

## Advisory To Shipping No. A-45-2023

October 10, 2023

**TO :** All Shipping Agents, Owners, and Operators  
**SUBJECT :** Monthly Canal Operations Summary – September 2023

### 1. Panama Canal Statistical Summary:

a. Transit Pilot Force .....	282
b. Pilots in Training .....	6
c. Tugs .....	46
d. Locomotives .....	100

### 2. Traffic Statistics:

	<u>Daily Average</u>	<u>High</u>	<u>Low</u>
Arrivals	31.63	41	27
Oceangoing Transits	32.57	35	30
Canal Waters Time (hours)	50.23	77.85	25.24
In-Transit Time (hours)	11.30	14.31	9.75

<b>Oceangoing Transits:</b>	<u>Total</u>	<u>Daily Average</u>	<u>Percentage</u>
Vessels of less than 91' beam	185	6.17	18.94
Vessels 91' beam to under 107' beam	501	16.70	51.28
Neopanamax Vessels (107' beam and over)	291	9.70	29.79
Total:	977	32.57	100.00

<b>Booking Slots:</b>	<u>Available</u>	<u>Used</u>	<u>Percentage</u>
Neopanamax Vessels (107' beam and over)	210*	213* <sup>1</sup>	101.43
Large Vessels (91' beam to under 107' beam)	384*	361* <sup>1</sup>	94.01
Regular Vessels (less than 91' beam)	176*	151* <sup>1</sup>	85.80
Auctioned booking slots	137	105	76.64

\* Does not include additional auctioned booking slots

<sup>1</sup> Includes booked transits only

3. The following page provides the scheduled locks maintenance work and other information of interest to the shipping community.

4. This advisory will be canceled for record purposes on October 31, 2023.

### ORIGINAL SIGNED

Boris Moreno Vásquez  
Vice President for Operations

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SCHEDULE OF PANAMAX LOCKS MAINTENANCE OUTAGES							
Dates	Duration	Miraflores	Pedro Miguel	Gatun	Estimated Capacity <sup>^</sup>	Expected Booking Condition	Status
September 7, 2023	6 hours			West*	28-30	1.a	Completed
September 12, 2023	8 hours	West*			26-28	1.a	Completed
September 18, 2023	7 hours			West*	28-30	1.a	Completed
September 19, 2023	4 hours		West*		30-32	1.a	Completed
September 20, 2023	4 hours	East*			30-32	1.a	Completed
September 21 and 22, 2023	7 hours/day	East*			26-28	1.a	Completed
September 29, 2023	6 hours	East*			28-30	1.a	Completed
October 23, 2023	7 hours	East*			26-28	3	Tentative
October 24, 2023	5 hours	East*			29-31	3	Tentative
October 25 and 26, 2023	7 hours/day	East*			26-28	3	Tentative
November 14 and 15, 2023	7 hours/day	East*			22	5	Tentative
November 16, 2023	6 hours			East*	22	5	Tentative
November 22, 2023	5 hours	East*			22	5	Tentative
November 22, 2023	4 hours		West*		22	5	Tentative
November 23, 2023	7 hours			East*	22	5	Tentative
November 26, 2023	12 hours			East*	22	5	Tentative
November 27 to Dec 7, 2023	10 days			East***	22	5	Tentative
November 30 and Dec 1, 2023	7 hours/day	East*			22	5	Tentative
December 7, 2023	12 hours			East*	22	5	Tentative

SCHEDULE OF NEOPANAMAX LOCKS MAINTENANCE OUTAGES						
Dates	Duration	Agua Clara	Cocolí	Estimated Capacity	Expected Booking Condition	Status
October 9, 2023	5 hours	*		9-10	N/A	Completed
October 10, 2023	5 hours	*		9-10	N/A	In Progress
November 20, 2023	5 hours		*	9	5	Tentative
November 21, 2023	5 hours		*	9	5	Tentative

<sup>^</sup>The normal transit capacity of the Panamax locks is 34-36 vessels per day, and in the Neopanamax locks 9-11 vessels per day, depending on vessel mix, transit restrictions, and other factors. The maximum sustainable capacity of the Panama Canal (Panamax and Neopanamax locks) is approximately 38 vessels per day. This capacity is reduced during locks maintenance work, as indicated in the above table. The capacity may also be reduced due to low levels of Gatun Lake. Consequently, vessels may experience delays in transiting. When the Panama Canal's capacity is expected to be reduced, a corresponding adjustment to the number of available reserved transit slots may be ordered by the Canal Authority. Whenever a set of locks requires a major outage of one of its two lanes for dry chamber inspection, miter gate repairs, tow track work or other major maintenance/improvement projects, advantage may be taken to perform simultaneous single lane outages at other locks.

- \* In order to perform scheduled maintenance works
- \*\* In order to perform scheduled dry chamber works
- \*\*\* Culvert outage
- <sup>^</sup> Panamax locks

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## Beyond Scarcity: How the Canal Manages the Fresh Water Challenge



October 3, 2023.- The year 2023 has been particularly dry, according to Panama Canal statistics, primarily because of the El Niño phenomenon.

The rainy season in Panama typically begins in May and ends in November. However, during years when the El Niño phenomenon is active, such as this one, the onset of rains can be delayed, resulting in a prolonged dry season.

The El Niño phenomenon also negatively impacts evaporation in water bodies, significantly affecting critical sites like the Gatun and Alhajuela lakes, which rely on rainfall and river inflows.

