

## APPORTIONMENT OF THE WATERS OF THE INDUS RIVER SYSTEM BETWEEN THE PROVINCES OF PAKISTAN

21st March, 1991, will go down in the history of Pakistan as a pivotal breakthrough in its leap towards the 21st century and turning point in its march towards national consolidation. On that day was unraveled a dispute that had been festering in this part of the subcontinent for the past seventy years. As a follow-up to the meeting of the Chief Ministers at Lahore on March 3, 1991, a meeting of the representatives of the four provinces was held at Lahore on March 04, 1991. Another meeting was held at Karachi on March 16, 1991. The list of participants is attached.

The participants agreed on the following points:-

1. There was an agreement that the issue relating to Apportionment of the Waters of the Indus River System should be settled as quickly as possible,
2. In the light of the accepted water distributional principles the following apportionment was agreed to:-

PROVINCE	KHARIF	RABI	TOTAL
PUNJAB	37.07	18.87	55.94
SINDH	33.94	14.82	48.76
N.W.F.P. (a)	3.48	2.30	5.78
(b) CIVIL CANALS**	1.80	1.20	3.00
BALUCHISTAN	2.85	1.02	3.87
TOTAL	77.34 + 1.80	37.01 +1.20	114.35 +3.00

\*Including already sanctioned Urban and Industrial uses for Metropolitan Karachi.

\*\*Ungauged Civil Canals above the rim stations.

3. N.W.F.P / Baluchistan Projects which are under execution have been provided their authorized quota of water as existing uses.

4. Balance river supplies (including flood supplies and future storages) shall be distributed as below:-

Punjab	SINDH	Balochistan	NWFP	TOTAL
37%	37%	12%	14%	100%

5. Industrial and Urban Water supplies for Metropolitan city, for which there were sanctioned allocations will be accorded priority.
6. The need for storages, wherever feasible on the Indus and other rivers was admitted and recognised by the participants for planned future agricultural development.
7. The need for certain minimum escapage to sea, below Kotri, to check sea intrusion was recognised. Sindh held the view, that the optimum level was 10 M.A.F., which was discussed at length, while other studies indicated lower/higher figures. It was, therefore, decided that further studies would be undertaken to establish the minimal escapage needs down stream Kotri.
8. There would be no restrictions on the Provinces to undertake new projects within their agreed shares.
9. No restrictions are placed on small schemes not exceeding 5000 acres above elevation of 1200 ft. SPD.
10. No restrictions are placed on developing irrigation uses in the Kurram / Gomal / Kohat basins, so long as these do not adversely affect the existing uses on these rivers.
11. There are no restrictions on Baluchistan, to develop the water resources of the Indus right bank tributaries, flowing through its areas.
12. The requirements of LBOD will be met out of the flood supplies In accordance with the agreed sharing formula.
13. For the implementation of this accord, the need to establish an Indus River System Authority was recognised and accepted. It would have headquarters at Lahore and would have representation from all the four provinces.

14.

- a. The system-wise allocation will be worked out separately, on ten daily basis and will be attached with this agreement as part and parcel of it.
- b. The record of actual average system uses for the period 1977-82, would form the guide line for developing a future regulation pattern. These ten daily uses would be adjusted pro-prata to correspond to the indicated seasonal allocations of the different canal systems and would form the basis for sharing shortages and surpluses on all Pakistan basis.
- c. The existing reservoirs would be operated with priority for the irrigation uses of the Provinces.
- d. The provinces will have the freedom within their allocations to modify system-wise and period-wise uses.
- e. All efforts would be made to avoid wastages. Any surpluses may be used by another province, but this would not establish any rights to such uses.

