205	789	675	683	1574880	789	5823850	671	117

HRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
HANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1,
AY, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
HRU 7 ACTUAL SALINITIES IN PPM ARE MONTHLY AVERAGES BASED UPON CHEMICAL ANALYSIS
LUMN 9 ACTUAL FLOWS IN ACRE FEET EQUAL COLUMN 10 MINUS COLUMNS 1 THRU 8.
COLUMNS 10 THRU 13 AS REPORTED BY IBWC.
12 MINUS COLUMN 13. PROJECTED FLOWS AND SALINTIES ARE ESTIMATED BASED UPON HISTORICAL RECORDS.

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

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AUG 29 2001

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RESOURCES PLANNING
& MANAGEMENT DEPARTMENT

Ms. Silvia Waggoner
International Boundary and
Water Commission
United States Section
The Commons Building C,
Suite 310
4171 North Mesa
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - July 2001

Dear Ms. Waggoner:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for July 2001.

Sincerely,

FRANK A. MACALUSO JR.

Frank Macaluso
Team Leader, River Scheduling
and Accounting Team

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Hydro Office
International Boundary and
Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Mr. Elston Grubaugh
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251

TABLE 2

PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS
COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY
USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA

July 2001

		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Welton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
2001		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	19785	708	5083	1740	6303	712	3489	1794	110459	710	7610	1308	0	0	0	0	2914	3380	155643	847	42	692	155685	847	339431	707	140
	Accum	19785	708	5083	1740	6303	712	3489	1794	110459	710	7610	1308	0	0	0	0	2914	3380	155643	847	42	692	155685	847	339431	707	140
FEB	Actual	37286	654	4637	1718	8148	655	2900	1790	123056	656	7465	1323	0	0	0	0	-715	-18225	182777	758	30	655	182807	758	420555	655	103
	Accum	57071	673	9720	1730	14451	680	6389	1792	233515	682	15075	1315	0	0	0	0	2199	10406	338420	799	72	677	338492	799	759986	678	121
MAR	Actual	32807	663	4875	1507	19972	663	2791	1682	147094	667	7851	1352	0	0	0	0	16557	1057	231947	747	4	847	231951	747	522942	659	88
	Accum	89878	669	14595	1655	34423	670	9180	1759	380609	676	22926	1328	0	0	0	0	18756	2153	570367	778	76	686	570443	778	1282928	670	107
APR	Actual	34490	622	6218	1735	4120	625	3545	1622	129285	623	8280	1171	0	0	0	0	2888	1913	188826	722	22	653	188848	722	694076	642	80
	Accum	124368	656	20813	1679	38543	665	12725	1721	509894	663	31206	1286	0	0	0	0	21644	2121	759193	764	98	678	759291	764	1977004	660	103
MAY	Actual	38212	649	5321	1797	20551	652	6173	1625	14107	650	7204	1033	0	0	0	0	6832	1078	98400	831	56	660	98456	831	647543	651	180
	Accum	162580	654	26134	1703	59094	661	18898	1689	524001	662	38410	1239	0	0	0	0	28476	1871	857593	772	154	672	857747	772	2624547	658	114
JUN	Actual	28532	655	5096	1858	5314	656	5841	1602	61285	654	7314	1086	0	0	0	0	-899	-2948	112483	815	35	653	112518	815	602955	655	160
	Accum	191112	655	31230	1728	64408	660	24739	1669	585286	661	45724	1214	0	0	0	0	27577	2028	970076	777	189	668	970265	777	3227502	658	119
JUL	Actual	47978	677	2810	1920	10358	693	5423	1619	58760	682	11816	1080	0	0	0	0	-4272	-37	132873	804	25	676	132898	804	655874	682	122
	Accum	239090	659	34040	1744	74766	665	30162	1660	644046	663	57540	1187	0	0	0	0	23305	2407	1102949	780	214	669	1103163	780	3883376	662	118
AUG	Projected	29875	658	5985	1725	10980	654	2340	1240	34670	668	15675	1150	0	0	0	0	-3115	2871	96410	750	85	660	96495	750	470018	660	90
	Accum	268965	659	40025	1741	85746	663	32502	1630	678716	663	73215	1179	0	0	0	0	20190	2335	1199359	778	299	666	1199658	778	4353394	661	116
SEP	Projected	25980	670	6090	1583	11250	667	2260	1390	26890	681	9870	1088	0	0	0	0	6968	419	89308	780	95	673	89403	780	391652	675	105
	Accum	294945	660	46115	1720	96996	664	34762	1614	705606	664	83085	1168	0	0	0	0	27158	1843	1288667	778	394	668	1289061	778	4745046	663	115
OCT	Projected	25650	681	5875	1585	21930	678	2085	1240	13580	689	8500	1120	0	0	0	0	-3632	1894	73988	760	170	680	74158	760	411417	684	76
	Accum	320595	662	51990	1705	118926	666	36847	1593	719186	665	91585	1164	0	0	0	0	23526	1836	1362655	777	564	672	1363219	777	5156463	664	112
NOV	Projected	24560	672	5150	2018	25670	665	2235	1400	15580	682	8560	1450	0	0	0	0	-2784	3010	78971	782	80	672	79051	782	374699	675	107
	Accum	345155	662	57140	1733	144596	666	39082	1582	734766	665	100145	1188	0	0	0	0	20742	1678	1441626	777	644	672	1442270	777	5531162	665	112
DEC	Projected	24785	730	5460	1980	26895	731	2170	1450	14580	741	8565	1400	0	0	0	0	41589	654	124044	820	100	732	124144	820	205252	735	85
	Accum	369940	667	62600	1755	171491	676	41252	1576	749346	666	108710	1205	0	0	0	0	62331	995	1565670	780	744	680	1566414	780	5736414	668	113

COLUMNS 1 THRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
COLUMN 6 ACRE FEET EQUALS SUM OF, MITTRY LAKE OUTLET CHANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1, BRUCE CHURCH DRAIN, NORTH GILA CANAL WASTEWAY, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
COLUMNS 1 THRU 7 ACTUAL SALINITIES IN PPM ARE MONTHLY AVERAGES BASED UPON CHEMICAL ANALYSIS
COLUMN 9 ACTUAL FLOWS IN ACRE FEET EQUAL COLUMN 10 MINUS COLUMNS 1 THRU 8.
COLUMNS 10 THRU 13 AS REPORTED BY IBWC.
COLUMN 14 EQUALS COLUMN 12 MINUS COLUMN 13. PROJECTED FLOWS AND SALINTIES ARE ESTIMATED BASED UPON HISTORICAL RECORDS.

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO:
YAO-6213
RES-9.00

JAN 25 1999

Ms. Vickie Doyle
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary

Dear Ms. Doyle:

Enclosed as requested are the copies of the reports which provide sources of flow and yearly salinity differentials between Imperial Dam and the Northerly International Boundary for the years of 1973 through 1997. Also, enclosed are monthly salinity differentials for 1998.

If you have any questions, please contact Mr. Alex Jimenez at 520-343-8290.

Sincerely,

Edward J. Kandl
River Operations

Enclosures

COLORADO RIVER FLOWS AND SALINITY

Imperial Dam to Northerly International Boundary (NIB)

Yearly Averages

Year	Flow Below Imperial Dam		South Gila DPOC'S 1,2,3 & 4 (Includes S.G. Wells)		Yuma Main Canal Wasteway		Yuma Mesa Pump Outlet Channel (Includes Y.M. Wells)		Pilot Knob Power Plant & Wasteway		Other Measured Flows (Includes Gila R. Flows)		Wellton Mohawk Returns		MODE 2 YDP		Unmeasured Flows		Northerly International Boundary		Tijuana & Cooper Wasteway		NIB, Tijuana & Cooper Wasteway		Colorado River at Imperial Dam		Sal. Diff.	
	Flow	PPM	Flow	PPM	Flow	PPM	Flow	PPM	Flow	PPM	Flow	PPM	Flow	PPM	Flow	PPM	Flow	PPM	Flow	PPM	Flow	PPM	Flow	PPM	Flow	PPM	PPM	
1973	244,100	843	56,249	2,280	168,779	831	58,690	1,347	538,250	808	159,865	1,231	38	3,542	0	0	55,093	1,814	1,281,064	980	10,101	843	1,291,065	978	5,865,360	843	135	
1974	311,400	835	50,423	2,157	96,600	885	58,060	1,328	665,730	818	72,491	1,406	0	0	0	0	81,651	1,238	1,336,355	967	10,367	857	1,346,722	966	6,219,900	836	130	
1975	334,880	836	54,649	2,030	122,824	854	56,250	1,353	668,270	819	76,203	1,430	0	0	0	0	82,823	1,220	1,395,899	965	14,830	853	1,410,729	964	6,191,600	829	135	
1976	337,720	827	55,188	2,000	154,474	859	46,970	1,350	685,250	813	75,907	1,283	61	3,665	0	0	93,946	1,542	1,449,516	956	11,222	870	1,460,738	955	5,905,300	823	132	
1977	356,310	825	55,556	2,141	97,504	847	40,910	1,369	756,820	808	64,294	1,274	29	3,485	0	0	97,639	1,457	1,469,062	944	9,761	837	1,478,823	943	5,705,376	820	123	
1978	391,350	852	54,581	2,158	94,956	846	31,549	1,348	745,925	793	57,723	1,262	0	0	0	0	81,425	1,421	1,457,509	929	6,973	836	1,464,482	928	5,696,946	812	116	
1979	265,680	822	53,746	2,039	40,969	885	17,760	1,374	1,313,780	802	1,313,733	589	0	0	0	0	72,957	832	3,078,625	739	1,094	846	3,079,719	739	6,131,662	809	(70)	Gila River Flood
1980	1,018,710	760	65,892	2,163	11,934	763	21,420	1,345	3,832,880	754	1,743,397	565	41,114	3,028	0	0	198,510	898	6,933,857	740	4,515	751	6,938,372	740	9,433,843	755	(15)	Gila River Flood
1981	372,100	812	58,601	2,094	101,811	865	28,120	1,337	1,164,113	787	115,669	1,530	7,529	2,950	0	0	77,791	1,473	1,925,734	924	745	835	1,926,479	924	6,267,768	806	118	
1982	342,820	830	52,172	2,041	125,369	860	27,320	1,349	755,580	808	73,471	1,326	18	2,970	0	0	64,177	1,575	1,440,927	933	693	842	1,441,620	933	5,408,400	825	108	
1983	8,433,650	721	63,400	2,140	6,669	752	17,180	1,407	4,449,400	740	964,437	711	73,935	3,022	0	0	82,442	106	14,091,113	742	757	743	14,091,870	742	16,930,057	733	9	
1984	10,079,700	669	64,089	2,081	6,806	671	22,401	1,262	4,864,700	668	340,684	971	20,610	2,753	0	0	31,422	(3,527)	15,430,412	676	721	668	15,431,133	676	19,104,593	670	6	
1985	5,807,700	606	60,382	2,021	10,262	610	29,250	1,313	4,856,600	607	871,866	773	1,491	2,703	0	0	61,953	2,772	11,699,504	639	867	608	11,700,371	639	14,959,933	607	32	Colorado River Flood
1986	5,709,900	578	61,423	1,972	9,886	581	22,470	1,391	4,715,900	580	125,714	1,149	11,109	2,973	0	0	31,472	1,294	10,687,874	600	1,026	579	10,688,900	600	14,701,685	579	21	Colorado River Flood
1987	1,634,320	586	53,160	1,862	101,746	657	18,229	1,331	2,478,460	603	162,273	949	26,222	2,893	0	0	55,657	1,833	4,530,067	656	1,247	622	4,531,314	656	8,705,055	610	46	
1988	437,750	660	55,911	1,874	371,950	663	20,895	1,454	1,149,490	645	90,231	1,247	190	3,080	0	0	90,729	1,105	2,217,146	733	1,132	669	2,218,278	733	6,608,386	655	78	
1989	378,530	688	46,753	1,757	328,920	695	28,040	1,426	506,270	659	98,089	1,224	325	3,189	0	0	65,264	1,461	1,452,191	800	2,064	699	1,454,255	800	5,972,485	682	118	
1990	243,720	727	53,931	1,873	367,010	734	20,721	1,359	565,220	706	87,604	1,124	2,231	3,009	0	0	66,418	1,678	1,406,855	847	1,227	733	1,408,082	846	6,033,638	721	125	
1991	278,380	768	55,111	1,798	354,290	773	19,754	1,376	503,313	734	95,979	1,105	0	0	0	0	78,000	1,271	1,384,827	858	1,233	755	1,386,060	858	5,753,591	751	107	
1992	381,790	795	31,204	1,579	249,740	817	21,145	1,445	343,410	757	279,725	935	0	0	11,750	424	132,898	1,428	1,451,662	898	1,489	793	1,453,151	898	5,176,739	781	117	
1993	248,130	784	44,932	1,826	96,360	848	24,320	1,373	98,850	870	4,815,391	591	106,340	2,919	2,746	833	(361,530)	1,437	5,075,539	614	1,460	776	5,076,999	614	4,758,464	767	(153)	Gila River Flood
1994	275,040	800	10,832	1,744	264,980	831	15,466	1,391	630,850	781	112,622	1,239	3,832	3,759	1,187	1,239	83,202	1,157	1,398,011	875	1,290	814	1,399,301	875	5,921,054	797	78	
1995	243,030	795	52,896	1,703	195,839	838	26,380	1,392	392,616	793	622,700	777	0	0	0	0	60,357	1,858	1,593,818	869	1,252	790	1,595,070	869	5,564,863	787	82	
1996	230,850	787	57,357	1,626	126,863	804	25,769	1,325	781,000	773	105,927	1,196	0	0	0	0	59,102	850	1,386,868	859	1,371	796	1,388,239	859	6,064,340	782	77	
1997	361,254	699	65,275	1,672	246,042	697	29,082	1,379	1,699,900	690	118,669	1,128	0	0	0	0	235,414	959	2,755,656	764	1,403	699	2,757,059	764	7,327,612	695	69	
1998																												