### Water Intakes and Consumption

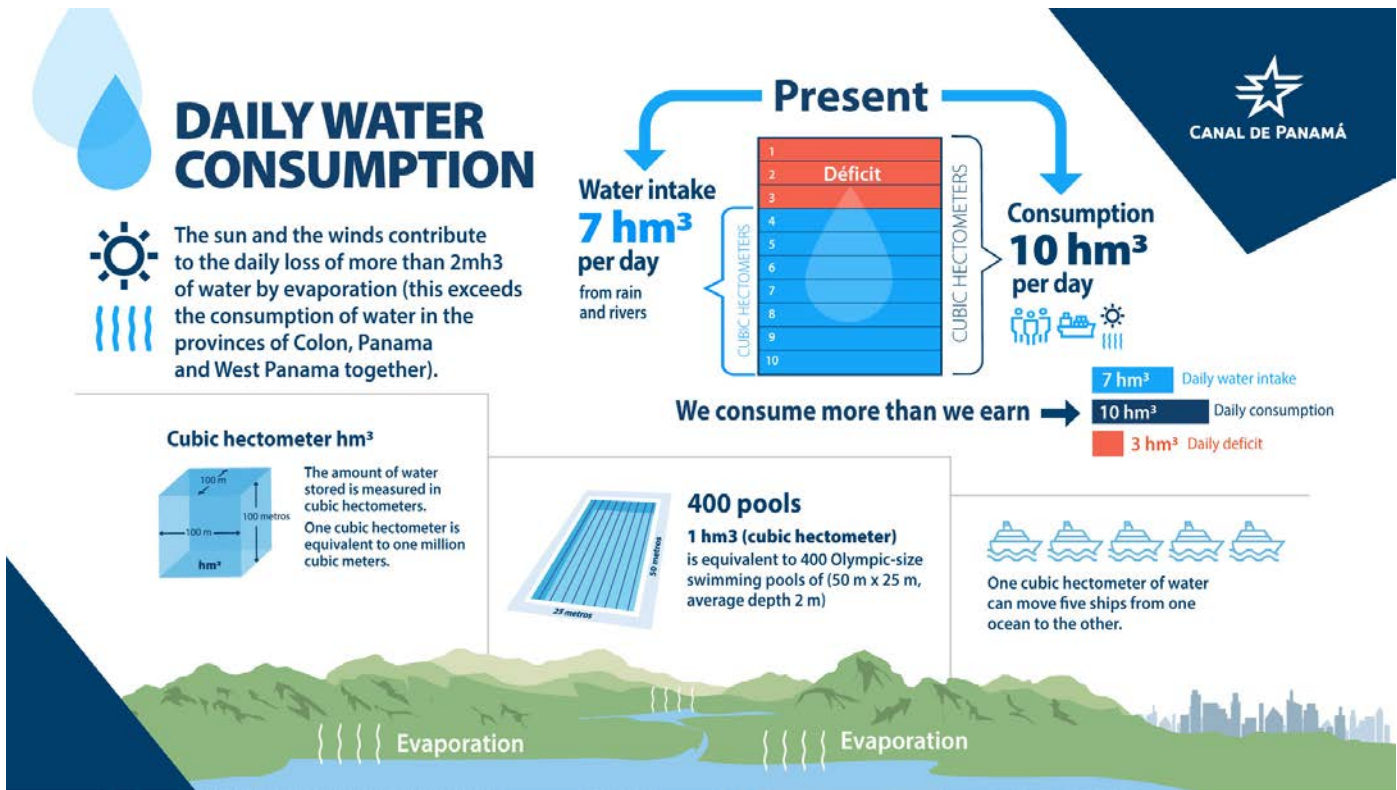
Currently, the Gatun reservoir receives a daily inflow from rainfall and river flow amounting to seven hm<sup>3</sup>. However, the combined outflows from Canal operations, evaporation, human consumption, and industry amount to ten hm<sup>3</sup>. This results in a daily deficit of three hm<sup>3</sup>. In a year with typical rainfall, the water inflow would average 15 hm<sup>3</sup> per day.

This means that for the year 2023, water consumption has surpassed Gatun Lake intakes from rainfall and rivers, hence the Canal has had to maintain acceptable levels for operations through water accumulated during last year's rainy season and transfers from the Alhajuela lake.

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To offer some perspective: three cubic hectometers is equal to the water volume in 1,200 Olympic-sized swimming pools. This daily shortfall has caused the Gatun reservoir's level to drop seven feet below its anticipated level for this time of year, marking the lowest level ever recorded during a rainy season in the reservoir's history.



Because of the El Niño phenomenon, the average accumulated rainfall in the watershed for 2023 is 25.6% less than the average over the past 73 years.

To alleviate this freshwater scarcity, it would require an extreme storm, such as La Purisima in 2010, or a hurricane like Otto in 2016. However, such events are unpredictable and undesirable from other standpoints.

The next 80 days are pivotal for increasing storage in the Gatun and Alhajuela reservoirs, ensuring water regulation capacity is available for the upcoming dry season in 2024.

It is worth mentioning that the measures and operational adjustments made by the Panama Canal facilitate daily water savings of 1.2 million cubic meters. This amount is equivalent to 80% of the daily consumption in the provinces of Colon, Panama, and West Panama.

In response to the rising water demand and fluctuating rainfall patterns, the Canal has implemented operational and commercial adjustments to guarantee a fresh water supply for both human consumption and for transits during the next dry season, which runs from December 2023 to April 2024.

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Thus, the Panama Canal upholds its commitment to the nation, aligned with one of its core strategic objectives: to ensure the availability and quality of fresh water for both, Canal operations and public consumption.

**Links:**

[Vessels in queue for transit](#)

[Real-time Weather Radar Animation](#) (updated every 5 minutes)

[Daily average level of Alhajuela reservoir for the last 12 months](#)

[Daily average level of Gatun Reservoir for the last 12 months](#)

[Daily precipitation \(rainfall\) by sub-basins \(Alhajuela/Gatun\) and cumulative in CHCP current year 2023](#)