10 – Day Seasonal System Wise Adjusted Allocations  
Excluding Flood Flows & Future Storages are as Under:-

10-DAY SEASONAL SYSTEMWISE ADJUSTED ALLOCATIONS (EXCLUDING FLOOD FLOWS & FUTURE STORAGES)													1 of 8 E
PUNJAB – KHARIF													
PERIOD		F.L.C.	M/R INT	CBDC	S.V.C. (Upper)	S.V.C. (Lower)	TRIMMU	PANJNAD	THAL	TAUNSA	CRBC	GREATER THAL	TOTAL (1000 X Cs)
APR	1.	24.2	0.1	1.8	8.3	3.9	2.9	4.3	6.0	4.9	1.3	2.6	60.3
	2.	24.7	0.3	1.8	10.8	3.7	3.4	5.1	6.4	4.3	0.18	3.4	64.7
	3.	28.1	1.1	2.0	13.3	5.5	5.5	7.3	6.4	7.9	0.5	4.9	82.5
MAY	1.	30.1	1.3	2.1	16.0	8.0	5.9	7.6	6.6	10.0	0.7	5.4	93.7
	2.	30.8	2.0	2.1	17.2	8.7	6.1	9.0	6.8	11.5	1.1	5.5	100.8
	3.	31.6	2.4	2.2	18.1	9.2	6.3	9.5	6.8	11.9	1.3	5.5	104.8
JUN	1.	32.3	2.6	2.3	18.5	9.4	6.6	10.5	6.8	13.0	1.7	5.4	109.1
	2.	33.2	3.6	2.2	18.7	9.7	6.7	10.4	6.9	13.5	1.8	5.5	112.2
	3.	34.0	4.0	2.2	19.2	9.6	6.7	10.7	6.7	14.0	1.8	5.7	114.6
JUL	1.	32.7	5.4	2.2	19.2	9.9	6.6	10.4	6.6	14.3	1.7	5.8	114.8
	2.	29.6	5.0	2.0	17.9	8.7	5.7	9.9	6.3	12.5	1.7	5.1	104.4
	3.	27.8	6.1	1.8	16.8	8.7	5.1	9.6	5.8	11.8	1.8	4.7	100.0
AUG	1.	28.2	5.8	1.7	17.4	8.2	5.3	9.6	6.0	11.5	1.8	4.8	100.3
	2.	31.5	6.1	1.8	19.3	9.3	6.3	10.6	6.3	11.3	1.8	5.4	109.7
	3.	34.6	4.9	2.0	20.6	10.1	6.8	11.1	6.6	13.9	1.8	5.9	118.3
SEP	1.	33.9	4.4	2.1	21.0	10.0	6.8	11.1	6.8	14.4	1.8	5.9	118.2
	2.	33.9	3.7	2.1	20.6	9.8	6.8	10.8	6.8	14.0	1.8	5.8	116.1
	3.	33.1	2.3	2.2	19.6	9.9	6.9	11.0	6.8	13.0	1.8	5.5	112.0
<b>TOTAL MAF</b>		<b>11.18</b>	<b>1.24</b>	<b>0.74</b>	<b>6.31</b>	<b>3.07</b>	<b>2.15</b>	<b>3.40</b>	<b>2.37</b>	<b>4.19</b>	<b>0.55</b>	<b>1.87</b>	<b>37.07</b>