Flows in Acre-Feet (AF)
PPM = Parts per million of salt (Salinity)

*Mittry Lake Outlet flooded out by Colorado River Flood 1983

TABLE 2
PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS
COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY
USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA
December 1998

1998		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	168600	670	4724	1681	75380	666	2854	1360	384204	661	8691	1258	0	0	0	0	-9723	-325	634730	698	68	656	634798	698	865804	665	33
	Accum	168600	670	4724	1681	75380	666	2854	1360	384204	661	8691	1258	0	0	0	0	-9723	-325	634730	698	68	656	634798	698	865804	665	33
FEB	Actual	412600	628	5559	1687	23190	628	2162	1390	322900	628	7478	1458	0	0	0	0	-19893	355	753996	641	82	641	754078	641	927074	629	12
	Accum	581200	640	10283	1684	98570	657	5016	1373	707104	646	16169	1350	0	0	0	0	-29616	131	1388726	667	150	648	1388876	667	1792878	646	21
MAR	Actual	333920	629	6325	1702	21602	625	2390	1530	145761	623	4866	1407	0	0	0	0	13056	1628	527920	676	164	631	528084	676	936793	627	49
	Accum	915120	636	16608	1691	120172	651	7406	1424	852865	642	21035	1364	0	0	0	0	-16560	-1049	1916646	670	314	639	1916960	670	2729671	640	30
APR	Actual	152990	642	6326	1693	15957	634	2670	1324	59557	658	8108	1342	0	0	0	0	31185	996	276793	736	97	644	276890	736	732297	651	85
	Accum	1068110	637	22934	1692	136129	649	10076	1397	912422	643	29143	1358	0	0	0	0	14625	3312	2193439	678	411	640	2193850	678	3461968	642	36
MAY	Actual	47590	653	6577	1702	5306	656	2672	1470	125686	654	9265	982	350	3840	0	0	24385	1177	221831	771	81	658	221912	771	699332	656	115
	Accum	1115700	638	29511	1694	141435	650	12748	1412	1038108	644	38408	1267	350	3840	0	0	39010	1978	2415270	686	492	643	2415762	686	4161300	644	42
JUN	Actual	26510	644	5720	1687	35260	643	2720	1450	136600	643	11015	1012	0	0	0	0	-21580	311	196245	742	99	645	196344	742	660595	643	99
	Accum	1142210	638	35231	1693	176695	648	15468	1419	1174708	644	49423	1210	350	3840	0	0	17430	4041	2611515	691	591	643	2612106	691	4821895	644	47
JUL	Actual	27550	661	6166	1778	4229	659	2487	1620	146600	663	8095	1464	0	0	0	0	7980	1067	203107	756	74	678	203181	756	736066	663	93
	Accum	1169760	638	41397	1705	180924	648	17955	1447	1321308	646	57518	1246	350	3840	0	0	25410	3107	2814622	695	665	647	2815287	695	5557961	647	48
AUG	Actual	52074	686	5623	1670	13870	703	2828	1550	59631	684	7496	1161	0	0	0	0	2438	1811	143960	786	63	698	144023	786	603272	690	96
	Accum	1221834	640	47020	1701	194794	652	20783	1461	1380939	648	65014	1236	350	3840	0	0	27848	2994	2958582	700	728	652	2959310	700	6161233	651	49
SEP	Actual	43400	650	5435	1721	23010	662	2540	1630	215500	643	13382	1147	0	0	0	0	-272	4337	302995	692	180	654	303175	692	698300	652	40
	Accum	1265234	641	52455	1703	217804	653	23323	1479	1596439	647	78396	1221	350	3840	0	0	27576	2981	3261577	699	908	652	3262485	699	6859533	651	48
OCT	Actual	28638	692	5562	1741	15500	693	4060	1920	174600	691	9174	1118	0	0	0	0	2730	2132	240264	769	342	686	240606	769	627471	688	81
	Accum	1293872	642	58017	1707	233304	656	27383	1545	1771039	652	87570	1210	350	3840	0	0	30306	2904	3501841	704	1250	661	3503091	704	7487004	654	50
NOV	Actual	55510	680	6754	1766	28220	684	3750	1590	259160	684	9166	1132	0	0	0	0	4977	190	367537	717	186	687	367723	717	634155	684	33
	Accum	1349382	643	64771	1713	261524	659	31133	1550	2030199	656	96736	1203	350	3840	0	0	35283	2521	3869378	705	1436	665	3870814	705	8121159	656	49
DEC	Actual	22000	900	4500	1900	44000	880	3700	1500	0	0	11000	1300	0	0	0	0	3300	-685	88500	860	100	880	88600	860	309498	850	10
	Accum	1371382	648	69271	1725	305524	691	34833	1545	2030199	656	107736	1213	350	3840	0	0	38583	2247	3957878	709	1536	679	3959414	709	8430657	664	45

COLUMNS 1 THRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
COLUMN 6 ACRE FEET EQUALS SUM OF, MITTRY LAKE OUTLET CHANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1, BRUCE CHURCH DRAIN, NORTH GILA CANAL WASTEWAY, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
COLUMNS 1 THRU 7 ACTUAL SALINITIES IN PPM ARE MONTHLY AVERAGES BASED UPON CHEMICAL ANALYSIS
COLUMN 9 ACTUAL FLOWS IN ACRE FEET EQUAL COLUMN 10 MINUS COLUMNS 1 THRU 8.
COLUMNS 10 THRU 13 AS REPORTED BY IBWC.
COLUMN 14 EQUALS COLUMN 12 MINUS COLUMN 13. PROJECTED FLOWS AND SALINTIES ARE ESTIMATED BASED UPON HISTORICAL RECORDS.

File

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO

JUL 25 2001

YAO-6213
RES-9.00

Ms. Silvia Waggoner
International Boundary and
Water Commission
United States Section
The Commons Building C,
Suite 310
4171 North Mesa
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - June 2001

Dear Ms. Waggoner:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for June 2001.

Sincerely,

FRANK A. MACALUSO JR

Frank Macaluso
Team Leader, River Scheduling
and Accounting Team

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Hydro Office
International Boundary and
Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Mr. Elston Grubaugh
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251

RECEIVED
JUL 25 2001
RESOURCES PLANNING
& MANAGEMENT DEPARTMENT

TABLE 2

PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS

COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY

USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA

June 2001

		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
2001		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	19785	708	5083	1740	6303	712	3489	1794	110459	710	7610	1308	0	0	0	0	2914	3380	155643	847	42	692	155685	847	339431	707	140
	Accum	19785	708	5083	1740	6303	712	3489	1794	110459	710	7610	1308	0	0	0	0	2914	3380	155643	847	42	692	155685	847	339431	707	140
FEB	Actual	37286	654	4637	1718	8148	655	2900	1790	123056	656	7465	1323	0	0	0	0	-715	-18225	182777	758	30	655	182807	758	420555	655	103
	Accum	57071	673	9720	1730	14451	680	6389	1792	233515	682	15075	1315	0	0	0	0	2199	10406	338420	799	72	677	338492	799	759986	678	121
MAR	Actual	32807	663	4875	1507	19972	663	2791	1682	147094	667	7851	1352	0	0	0	0	16557	1057	231947	747	4	847	231951	747	522942	659	88
	Accum	89878	669	14595	1655	34423	670	9180	1759	380609	676	22926	1328	0	0	0	0	18756	2153	570367	778	76	686	570443	778	1282928	670	107
APR	Actual	34490	622	6218	1735	4120	625	3545	1622	129285	623	8280	1171	0	0	0	0	2888	1913	188626	722	22	653	188648	722	694076	642	80
	Accum	124368	656	20813	1679	38543	665	12725	1721	509894	663	31206	1286	0	0	0	0	21644	2121	759193	764	98	678	759291	764	1977004	660	103
MAY	Actual	38212	649	5321	1797	20551	652	6173	1625	14107	650	7204	1033	0	0	0	0	6832	1078	98400	831	56	660	98456	831	647543	651	180
	Accum	162580	654	26134	1703	59094	661	18898	1689	524001	662	38410	1239	0	0	0	0	28476	1871	857593	772	154	672	857747	772	2624547	658	114
JUN	Actual	59570	670	6054	1827	1630	681	3850	1630	80050	685	10632	1131	0	0	0	0	3080	989.81	164866	778	51	681	164917	778	637348	680	98
	Accum	222150	659	32188	1726	60724	661	22748	1679	604051	665	49042	1215	0	0	0	0	31556	1785	1022459	773	205	674	1022664	773	3261895	662	111
JUL	Projected	33950	650	6080	1675	10875	647	3890	1320	65750	667	13580	1108	0	0	0	0	-3812	1124	130313	760	54	652	130367	760	518247	655	105
	Accum	256100	657	38268	1718	71599	659	26638	1627	669801	665	62622	1192	0	0	0	0	27744	1876	1152772	771	259	669	1153031	771	3780142	661	110
AUG	Projected	29875	658	5985	1725	10980	654	2340	1240	34670	668	15675	1150	0	0	0	0	-37241	927	62284	750	85	660	62369	750	470018	680	90
	Accum	285975	658	44253	1719	82579	658	28978	1596	704471	666	78297	1184	0	0	0	0	-9497	-1843	1215056	770	344	667	1215400	770	4250160	661	109
SEP	Projected	25980	670	6090	1583	11250	667	2260	1390	26890	681	9870	1088	0	0	0	0	14322	604	96662	780	95	673	96757	780	391652	675	105
	Accum	311955	659	50343	1703	93829	659	31238	1581	731361	666	88167	1173	0	0	0	0	4825	5421	1311718	771	439	668	1312157	771	4641812	662	109
OCT	Projected	25650	681	5875	1585	21930	678	2085	1240	13580	689	8500	1120	0	0	0	0	494	-7578	78114	760	170	680	78284	760	411417	684	76
	Accum	337605	660	56218	1690	115759	663	33323	1559	744941	666	96667	1168	0	0	0	0	5319	4214	1389832	770	609	672	1390441	770	5053229	664	106
NOV	Projected	24560	672	5150	2018	25670	665	2235	1400	15580	682	8560	1450	0	0	0	0	-14511	1209	67244	782	80	672	67324	782	374699	675	107
	Accum	362165	661	61368	1718	141429	663	35558	1549	760521	667	105227	1191	0	0	0	0	-9192	-529	1457076	771	689	672	1457765	771	5427928	665	106
DEC	Projected	24785	730	5460	1980	26895	731	2170	1450	14580	741	8565	1400	0	0	0	0	41589	654	124044	820	100	732	124144	820	205252	735	85
	Accum	386950	665	66828	1739	168324	674	37728	1544	775101	668	113792	1207	0	0	0	0	32397	990	1581120	775	789	679	1581909	775	5633180	667	107

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File

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO:

YAO-6213
RES-9.00

Ms. Sylvia Waggoner
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - May

Dear Ms. Waggoner:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for May 2001.

