

Regulatory Storage White Paper

WSO Operations Planning and Programs Unit

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Summary

This paper builds upon Metropolitan's Emergency Storage Requirement (Board Letter: May 14, 2019) and presents the allocation of available storage capacities in Metropolitan's three major surface reservoirs. The primary purpose of the allocation of available storage capacities is to estimate a quantity of storage reserved for emergency, dry-year, and seasonal/regulatory purposes.

Operational Criteria

Metropolitan's three major surface reservoirs, Lake Mathews, Lake Skinner, and Diamond Valley Lake, provide over 1,020,000 acre-feet of total useable storage capacity to Metropolitan's service area as shown in Table 1.

Table 1: Allocation of Total Storage Capacities in Metropolitan Reservoirs (Acre-Feet)

Reservoir	Total Storage Capacity	Dead Storage	Available Capacity
Diamond Valley Lake	810,000	11,500	798,500
Lake Mathews	182,000	3,500	178,500
Lake Skinner	44,000	200	43,800
Total	1,036,000	15,200	1,020,800

Available capacity storage is allocated into emergency, dry-year, and seasonal/regulatory storages. Of the 1,020,800 acre-feet of Metropolitan available storage capacity, approximately 369,000 acre-feet are reserved for emergency storage based on the Emergency Storage Requirement as stated in the May 14, 2019, Board Report. Approximately 210,000 acre-feet are reserved for regulatory purposes and meet seasonal demands in Riverside, Orange, Los Angeles, San Bernardino, Riverside, and San Diego counties. The remaining storage capacity of 441,600 acre-feet at Diamond Valley Lake is reserved for dry-year storage. The dry-year storage augments imported supplies during periods of drought. Table 2 shows the distribution of emergency, dry-year, and seasonal/regulatory storages in Metropolitan's reservoirs.

Table 2: Allocation of Available Storage Capacity in Metropolitan Reservoirs (Acre-Feet)

	Available Capacity	Emergency Storage ¹	Dry-Year Storage	Seasonal, Regulatory Storage
Diamond Valley Lake	798,500	256,900	441,600	100,000
Lake Mathews	178,500	78,500	-	100,000
Lake Skinner	43,800	33,800	-	10,000
Total	1,020,800	369,200	441,600	210,000

1. Metropolitan's Emergency Storage Requirement (May 14, 2019, Board Report)

Seasonal/regulatory storage at the various reservoirs provide the flexibility required for effective intra-year operations, including providing storage space for storm inflows and SWP Carryover supplies to avoid spill.

Conclusion

Metropolitan has over 1,000,000 acre-feet of available storage capacity for emergency, dry-year, and seasonal/regulatory storage in three major surface reservoirs. The emergency requirements in Lake Mathews, Lake Skinner, and Diamond Valley are fixed quantities and remaining balances are reflected in the dry-year and seasonal/regulatory storages. The stated seasonal/regulatory storage amount is a steady operational objective and does not need to be revised annually.