**10-DAY SEASONAL SYSTEMWISE ADJUSTED ALLOCATIONS  
(EXCLUDING FLOOD FLOWS & FUTURE STORAGES)**

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**PUNJAB – RABI**

PERIOD	F.L.C.	M-R INT	CBDC	S.V.C. (Upper)	S.V.C. (Lower)	TRIMMU	PANJNAD	THAL	TAUNSA	CRBC	GREATER THAL	TOTAL (1000 X Cs)	
OCT	1.	28.2	1.0	1.4	15.2	8.9	6.5	10.3	6.3	11.9	1.3	—	90.9
	2.	26.7	0.6	1.9	13.4	8.4	5.7	9.2	5.9	9.8	0.9	—	82.4
	3.	25.4	0.7	2.0	11.3	6.3	4.6	7.2	6.2	6.2	1.0	—	70.8
NOV	1.	24.3	0.3	2.1	9.6	4.3	3.6	4.9	6.1	4.5	0.9	—	60.5
	2.	23.5	0.1	2.0	8.6	3.3	3.1	4.0	6.0	5.0	1.0	—	56.7
	3.	22.4	0.0	2.0	8.7	2.9	2.9	3.7	6.0	3.1	1.0	—	52.7
DEC	1.	22.3	0.0	1.9	9.4	4.0	3.2	3.6	5.9	2.6	0.6	—	53.5
	2.	21.3	0.0	1.8	8.9	3.7	3.3	3.5	5.7	2.9	0.6	—	51.8
	3.	17.3	0.0	1.0	5.5	3.5	2.9	1.9	5.3	1.5	0.7	—	39.6
JAN	1.	9.9	0.2	0.1	1.0	6.7	4.1	1.4	1.8	0.6	0.8	—	26.7
	2.	8.7	0.1	0.8	3.5	4.3	2.6	2.1	0.1	1.8	0.8	—	24.7
	3.	10.4	0.1	1.3	7.1	0.5	0.2	2.9	2.0	3.1	0.9	—	28.6
FEB	1.	19.6	0.1	1.6	9.4	0.8	1.0	3.1	4.8	3.7	1.3	—	45.4
	2.	18.5	0.7	1.7	9.6	2.3	2.5	3.1	5.7	3.3	1.1	—	49.5
	3.	17.8	0.2	1.5	7.6	3.6	2.4	2.9	4.9	3.1	0.9	—	45.0
MAR	1.	18.0	0.6	1.1	10.1	4.3	2.9	2.9	4.8	3.4	1.5	—	49.7
	2.	20.0	0.1	1.2	11.3	5.2	4.0	4.3	5.3	3.7	1.3	—	56.4
	3.	21.3	0.1	1.2	10.0	5.5	3.5	4.3	5.6	4.4	1.2	—	57.1
<b>TOTAL MAF</b>	<b>7.13</b>	<b>0.10</b>	<b>0.53</b>	<b>3.21</b>	<b>1.57</b>	<b>1.18</b>	<b>1.52</b>	<b>1.77</b>	<b>1.50</b>	<b>0.36</b>	<b>—</b>	<b>18.87</b>	

**INDUS WATER ACCORD**  
**10-DAY SEASONAL SYSTEMWISE ADJUSTED ALLOCATIONS**  
**(EXCLUDING FLOOD FLOWS & FUTURE STORAGES)**

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**SINDH — KHARIF**

PERIOD		GUDDU BARRAGE SYSTEM	SUKKUR BARRAGE SYSTEM	KOTRI BARRAGE SYSTEM	TOTAL (1000 X Cs)
APR	1.	0.00	34.00	6.20	40.20
	2.	0.20	34.30	6.80	41.30
	3.	1.40	31.60	6.90	39.90
MAY	1.	3.70	35.10	12.30	51.10
	2.	6.50	39.50	15.70	61.70
	3.	12.60	43.10	21.70	77.40
JUN	1.	22.70	49.10	26.90	98.70
	2.	31.10	56.00	32.50	119.50
	3.	35.20	60.60	33.80	129.60
JUL	1.	41.10	61.20	34.20	136.50
	2.	36.20	57.10	29.80	123.10
	3.	30.10	54.30	31.00	115.40
AUG	1.	28.50	54.00	27.60	110.10
	2.	27.80	54.40	23.40	117.80
	3.	28.70	54.60	23.80	107.10
SEP	1.	26.50	55.10	27.60	109.20
	2.	26.79	55.59	25.10	107.40
	3.	25.79	55.80	23.30	104.90
<b>TOTAL MAF</b>		<b>7.77</b>	<b>17.90</b>	<b>8.27</b>	<b>33.94</b>

**INDUS WATERS ACCORD**  
**10-DAY SEASONAL SYSTEMWISE ADJUSTED ALLOCATIONS**  
**(EXCLUDING FLOOD FLOWS & FUTURE STORAGES)**