Sincerely,

FRANK A MACALUSO JR

Frank Macaluso
Team Leader, River Scheduling
and Accounting Team

Enclosure

cc: Mr. Alton Goff
Chief, Yuma Hydro Office
International Boundary and
Water Commission
P.O. Box 5737
Yuma AZ 85366

Mr. Elston Grubaugh
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
(w/encl)

RECEIVED
JUN 29 2001
RESOURCES PLANNING
& MANAGEMENT DEPARTMENT

TABLE 2

PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS

COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY

USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA

May 2001

2001		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		*7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	19785	708	5083	1740	6303	712	3489	1794	110459	710	7610	1308	0	0	0	0	2914	3380	155643	847	42	692	155685	847	339431	707	140
	Accum	19785	708	5083	1740	6303	712	3489	1794	110459	710	7610	1308	0	0	0	0	2914	3380	155643	847	42	692	155685	847	339431	707	140
FEB	Actual	37286	654	4637	1718	8148	655	2900	1790	123056	656	7465	1323	0	0	0	0	-715	-18225	182777	758	30	655	182807	758	420555	655	103
	Accum	57071	673	9720	1730	14451	680	6389	1792	233515	682	15075	1315	0	0	0	0	2199	10406	338420	799	72	677	338492	799	759986	678	121
MAR	Actual	32807	663	4875	1507	19972	663	2791	1682	147094	667	7851	1352	0	0	0	0	16557	1057	231947	747	4	847	231951	747	522942	659	88
	Accum	89878	669	14595	1655	34423	670	9180	1759	380609	676	22926	1328	0	0	0	0	18756	2153	570367	778	76	686	570443	778	1282928	670	107
APR	Actual	34490	622	6218	1735	4120	625	3545	1622	129285	623	8280	1171	0	0	0	0	2888	1913	188826	722	22	653	188848	722	694076	642	80
	Accum	124368	656	20813	1679	38543	665	12725	1721	509894	663	31206	1286	0	0	0	0	21644	2121	759193	764	98	678	759291	764	1977004	660	103
MAY	Actual	38212	649	5321	1797	20551	652	6173	1625	14107	650	7204	1033	0	0	0	0	6832	1078	98400	831	56	660	98456	831	647543	651	180
	Accum	162580	654	26134	1703	59094	661	18898	1689	524001	662	38410	1239	0	0	0	0	28476	1871	857593	772	154	672	857747	772	2624547	658	114
JUN	Projected	37860	635	5985	2018	10580	638	2985	1385	65890	649	11590	1310	0	0	0	0	-15113	1000	119777	750	65	648	119842	750	499843	640	110
	Accum	200440	651	32119	1762	69674	657	21883	1648	589891	661	50000	1255	0	0	0	0	13363	2856	977370	769	219	665	977589	769	3124390	655	114
JUL	Projected	33950	650	6080	1675	10875	647	3890	1320	65750	667	13580	1108	0	0	0	0	-3812	1124	130313	760	54	652	130367	760	518247	655	105
	Accum	234390	651	38199	1748	80549	656	25773	1598	655641	661	63580	1224	0	0	0	0	9551	3547	1107683	768	273	662	1107956	768	3642637	655	113
AUG	Projected	29875	658	5985	1725	10980	654	2340	1240	34670	668	15675	1150	0	0	0	0	-37241	927	62284	750	85	660	62369	750	470018	660	90
	Accum	264265	651	44184	1745	91529	656	28113	1569	690311	662	79255	1209	0	0	0	0	-27690	24	1169967	767	358	662	1170325	767	4112655	656	111
SEP	Projected	25980	670	6090	1583	11250	667	2260	1390	26890	681	9870	1088	0	0	0	0	14322	604	96662	780	95	673	96757	780	391652	675	105
	Accum	290245	653	50274	1725	102779	657	30373	1555	717201	662	89125	1196	0	0	0	0	-13368	-598	1266629	768	453	664	1267082	768	4504307	657	111
OCT	Projected	25650	681	5875	1585	21930	678	2085	1240	13580	689	8500	1120	0	0	0	0	494	-7578	78114	760	170	680	78284	760	411417	684	76
	Accum	315895	655	56149	1711	124709	661	32458	1535	730781	663	97625	1189	0	0	0	0	-12874	-330	1344743	767	623	668	1345366	768	4915724	660	108
NOV	Projected	24560	672	5150	2018	25670	665	2235	1400	15580	682	8560	1450	0	0	0	0	-14511	1209	67244	782	80	672	67324	782	374699	675	107
	Accum	340455	657	61299	1736	150379	661	34693	1526	746361	663	106185	1210	0	0	0	0	-27385	486	1411987	768	703	669	1412690	768	5290423	661	108
DEC	Projected	24785	730	5460	1980	26895	731	2170	1450	14580	741	8565	1400	0	0	0	0	41589	654	124044	820	100	732	124144	820	205252	735	85
	Accum	365240	662	66759	1756	177274	672	36863	1522	760941	665	114750	1224	0	0	0	0	14204	979	1536031	772	803	677	1536834	773	5495675	663	109

COLUMNS 1 THRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
COLUMN 8 ACRE FEET EQUALS SUM OF, MITTRY LAKE OUTLET CHANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1, BRUCE CHURCH DRAIN, NORTH GILA CANAL WASTEWAY, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
COLUMNS 1 THRU 7 ACTUAL SALINITIES IN PPM ARE MONTHLY AVERAGES BASED UPON CHEMICAL ANALYSIS
COLUMN 9 ACTUAL FLOWS IN ACRE FEET EQUAL COLUMN 10 MINUS COLUMNS 1 THRU 8.
COLUMNS 10 THRU 13 AS REPORTED BY IBWC.
COLUMN 14 EQUALS COLUMN 12 MINUS COLUMN 13. PROJECTED FLOWS AND SALINTIES ARE ESTIMATED BASED UPON HISTORICAL RECORDS.
COLUMN 9 ACTUAL FLOWS IN ACRE FEET EQUAL COLUMN 10 MINUS COLUMNS 1 THRU 8.
COLUMNS 10 THRU 13 AS REPORTED BY IBWC.
COLUMN 14 EQUALS COLUMN 12 MINUS COLUMN 13. PROJECTED FLOWS AND SALINTIES ARE ESTIMATED BASED UPON HISTORICAL RECORDS.

File

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO:

YAO-6213
RES-9.00

JUN -5 2001

Ms. Sylvia Waggoner
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - April

Dear Ms. Waggoner:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for April 2001.

Sincerely,

FRANK A MACALUSO JR

Frank Macaluso
Team Leader, River Scheduling
and Accounting Team

Enclosure

cc: Mr. Alton Goff
Chief, Yuma Hydro Office
International Boundary and
Water Commission
P.O. Box 5737
Yuma AZ 85366

Mr. Elston Grubaugh
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
(w/encl)

RECEIVED
JUN 12 2001
RESOURCES PLANNING
& MANAGEMENT DEPARTMENT

TABLE 2

PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS
COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY
USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA
April 2001

2001		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	19785	708	5083	1740	6303	712	3489	1794	110459	710	7610	1308	0	0	0	0	2914	3380	155643	847	42	692	155685	847	339431	707	140
	Accum	19785	708	5083	1740	6303	712	3489	1794	110459	710	7610	1308	0	0	0	0	2914	3380	155643	847	42	692	155685	847	339431	707	140
FEB	Actual	37286	654	4637	1718	8148	655	2900	1790	123056	656	7465	1323	0	0	0	0	-715	-18225	182777	758	30	655	182807	758	420555	655	103
	Accum	57071	673	9720	1730	14451	680	6389	1792	233515	682	15075	1315	0	0	0	0	2199	10406	338420	799	72	677	338492	799	759986	678	121
MAR	Actual	32807	663	4875	1507	19972	663	2791	1682	147094	667	7851	1352	0	0	0	0	16557	1057	231947	747	4	847	231951	747	522942	659	88
	Accum	89878	669	14595	1655	34423	670	9180	1759	380609	676	22926	1328	0	0	0	0	18756	2153	570367	778	76	686	570443	778	1282928	670	107
APR	Actual	34332	644	5187	1677	9975	643	4792	1618	117185	642	7590	1158	0	0	0	0	9765	751	188826	722	22	653	188848	722	662717	642	80
	Accum	124210	662	19782	1661	44398	664	13972	1710	497794	668	30516	1286	0	0	0	0	28521	1673	759193	764	98	678	759291	764	1945645	661	103
MAY	Projected	38975	648	6975	1710	19850	645	3985	1309	55860	662	10950	1350	0	0	0	0	-33786	823	102809	770	85	648	102894	770	529296	650	120
	Accum	163185	659	26757	1674	64248	658	17957	1621	553654	667	41466	1303	0	0	0	0	-5265	-3783	862002	765	183	664	862185	765	2474941	658	106
JUN	Projected	37860	635	5985	2018	10580	638	2985	1386	65890	649	11590	1310	0	0	0	0	-22810	816	112080	750	65	648	112145	750	499843	640	110
	Accum	201045	654	32742	1737	74828	655	20942	1588	619544	665	53056	1304	0	0	0	0	-28075	35	974082	763	248	660	974330	763	2974784	655	108
JUL	Projected	33950	650	6080	1675	10875	647	3890	1320	65750	667	13580	1108	0	0	0	0	-3812	1124	130313	760	54	652	130367	760	518247	655	105
	Accum	234995	654	38822	1727	85703	654	24832	1546	685294	666	66636	1264	0	0	0	0	-31887	165	1104395	763	302	659	1104697	763	3493031	655	107
AUG	Projected	29875	658	5985	1725	10980	654	2340	1240	34670	668	15675	1150	0	0	0	0	-7241	1662	92284	750	85	660	92369	750	470018	660	90
	Accum	264870	654	44807	1727	96683	654	27172	1519	719964	666	82311	1243	0	0	0	0	-39128	442	1196679	762	387	659	1197066	762	3963049	656	106
SEP	Projected	25980	670	6090	1583	11250	667	2260	1390	26890	681	9870	1088	0	0	0	0	14322	604	96662	780	95	673	96757	780	391652	675	105
	Accum	290850	656	50897	1710	107933	656	29432	1509	746854	666	92181	1226	0	0	0	0	-24806	348	1293341	763	482	662	1293823	763	4354701	658	105
OCT	Projected	25650	681	5875	1585	21930	678	2085	1240	13580	689	8500	1120	0	0	0	0	494	-7578	78114	760	170	680	78284	760	411417	684	76
	Accum	316500	658	56772	1697	129863	659	31517	1492	760434	667	100681	1217	0	0	0	0	-24312	509	1371455	763	652	666	1372107	763	4766118	660	103
NOV	Projected	24560	672	5150	2018	25670	665	2235	1400	15580	682	8560	1450	0	0	0	0	-14511	1209	67244	782	80	672	67324	782	374699	675	107
	Accum	341060	659	61922	1723	155533	660	33752	1486	776014	667	109241	1235	0	0	0	0	-38823	771	1438699	764	732	667	1439431	764	5140817	661	103
DEC	Projected	24785	730	5460	1980	26895	731	2170	1450	14580	741	8565	1400	0	0	0	0	49285	680	131740	820	100	732	131840	820	205252	735	85
	Accum	365845	664	67382	1744	182428	671	35922	1483	790594	668	117806	1247	0	0	0	0	10462	343	1570439	768	832	675	1571271	768	5346069	664	105

COLUMNS 1 THRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
COLUMN 6 ACRE FEET EQUALS SUM OF, MITTRY LAKE OUTLET CHANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1, BRUCE CHURCH DRAIN, NORTH GILA CANAL WASTEWAY, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
COLUMNS 1 THRU 7 ACTUAL SALINITIES IN PPM ARE MONTHLY AVERAGES BASED UPON CHEMICAL ANALYSIS
COLUMN 9 ACTUAL FLOWS IN ACRE FEET EQUAL COLUMN 10 MINUS COLUMNS 1 THRU 8.
COLUMNS 10 THRU 13 AS REPORTED BY IBWC.
COLUMN 14 EQUALS COLUMN 12 MINUS COLUMN 13. PROJECTED FLOWS AND SALINTIES ARE ESTIMATED BASED UPON HISTORICAL RECORDS.
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COLUMNS 10 THRU 13 AS REPORTED BY IBWC.
COLUMN 14 EQUALS COLUMN 12 MINUS COLUMN 13. PROJECTED FLOWS AND SALINTIES ARE ESTIMATED BASED UPON HISTORICAL RECORDS.

F.M

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
PO Box D
Yuma, Arizona 85366

IN REPLY REFER TO:

YAO-6213
RES-9.00

APR 30 2001

Ms. Sylvia Waggoner
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - March

Dear Ms. Waggoner:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for March 2001.

