

Ministry of melioration and water resources of the USSR

Approved:

Deputy minister
of melioration and water resources of the USSR
_____ I. I. Borodavchenko

January 31, 1983

AGREEMENT On the distribution of Talas river water flow

Moscow – 1983

Agreement on the distribution of water flow in Talas river basin

1. Agreement on the distribution of water flow in Chu river basin has been made on the basis of inter-republican distribution of water flow established by the Ministry of water resources of the USSR on April 27, 1981 #1/I-36-427 (428), - **50% to each of the republics**.

2. Water resources to be distributed are mean annual runoff of Talas river and its tributaries, return water and pinching-out water (less losses in the river channel and Kirov reservoir) **in the amount 1616 million m³**.

3. Water use of Kazakh SSR in the amount 808 million m³ should be provided by the **discharge from Kirov reservoir in the amount 716 million m³** and flow forming on the territory of the republic in the amount 92 million m³. Volume of discharge from Kirov reservoir coming to the territory of Kazakh SSR should be controlled by base hydro post UKGS in Pokrovka village downstream of offtakes of the Kirghiz Republic.

4. Annual water flow distribution (month, decade, five-days week) and operation regime of Kirov reservoir should be made by joint decision of the Ministries of water resources of the republics within the limit of established annual volume.

5. Volume of water used by the republics during the year with average water content should be maximum volume. Water flow exceeding average annual flow should be accumulated in Kirov reservoir to be used during dry years.

6. Demand for water for residential and industrial needs should be fully satisfied regardless of water content during the year.

7. Further development of the irrigation in Talas river basin or increase of water supply should be made only within the limits of volumes established by the current agreement due to water saving provided by measures on technical improvement of the irrigation systems.

8. Forced discharge from Kirov reservoir without preliminary agreement of Djambul oblast department of water resources to receive water should not be accounted in the distribution of water and should not be compensated.

9. After coming into effect of the current agreement, "Agreement on water distribution on the river Talas and its tributaries Kenkol and Urmal between Kazakh SSR and Kirghiz SSR" of 1948-1949 and part 2 of parity commission protocol "On Talas river" of the Councils of Ministers of Kazakh SSR and Kirghiz SSR on inter-republican distribution of water resources of Chu and Talas rivers as of March 26, 1976 become invalid.

10. Control over the distribution of Talas river water flow should be implemented by the Department of Kirov canal operation department under the Ministry of water resources of the USSR (inter-republican unit on the distribution of Chu and Talas rivers water flow between Kazakh SSR and Kirghiz SSR) in accordance with the current Agreement.

11. Disagreements arising between the republics on water distribution matters should be settled by the indicated Department. Decisions made by the Department should be mandatory for the implementation by the Ministries of water resources of the republics.

“Glavvodresourtsy”

_____ V.K. Adam

“Glavekspluatatsiya”

_____ V.N. Alenin

“Soyuzvodproject”

_____ N.E. Pesikov

Approved:
Minister of melioration and water resources of Kazakh SSR
_____ N .K. Kipshakbaev

Approved:
Minister of melioration and water resources of Kirghiz SSR
_____ K. M. Batyrkanov

**ANNUAL DISTRIBUTION
of Talas river water flow between Kazakh and Kirghiz SSR and operation regime of Kirov reservoir during the year with average
water content**