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**SINDH — RABI**

PERIOD		GUDDU BARRAGE SYSTEM	SUKKUR BARRAGE SYSTEM	KOTRI BARRAGE SYSTEM	TOTAL (1000 X Cs)
OCT	1.	17.60	43.60	18.00	79.20
	2.	10.20	37.80	14.50	62.50
	3.	6.30	33.00	11.30	50.60
NOV	1.	4.10	31.40	9.60	45.10
	2.	3.50	31.40	7.50	42.40
	3.	3.20	31.10	5.70	40.00
DEC	1.	2.60	31.40	5.00	39.00
	2.	1.99	31.80	4.70	38.49
	3.	1.99	26.30	4.50	32.79
JAN	1.	5.40	12.30	3.10	20.80
	2.	10.40	5.40	8.60	24.40
	3.	5.50	20.30	11.70	37.50
FEB	1.	1.30	31.90	8.80	42.00
	2.	1.70	31.10	4.90	37.70
	3.	2.30	30.00	5.20	37.50
MAR	1.	2.70	29.70	4.40	36.80
	2.	3.40	29.40	4.20	37.00
	3.	2.00	28.50	4.70	35.20
<b>TOTAL MAF</b>		<b>1.73</b>	<b>10.34</b>	<b>2.75</b>	<b>14.82</b>



**INDUS WATERS ACCORD**  
**10-DAY SEASONAL SYSTEMWISE ADJUSTED ALLOCATIONS**  
**(EXCLUDING FLOOD FLOWS & FUTURE STORAGES)**

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**NWFP — KHARIF**

PERD		SWAT CANALS	KABUL RIVER CANALS	INDUS CANALS	OTHER CANALS	CIVIL UNGAUGED CANALS	TOTAL (1000 X Cc)	
APR	1.	<del>3.10</del> 2.91	0.89	<del>3.59</del> 4.53	0.16	4.91	<del>12.44</del> 13.19	
	2.	<del>3.61</del> 3.39	0.94	<del>3.75</del> 4.20	0.50	4.91	<del>13.71</del> 13.94	
	3.	<del>3.89</del> 3.60	1.16	<del>3.76</del> 3.71	0.58	4.91	<del>14.24</del> 13.92	
MAY	1.	<del>3.97</del> 3.74	0.98	<del>4.04</del> 3.99	0.54	5.01	<del>14.54</del> 14.26	
	2.	<del>4.15</del> 3.90	1.10	<del>4.00</del> 4.39	0.36	5.01	<del>14.62</del> 14.76	
	3.	<del>4.15</del> 3.90	1.18	<del>4.68</del> 4.62	0.48	5.01	<del>15.50</del> 15.19	
JUN	1.	<del>4.09</del> 3.84	1.16	<del>4.98</del> 5.37	0.50	5.11	<del>15.79</del> 15.98	
	2.	<del>4.10</del> 3.84	1.12	<del>4.71</del> 5.45	0.40	5.11	<del>15.44</del> 15.92	
	3.	<del>4.17</del> 3.90	1.20	<del>4.82</del> 5.55	0.34	5.01	<del>15.34</del> 16.00	
JUL	1.	<del>3.92</del> 3.69	1.09	<del>4.32</del> 4.27	0.34	4.91	<del>14.57</del> 14.29	
	2.	<del>3.79</del> 3.56	0.98	<del>4.14</del> 4.09	0.19	4.91	<del>14.01</del> 13.73	
	3.	<del>3.46</del> 3.24	0.84	<del>4.08</del> 4.03	0.16	4.91	<del>13.44</del> 13.18	
AUG	1.	<del>3.76</del> 3.54	0.84	<del>4.69</del> 4.62	0.10	4.81	<del>14.19</del> 13.91	
	2.	<del>3.80</del> 3.10	1.04	<del>4.29</del> 4.24	0.16	4.81	<del>13.60</del> 13.35	
	3.	<del>3.12</del> 2.93	1.08	<del>4.68</del> 4.62	0.26	4.81	<del>13.95</del> 13.70	
SEP	1.	<del>4.02</del> 3.78	1.06	<del>5.48</del> 5.42	0.28	5.11	<del>16.96</del> 15.65	
	2.	<del>3.74</del> 3.50	1.16	<del>5.81</del> 5.25	0.30	5.11	<del>15.62</del> 15.32	
	3.	<del>3.30</del> 3.10	1.18	<del>5.39</del> 6.01	0.54	5.11	<del>15.52</del> 15.94	
TOTAL MAF	<del>1.36</del> 1.28	0.38	<del>1.62</del> 1.70	0.12	1.80	<del>5.28</del> 5.28		