Sincerely,

FRANK A MACALUSO JR

Frank Macaluso
Team Leader, River Scheduling
and Accounting Team

Enclosure

cc: Mr. Alton Goff
Chief, Yuma Hydro Office
International Boundary and
Water Commission
P.O. Box 5737
Yuma AZ 85366

Mr. Elston Grubaugh
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
(w/encl)

RECEIVED
MAY - 4 2001
RESOURCES PLANNING
& MANAGEMENT DEPARTMENT

TABLE 2

PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS

COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY

USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA

March 2000

		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
2001		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	19785	708	5083	1740	6303	712	3489	1794	110459	710	7610	1308	0	0	0	0	2914	3380	155643	847	42	692	155685	847	339431	707	140
	Accum	19785	708	5083	1740	6303	712	3489	1794	110459	710	7610	1308	0	0	0	0	2914	3380	155643	847	42	692	155685	847	339431	707	140
FEB	Actual	37286	654	4637	1718	8148	655	2900	1790	123056	656	7465	1323	0	0	0	0	-715	-18225	182777	758	15	655	182792	758	420555	655	103
	Accum	57071	673	9720	1730	14451	680	6389	1792	233515	682	15075	1315	0	0	0	0	2199	10406	338420	799	57	682	338477	799	759986	678	121
MAR	Actual	32807	663	4875	1507	19972	663	2791	1682	147094	667	7851	1352	0	0	0	0	16557	1057.2	231947	747	4	847	231951	747	522942	659	88
	Accum	89878	669	14595	1655	34423	670	9180	1759	380609	676	22926	1328	0	0	0	0	18756	2153	570367	778	61	693	570428	778	1282928	670	107
APR	Projected	35895	675	6875	1665	26985	675	3185	1255	50680	689	9565	1200	0	0	0	0	53836	616	187021	735	102	675	187123	735	499458	680	55
	Accum	125773	671	21470	1658	61408	672	12365	1629	431289	677	32491	1290	0	0	0	0	72592	1013	757388	767	163	682	757551	767	1782386	673	94
MAY	Projected	38975	648	6975	1710	19850	645	3985	1309	55860	662	10950	1350	0	0	0	0	-33786	823	102809	770	85	648	102894	770	529296	650	120
	Accum	164748	665	28445	1671	81258	666	16350	1551	487149	676	43441	1305	0	0	0	0	38806	1179	860197	768	248	670	860445	768	2311682	668	100
JUN	Projected	37860	635	5985	2018	10580	638	2985	1385	65890	649	11590	1310	0	0	0	0	-22810	916	112080	750	65	648	112145	750	499843	640	110
	Accum	202608	660	34430	1731	91838	662	19335	1525	553039	673	55031	1306	0	0	0	0	15996	1555	972277	766	313	666	972590	766	2811525	663	103
JUL	Projected	33950	650	6080	1675	10875	647	3890	1320	65750	667	13580	1108	0	0	0	0	-3812	1124	130313	760	54	652	130367	760	518247	655	105
	Accum	236558	658	40510	1723	102713	661	23225	1491	618789	672	68611	1267	0	0	0	0	12184	1690	1102590	765	367	664	1102957	765	3329772	662	103
AUG	Projected	29875	658	5985	1725	10980	654	2340	1240	34670	668	15675	1150	0	0	0	0	-7241	1652	92284	750	85	660	92369	750	470018	660	90
	Accum	266433	658	46495	1723	113693	660	25565	1468	653459	672	84286	1245	0	0	0	0	4943	1729	1194874	764	452	663	1195326	764	3799790	661	102
SEP	Projected	25980	670	6090	1583	11250	667	2260	1390	26890	681	9870	1088	0	0	0	0	14322	694	96662	780	95	673	96757	780	391652	675	105
	Accum	292413	659	52585	1707	124943	661	27825	1462	680349	672	94156	1229	0	0	0	0	19265	893	1291536	765	547	665	1292083	765	4191442	663	102
OCT	Projected	25650	681	5875	1585	21930	678	2085	1240	13580	689	8500	1120	0	0	0	0	494	-7578	78114	760	170	680	78284	760	411417	684	76
	Accum	318063	661	58460	1695	146873	663	29910	1446	693929	672	102656	1220	0	0	0	0	19759	681	1369650	765	717	668	1370367	765	4602859	665	100
NOV	Projected	24560	672	5150	2018	25670	665	2235	1400	15580	682	8560	1450	0	0	0	0	-14511	1209	67244	782	80	672	67324	782	374699	675	107
	Accum	342623	662	63610	1721	172543	664	32145	1443	709509	673	111216	1238	0	0	0	0	5248	-760	1436894	765	797	669	1437691	765	4977558	665	100
DEC	Projected	24785	730	5460	1980	26895	731	2170	1450	14580	741	8565	1400	0	0	0	0	49285	680	131740	820	100	732	131840	820	205252	735	85
	Accum	367408	666	69070	1741	199438	673	34315	1443	724089	674	119781	1249	0	0	0	0	54533	540	1568634	770	897	676	1569531	770	5182810	668	102

COLUMNS 1 THRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
COLUMN 6 ACRE FEET EQUALS SUM OF, MITTRY LAKE OUTLET CHANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1, BRUCE CHURCH DRAIN, NORTH GILA CANAL WASTEWAY, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
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United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO:

YAO-6213
RES-9.00

APR - 6 2001

Ms. Sylvia Waggoner
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - February

Dear Ms. Waggoner:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for February 2001.

Sincerely,

FRANK A. MACALUSO JR.

Frank Macaluso
Team Leader, River Scheduling
and Accounting Team

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Office
International Boundary
and Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Mr. Elston Grubaugh
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
(w/encl)

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APR 17 2001
RESOURCES PLANNING
& MANAGEMENT DEPARTMENT

TABLE 2

PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS
COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY
USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA
February 2000

		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
2001		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	19785	708	5083	1740	6303	712	3489	1794	110459	710	7610	1308	0	0	0	0	2914	3380	155643	847	42	692	155685	847	339431	707	140
	Accum	19785	708	5083	1740	6303	712	3489	1794	110459	710	7610	1308	0	0	0	0	2914	3380	155643	847	42	692	155685	847	339431	707	140
FEB	Actual	37286	654	4637	1718	8148	655	2900	1790	123056	656	7465	1323	0	0	0	0	-715	-18225	182777	758	15	655	182792	758	420555	655	103
	Accum	57071	673	9720	1730	14451	680	6389	1792	233515	682	15075	1315	0	0	0	0	2199	10406	338420	799	57	682	338477	799	759986	678	121
MAR	Projected	33965	660	5680	1950	27650	660	3180	1380	48970	675	9243	1465	0	0	0	0	64433	744	193121	780	110	664	193231	780	436282	665	115
	Accum	91036	668	15400	1811	42101	667	9569	1655	282485	680	24318	1372	0	0	0	0	66632	1062	531541	792	167	670	531708	792	1196268	673	119
APR	Projected	35895	675	6875	1665	26985	675	3185	1255	50680	689	9565	1200	0	0	0	0	70184	644	203369	735	102	675	203471	735	499458	680	55
	Accum	126931	670	22275	1766	69086	670	12754	1555	333165	682	33883	1324	0	0	0	0	136816	848	734910	776	269	672	735179	776	1695726	675	101
MAY	Projected	38975	648	6975	1710	19850	645	3985	1309	65860	662	10950	1350	0	0	0	0	-48492	807	88103	770	85	648	88188	770	529296	650	120
	Accum	165906	665	29250	1753	88936	664	16739	1497	389025	679	44833	1330	0	0	0	0	88324	870	823013	776	354	666	823367	776	2225022	669	106
JUN	Projected	37860	635	5985	2018	10580	638	2985	1385	65890	649	11590	1310	0	0	0	0	-30877	872	104013	750	65	648	104078	750	499843	640	110
	Accum	203766	659	35235	1798	99516	662	19724	1480	454915	675	56423	1326	0	0	0	0	57447	869	927026	773	419	663	927445	773	2724865	664	109
JUL	Projected	33950	650	6080	1675	10875	647	3890	1320	65750	667	13580	1108	0	0	0	0	-11615	880	122510	760	54	652	122564	760	518247	655	105
	Accum	237716	658	41315	1780	110391	660	23614	1453	520665	674	70003	1284	0	0	0	0	45832	866	1049536	771	473	662	1050009	771	3243112	663	109
AUG	Projected	29875	658	5985	1725	10980	654	2340	1240	34670	668	15675	1150	0	0	0	0	-16718	972	82807	785	85	660	82892	785	470018	660	125
	Accum	267591	658	47300	1773	121371	660	25954	1434	555335	673	85678	1259	0	0	0	0	29114	806	1132343	772	558	662	1132901	772	3713130	662	110
SEP	Projected	25980	670	6090	1583	11250	667	2260	1390	26890	681	9870	1088	0	0	0	0	4621	405	86961	789	95	673	87056	789	391652	675	114
	Accum	293571	659	53390	1751	132621	660	28214	1431	582225	674	95548	1242	0	0	0	0	33735	751	1219304	773	653	663	1219957	773	4104782	663	110
OCT	Projected	25650	681	5875	1585	21930	678	2085	1240	13580	689	8500	1120	0	0	0	0	-23692	934	53928	760	170	680	54098	760	411417	684	76
	Accum	319221	661	59265	1735	154551	663	30299	1418	595805	674	104048	1232	0	0	0	0	10043	319	1273232	773	823	667	1274055	773	4516199	665	108
NOV	Projected	24560	672	5150	2018	25670	665	2235	1400	15580	682	8560	1450	0	0	0	0	-24861	1031	56894	782	80	672	56974	782	374699	675	107
	Accum	343781	662	64415	1757	180221	663	32534	1416	611385	674	112608	1248	0	0	0	0	-14818	1515	1330126	773	903	667	1331029	773	4890898	666	107
DEC	Projected	24785	730	5460	1980	26895	731	2170	1450	14580	741	8565	1400	0	0	0	0	29350	585	111805	820	100	732	111905	820	205252	735	85
	Accum	368566	666	69875	1775	207116	672	34704	1418	625965	676	121173	1259	0	0	0	0	14532	-363	1441931	777	1003	674	1442934	777	5096150	669	108

COLUMNS 1 THRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
COLUMN 6 ACRE FEET EQUALS SUM OF, MITTRY LAKE OUTLET CHANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1, BRUCE CHURCH DRAIN, NORTH GILA CANAL WASTEWAY, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
COLUMNS 1 THRU 7 ACTUAL SALINITIES IN PPM ARE MONTHLY AVERAGES BASED UPON CHEMICAL ANALYSIS
COLUMN 9 ACTUAL FLOWS IN ACRE FEET EQUAL COLUMN 10 MINUS COLUMNS 1 THRU 8.
COLUMNS 10 THRU 13 AS REPORTED BY IBWC.
COLUMN 14 EQUALS COLUMN 12 MINUS COLUMN 13. PROJECTED FLOWS AND SALINTIES ARE ESTIMATED BASED UPON HISTORICAL RECORDS.

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO

YAO-6213
RES-9.00

JAN 25 2001

RECEIVED
JAN 31 2001
RESOURCES PLANNING
& MANAGEMENT DEPARTMENT

Ms. Sylvia Waggoner
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - December 2000

Dear Ms. Waggoner:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for December 2000.

If you have any questions, please contact Mr. Alex Jimenez at 520-343-8290.

Sincerely,

FRANK A. MACALUSO JR

Frank Macaluso
Team Leader, River Scheduling
and Accounting Team

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Office
International Boundary
and Water Commission
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Water Resources
Imperial Irrigation District
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PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS
COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY
USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA

December 2000

		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
2000		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	22223	697	6408	1691	8870	692	2682	1596	107526	691	9539	1205	0	0	0	0	3334	3608	160582	838	40	689	160622	838	383841	688	150
	Accum	22223	697	6408	1691	8870	692	2682	1596	107526	691	9539	1205	0	0	0	0	3334	3608	160582	838	40	689	160622	838	383841	688	150
FEB	Actual	25240	664	6002	1685	9880	670	2866	1571	127700	668	7828	1294	0	0	0	0	-2174	-4374	177342	806	47	664	177389	806	439398	666	140
	Accum	47463	679	12410	1688	18750	680	5548	1583	235226	679	17367	1245	0	0	0	0	1160	18568	337924	821	87	675	338011	820	823239	676	144
MAR	Actual	46251	653	6425	1735	8095	658	3481	1638	130256	652	8855	1246	0	0	0	0	5120	1282	208483	743	24	657	208507	743	622948	650	93
	Accum	93714	666	18835	1704	26845	674	9029	1604	365482	669	26222	1245	0	0	0	0	6280	4475	546407	791	111	671	546518	791	1446187	665	126
APR	Actual	34490	622	6218	1735	4120	625	3545	1622	129285	623	8280	1171	0	0	0	0	1500	4390	187438	733	65	625	187503	733	694076	622	111
	Accum	128204	654	25053	1712	30965	667	12574	1609	494767	657	34502	1228	0	0	0	0	7780	4459	733845	776	176	654	734021	776	2140263	651	125
MAY	Actual	39015	644	3209	1717	9366	649	3792	1694	86678	647	9495	1128	0	0	0	0	7261	1658	158816	768	44	653	158860	768	692826	646	122
	Accum	167219	652	28262	1712	40331	663	16366	1629	581445	656	43997	1206	0	0	0	0	15041	3107	892661	775	220	654	892881	774	2833089	650	125
JUN	Actual	30430	643	6040	1690	11200	647	3690	1619	82908	643	7229	1078	0	0	0	0	4705	1429	146202	758	16	640	146218	758	631973	643	115
	Accum	197649	651	34302	1708	51531	659	20056	1627	664353	654	51226	1188	0	0	0	0	19746	2707	1038863	773	236	653	1039099	772	3465062	649	124
JUL	Actual	35843	654	5979	1764	16385	654	3671	1599	81798	653	8194	1065	0	0	0	0	917	3545	152787	759	18	656	152805	759	659345	653	106
	Accum	233492	651	40281	1717	67916	658	23727	1623	746151	654	59420	1171	0	0	0	0	20663	2744	1191650	771	254	653	1191904	770	4124407	649	121
AUG	Actual	41685	665	5054	1734	27808	670	3253	1653	37634	654	7756	1106	0	0	0	0	698	5645	123888	788	49	658	123937	788	556105	664	124
	Accum	275177	653	45335	1719	95724	662	26980	1626	783785	654	67176	1164	0	0	0	0	21361	2839	1315538	772	303	654	1315841	772	4680512	651	121
SEP	Actual	30127	673	5364	1703	8928	672	2836	1799	66853	673	7183	1077	0	0	0	0	-676	-3205	120615	791	85	662	120700	790	520133	672	118
	Accum	305304	655	50699	1717	104652	662	29816	1643	850638	655	74359	1155	0	0	0	0	20685	3037	1436153	774	388	656	1436541	774	5200645	653	121
OCT	Actual	60046	674	5402	1654	19779	666	2930	1751	58813	680	8011	1075	0	0	0	0	3855	730	158836	750	131	672	158967	750	519530	673	77
	Accum	365350	658	56101	1711	124431	663	32746	1652	909451	657	82370	1147	0	0	0	0	24540	2674	1594989	771	519	660	1595508	771	5720175	655	116
NOV	Actual	23177	685	5276	1715	4386	685	2261	1736	95187	685	7767	949	0	0	0	0	2872	3385	140926	810	188	685	141114	810	416906	684	126
	Accum	388527	660	61377	1711	128817	664	35007	1658	1004638	660	90137	1130	0	0	0	0	27412	2749	1735915	774	707	667	1736622	774	6137081	657	117
DEC	Actual	24726	685	4954	1680	9118	682	2644	1710	118869	662	8225	1215	0	0	0	0	-5653	-1369	162883	813	83	677	162966	813	391715	683	130
	Accum	413253	661	66331	1709	137935	665	37651	1662	1123507	660	98362	1137	0	0	0	0	21759	3819	1898798	777	790	668	1899588	777	6528796	658	119