#	Indicators	Unit of measurement	Months												Год	Period	
			I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII		IV-IX	X-III
1	Water resources at the site of Kirov reservoir	m ³ /s	15,3	15,6	18,0	4,4	54,4	135,8	106,1	77,3	51,9	38,6	29,0	19,9	48,8	74,6	22,6
		million m ³	41,0	37,8	48,2	55,6	145,6	352,0	284,3	207,1	134,5	103,3	75,3	53,3	1538,0	1179,1	3549,0
2	Losses in Kirov reservoir	m ³ /s	0,2	0,2	0,3	0,5	0,6	0,6	0,7	0,7	0,5	0,4	0,3	0,2	0,4	0,6	0,3
		million m ³	0,6	0,6	0,7	1,2	1,6	1,7	1,9	1,8	1,4	1,1	0,8	0,6	14,0	9,6	4,4
3	Water resources formed at the territory of Kazakh SSR	m ³ /s	5,0	5,5	5,6	4,0	2,0	-1,0	-2,0	-2,0	3,0	5,1	5,0	5,1	2,9	0,6	5,2
		million m ³	13,4	13,3	14,7	10,4	5,4	-2,6	-5,4	-5,4	7,8	13,7	13,0	13,7	92,0	10,2	81,8
4	Water resources to be distributed (1-2+3)	m ³ /s	20,1	20,9	23,2	25,0	55,8	134,1	103,4	74,6	54,4	43,2	33,8	24,8	51,2	74,6	27,7
		million m ³	53,8	50,5	62,2	64,8	149,4	347,7	294,0	199,9	146,9	115,9	87,5	66,4	1616,0	1179,7	436,3
5	Amount of water due to Kazakh SSR (4x50%)	m ³ /s	10,0	10,4	11,6	12,5	27,9	67,0	51,7	37,3	27,2	21,6	16,9	12,4	25,6	37,3	13,9
		million m ³	26,9	25,2	31,1	32,4	74,7	173,8	138,8	100,0	70,4	58,0	43,8	33,2	808,0	589,8	218,2
6	Amount of water due to Kirghiz SSR (4x50%)	m ³ /s	10,0	10,4	11,6	12,5	27,9	67,0	51,7	37,3	27,2	21,6	16,9	12,4	25,6	37,3	13,9
		million m ³	26,9	25,2	31,1	32,4	74,7	173,8	138,5	100,0	70,4	58,0	43,8	33,2	808,0	589,8	218,2
7	Amount of water due to Kazakh SSR on hydro post in Pokrovka village (5-3)	m ³ /s	5,0	4,9	6,1	8,5	25,9	68,1	53,7	39,4	24,2	16,5	11,9	7,3	22,7	36,6	8,7
		million m ³	3,5	11,9	16,4	22,0	69,3	176,4	143,9	105,4	62,6	44,3	30,8	19,5	716,0	579,6	136,4
8	Planned supply to	m ³ /s	3,0	3,0	5,0	25,0	39,2	50,0	49,9	49,4	35,4	5,0	3,0	3,0	22,7	41,6	3,7

	Kazakh SSR on hydro post in Pokrovka village	million m ³	3,0	7,3	13,4	64,7	105,0	129,5	133,6	105,4	62,6	13,4	7,8	8,0	716,0	658,1	57,9
	Including:																
9	Due to live flow (7.8,8) (8,7,7)	m ³ /s	3,0	3,0	5,0	8,5	25,9	50,0	49,9	39,4	24,2	5,0	3,0	3,0	18,4	33,0	3,7
		million m ³	3,0	7,3	13,4	22,0	69,3	129,5	133,6	105,4	62,6	13,4	7,8	8,0	580,3	522,4	57,9
10	Due to accumulated water volume (8-7)	m ³ /s				16,5	13,3			10,5	11,2				4,3	8,6	
		million m ³				42,4	35,7			28,2	29,1				165,7	135,7	
11	Accumulation due to shortage of water (7-8)	m ³ /s	2,0	1,9	1,1			18,1	3,8			11,5	8,9	4,3	4,3	3,6	5,0
		million m ³	10,0	4,6	3,0			46,9	10,3			30,9	23,0	11,5	135,7	57,2	78,5
12	Balance water volume for Kazakh SSR	million m³	70,9	75,6	78,5	35,8	0,1	47,0	57,3	29,1	0,0	30,9	53,9	65,4			
13	Planned offtake of Kirghiz SSR	m ³ /s	0,1	0,1	0,3	17,9	44,1	70,2	66,0	57,9	30,6	18,1	0,1	0,1	25,6	47,9	3,2
		million m ³	0,3	0,3	0,9	45,3	118,1	181,9	176,8	155,0	79,3	48,5	0,3	0,3	808,0	757,4	50,6
	Including:																
14	Due to live flow	m ³ /s	0,1	0,1	0,3	12,5	27,9	67,1	51,7	37,3	27,2	18,1	0,1	0,1	20,3	37,3	3,2
		million m ³	0,3	0,3	0,9	32,4	74,7	173,8	138,5	100,0	70,4	48,5	0,3	0,3	640,4	589,8	50,6
15	Due to accumulated water volume	m ³ /s				5,4	16,2	3,1	14,3	20,5	3,4				5,3		10,6
		million m ³				13,9	43,4	8,1	38,3	55,0	8,9				167,6		167,6
16	Accumulation due to water collection	m ³ /s	9,9	10,3	11,3							3,5	16,8	12,3	5,3	10,6	
		million m ³	26,6	24,9	30,2							9,5	43,5	32,9	167,6	167,6	
17	Balance water volume for Kirghiz SSR at the end of the month	million m ³	112,5	137,4	167,6	153,7	110,3	102,2	63,9	8,9	0,0	9,5	53,0	85,9			
18	Balance water volume in Kirov reservoir at the end of the month	million m ³	183,4	212,9	246,1	189,5	110,4	149,2	121,2	38,0	0,0	40,4	165,9	151,3			