**INDUS WATER ACCORD**  
**10-DAY SEASONAL SYSTEMWISE ADJUSTED ALLOCATIONS**  
**(EXCLUDING FLOOD FLOWS & FUTURE STORAGES)**

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**NWFP – RABI**

PERIOD		SWAT CANALS	KABUL RIVER CANALS	INDUS CANALS	OTHER CANALS	CIVIL UNGAUGED CANALS	TOTAL (1000 X C <sub>9</sub> )
OCT	1.	3.67	1.16	4.94	0.42	3.73	13.92
	2.	3.25	1.20	4.97	0.48	3.73	14.13
	3.	3.86	1.12	4.01	0.56	3.73	13.28
NOV	1.	3.93	1.14	3.87	0.46	3.24	12.64
	2.	2.72	1.04	3.24	0.36	3.24	10.60
	3.	2.39	1.02	3.64	0.30	3.24	10.59
DEC	1.	1.74	0.98	2.19	0.10	3.41	8.42
	2.	1.78	1.05	1.96	0.10	3.41	8.30
	3.	1.74	0.94	2.00	0.22	3.41	8.31
JAN	1.	0.00	0.12	1.84	0.26	1.95	4.17
	2.	0.00	0.00	1.82	0.20	1.95	3.97
	3.	0.00	0.40	2.07	0.12	1.95	4.54
FEB	1.	1.32	0.10	2.52	0.16	3.73	7.83
	2.	1.33	0.60	2.93	0.14	3.57	8.54
	3.	1.48	0.59	3.81	0.06	3.57	9.50
MAR	1.	2.18	0.54	3.92	0.12	3.89	10.65
	2.	2.62	0.48	3.86	0.30	3.73	10.99
	3.	3.27	0.58	3.66	0.30	3.73	11.54
<b>TOTAL MAF</b>		<b>0.81</b>	<b>0.26</b>	<b>1.12</b>	<b>0.11</b>	<b>1.20</b>	<b>3.50</b>

— INDUS WATERS ACCORD  
**10-DAY SEASONAL SYSTEMWISE ADJUSTED ALLOCATIONS**  
**(EXCLUDING FLOOD FLOWS & FUTURE STORAGES)**

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**BALUCHISTAN — KHARIF**

PERIOD		SUKKUR BARRAGE SYSTEM	GUDDU BARRAGE SYSTEM	TOTAL (1000 X Cs)
APR	1.	2.19	0.05	2.24
	2.	0.57	0.70	1.27
	3.	0.00	0.40	0.40
MAY	1.	0.00	0.68	0.68
	2.	0.60	1.24	1.84
	3.	0.70	2.54	3.24
JUN	1.	2.00	5.64	7.64
	2.	2.20	6.44	8.64
	3.	2.20	7.83	10.03
JUL	1.	2.20	9.49	11.69
	2.	2.20	8.80	11.00
	3.	2.20	9.80	12.00
AUG	1.	2.20	9.21	11.41
	2.	2.20	9.23	11.43
	3.	2.20	9.45	11.65
SEP	1.	2.20	9.22	11.42
	2.	2.20	9.78	11.98
	3.	2.20	10.24	12.44
<b>TOTAL MAF</b>		<b>0.61</b>	<b>2.24</b>	<b>2.85</b>

**INDUS WATER ACCORD**  
**10-DAY SEASONAL SYSTEMWISE ADJUSTED ALLOCATIONS**  
**(EXCLUDING FLOOD FLOWS & FUTURE STORAGES)**