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Yuma, Arizona 85366

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DEC -4 2000

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El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - October 2000

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Frank Macaluso
Team Leader, River Scheduling
and Accounting Team

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Office
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USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA
October 2000

		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
2000		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	22223	697	6408	1691	8870	692	2682	1596	107526	691	9539	1205	0	0	0	0	3334	3608	160582	838	40	689	160622	838	383841	688	150
	Accum	22223	697	6408	1691	8870	692	2682	1596	107526	691	9539	1205	0	0	0	0	3334	3608	160582	838	40	689	160622	838	383841	688	150
FEB	Actual	25240	664	6002	1685	9880	670	2866	1571	127700	668	7828	1294	0	0	0	0	-2174	-4374	177342	806	47	664	177389	806	439398	666	140
	Accum	47463	679	12410	1688	18750	680	5548	1583	235226	679	17367	1245	0	0	0	0	1160	18568	337924	821	87	675	338011	820	823239	676	144
MAR	Actual	46251	653	6425	1735	8095	658	3481	1638	130256	652	8855	1246	0	0	0	0	5120	1282	208483	743	24	657	208507	743	622948	650	93
	Accum	93714	666	18835	1704	26845	674	9029	1604	365482	669	26222	1245	0	0	0	0	6280	4475	546407	791	111	671	546518	791	1446187	665	126
APR	Actual	34490	622	6218	1735	4120	625	3545	1622	129285	623	8280	1171	0	0	0	0	1500	4390	187438	733	65	625	187503	733	694076	622	111
	Accum	128204	654	25053	1712	30965	667	12574	1609	494767	657	34502	1228	0	0	0	0	7780	4459	733845	776	176	654	734021	776	2140263	651	125
MAY	Actual	39015	644	3209	1717	9366	649	3792	1694	86678	647	9495	1128	0	0	0	0	7261	1658	158816	768	44	653	158860	768	692826	646	122
	Accum	167219	652	28262	1712	40331	663	16366	1629	581445	656	43997	1206	0	0	0	0	15041	3107	892661	775	220	654	892881	774	2833089	650	125
JUN	Actual	30430	643	6040	1690	11200	647	3690	1619	82908	643	7229	1078	0	0	0	0	4705	1429	146202	758	16	640	146218	758	631973	643	115
	Accum	197649	651	34302	1708	51531	659	20056	1627	664353	654	51226	1188	0	0	0	0	19746	2707	1038863	773	236	653	1039099	772	3465062	649	124
JUL	Actual	35843	654	5979	1764	16385	654	3671	1599	81798	653	8194	1065	0	0	0	0	917	3545	152787	759	18	656	152805	759	659345	653	106
	Accum	233492	651	40261	1717	67916	658	23727	1623	746151	654	59420	1171	0	0	0	0	20663	2744	1191650	771	254	653	1191904	770	4124407	649	121
AUG	Actual	41685	665	5054	1734	27808	670	3253	1653	37634	654	7756	1106	0	0	0	0	698	5645	123888	788	49	658	123937	788	556105	664	124
	Accum	275177	653	45335	1719	95724	662	26980	1626	783785	654	67176	1164	0	0	0	0	21361	2839	1315538	772	303	654	1315841	772	4680512	651	121
SEP	Actual	30127	673	5364	1703	8928	672	2836	1799	66853	673	7183	1077	0	0	0	0	-676	-3205	120615	791	85	662	120700	790	520125	672	118
	Accum	305304	655	50699	1717	104652	662	29816	1643	850638	655	74359	1155	0	0	0	0	20685	3037	1436153	774	388	656	1436541	774	5200637	653	121
OCT	Actual	60046	674	5402	1654	19779	666	2930	1751	58813	680	8011	1075	0	0	0	0	3855	730	158836	750	131	672	158967	750	519530	673	77
	Accum	365350	658	56101	1711	124431	663	32746	1652	909451	657	82370	1147	0	0	0	0	24540	2674	1594989	771	519	660	1595508	771	5720167	655	116
NOV	Projected	21850	850	5100	1600	10500	850	1900	1500	0	0	1500	1300	0	0	0	0	72623	787	113473	750	130	672	113603	750	341300	670	80
	Accum	387200	669	61201	1702	134931	678	34646	1644	909451	657	83870	1150	0	0	0	0	97163	1263	1708462	770	649	662	1709111	770	6061467	656	114
DEC	Projected	22000	870	4500	1900	9500	880	2000	1500	0	0	1400	1300	0	0	0	0	103626	793	143026	790	100	672	143126	790	309500	670	120
	Accum	409200	680	65701	1715	144431	691	36646	1636	909451	657	85270	1153	0	0	0	0	200789	1020	1851488	771	749	664	1852237	771	6370967	656	115

COLUMNS 1 THRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
COLUMN 6 ACRE FEET EQUALS SUM OF, MITTRY LAKE OUTLET CHANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1, BRUCE CHURCH DRAIN, NORTH GILA CANAL WASTEWAY, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
COLUMNS 1 THRU 7 ACTUAL SALINITIES IN PPM ARE MONTHLY AVERAGES BASED UPON CHEMICAL ANALYSIS
COLUMN 9 ACTUAL FLOWS IN ACRE FEET EQUAL COLUMN 10 MINUS COLUMNS 1 THRU 8.
COLUMNS 10 THRU 13 AS REPORTED BY IBWC.
COLUMN 14 EQUALS COLUMN 12 MINUS COLUMN 13. PROJECTED FLOWS AND SALINTIES ARE ESTIMATED BASED UPON HISTORICAL RECORDS.

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO:

YAO-6213
RES-9.00

OCT - 4 2000

Ms. Sylvia Waggoner
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - August

Dear Ms. Waggoner:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for August 2000.

If you have any questions, please contact Mr. Alex Jimenez at 520-343-8290.

Sincerely,

FRANK A. MACALUSO JR

Frank Macaluso
Team Leader, River Scheduling
and Accounting Team

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Office
International Boundary
and Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Mr. Elston Grubaugh
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
(w/encl)

RECEIVED
OCT 10 2000
RESOURCES PLANNING
MANAGEMENT DEPARTMENT

TABLE 2

PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS

COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY

USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA

August 2000

		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Welton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
2000		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	22223	697	6408	1691	8870	692	2682	1596	107526	691	9539	1205	0	0	0	0	3334	3608	160582	838	40	689	160622	838	383841	688	150
	Accum	22223	697	6408	1691	8870	692	2682	1596	107526	691	9539	1205	0	0	0	0	3334	3608	160582	838	40	689	160622	838	383841	688	150
FEB	Actual	25240	664	6002	1685	9880	670	2866	1571	127700	668	7828	1294	0	0	0	0	-2174	-4374	177342	806	47	664	177389	806	439398	666	140
	Accum	47463	679	12410	1688	18750	680	5548	1583	235226	679	17367	1245	0	0	0	0	1160	18568	337924	821	87	675	338011	820	823239	676	144
MAR	Actual	46251	653	6425	1735	8095	658	3481	1638	130256	652	8855	1246	0	0	0	0	5120	1282	208483	743	24	657	208507	743	622948	650	93
	Accum	93714	666	18835	1704	26845	674	9029	1604	365482	669	26222	1245	0	0	0	0	6280	4475	546407	791	111	671	546518	791	1446187	665	126
APR	Actual	34490	622	6218	1735	4120	625	3545	1622	129285	623	8280	1171	0	0	0	0	1500	4390	187438	733	65	625	187503	733	694076	622	111
	Accum	128204	654	25053	1712	30965	667	12574	1609	494767	657	34502	1228	0	0	0	0	7780	4459	733845	776	176	654	734021	776	2140263	651	125
MAY	Actual	39015	644	3209	1717	9366	649	3792	1694	86678	647	9495	1128	0	0	0	0	7261	1658	158816	768	44	653	158860	768	692826	646	122
	Accum	167219	652	28262	1712	40331	663	16366	1629	581445	656	43997	1206	0	0	0	0	15041	3107	892661	775	220	654	892881	774	2833089	650	125
JUN	Actual	30430	643	6040	1690	11200	647	3690	1619	82908	643	7229	1078	0	0	0	0	4705	1429	146202	758	16	640	146218	758	631973	643	115
	Accum	197649	651	34302	1708	51531	659	20056	1627	664353	654	51226	1188	0	0	0	0	19746	2707	1038863	773	236	653	1039099	772	3465062	649	124
JUL	Actual	35843	654	5979	1764	16385	654	3671	1599	81798	653	8194	1065	0	0	0	0	917	3545	152787	759	18	656	152805	759	659345	653	106
	Accum	233492	651	40281	1717	67916	658	23727	1623	746151	654	59420	1171	0	0	0	0	20663	2744	1191650	771	254	653	1191904	770	4124407	649	121
AUG	Actual	41685	665	5054	1734	27808	670	3253	1653	37634	654	7756	1106	0	0	0	0	698	5645	123888	788	49	658	123937	788	556105	664	124
	Accum	275177	653	45335	1719	95724	662	26980	1626	783785	654	67176	1164	0	0	0	0	21361	2839	1315538	772	303	654	1315841	772	4680512	651	121
SEP	Projected	24600	850	4400	1600	9200	850	1700	1400	36500	855	1100	1100	0	0	0	0	15641	967	93141	920	230	850	93371	920	530800	850	70
	Accum	299777	669	49735	1708	104924	678	28680	1613	820285	663	68276	1163	0	0	0	0	37002	2048	1408679	782	533	739	1409212	782	5211312	671	111
OCT	Projected	22800	845	5100	1700	9870	850	1700	1400	0	0	1150	1150	0	0	0	0	58117	772	98737	860	170	850	98907	860	480600	850	10
	Accum	322577	682	54835	1707	114794	693	30380	1601	820285	663	69426	1162	0	0	0	0	95119	1268	1507416	787	703	766	1508119	787	5691912	686	101
NOV	Projected	21850	850	5100	1600	10500	850	1900	1500	0	0	1500	1300	0	0	0	0	72623	787	113473	860	130	840	113603	860	341300	840	20
	Accum	344427	692	59935	1698	125294	706	32280	1595	820285	663	70926	1165	0	0	0	0	167742	1060	1620889	792	833	777	1621722	792	6033212	695	97
DEC	Projected	22000	870	4500	1900	9500	880	2000	1500	0	0	1400	1300	0	0	0	0	103626	793	143026	860	100	850	143126	860	309500	850	10
	Accum	366427	703	64435	1712	134794	718	34280	1590	820285	663	72326	1168	0	0	0	0	271368	958	1763915	798	933	785	1764848	798	6342712	703	95

COLUMNS 1 THRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
COLUMN 6 ACRE FEET EQUALS SUM OF. MITTRY LAKE OUTLET CHANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1, BRUCE CHURCH DRAIN, NORTH GILA CANAL WASTEWAY, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
COLUMNS 1 THRU 7 ACTUAL SALINITIES IN PPM ARE MONTHLY AVERAGES BASED UPON CHEMICAL ANALYSIS
COLUMN 9 ACTUAL FLOWS IN ACRE FEET EQUAL COLUMN 10 MINUS COLUMNS 1 THRU 8.
COLUMNS 10 THRU 13 AS REPORTED BY IBWC.
COLUMN 14 EQUALS COLUMN 12 MINUS COLUMN 13. PROJECTED FLOWS AND SALINTIES ARE ESTIMATED BASED UPON HISTORICAL RECORDS.

