### Central Water Commission **Technical Documentation Directorate** Bhagirath(English)& Publicity Section

West Block II, Wing No-5 R K Puram, New Delhi - 66.

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Subject: Submission of News Clippings.

The News Clippings on Water Resources Development and allied subjects are enclosed for perusal of the Chairman, CWC, and Member (WP&P/D&R/RM), Central Water Commission. The soft copies of clippings have also been uploaded on the CWC website.

Encl: As stated above.

For information of Chairman & Member (WP&P/D&R/R.M.), CWC and all concerned, uploaded at www.cwc.nic.in

News item/letter/article/editorial published on

Hindustan Times Statesman The Times of India (N.D.) Indian Express Tribune Hindustan (Hindi)

Nav Bharat Times (Hindi) Punjab Keshari (Hindi) The Hindu Rajasthan Patrika (Hindi) Deccan Chronicle Deccan Herald

Aaj (Hindi) Indian Nation Nai Duniya (Hindi) The Times of India (A)

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# Mapped, the Shrinking

Data over 50 years show sweeping reductions in the spread and depth of glaciers in an American alpine park, presenting frightening evidence of the extent to which the Earth has warmed in these years. The park's 39 major glaciers have shrunk by between 10% and 85%, 10 glaciers have lost more than half their area, and 3, more than 80%

BOULDER Lost 48 acres 85%

THE FLOWING sheets of ice scattered throughout Glacier National Park in the US state of Montana shrank by more than a third in the half century between 1966 and 2015, new data gathered by the United States Geological Survey (USGS) and Portland State University show.

Using aerial and satellite imagery, researchers traced the footprints of 39 named glaciers in the park and the surrounding forest. They found that 10 glaciers had lost more than half their area; 3 had lost more than 80%. On average, the glaciers have reduced by 39% since 1966, and only 26 glaciers are now larger than 25 acres, which is used as a guideline for deciding if bodies of ice are large enough to be considered glaciers.

The retreat of glaciers is significant because it is a visual indicator of climate change, leading to the alteration of the mountain ecosystem in the northern Rocky Mountains. The park's glaciers are a major fourist draw in Montana; some 2.9 million visited last year.

"One of the reasons we study glaciers is because they have a simple, visual and easily understood response to climate," said Daniel Fagre, the USGS research ecologist who led the study. "If it gets warmer, or if they get less snow, they shrink." The loss of ice can affect aquatic species due to changes in stream volume, water temperature and runoff timing in the higher elevations, he said.

Glacier National Park's glaciers have been around for more than 7,000 years,

TWO OCEAN Lost 87 acres

82%

California

HERBST Lost 34 acres

81%

HARRIS

Lost 28 acres

77%

SHEPARD Lost 44 acres

72%

GLACIER NATIONAL PARK CHANEY GLACIER Montana lowa UNITED STATES OF AMERICA Washington DC Texas 2005 1998

(Above) The 5 glaciers that have lost the most percentage area since 1966. The extent of ice today is in blue, that in 1966 in grey. The extent of loss of ice over the years in the Chaney glacier is shown in the picture above right. NYT/USGS

having survived warmer and cooler periods. But they have been shrinking rapidly since the late 1800s, when North America emerged from the "Little Ice Age," a period of regionally colder, snowier weather that lasted for roughly 400 years.

After the end of the Little Ice Age, glaciers across the western US, Canada and Europe lost ice as temperatures rebounded. At its founding in 1910, the park had at least 150 glaciers, most of which are now gone. But scientists have attributed more recent melting to human-caused global warming.

"With each decade that we go, more of

what we see can be attributed to humans. and less to natural variation," Dr Fagre said. Study co-author Andrew G Fountain agreed that "while the shrinkage in Montana is more severe than some other places in the US, it is in line with trends that have been happening on a global scale".

Larger, thinner glaciers in the park have lost the most ground; however, smaller, thicker glaciers have lost mass, too, and become thinner. The USGS data measured only coverage area, but a new study by Dr Fagre's team will measure the glaciers' volume.

"Both processes are going on: thinning

and contracting," he said.