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**BALUCHISTAN — RABI**

PERIOD		SUKKUR BARRAGE SYSTEM	GUDDU BARRAGE SYSTEM	TOTAL (1000 X Cs)
OCT.	1.	1.00	3.74	4.74
	2.	0.90	3.15	4.05
	3.	0.90	3.15	4.05
NOV	1.	0.80	2.38	3.18
	2.	0.90	2.54	3.44
	3.	0.60	2.17	2.77
DEC	1.	0.70	2.21	2.91
	2.	0.65	1.68	2.33
	3.	0.50	1.32	1.82
JAN	1.	0.60	1.83	2.43
	2.	0.65	2.12	2.77
	3.	0.70	2.18	2.88
FEB	1.	0.60	1.91	2.51
	2.	0.70	2.01	2.71
	3.	0.60	2.03	2.63
MAR	1.	0.60	1.43	2.03
	2.	0.60	1.63	2.23
	3.	0.40	1.12	1.52
<b>TOTAL MAF</b>		<b>0.25</b>	<b>0.77</b>	<b>1.02</b>

Actual Average System Uses 1977-1982



Additional Secretary (Water).....

From:

Maj Gen (Retd)  
Agha Manzoor Rauf

51.6 (27)  
D. O. No. WA-13(199)/88

Government of Pakistan  
MINISTRY OF WATER AND POWER

Islamabad, the 25th March, 1991

Subject:- APPORTIONMENT OF THE WATERS OF THE  
INDUS RIVER SYSTEM BETWEEN THE PROVINCES

My dear ✓

You would recall that in accordance with para 14(a) of the Agreement signed between the Provinces on the subject issue, the system wise allocation have to be worked out separately, on ten daily basis, and attached with the aforementioned agreement as a part of it.

2. Accordingly, I am sending herewith a statement of average canal withdrawals for the period from 1977-78 to 1981-82. You are requested to finalize the 10 daily averages system wise, through mutual consultations. A reply in the matter may kindly be provided by 30th March, 1991.

With regards,

Yours sincerely,

Encl: as above

Ch. Mazhar Ali,  
Adviser to the  
Punjab Irrigation and Power Department,  
Lahore.

Dr. Muhammad Afzal Baloch,  
Additional Chief Secretary (I&P)/  
Adviser Irrigation and Power Department  
and Adviser (Technical) to the  
Government of Sindh, Karachi.

Mr. Khalid Aziz,  
Additional Chief Secretary,  
Planning and Development Department,  
Government of NWFP,  
Peshawar.

*(Handwritten notes and signatures)*

BY SPECIAL MESSENGER

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25/7/73

Copy forwarded for information and necessary follow up  
action forwarded to Mr. Asif H. Kazim, CEA/CEFC, Islamabad.

*[Handwritten signature]*

Maj Gen. (Retd)  
Agha Manzoor Rauf,  
Additional Secretary. (W)



8-46 All



CANAL WITHDRAWALS (1000XCS)  
( 1977-78 to 1981-82 )