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO:

AUG 25

YAO-6213
RES-9.00

Ms. Sylvia Waggoner
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - July

Dear Ms. Waggoner:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for July 2000.

If you have any questions, please contact Mr. Alex Jimenez at 520-343-8290.

Sincerely,

FRANK A. MACALUSO JR.

Frank Macaluso
Team Leader, River Scheduling
and Accounting Team

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Office
International Boundary
and Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Mr. Elston Grubaugh
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
(w/encl)

TABLE 2

PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS
COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY
USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA
July 2000

2000		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	22223	697	6408	1691	8870	692	2682	1596	107526	691	9539	1205	0	0	0	0	3334	3608	160582	838	40	689	160622	838	383841	688	150
	Accum	22223	697	6408	1691	8870	692	2682	1596	107526	691	9539	1205	0	0	0	0	3334	3608	160582	838	40	689	160622	838	383841	688	150
FEB	Actual	25240	664	6002	1685	9880	670	2866	1571	127700	668	7828	1294	0	0	0	0	-2174	-4374	177342	806	47	664	177389	806	439398	666	140
	Accum	47463	679	12410	1688	18750	680	5548	1583	235226	679	17367	1245	0	0	0	0	1160	18568	337924	821	87	675	338011	820	823239	676	144
MAR	Actual	46251	653	6425	1735	8095	658	3481	1638	130256	652	8855	1246	0	0	0	0	5120	1282	208463	743	24	657	208507	743	622948	650	93
	Accum	93714	666	18835	1704	26845	674	9029	1604	365482	669	26222	1245	0	0	0	0	6280	4475	546407	791	111	671	546518	791	1446187	665	126
APR	Actual	34490	622	6218	1735	4120	625	3545	1622	129285	623	8280	1171	0	0	0	0	1500	4390	187438	733	65	625	187503	733	694076	622	111
	Accum	128204	654	25053	1712	30965	667	12574	1609	494767	657	34502	1228	0	0	0	0	7780	4459	733845	776	176	654	734021	776	2140263	651	125
MAY	Actual	39015	644	3209	1717	9366	649	3792	1694	86678	647	9495	1128	0	0	0	0	7261	1658	158816	768	44	653	158860	768	692826	646	122
	Accum	167219	652	28262	1712	40331	663	16366	1629	581445	656	43997	1206	0	0	0	0	15041	3107	892661	775	220	654	892881	774	2833089	650	125
JUN	Actual	30430	643	6040	1690	11200	647	3690	1619	82908	643	7229	1078	0	0	0	0	4705	1429	146202	758	16	640	146218	758	631973	643	115
	Accum	197649	651	34302	1708	51531	659	20056	1627	664353	654	51226	1188	0	0	0	0	19746	2707	1038863	773	236	653	1039099	772	3465062	649	124
JUL	Actual	35843	654	5979	1764	16385	654	3671	1599	81798	653	8194	1065	0	0	0	0	917	3545	152787	759	18	656	152805	759	659345	653	106
	Accum	233492	651	40281	1717	67916	658	23727	1623	746151	654	59420	1171	0	0	0	0	20663	2744	1191650	771	254	653	1191904	771	4124407	649	122
AUG	Projected	28000	770	5100	1600	9500	780	2800	1400	40500	770	1400	1000	0	0	0	0	5218	73	123545	800	80	770	92598	800	559800	770	30
	Accum	261492	664	45381	1704	77416	673	26527	1599	786651	660	60820	1167	0	0	0	0	25881	2206	1315195	774	334	681	1284502	773	4684207	664	109
SEP	Projected	24600	850	4400	1600	9200	850	1700	1400	36500	855	1100	1100	0	0	0	0	15641	967	89190	920	230	850	93371	920	530800	850	70
	Accum	286092	680	49781	1694	86616	692	28227	1587	823151	668	61920	1166	0	0	0	0	41522	1739	1404385	783	564	750	1377873	783	5215007	683	100
OCT	Projected	22800	845	5100	1700	9870	850	1700	1400	0	0	1150	1150	0	0	0	0	42072	739	82692	860	170	850	82862	860	480600	850	10
	Accum	308892	692	54881	1695	96486	708	29927	1577	823151	668	63070	1166	0	0	0	0	83594	1236	1487077	787	734	773	1460735	787	5695607	697	91
NOV	Projected	21850	850	5100	1600	10500	850	1900	1500	0	0	1500	1300	0	0	0	0	88668	800	129518	860	130	840	129648	860	341300	840	20
	Accum	330742	702	59981	1687	106986	722	31827	1572	823151	668	64570	1169	0	0	0	0	172262	1011	1616595	793	864	783	1590383	793	6036907	705	88
DEC	Projected	22000	870	4500	1900	9500	880	2000	1500	0	0	1400	1300	0	0	0	0	115787	800	120252	860	100	850	155287	860	309500	850	10
	Accum	352742	713	64481	1702	116486	735	33827	1568	823151	668	65970	1172	0	0	0	0	288049	926	1736847	798	964	790	1745670	799	6346407	712	87

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United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO

1849-1999

YAO-6213
RES-9.00

JUL 25

Ms. Sylvia Waggoner
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - June 2000

Dear Ms. Waggoner:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for June 2000.

If you have any questions, please contact Mr. Alex Jimenez at 520-343-8290.

Sincerely,

FRANK A MACALUSO JR

Frank Macaluso
Team Leader, River Scheduling
and Accounting Team

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Office
International Boundary
and Water Commission
P.O. Box 5737
Yuma AZ 85366
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Mr. Elston Grubaugh
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
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RECEIVED
JUL 27 1999
RESOURCES PLANNING
& MANAGEMENT DEPARTMENT

TABLE 2

PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS

COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY

USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA

June 2000

2000		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	22223	697	6408	1691	8870	692	2682	1596	107526	691	9539	1205	0	0	0	0	3334	3608	160582	838	40	689	160622	838	383841	688	150
	Accum	22223	697	6408	1691	8870	692	2682	1596	107526	691	9539	1205	0	0	0	0	3334	3608	160582	838	40	689	160622	838	383841	688	150
FEB	Actual	25240	664	6002	1685	9880	670	2866	1571	127700	668	7828	1294	0	0	0	0	-2174	-4374	177342	806	47	664	177389	806	439398	666	140
	Accum	47463	679	12410	1688	18750	680	5548	1583	235226	679	17367	1245	0	0	0	0	1160	18568	337924	821	87	675	338011	820	823239	676	144
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	Accum	93714	666	18835	1704	26845	674	9029	1604	365482	669	26222	1245	0	0	0	0	6280	4475	546407	791	111	671	546518	791	1446187	665	126
APR	Actual	34490	622	6218	1735	4120	625	3545	1622	129285	623	8280	1171	0	0	0	0	1500	4390	187438	733	65	625	187503	733	694076	622	111
	Accum	128204	654	25053	1712	30965	667	12574	1609	494767	657	34502	1228	0	0	0	0	7780	4459	733845	776	176	654	734021	776	2140263	651	125
MAY	Actual	39015	644	3209	1717	9366	649	3792	1694	86678	647	9495	1128	0	0	0	0	7261	1658	158816	768	44	653	158860	768	692826	646	122
	Accum	167219	652	28262	1712	40331	663	16366	1629	581445	656	43997	1206	0	0	0	0	15041	3107	892661	775	220	654	892881	774	2833089	650	125
JUN	Actual	30430	643	6040	1690	11200	647	3690	1619	82908	643	7526	1061	0	0	0	0	4408	1482	146202	758	16	640	146218	758	631973	643	115
	Accum	197649	651	34302	1708	51531	659	20056	1627	664353	654	51523	1185	0	0	0	0	19449	2739	1038863	773	236	653	1039099	772	3465062	649	124
JUL	Projected	28350	685	5700	1750	7550	690	2950	1400	105000	680	1500	1100	0	0	0	0	-5407	203	145643	760	90	680	145733	760	700100	680	80
	Accum	225999	655	40002	1714	59081	663	23006	1598	769353	658	53023	1182	0	0	0	0	14042	3715	1184506	771	326	661	1184832	771	4165162	654	117
AUG	Projected	28000	770	5100	1600	9500	780	2800	1400	40500	770	1400	1000	0	0	0	0	5218	73	92518	800	80	770	92598	800	559800	770	30
	Accum	253999	668	45102	1701	68581	680	25806	1576	809853	663	54423	1178	0	0	0	0	19260	2723	1277024	773	406	682	1277430	773	4724962	668	105
SEP	Projected	24600	850	4400	1600	9200	850	1700	1400	36500	855	1100	1100	0	0	0	0	15641	967	93141	920	230	850	93371	920	530800	850	70
	Accum	278599	684	49502	1692	77781	700	27506	1566	846353	671	55523	1176	0	0	0	0	34901	1939	1370165	783	636	743	1370801	783	5255762	686	97
OCT	Projected	22800	845	5100	1700	9870	850	1700	1400	0	0	1150	1150	0	0	0	0	42072	739	82692	860	170	850	82862	860	480600	850	10
	Accum	301399	696	54602	1693	87651	717	29206	1556	846353	671	56673	1176	0	0	0	0	76973	1283	1452857	787	806	765	1453663	787	5736362	700	87
NOV	Projected	21850	850	5100	1600	10500	850	1900	1500	0	0	1500	1300	0	0	0	0	88668	800	129518	860	130	840	129648	860	341300	840	20
	Accum	323249	706	59702	1685	98151	731	31106	1553	846353	671	58173	1179	0	0	0	0	165641	1024	1582375	793	936	776	1583311	793	6077662	708	86
DEC	Projected	22000	870	4500	1900	9500	880	2000	1500	0	0	1400	1300	0	0	0	0	115787	800	155187	860	100	850	155287	860	309500	850	10
	Accum	345249	717	64202	1700	107651	744	33106	1549	846353	671	59573	1182	0	0	0	0	281428	932	1737562	799	1036	783	1738598	799	6387162	715	85

COLUMNS 1 THRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
COLUMN 6 ACRE FEET EQUALS SUM OF, MITTRY LAKE OUTLET CHANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1, BRUCE CHURCH DRAIN, NORTH GILA CANAL WASTEWAY, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
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United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO:

1849-1999

YAO-6213
RES-9.00

JUN 27 2000

RECEIVED
JUL 12 1999
RESOURCES PLANNING
& MANAGEMENT DEPARTMENT

Ms. Sylvia Waggoner
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - May 2000

Dear Ms. Waggoner:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for May 2000.

If you have any questions, please contact Mr. Alex Jimenez at 520-343-8290.

Sincerely,

FRANK A. MACALUSO JR

Frank Macaluso
Team Leader, River Scheduling
and Accounting Team

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Office
International Boundary
and Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Ms. Vickie Doyle
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
(w/encl)

