

Mountain Spa Resort Master Plan

Water Right Calculations

September 1, 2022

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Project Information

Tables 1 and 2 provide the water right requirements and water uses for The Mountain Spa Resort Master Plan.

Tables 1 and 2 were previously approved by the Midway Water Board and Midway City Council as part of the Resort Master Plan.

Updates to Tables 1 and 2 have been made to reflect changes between the master plan and the preliminary plan.

Table 3 provides the water rights needed for each phase of the development.

Table 1 - Water Use Requirements

Use	Water Requirement		Source of Requirement	Return Flow Requirement	Total Required	
	Quantity	Unit			Quantity	Unit
Irrigated / landscaped area	3.00	acre-feet/acre	Midway Water Board	—	3.00	acre-feet/acre
Hotel units (1 bedroom)	150	gpd/unit	Table 1, Utah Code R309-510	1.77	0.30	acre-feet/unit
Cottage units (2 hotel units with lockout)	300	gpd/unit	Table 1, Utah Code R309-510	1.77	0.60	acre-feet/unit
Presidential units (3 bedrooms)	0.80	acre-feet/acre	Midway Water Board	—	0.80	acre-feet/unit
Duplex units (6 - 7 bedrooms)	0.80	acre-feet/acre	Midway Water Board	—	0.80	acre-feet/unit
Family lodge (5 bedrooms)	0.80	acre-feet/acre	Midway Water Board	—	0.80	acre-feet/unit
Yurt	150.00	gpd/unit	Same as Hotel Unit	1.77	0.30	acre-feet/unit
Restaurant	35	gpd/seat	Table 2, Utah Code R309-510	1.77	0.07	acre-feet/seat
Bar	20	gpd/seat	Table 2, Utah Code R309-510	1.77	0.04	acre-feet/seat
Swimming pools	10	gpd/person	Table 2, Utah Code R309-510	1.77	0.02	acre-feet/person
Spa / gym	25	gpd/person	Table 2, Utah Code R309-510	1.77	0.05	acre-feet/person
Event space / conference center	5	gpd/person	Table 2, Utah Code R309-510	1.77	0.01	acre-feet/person
Hotel staff and employees	15	gpd/person	Table 2, Utah Code R309-510	1.77	0.03	acre-feet/person
Kitchen staff and employees	15	gpd/person	Table 2, Utah Code R309-510	1.77	0.03	acre-feet/person
Laundry	580	gpd/washer	Table 2, Utah Code R309-510	1.77	1.15	acre-feet/washer

Table 2 - Water Right Needs for the Mountain Spa Resort

Use	Project Quantity	Unit	Water Requirement with Return Flow	Unit	Total (acre-feet)
Irrigated area (more added to plan)	8.54	acres	3.00	acre-feet/acre	25.62
Hotel units (1 bedroom)	80	units	0.30	acre-feet/unit	24.00
Cottage units (2 bedrooms)	23	units	0.60	acre-feet/unit	13.80
Presidential units (3 bedrooms)	1	units	0.80	acre-feet/unit	0.80
Duplex units (6 - 7 bedrooms)	24	units	0.80	acre-feet/unit	19.20
Family lodge (5 bedrooms)	2	units	0.80	acre-feet/unit	1.60
Yurt (have been removed from the plan)	0	units	0.30	acre-feet/unit	0.00

Restaurants	71	seats	0.07	acre-feet/person	4.97
Rooftop bar	35	seats	0.04	acre-feet/person	1.40
Event space / conference center	245	person	0.01	acre-feet/person	2.45
Swimming pools	201	person	0.02	acre-feet/person	4.02
Spa - Main Full Service	102	person	0.05	acre-feet/person	5.10
Spa - Med Spa	73	person	0.05	acre-feet/person	3.65
Spa - Basement	51	person	0.05	acre-feet/person	2.55
Fitness Center	53	person	0.05	acre-feet/person	2.65
Hotel staff and employees	53	person	0.03	acre-feet/person	1.59
Kitchen staff and employees	18	person	0.03	acre-feet/person	0.54
Laundry	4	washers	1.15	acre-feet/washer	4.60

118.54 acre-feet

Table 3 - Water Right Needs per Phase for the Mountain Spa Resort

Use	Project Quantity	Unit	Water Requirement with Return Flow	Unit	Total (acre-feet)
Phase 1					
Duplex units (6 - 7 bedrooms)	24	units	0.80	acre-feet/unit	19.20
Family lodge (5 bedrooms)	2	units	0.80	acre-feet/unit	1.60
Irrigated area	3.16	acres	3.00	acre-feet/acre	9.48
Phase 1 Total					30.28

Phase 2					
Restaurants	71	seats	0.07	acre-feet/person	4.97
Rooftop bar	35	seats	0.04	acre-feet/person	1.40
Event space / conference center	245	person	0.01	acre-feet/person	2.45
Swimming pools	201	person	0.02	acre-feet/person	4.02
Spa - Main Full Service	102	person	0.05	acre-feet/person	5.10
Spa - Med Spa	73	person	0.05	acre-feet/person	3.65
Spa - Basement	51	person	0.05	acre-feet/person	2.55
Fitness Center	53	person	0.05	acre-feet/person	2.65
Hotel staff and employees	53	person	0.03	acre-feet/person	1.59
Kitchen staff and employees	18	person	0.03	acre-feet/person	0.54
Laundry	4	washers	1.15	acre-feet/washer	4.60
Irrigated area	1.28	acres	3.00	acre-feet/acre	3.84
Phase 2 Total					37.36

Phase 3					
Hotel units (1 bedroom)	80	units	0.30	acre-feet/unit	24.00
Irrigated area	2.11	acres	3.00	acre-feet/acre	6.33
Phase 3 Total					30.33

Phase 4					
Cottage units (2 bedrooms)	23	units	0.60	acre-feet/unit	13.80
Presidential units (3 bedrooms)	1	units	0.80	acre-feet/unit	0.80
Irrigated area	1.99	acres	3.00	acre-feet/acre	5.97
				Phase 4 Total	20.57

Notes:

1. 1 acre-feet per year = 892 gallons per day
2. Return Flow Factor = State Indoor Requirement / Midway City Indoor Requirement = $0.45 / 0.80 = 1.77$
3. The preliminary landscape plan shows 8.54 acres of irrigated area for the resort property.
4. A cottage has been removed from the master plan.
5. The yurts have been removed from the master plan.