Note:

1. Annual water flow of Talas river basin and all tributaries distributed as 50% to each of the republic should be respectively extended to months and decades.
2. Water resources of Talas river basin to be distributed should be determined according to the УКГС data for 5 rivers: **Kara-Bura, Besh-Tash, Kumyshtag, Urmalar and Talas** (2.6 km downstream of Uchkoigoi) taking into account losses in Kirov reservoir and runoff formed on the territory of Kazakh SSR, taken according to “Soyuzvodproject” data.
3. Calculation of water distribution should be done on decade basis. After each decade correction should be made taking into account actual water content of the river basin.
4. Annual schedules of discharge from Kirov reservoir considering basin water content should be agreed upon by the republican Ministries of water resources and inter-republican division of “Kirovcanal” department.
5. Actual percentage of water supply according to total amount on hydro posts on the rivers Kara-Bura, Besh-Tash, Kumyshtag, Urmalar and Talas (2.6 km downstream of Uchkoigoi) should be distributed among all sources of irrigation in Talas valley.
6. Decade distribution of water should be implemented taking into account minutes of the meeting on the distribution of Talas river water flow as of July 18, 1983 in the amount proportionally to areas of Uyk irrigation system brought into operation annually.

The head of unit, KIWR
Under the Ministry of water resources of Kazakh SSR
I. Baigesiev

The head of Djambul
oblast department of water resources
N. Alibekov

The head of main department of the irrigation systems
Under the Ministry of water resources of the Kirghiz SSR
A. Sizintsev

The head of Talas oblast department of water resources
S. Satymkulov

WATER RESOURCES IN TALAS RIVER BASIN
According to average annual values

Months	Decades	Average annual flow in Kirov reservoir site		Average annual flow of Kara-Bura, Besh-Tash, Kumyshtag, Urmalar and Talas rivers		Losses from Kirov reservoir		Average annual flow to the territory of Kazakh SSR	
		m ³ /s	million m ³	m ³ /s	million m ³	m ³ /s	million m ³	m ³ /s	million m ³
January	I	15,3	13,2	14,2	12,2	0,2	0,2	5,0	4,3
	II	15,3	13,2	14,2	12,2	0,2	0,2	5,0	4,3
	III	15,3	14,6	14,2	12,5	0,3	0,2	5,5	4,8
February	I	15,6	13,5	14,2	12,3	0,2	0,2	5,5	4,7
	II	15,6	13,5	14,2	12,3	0,3	0,2	5,5	4,7
	III	15,6	10,8	14,2	9,0	0,2	0,2	5,5	4,9
March	I	17,9	15,5	12,3	10,6	0,2	0,2	5,5	4,7
	II	17,9	15,5	12,3	10,3	0,3	0,2	5,5	4,7
	III	18,1	17,2	12,3	11,7	0,3	0,3	5,5	5,3
April	I	21,4	18,5	13,9	12,0	0,4	0,4	4,0	3,5
	II	21,4	18,5	13,9	12,0	0,5	0,4	4,0	3,5
	III	21,4	18,6	13,9	12,0	0,5	0,4	4,0	3,4
May	I	46,3	40,0	38,9	33,6	0,6	0,5	2,0	1,7
	II	47,5	41,0	38,9	33,6	0,6	0,5	2,0	1,7
	III	68,0	64,6	38,9	37,0	0,6	0,6	2,0	2,0
June	I	121,5	105	84,5	73	0,6	0,5	1	0,8
	II	142,4	123	98,9	85,5	0,6	0,6	1	0,9
	III	143,5	124	99	85,5	0,6	0,6	1	0,9
July	I	106,5	92	97,3	84,1	0,7	0,6	2	1,7
	II	106,5	92	97,3	84,1	0,7	0,6	2	1,7
	III	105,5	100,3	97,4	92,6	0,7	0,7	2	2
August	I	93,7	81	79,6	68,8	0,6	0,6	2	1,7
	II	78,7	68	67,4	58,2	0,7	0,6	2	1,7
	III	61,1	58,1	52,1	49,5	0,7	0,6	2	2
September	I	57,9	50	40,4	34,9	0,5	0,4	3	2,6
	II	50,9	44	36	31,1	0,6	0,5	3	2,6
	III	46,9	40,5	32,8	28,3	0,5	0,5	3	2,6