TABLE 2

PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS

COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY

USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA

May 2000

		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		*7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
2000		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	22223	697	6408	1691	8870	692	2682	1596	107526	691	9539	1205	0	0	0	0	3334	3603	160582	838	40	689	160622	838	383841	688	150
	Accum	22223	697	6408	1691	8870	692	2682	1596	107526	691	9539	1205	0	0	0	0	3334	3603	160582	838	40	689	160622	838	383841	688	150
FEB	Actual	25240	664	6002	1685	9880	670	2866	1571	127700	668	7828	1294	0	0	0	0	-2174	-4374	177342	806	47	664	177389	806	439398	666	140
	Accum	47463	679	12410	1688	18750	680	5548	1583	235226	679	17367	1245	0	0	0	0	1160	18568	337924	821	87	675	338011	820	823239	676	144
MAR	Actual	46251	653	6425	1735	8095	658	3481	1638	130256	652	8855	1246	0	0	0	0	5120	1282	208483	743	24	657	208507	743	622948	650	93
	Accum	93714	666	18835	1704	26845	674	9029	1604	365482	669	26222	1245	0	0	0	0	6280	4475	546407	791	111	671	546518	791	1446187	665	126
APR	Actual	34490	622	6218	1735	4120	625	3545	1622	129285	623	8280	1171	0	0	0	0	1500	4390	187438	733	65	625	187503	733	694076	622	111
	Accum	128204	654	25053	1712	30965	667	12574	1609	494767	657	34502	1228	0	0	0	0	7780	4459	733845	776	176	654	734021	776	2140263	651	125
MAY	Actual	39015	644	3209	1717	9366	649	3792	1694	86678	647	9495	1128	0	0	0	0	7261	1650	158816	768	44	653	158860	768	692826	646	122
	Accum	167219	652	28262	1712	40331	663	16366	1629	581445	656	43997	1206	0	0	0	0	15041	3107	892661	775	220	654	892881	774	2833089	650	125
JUN	Projected	27450	690	5500	1700	9500	680	3500	1400	90500	680	1300	1100	0	0	0	0	5652	3034	143402	770	60	680	143462	770	790500	680	90
	Accum	194669	657	33762	1710	49831	666	19866	1589	671945	659	45297	1203	0	0	0	0	20693	3087	1036063	774	280	660	1036343	774	3623589	656	117
JUL	Projected	28350	685	5700	1750	7550	690	2950	1400	105000	680	1500	1100	0	0	0	0	-5407	-1642	145643	760	90	680	145733	760	700100	680	80
	Accum	223019	661	39462	1716	57381	669	22816	1564	776945	662	46797	1200	0	0	0	0	15286	4760	1181706	773	370	665	1182076	772	4323689	660	112
AUG	Projected	28000	770	5100	1600	9500	780	2800	1400	40500	770	1400	1000	0	0	0	0	5218	1637	92518	800	80	770	92598	800	559800	770	30
	Accum	251019	673	44562	1703	66881	685	25616	1546	817445	667	48197	1194	0	0	0	0	20504	3965	1274224	775	450	683	1274674	774	4883489	673	101
SEP	Projected	24600	850	4400	1600	9200	850	1700	1400	36500	855	1100	1100	0	0	0	0	15641	1417	93141	920	230	850	93371	920	530800	850	70
	Accum	275619	689	48962	1694	76081	705	27316	1537	853945	675	49297	1192	0	0	0	0	36145	2862	1367365	784	680	740	1368045	784	5414289	690	94
OCT	Projected	22800	845	5100	1700	9870	850	1700	1400	0	0	1150	1150	0	0	0	0	52611	928	82692	860	170	850	93401	860	480600	850	10
	Accum	298419	701	54062	1694	85951	722	29016	1529	853945	675	50447	1191	0	0	0	0	88756	1716	1450057	789	850	762	1461446	789	5894889	703	86
NOV	Projected	21850	850	5100	1600	10500	850	1900	1500	0	0	1500	1300	0	0	0	0	88668	892	129518	860	130	840	129648	860	341300	840	20
	Accum	320269	711	59162	1686	96451	736	30916	1527	853945	675	51947	1194	0	0	0	0	177424	1304	1579575	795	980	772	1591094	795	6236189	711	84
DEC	Projected	22000	870	4500	1900	9500	880	2000	1500	0	0	1400	1300	0	0	0	0	115787	874	155187	860	100	850	155287	860	309500	850	10
	Accum	342269	721	63662	1701	105951	749	32916	1526	853945	675	53347	1197	0	0	0	0	293211	1134	1734762	800	1080	779	1746381	801	6545689	717	83

COLUMNS 1 THRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
COLUMN 6 ACRE FEET EQUALS SUM OF, MITTRY LAKE OUTLET CHANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1, BRUCE CHURCH DRAIN, NORTH GILA CANAL WASTEWAY, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
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United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO:

YAO-6213
RES-9.00

MAY 31

Ms. Sylvia Waggoner
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - April 2000

Dear Ms. Waggoner:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for April 2000.

If you have any questions, please contact Mr. Alex Jimenez at 520-343-8290.

Sincerely,

FRANK A. MACALUSO JR.

Frank Macaluso
Team Leader, River Scheduling
and Accounting Team

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Office
International Boundary
and Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Ms. Vickie Doyle
Water Resources
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
(w/encl)

TABLE 2

PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS

COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY

USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA

April 2000

		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
2000		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	22223	697	6408	1691	8870	692	2682	1596	107526	691	9539	1205	0	0	0	0	3334	3608	160582	838	40	689	160622	838	383841	688	150
	Accum	22223	697	6408	1691	8870	692	2682	1596	107526	691	9539	1205	0	0	0	0	3334	3608	160582	838	40	689	160622	838	383841	688	150
FEB	Actual	25240	664	6002	1685	9880	670	2866	1571	127700	668	7828	1294	0	0	0	0	-2174	-4374	177342	806	47	664	177389	806	439398	666	140
	Accum	47463	679	12410	1688	18750	680	5548	1583	235226	679	17367	1245	0	0	0	0	1160	18568	337924	821	87	675	338011	821	823239	676	145
MAR	Actual	46251	653	6425	1735	8095	658	3481	1638	130256	652	8855	1246	0	0	0	0	5120	1282	208483	743	24	657	208507	743	603828	650	93
	Accum	93714	666	18835	1704	26845	674	9029	1604	365482	669	26222	1245	0	0	0	0	6280	4475	546407	791	111	671	546518	791	1427067	665	126
APR	Actual	34490	622	6218	1735	4120	625	3545	1622	129285	623	8280	1171	0	0	0	0	1500	4390	187438	733	65	625	187503	733	694076	622	111
	Accum	128204	654	25053	1712	30965	667	12574	1609	494767	657	34502	1228	0	0	0	0	7780	4459	733845	776	176	654	734021	776	2121143	651	125
MAY	Projected	26800	740	6000	1600	10900	745	3650	1400	125500	690	1570	1200	0	0	0	0	-22965	280	140916	760	90	750	151545	760	830100	750	10
	Accum	155004	669	31053	1690	41865	687	16224	1562	620267	664	36072	1226	0	0	0	0	-15185	-1861	874761	774	266	687	885566	774	2951243	679	95
JUN	Projected	27450	690	5500	1700	9500	680	3500	1400	90500	680	1300	1100	0	0	0	0	5652	3034	143402	770	60	680	143462	770	790500	680	90
	Accum	182454	672	36553	1692	51365	686	19724	1533	710767	666	37372	1222	0	0	0	0	-9533	-4763	1018163	773	326	685	1029028	773	3741743	679	94
JUL	Projected	28350	685	5700	1750	7550	690	2950	1400	105000	680	1500	1100	0	0	0	0	-5407	-1642	145643	760	90	680	145733	760	700100	680	80
	Accum	210804	674	42253	1700	58915	687	22674	1516	815767	668	38872	1217	0	0	0	0	-14940	-3633	1163806	772	416	684	1174761	771	4441843	679	92
AUG	Projected	28000	770	5100	1600	9500	780	2800	1400	40500	770	1400	1000	0	0	0	0	5218	1637	92518	800	80	770	92598	800	559800	770	30
	Accum	238804	685	47353	1689	68415	700	25474	1503	856267	672	40272	1210	0	0	0	0	-9722	-6462	1256324	774	496	698	1267359	774	5001643	689	84
SEP	Projected	24600	850	4400	1600	9200	850	1700	1400	36500	855	1100	1100	0	0	0	0	15641	1417	93141	920	230	850	93371	920	530800	850	70
	Accum	263404	701	51753	1681	77615	717	27174	1497	892767	680	41372	1207	0	0	0	0	5919	14358	1349465	784	726	746	1360730	784	5532443	705	79
OCT	Projected	22800	845	5100	1700	9870	850	1700	1400	0	0	1150	1150	0	0	0	0	52611	928	82692	860	170	850	93401	860	480600	850	10
	Accum	286204	712	56853	1683	87485	732	28874	1491	892767	680	42522	1205	0	0	0	0	58530	2286	1432157	788	896	766	1454131	789	6013043	716	72
NOV	Projected	21850	850	5100	1600	10500	850	1900	1500	0	0	1500	1300	0	0	0	0	88668	892	129518	860	130	840	129648	860	341300	840	20
	Accum	308054	722	61953	1676	97985	745	30774	1492	892767	680	44022	1208	0	0	0	0	147198	1446	1561675	794	1026	775	1583779	794	6354343	723	71
DEC	Projected	22000	870	4500	1900	9500	880	2000	1500	0	0	1400	1300	0	0	0	0	115787	874	155187	860	100	850	155287	860	309500	850	10
	Accum	330054	732	66453	1691	107485	757	32774	1492	892767	680	45422	1211	0	0	0	0	262985	1194	1716862	800	1126	782	1739066	800	6663843	729	71

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United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO

YAO-6213
RES-9.00

MAY 17 2000

Ms. Sylvia Waggoner
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - March 2000

Dear Ms. Waggoner:

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Team Leader, River Scheduling
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cc: Mr. Alton L. Goff
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Ms. Vickie Doyle
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Imperial Irrigation District
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March 2000

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		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	22223	697	6408	1691	8870	692	2682	1596	107526	691	9539	1205	0	0	0	0	3334	3608	160582	838	40	689	160622	838	383841	688	150
	Accum	22223	697	6408	1691	8870	692	2682	1596	107526	691	9539	1205	0	0	0	0	3334	3608	160582	838	40	689	160622	838	383841	688	150
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	Accum	47463	679	12410	1688	18750	680	5548	1583	235226	679	17367	1245	0	0	0	0	1160	27286	337924	821	87	675	338011	821	823239	676	145
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	Accum	93714	666	18835	1704	26845	674	9029	1604	365482	669	26168	1239	0	0	0	0	6334	6071	546407	791	111	671	546518	791	1427067	665	126
APR	Projected	28760	775	5800	1850	9600	780	3500	1200	148500	670	1580	1200	0	0	0	0	-32944	307	185874	760	80	750	164876	760	865000	750	10
	Accum	122474	692	24635	1738	36445	702	12529	1491	513982	669	27748	1237	0	0	0	0	-26610	-1065	732281	783	191	704	711394	784	2292067	697	87
MAY	Projected	26800	740	6000	1600	10900	745	3650	1400	125500	690	1570	1200	0	0	0	0	-22965	280	140916	760	90	750	151545	760	830100	750	10
	Accum	149274	701	30635	1711	47345	712	16179	1471	639482	673	29318	1235	0	0	0	0	-49575	-442	873197	780	281	719	862939	780	3122167	711	69
JUN	Projected	27450	690	5500	1700	9500	680	3500	1400	90500	680	1300	1100	0	0	0	0	5652	3034	143402	770	60	680	143462	770	790500	680	90
	Accum	176724	699	36135	1710	56845	706	19679	1458	729982	674	30618	1229	0	0	0	0	-43923	-889	1016599	778	341	712	1006401	778	3912667	705	74
JUL	Projected	28350	685	5700	1750	7550	690	2950	1400	105000	680	1500	1100	0	0	0	0	-5407	-1642	145643	760	90	680	145733	760	700100	680	80
	Accum	205074	697	41835	1715	64395	704	22629	1451	834982	675	32118	1223	0	0	0	0	-49330	-971	1162242	776	431	705	1152134	776	4612767	701	75
AUG	Projected	28000	770	5100	1600	9500	780	2800	1400	40500	770	1400	1000	0	0	0	0	5218	1637	92518	800	80	770	92598	800	559800	770	30
	Accum	233074	706	46935	1703	73895	714	25429	1445	875482	679	33518	1214	0	0	0	0	-44112	-1280	1254760	778	511	716	1244732	778	5172567	709	69
SEP	Projected	24600	850	4400	1600	9200	850	1700	1400	36500	855	1100	1100	0	0	0	0	15641	1417	93141	920	230	850	93371	920	530800	850	70
	Accum	257674	720	51335	1694	83095	729	27129	1442	911982	686	34618	1210	0	0	0	0	-28471	-2762	1347901	788	741	757	1338103	788	5703367	722	66
OCT	Projected	22800	845	5100	1700	9870	850	1700	1400	0	0	1150	1150	0	0	0	0	52611	928	82692	860	170	850	93401	860	480600	850	10
	Accum	280474	730	56435	1694	92965	742	28829	1440	911982	686	35768	1208	0	0	0	0	24140	5279	1430593	792	911	775	1431504	792	6183967	732	61
NOV	Projected	21850	850	5100	1600	10500	850	1900	1500	0	0	1500	1300	0	0	0	0	88668	892	129518	860	130	840	129648	860	341300	840	20
	Accum	302324	738	61535	1687	103465	753	30729	1443	911982	686	37268	1212	0	0	0	0	112808	1831	1560111	797	1041	783	1561152	798	6525267	737	61
DEC	Projected	22000	870	4500	1900	9500	880	2000	1500	0	0	1400	1300	0	0	0	0	115787	874	155187	860	100	850	155287	860	309500	850	10
	Accum	324324	747	66035	1701	112965	764	32729	1447	911982	686	38668	1215	0	0	0	0	228595	1346	1715298	803	1141	789	1716439	804	6834767	742	61

COLUMNS 1 THRU 7 ACTUAL AND ACCUM. ACTUAL FLOWS IN ACRE FEET ARE AS REPORTED BY USGS & USBR.
COLUMN 6 ACRE FEET EQUALS SUM OF, MITTRY LAKE OUTLET CHANNEL, LAGUNA CANAL WASTEWAY, LEVEE CANAL WASTEWAY, BRUCE CHRUCH WASTEWAY, STATION 750+50 WASTEWAY, NORTH GILA DRAIN #1, BRUCE CHURCH DRAIN, NORTH GILA CANAL WASTEWAY, GILA RIVER AT DOME, SOUTH GILA TERMINAL WASTEWAY, RESERVATION MAIN DRAIN #4, YUMA WASTE WATER PLANT, AND ARAZ DRAIN
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COLUMN 9 ACTUAL FLOWS IN ACRE FEET EQUAL COLUMN 10 MINUS COLUMNS 1 THRU 8.
COLUMNS 10 THRU 13 AS REPORTED BY IBWC.
COLUMN 14 EQUALS COLUMN 12 MINUS COLUMN 13. PROJECTED FLOWS AND SALINTIES ARE ESTIMATED BASED UPON HISTORICAL RECORDS.
COLUMN 9 ACTUAL FLOWS IN ACRE FEET EQUAL COLUMN 10 MINUS COLUMNS 1 THRU 8.
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United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
P.O. Box D
Yuma, Arizona 85366

IN REPLY REFER TO

1849-1999

DEC 13 1999

YAO-6213
RES-9.00

Mr. Yusuf Farran
International Boundary and
Water Commission
The Commons, Building C,
Suite 310
4171 North Mesa Street
El Paso TX 79902

Subject: Salinity Differentials Between Imperial Dam and Northerly International Boundary - October 1999

Dear Mr. Farran:

Enclosed is a copy of our latest report which provides sources of flow and monthly salinity differentials between Imperial Dam and the Northerly International Boundary for October 1999.