Period	Punjab (Indus a/ Canals)	Trimmu+ SVC(L) Canals	Jhelum Chenab Zone Canal W/drawals	Total Punjab Canals	Sind Canals	Baluch. Canals	NWFP b/ Canals	Total
Year	*****	*****	*****	*****	*****	*****	*****	*****
			34.8	57.3	33.9	0.9	8.4	100.5
APR 1	15.7	6.8	37.1	60.2	34.9	0.3	9.7	105.1
2	15.9	7.2						
3	21.8	11.1	44.9	77.8	34.3	0	10.5	112.6
MAY 1	24.4	14.1	51.1	89.6	44.0	0.4	10.1	144.1
2	27.4	14.7	54.4	96.5	52.4	0.8	10.1	159.8
3	28.3	15.4	55.8	99.5	66.3	1.2	10.4	172.4
JUN 1	30.2	15.9	56.9	103.0	84.1	2.0	10.5	199.6
2	30.9	16.3	58.4	105.6	101.8	2.0	10.4	219.8
3	31.2	16.1	59.7	107.0	111.6	2.8	10.3	231.7
JULY 1	31.1	16.2	59.3	106.6	115.4	3.5	9.9	235.4
2	27.8	14.0	53.2	95.0	101.4	3.2	9.3	208.9
3	26.2	13.2	51.2	90.6	92.0	3.3	8.9	194.8
AUG 1	26.0	12.7	53.6	92.3	91.6	3.3	8.7	195.9
2	27.8	15.2	59.5	102.5	88.3	3.5	9.1	203.4
3	31.2	16.8	62.6	110.6	87.5	3.5	9.3	210.9
SEP 1	32.1	16.8	61.5	110.4	91.9	3.7	10.0	216.0
2	31.4	16.7	61.2	108.3	92.6	3.7	10.3	214.9
3	30.4	16.8	57.9	105.1	90.7	3.4	10.5	210.2
LAIT(MAY) 5-83		5.7	19.61	34.66 ✓	28.55 ✓	2.55 ✓	3.55 ✓	67.61

a/  
b/ Thal + Taunsa + panned Canals.  
including Civil Canals.

CANAL WITHDRAWALS (1000 cfs)  
(1977-78 to 1981-82)

	Punjab (Indus Canals) <sup>a/</sup>	Trimmu+ SVC(L) Canals	Jhelum Chenab Zone Canal Wils:	Total Punjab Canals	Sind Canals	Balch: Canals	<sup>b/</sup> NWFP Canals	Total
1	29.4	16.2	51.1	96.7	79.4	3.8	7.5	187.4
2	26.1	15.0	46.7	87.8	63.4	3.3	7.6	162.1
3	21.7	12.2	43.5	77.4	50.8	3.3	7.6	139.3
1	16.7	8.6	39.7	65.0	45.0	2.7	7.0	119.7
2	16.3	6.8	37.1	60.2	43.3	2.9	6.6	112.9
3	13.6	5.8	33.7	55.1	41.4	2.1	6.2	104.8
1	12.7	6.5	35.9	55.1	40.0	2.2	5.9	103.2
2	12.7	7.5	34.8	55.0	39.5	1.8	5.9	102.2
3	8.2	8.0	25.7	41.9	35.6	1.5	6.1	85.8
1	3.5	11.8	12.9	28.2	19.2	2.1	3.2	52.7
2	5.2	7.5	15.4	28.1	21.7	1.7	2.4	53.9
3	9.6	0.8	21.2	31.6	37.5	2.3	2.3	73.7
1	12.5	2.1	17.6	42.2	43.2	1.8	4.0	91.2
2	12.9	4.9	31.4	50.2	38.1	1.8	5.1	95.2
3	11.3	5.9	27.9	45.1	37.6	1.5	5.2	89.4
1	11.4	6.9	31.8	50.1	37.1	1.8	5.3	94.5
2	13.1	9.6	35.1	57.8	37.8	1.4	5.5	102.5
3	15.0	10.4	35.3	60.9	35.6	0.8	5.8	103.1

(HAF) 5.07  
K(MAF) 14.95  
INDIAL

2.93	11.86	19.86	14.98	0.78	2.00	37.62
8.10	3.47	54.52	43.53	1.63	5.55	105.23

<sup>a/</sup> Thal + Causeway -panjnad canals.  
<sup>b/</sup> including canal canals.