Scientists measured the perimeters of the glaciers in late summer when seasonal snow has melted to reveal the extent of the glacial ice. Measurements are from 1966, 1998, 2005 and 2015-2016, and are part of a larger, ongoing USGS study of glaciers in Montana, Alaska and Washington to document mass balance measurements that estimate changes in ice volumes. This information helps scientists understand the impact of largescale climate patterns on glaciers in different mountain environments.

THE NYT AND USGS RELEASE

FLAGGING INTERESTING RESEARCH

### CLIMATE CHANGE RECEDING GLACIERS

Study by United States Geological Survey and Portland State University, released May 10, 2017

AUTHORS: Daniel Fagre, Andrew G Fountain and Others

Grinnell, among the most popular glaciers in the Glacier National Park, has shrunk by 45%, having lost 113

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Hindustan Times ( Delhi ) ਕਰभਾਣਰ ਟਾਡ਼ਿਸ਼ ( ਫਿਕਰੀ ) The Tribune ( Chandigarh ) The Hindu ( Chennai ) The Assam Tribune ( Guwahati ) The Times of India ( Mumbai ) The Telegraph ( Kolkata ) हिन्दुएतान ( पटना ) The Deccan Hearld (Bengluru)
The Deccan Chronical (Hyderabad)
Central Chronical (Bhopal)

# Inflow to Mettur dam brings cheer

Touches four-figure mark for first time since October last

SPECIAL CORRESPONDENT

The steady increase in the inflow of water into the Stanley Reservoir in Mettur, for the first time in many months, has brought cheer to both officials and the farming community.

The inflow touched the four-figure mark - 1,380 cusecs - on Tuesday for the first time since October last

Due to the failure of the monsoon and the repeated refusal of the Karnataka government to release water from the Krishnaraja Sagar and Kabini reservoirs into Cauvery despite the direction of the Supreme Court, the quantum of inflow into the Mettur dam has remained meagre since mid-October.

On many occasions, the inflow was less than 20 cusecs. The realisation of 11 cusecs on February 19 was the lowest inflow recorded in the last one decade.

The last time the inflow touched the three-figure mark - 116 cusecs - was on April 3; it touched the fourfigure mark on October 20



Happy tidings: The inflow reached 1,380 cusecs on Tuesday.

last year.

The inflow into the dam, which stood at 49 cusecs on Friday, rose to 154 cusecs on Saturday and 153 cusecs on Sunday; it further went up to 847 cusecs on Monday.

Decline in storage

About 500 cusecs of water is being discharged from the dam for meeting the drinking water needs of delta districts. As the discharge was more than the inflow, the storage level was steadily and alarmingly going down all these months.

For the first time in five months, the water level rose on Sunday from 19.65 feet to 19.72 feet. The water level continued to raise and it was 19.95 feet on Tuesday. The storage level was 4.086 tmc against the full storage level of 93.47 tmc.

The poor inflow and the alarmingly low storage proved a major concern for the officials as a minimum quantity of water has to be stored in the dam for protecting the fish population and also for different drinking water schemes.

News item/letter/article/editorial published on 341517 in s

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# New platform to fix water crisis

BENGALURU: Karnataka's urban water demand and supply gap is set to widen from 24% (2011) to 58% in 2030, according to 2030 Water Resources Group, a unique public-private-civil society collaboration.

To address this growing gap between demand and supply, the state government and 2030 WRG launched the "Karnataka multi-stakeholder platform for water" on Tuesday.

The partnership aims to transform water resources management by mobilising funds through financial institutions and identification of in-

novative demand-side manage ment solutions.

"The need of the hour is for corporates to partner with farmers to create a supply chain model that helps in the economic empowerment of the farmers. When the government also partners in this model, the implementation will be more effective," said Bastiaan Mohrmann, Co-Lead, Asia and Middle East, 2030WRG.

#### First in India

This is the first multi-stakeholder platform for water in India. Similar models will be

replicated in Maharashtra and Uttar Pradesh. "Karnataka is among India's most waterstressed states. Nearly 26% of its groundwater area is overexploited. Moreover, 54% of the geographical area is drought-prone. Unfortunately, the two largest and economically most important river basins - the Krishna and the Cauvery - have both reached a point where demand exceeds supply," Rakesh Singh, Principal Secretary, Water Resources Department, said stressing the need for better water management.

**DH News Service** 

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