If you have any questions, please contact Mr. Alex Jimenez at 520-343-8290.

Sincerely,

FRANK A. MACALUSO JR.

Frank Macaluso
Team Leader, River Scheduling
and Accounting Team

Enclosure

cc: Mr. Alton L. Goff
Chief, Yuma Office
International Boundary
and Water Commission
P.O. Box 5737
Yuma AZ 85366
(w/encl)

Ms. Vickie Doyle
Water Recourses
Imperial Irrigation District
P.O. Box 937
Imperial CA 92251
(w/encl)

DEC 20 1999

TABLE 2

PROVISIONAL RECORDS OF MONTHLY CONSTITUENT FLOWS AND TOTAL DISSOLVED SOLIDS

COLORADO RIVER FROM IMPERIAL DAM TO THE NORTHERLY INTERNATIONAL BOUNDARY

USBR WATER OPERATIONS, YUMA AREA OFFICE, YUMA, ARIZONA

October 1999

		1 Flow Below Imperial Dam		2 S. Gila D.P.O.C.s		3 Yuma Main Canal Wasteway		4 Yuma Mesa Pump Outlet Channel		5 Pilot Knob Power Plant & Wasteway		6 Other Measured Flows		7 Wellton-Mohawk Returns		8 M.O.D.E. 2 Returns		9 Unmeasured Flows		10 Northerly Int'l. Boundary		11 Cooper Wasteway		12 N. I. B. & Cooper Wasteway		13 Colorado River at Imp. Dam		14 Sal. Diff.
1999		AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	AF	PPM	PPM
JAN	Actual	56100	681	6001	1822	27410	682	4199	1540	298372	672	13490	1215	0	0	0	0	3261	2224	408833	730	162	697	408995	730	623980	687	43
	Accum	56100	681	6001	1822	27410	682	4199	1540	298372	672	13490	1215	0	0	0	0	3261	2224	408833	730	162	697	408995	730	623980	687	43
FEB	Actual	41820	706	6361	1819	7800	702	3372	1580	91400	700	8014	1337	0	0	0	0	10919	2768	169686	856	144	704	169830	856	418274	701	155
	Accum	97920	692	12362	1820	35210	686	7571	1558	389772	679	21504	1260	0	0	0	0	14180	2643	578519	767	306	700	578825	767	1042254	693	74
MAR	Actual	31790	714	7086	1706	11760	715	3348	1670	126012	710	8323	1283	0	0	0	0	13499	658	201818	782	53	709	201871	782	607874	710	72
	Accum	129710	697	19448	1779	46970	694	10919	1592	515784	686	29827	1267	0	0	0	0	27679	1675	780337	771	359	702	780696	771	1650128	699	72
APR	Actual	39440	684	6936	1851	9739	689	3511	1640	140650	690	7693	1302	0	0	0	0	-597	-1591	207372	773	30	686	207402	773	641177	684	89
	Accum	169150	694	26384	1798	56709	693	14430	1604	656434	687	37520	1274	0	0	0	0	27082	1747	987709	771	389	700	988098	771	2291305	695	76
MAY	Actual	34940	701	6532	1813	5324	704	3816	1490	103836	705	7925	1294	0	0	0	0	7234	775	169607	795	70	707	169677	795	670254	705	90
	Accum	204090	695	32916	1801	62033	694	18246	1580	760270	690	45445	1277	0	0	0	0	34316	1542	1157316	775	459	701	1157775	775	2961559	697	78
JUN	Actual	59570	670	6054	1827	1630	681	3850	1630	80050	685	10632	1131	0	0	0	0	3080	990	164866	778	51	681	164917	778	637348	680	98
	Accum	263660	690	38970	1805	63663	693	22096	1589	840320	689	56077	1250	0	0	0	0	37396	1497	1322182	775	510	699	1322692	775	3598907	694	81
JUL	Actual	29100	680	5185	1861	4739	678	3874	1580	146100	677	11772	1071	0	0	0	0	1425	-1601	202195	732	17	668	202212	732	647881	678	54
	Accum	292760	689	44155	1811	68402	692	25970	1587	986420	687	67849	1219	0	0	0	0	38821	1383	1524377	769	527	698	1524904	769	4246788	692	77
AUG	Actual	30268	696	5977	1856	16984	686	3723	1700	46780	712	7292	1161	0	0	0	0	7607	736	118631	822	11	682	118642	822	537163	698	124
	Accum	323028	689	50132	1817	85386	691	29693	1602	1033200	688	75141	1213	0	0	0	0	46428	1277	1643008	773	538	698	1643546	773	4783951	692	81
SEP	Actual	27300	642	5677	1802	24230	648	2300	1660	199600	636	8723	1106	0	0	0	0	-2680	144	265150	692	85	640	265235	692	653494	643	49
	Accum	350328	686	55809	1815	109616	682	31993	1606	1232800	680	83864	1202	0	0	0	0	43748	1347	1908158	762	623	690	1908781	762	5437445	686	76
OCT	Actual	74814	618	5830	1683	12718	620	2275	1630	259025	620	9194	1202	0	0	0	0	8322	2015.3	372178	688	192	621	372370	688	756892	620	68
	Accum	425142	674	61639	1803	122334	675	34268	1607	1491825	670	93058	1202	0	0	0	0	52070	1453	2280336	750	815	674	2281151	750	6194337	678	72
NOV	Projected	11570	740	5100	1650	9800	740	1340	1360	0	0	10200	1300	0	0	0	0	75490	884	113500	860	130	850	113630	860	341315	830	30
	Accum	436712	675	66739	1791	132134	680	35608	1598	1491825	670	103258	1212	0	0	0	0	127560	1116	2393836	755	945	698	2394781	755	6535652	686	69
DEC	Projected	18800	770	5400	1680	9700	770	3100	1450	0	0	11000	1300	0	0	0	0	65588	868	120252	860	100	880	113688	860	309498	850	10
	Accum	455512	679	72139	1783	141834	686	38708	1586	1491825	670	114258	1220	0	0	0	0	193148	1032	2514088	760	1045	715	2508469	760	6845150	694	66

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5-120

IMPERIAL IRRIGATION DISTRICT

OPERATING HEADQUARTERS • P. O. BOX 937 • IMPERIAL, CALIFORNIA 92251

September 3, 1996

Post-It™ brand fax transmittal memo 7671	# of pages ▸ 2
To Eric Yoder	From Tina Anderholt
Co. IID.	Co. IID-WR
Dept. E-A.	Phone # 339-9038
Fax # X7191	Fax # X 7009

Mr. Jack A. Barnett
Executive Director
Colorado River Basin Salinity Control Forum
106 West 500 South, Suite 101
Bountiful, Utah 84010

Subject: Comments-*1996 Review of Water Quality Standards for Salinity, Colorado River System*

Dear ~~Mr. Barnett~~: Jack —

The Imperial Irrigation District (IID) has examined the *1996 Review of Water Quality Standards for Salinity, Colorado River System* (*Review*), dated June 1996, and appreciates being given the opportunity to comment on this document. As the most southerly user of Colorado River waters within the United States, the IID is a primary beneficiary of Colorado River salinity control measures and sincerely supports the efforts of the Colorado River Basin Salinity Control Forum (Forum). The IID concurs with the general recommendations set forth in this *Review*, and supports the salinity control measures the Forum has advocated to achieve current and future standards. At this time, the IID also continues to endorse the existing numeric Colorado River salinity criteria and encourages the attainment of these target levels.

However, as the largest and most downstream user of Colorado River waters in both California and the Lower Basin, it is imperative to the IID that the salinity control programs noted in this *Review* not only be implemented, but placed on an accelerated schedule as well. The IID and its agricultural users continue to be damaged due to the increasing salinity of the Colorado River, both by economic losses and the requirement to use more water to sustain an acceptable salt balance. If the current scheduling of planned projects is not expedited, the likelihood of failing to meet targeted salinity standards becomes not only a danger, but a reality. According to this *Review*, when existing *observed* salinity levels are adjusted to reflect the full impact of the current level of water development within the basin (long-term mean water supply), these *adjusted* salinity concentrations exceed the Forum's numeric criteria at all three measurement stations. Of particular concern to the IID are the salinity levels at Imperial Dam (IID's point of diversion), but we obviously have a vested interest in water quality at the two upstream stations as well.

While the goal of the Colorado River Basin Salinity Control Program (Program) is ultimately a 1.48 million ton reduction in the salt loading of the Colorado River, the IID does not feel that the pace of the current schedule is adequate to obtain this objective. In fact, based on the analysis outlined in this *Review*, the 1995 Program "backlog" involves controls that would reduce Colorado River salinity by more than 418,000 tons. This is in addition to future controls designed to lower the River's salt load by 437,000 tons over the next twenty years. Thus, according to the *Review*, this translates to a need for "45,000 tons of new salinity control measures . . each year . . . (until) 2015." Given the current status and recent funding trends of the Program, the IID does not feel that adequate efforts are being put forth to implement additional salinity control projects. The tables that provide exceedance evaluation analyses for the three measurement stations in the *Review* further illustrate this point. The text in Appendix C notes that, with only the existing salinity controls in place, "there is a (sic) 18 percent chance

that salinity may go above 1,000 mg/L at Imperial Dam (and) . . . the mean of 882 mg/L is above the numeric criteria level of 879 mg/L. *This is because there is not currently enough salinity control to offset water development.*" (emphasis added) These figures provide the basis and impetus for the IID's request for an accelerated Program implementation schedule. The Review also notes that, based on available data, "the measured salinity will not exceed the numeric criteria during the next three years". The IID disagrees with this conclusion. The Program allows for temporary increases due to the completion of additional water development projects provided "appropriate control measures" are planned, even if they are not implemented at the time of development. However, the District does not feel that appropriate funding and/or scheduling currently exists to implement these controls.

The potential impact of the Program's failure to achieve targeted goals in a timely manner is staggering. Damages to the Lower Basin will exceed an estimated $1 billion by 2015 if further salinity control measures are not implemented. The damages to the IID and its agricultural community are briefly documented in the *Review*, and are primarily a result of lower crop yields, increased irrigation management costs, and additional drainage requirements, as well as increased water use required to maintain a salt balance. Also touched upon, and of perhaps even more significance, are the problems that our irrigation district faces as a result of increasingly strict regulatory restrictions on our drain water quality. As the salinity of our inflow waters increase, we also experience a subsequent decrease in drain water quality and ultimately a degradation in the waters of the Salton Sea drainage basin.

While no recent studies have been conducted to pinpoint the true magnitude of the damages resulting from the River's increased salinity, the use of data from previous years (1976-1985) would indicate an annual loss on the order of $700 million (one-third of which is thought to be agriculturally-based). Due to the age of this data, there also appears to be an urgent need to update this information for the 1986 to 1995 time period in order to develop a more accurate and current estimate of the potential economic impacts resulting from increased salinity levels.

As noted in this *Review*, federal funding has been reduced in recent years (since 1994). Combined with the Program's transition to a basin-wide planning approach, it appears to the IID that the Program is not only off-course, but slowing to a pace that will cause irrevocable harm and economic damage to the IID, its water users, and its surrounding communities. The IID is thankful that the Colorado River Basin's hydrology has been favorable since the Program has gotten off-track, but this can only mitigate the effects of salinity for so long.

It is with great regard to the Forum's past efforts and accomplishments that the IID requests the acceleration of planned salinity control projects and the update of the 1988 Bureau of Reclamation report analyzing the estimated economic impacts of Colorado River salinity. We are well aware of the funding restrictions and difficulties that most public agencies are facing in the current economy, and sincerely appreciate all of the Forum's achievements to date. It is however, in our consumer's best interest to actively promote and encourage the timely attainment of the Forum's targeted salinity goals. Once again, let us thank you for the opportunity to comment on the 1996 *Review* and voice both our support and concern for the existing Program.

Sincerely,

M. J. Clinton

Michael J. Clinton
General Manager