October	I	38,5	33,3	23,3	20,1	0,4	0,3	5,1	4,4
	II	38,5	33,3	23,3	20,1	0,4	0,4	5,1	4,4
	III	38,6	36,7	23,3	22,2	0,4	0,4	5,1	4,9
November	I	29,1	25,1	19,9	17,2	0,3	0,2	5	4,3
	II	29,1	25,1	19,9	17,2	0,3	0,3	5	4,3
	III	29,1	25,1	19,9	17,2	0,3	0,3	5	4,3
December	I	19,9	17,2	16,1	13,8	0,2	0,2	5,1	4,4
	II	19,9	17,2	16,1	13,8	0,3	0,2	5,1	4,4
	III	19,9	18,9	16,1	15,4	0,2	0,2	5,1	4,9
Total		48,8	1538	37,4	1178	0,44	14	2,9	92
including	<i>IV-IX</i>	<i>1341,1</i>	<i>1179,1</i>	<i>1041,1</i>	<i>915,8</i>	<i>10,7</i>	<i>9,6</i>	<i>42,0</i>	<i>37,0</i>
	<i>I-III, X-XII</i>	<i>409,2</i>	<i>358,9</i>	<i>300,0</i>	<i>247,9</i>	<i>5,0</i>	<i>4,4</i>	<i>94,1</i>	<i>82,7</i>

The head of unit, KIWR
Under the Ministry of water resources of Kazakh SSR

I. Baigesiev

The head of main department of the irrigation systems
Under the Ministry of water resources of the Kirghiz SSR

A. Sizintsev

Approved:
Minister of melioration and water resources of
Kazakh SSR

N .K.
Kipshakbaev
March 12 марта, 1984

Approved:
Minister of melioration and water resources
of Kirghiz SSR

K. M. Batyrkanov
March 26, 1984

I. CALCULATION

Of decade water distribution in Talas river basin

in million m³

1. Offtake of the Kirghiz SSR

Including:

- a) upstream from hydro post Talas – 2.6 km downstream of Uchkoshoi river mouth
- b) from hydro post Talas - 2.6 km downstream of Uchkoshoi river mouth to Kirov reservoir
- c) downstream of Kirov reservoir

2. Supplied to Kazakh SSR at the site of Talas hydro post – Pokrovka village

3. Useful storage of Kirov reservoir at the end of previous decade

Including:

- a) share of Kirghiz SSR
- b) share of Kazakh SSR

4. Useful storage of Kirov reservoir at the end of design decade

$W = f(H)$

$W = f(H)$

5. Accumulation (+), discharge (-) of Kirov reservoir for design decade (4+3)

Lines 4+3

6. Actual flow at the site of Talas hydro post, Pokrovka village (1+2+5)

Lines
1+2+5

7. Flow formed at the territory of Kazakh SSR (lines 9, 10 of table 2)

Lines 9,
10 table 2

8. Total offtake, Kazakh SSR (2+7)

2+7

9. Actual flow to be distributed (6+7)

6+7

10. Water amount due to Kirghiz SSR from live flow (9x0,5)

9x0,5

11. Shortage of live flow of Kirghiz SSR (accumulation to reservoir, +), surplus due to the share in the reservoir (reservoir drawdown, -)

12. Water amount due to Kazakh SSR from live flow (9x0,5)

Including:

- a) on hydro post Talas – Pokrovka village (12+7)

12+7

13. Shortage of live flow of Kazakh SSR (accumulation to reservoir, +), surplus due to the share in the reservoir (reservoir drawdown, -)

14. Useful storage of reservoir at the end of design decade (4)

4

Including:

- a) share of Kirghiz SSR (3a±11)

b) share of Kazakh SSR (36 ± 13)