# INDUS RIVER SYSTEM AUTHORITY

## CANAL WITHDRAWALS (1000xcs) (1977-78 to 1981-82)

PERIOD		Punjab (Indus a/ Canal	Trimmu+ SVC (L) Canals	Jhelum	Total Punjab Canals	Sindh Canals	Baloch. Canals	NWFP b/ Canals	Total
				Chenab Zone Canal W/drawals					
Apr.	1	15.7	6.8	34.8	57.3	33.9	0.9	8.4	100.5
	2	15.9	7.2	37.1	60.2	34.9	0.3	9.7	105.1
	3	21.8	11.1	44.9	77.8	34.3	0.0	10.5	122.6
May.	1	24.4	14.1	51.1	89.6	44.0	0.4	10.1	144.1
	2	27.4	14.7	54.4	96.5	52.4	0.8	10.1	159.8
	3	28.3	15.4	55.8	99.5	66.3	1.2	10.4	177.4
Jun.	1	30.2	15.9	56.9	103.0	84.1	2.0	10.5	199.6
	2	30.9	16.3	58.4	105.6	101.8	2.0	10.4	219.8
	3	31.2	16.1	59.7	107.0	111.6	2.8	10.3	231.7
Jul.	1	31.1	16.2	59.3	106.6	115.4	3.5	9.9	235.4
	2	27.6	14.0	53.2	95.0	101.4	3.2	9.3	208.9
	3	26.2	13.2	51.2	90.6	92.0	3.3	8.9	194.8
Aug.	1	26.0	12.7	53.6	92.3	91.6	3.3	8.7	195.9
	2	27.8	15.2	59.5	102.5	88.3	3.5	9.1	203.4
	3	31.2	16.8	62.6	110.6	87.5	3.5	9.3	210.9
Sep.	1	32.1	16.8	61.5	110.4	91.9	3.7	10.0	216.0
	2	31.4	16.7	60.2	108.3	92.6	3.7	10.3	214.9
	3	30.4	16.6	57.9	105.1	90.7	3.9	10.5	210.2
Kharif (MAF)		9.88	5.17	19.61	34.66	28.55	0.85	3.55	67.61

a/

Thal + Taunsa + Panjnad Canals.

b/

Including Civil Canals.

# INDUS RIVER SYSTEM AUTHORITY

## CANAL WITHDRAWALS (1000 xcs) ( 1977 - 78 to 1981 - 82 )

Period	Punjab (Indus a/ Canal)	Trimmu + SVC (L) Canals	Jhelum Chenab Zone	Total Punjab Canals	Sindh Canals	Balochistan Canals	NWFP b/ Canals	Total	
			Canal Wdls:						
Oct.	1	29.4	16.2	51.1	96.7	79.4	3.8	7.5	187.4
	2	26.1	15.0	46.7	87.8	63.4	3.3	7.6	162.1
	3	21.7	12.2	43.5	77.4	50.8	3.3	7.6	139.1
Nov.	1	16.7	8.6	39.7	65.0	45.0	2.7	7.0	119.7
	2	16.3	6.6	37.1	60.2	43.3	2.9	6.5	112.9
	3	13.6	5.8	35.7	55.1	41.4	2.1	6.2	104.8
Dec.	1	12.7	6.5	35.9	55.1	40.0	2.2	5.9	103.2
	2	12.7	7.5	34.8	55.0	39.5	1.8	5.9	102.2
	3	8.2	8.0	25.7	41.9	35.6	1.5	6.1	85.1
Jan.	1	3.5	11.8	12.9	28.2	19.2	2.1	3.2	52.7
	2	5.2	7.5	15.4	28.1	21.7	1.7	2.4	53.9
	3	9.6	0.8	21.2	31.6	37.5	2.3	2.3	73.7
Feb.	1	12.5	2.1	27.6	42.2	43.2	1.8	4.0	91.2
	2	12.9	4.9	32.4	50.2	38.1	1.8	5.1	95.2
	3	11.3	5.9	27.9	45.1	37.6	1.5	5.2	89.4
Mar.	1	11.4	6.9	31.8	50.1	37.1	1.8	5.5	94.5
	2	13.1	9.6	35.1	57.8	37.8	1.4	5.5	102.5
	3	15.0	10.4	35.5	60.9	35.6	0.8	5.8	103.1
Rabi (MAF)	5.07	2.93	11.86	19.86	14.98	0.78	2.00	37.62	
ANNUAL	14.95	8.10	31.47	54.52	43.53	1.63	5.55	105.23	