

### Statement on Taolai River water flow statistics

The Taolai River is a comparatively big continental river in Northwest of China. It flows through Jiuquan and Jiayuguan city of Gansu province. The runoff of Taolai River is mainly sourced from the snow and melting glaciers on Qilian Mountain and rainfall in this region.

Unit: $10^4\text{m}^3$						
year	1991	1992	1993	1994	1995	1996
Annual runoff	4283.450	4762.836	5352.469	4828.693	4252.177	4338.086
year	1997	1998	1999	2000	2001	2002
Annual runoff	3768.098	5219.554	5805.743	6001.927	4912.149	6449.039
year	2003	2004	2005	2006	2007	2008
Annual runoff	4808.745	4760.816	6204.174	5344.976	6936.253	5796.162
year	2009	2010				
Annual runoff	7212.978	8004.369				
Average annual runoff from 1991 to 2010			5452.134			
Average annual runoff from 1991 to 2004			4967.413			
Average annual runoff from 2005 to 2010			6583.152			

It is shown from the above data, since 2005 till 2010, annual runoff shows a rising trend compared with the historical average data. The average annual runoff from 2005-2010 is  $6583.152 \times 10^4\text{m}^3$ , which is 20.7% higher than the average annual runoff  $5452.134 \times 10^4\text{m}^3$  from 1991 to 2010; and 32.5% higher than the annual runoff of  $4967.413 \times 10^4\text{m}^3$  from 1991 to 2004.

Our experts analyzed the reason why Taolai River falls into a wet period since 2005. It is concluded that the main reasons that cause the annual runoff of this river increasing are because of the accelerated melting of glaciers in this river and the increased rainfall due to climate change.

Hereby the statement.

Taolai River Basin Hydraulic Management  
Bureau of Water Resources in Gansu Province  
March 18<sup>th</sup>, 2011

## 关于讨赖河近几年年径流增加情况的说明

讨赖河是我国西北地区较大的内陆河, 主要流经甘肃省酒泉市和嘉峪关市。讨赖河年径流主要来源于祁连山上的积雪与冰川的融化以及该地区的降雨, 年径流量长期呈现丰水年和枯水年相互交替不平均的现象, 且径流年内分配不均, 在一年内呈现随季节不同而不同, 其中每年 6-9 月为丰水期。

讨赖河年径流量是根据讨赖河上朱龙关水文站和冰沟水文站提供的水文数据进行分析计算得出, 下表为讨赖河 1991 年至 2010 年讨赖河渠首水管所实测流量数据。

单位: 万立方米						
年	1991	1992	1993	1994	1995	1996
年径流量	4283.450	4762.836	5352.469	4828.693	4252.177	4338.086
年	1997	1998	1999	2000	2001	2002
年径流量	3768.098	5219.554	5805.743	6001.927	4912.149	6449.039
年	2003	2004	2005	2006	2007	2008
年径流量	4808.745	4760.816	6204.174	5344.976	6936.253	5796.162
年	2009	2010				
年径流量	7212.978	8004.369				
1991-2010 年平均年径流量			5452.134			
1991-2004 年平均年径流量			4967.413			
2005-2010 年平均年径流量			6583.152			

从以上数据可见, 2005 年至 2010 年以来, 年径流量相对于长年平均呈上升趋势。2005-2010 年的年平均径流量为 6583.152 万立方米, 比 1991-2010 年的年平均流量 5452.134 万立方米高出 20.7%;

比 1991-2004 年年平均径流量 4967.413 万立方米高出 32.5%。

对于讨赖河从 2005 年起持续处于丰水状态，我局有关专家研究分析后，变为是由于气候变暖导致该河流集流区冰川消融速度加快，当地降雨降雪增加，是造成该河历年径流量增加的主要原因。

特此说明

甘肃省水利厅讨赖河流域水利管理局

2011 年 3 月 18 日