I I. CALCULATION

Of limit for the next decade in Talas river basin

in million m³

1. Average annual flow at Kirov reservoir site: (lines 3 – 4 table 2)	Lines 3 – 4 table 2
2. Average annual flow of five rivers (lines 5-6 table 2)	Lines 5-6 table 2
3. Flow formed at the territory of Kazakh SSR during average water content year (lines 9-10 table 2)	Lines 9-10 table 2
4. Offtake of Kirghiz SSR upstream of Talas hydro post – 2.6 km from Uchkoshoi river mouth for previous decade (calculation I item 1a)	расчет I пункт 1a
5. Forecast water content of five rivers (Sum Q of five hydro posts according to YTKC data + 0,5x4)	Sum Q, on YTKC+0,5x4
6. Percent of water content for five rivers (5:2), %	(5:2) in %
7. Expected water content at Kirov reservoir site (1x6)	1x6
8. Losses in Kirov reservoir (lines 7-8 table 2)	Lines 7-8 table 2
9. Expected water content of the basin to be distributed (7-8+3)	7-8+3
10. Amount of water for the republics from live flow (9x0,50)	9x0,50
11. Balance of useful storage in Kirov reservoir at the beginning of design decade (calculation I, item 14)	Calculation I, item 14
Including	
a) share of Kirghiz SSR (cal. I, item 14a)	cal. I, item 14a
б) share of Kazakh SSR (cal. I, item 14b)	cal. I, item 14b
12. Planed offtake of Kirghiz SSR for decade	
Including:	
a) upstream from hydro post Talas – 2.6 km downstream of Uchkoshoi river mouth	
b) from hydro post Talas - 2.6 km downstream of Uchkoshoi river mouth to Kirov reservoir	
c) downstream of Kirov reservoir	
13. Offtake of Kirghiz SSR due to the share in the reservoir (12-10)	12-10
14. Planed offtake of Kazakh SSR	
Including:	
a) on hydro post Talas – Pokrovka village (14±3)	14±3
15. Offtake of Kazakh SSR due to the share in the reservoir (14-10)	14-10
16. Discharge from Kirov reservoir (I2b+14a)	I2b+14a

Note:

1. In accordance with items 10 and 11 of the regulation approved by the Ministry of water resources of the USSR as of January 31, 1983, control over the flow distribution and check of

actual data on water content, offtakes of the republics according to the information of Djambul and Talas oblast water resources departments, and UGKS should be implemented by inter-republican division of the Department of Kirov canal operation under the Ministry of water resources of the USSR.

2. Djambul and Talas oblast water resources departments should assign representatives to conduct checks of actual offtakes of the republics and storage of Kirov reservoir.

The head of inter-republican division
Of the Department of Kirov canal operation
Under the Ministry of water resources of the USSR
_____ V. Chernov

The head of unit, KIWR
Under the Ministry of water resources of Kazakh SSR
_____ J. Baigesiev

The head of main department of the
irrigation systems
Under the Ministry of water
resources of the Kirghiz SSR
_____ V. Sizintsev

Minutes

of the meeting on the distribution of water flow of Talas river
Alma-Ata, #13-10/3-928 as of July 18, 1983

Attended by:

From the Ministry of water resources of the USSR:

Borodavchenko I. I. - deputy minister, MWR USSR
Volnov A. M. - deputy head, KIWR under the Ministry of water resources of the USSR
Kolokolov A. G. - chief engineer, "Soyuzvodproject"

From the Kirghiz SSR:

Khodos P.M. - first deputy chairman, Council of Ministers of the Kirghiz SSR
Kostenko I. G. - head of agriculture department, Council of Ministers of the Kirghiz SSR
Batyrcanov K. - Minister of melioration and water resources, Kirghiz SSR
Saventsev A. G. - head of the main operation department MWR, Kirghiz SSR

from Kazakh SSR:

Gukasov E. Kh. - deputy chairman, Council of Ministers of Kazakh SSR
Borobonov V. G. - head of agriculture department, Council of Ministers of Kazakh SSR
Kipshakbaev N. - Minister of melioration and water resources of Kazakh SSR
Rudik A.A. - deputy minister MWR of Kazakh SSR
Baigesiev - head, KIWR under the Ministry of water resources of Kazakh SSR

Having considered a question on water distribution from Talas river between the republics, the participants made the following decisions:

1. After completion of construction of water intake facility and main canal of Uyuk irrigation system, it is necessary to include additional saving of channel losses **downstream of Uyuk in the amount 42.0 million m³**. Volume of water included into daily water distribution should be determined proportionally to the areas brought at Uyuk irrigation system. Account of water distribution for full volume (**42.0 million m³**) should be implemented from January 1, 1986, regardless of construction rates. Matters of inclusion of possible saving at the section Djeimbet-Uyuk (**46 million m³**) should be considered and addressed after implementation of anti seepage measures in the river channel and upon the construction of bypass canal by 1995.

2. The issue of inclusion of Djambul city sewage water to water distribution should be considered additionally after receiving data from hydro geological expedition of the Ministry of geology of the USSR on water supply sources for the city in the area of underground waters feeding and on the quality of sewage water at the sites of its taking-off.

Borodavchenko

Khodos

Gukasov