



Design Bid Cost Estimate

Tahoe Donner

Date 8/31/2019

2019 PFM BUDGET SCHEDULE

Budget 503

Rev.
3/10/2020
4/2/2020

Cross Country Ski Area Utility Installation Phase 1

Item #	ITEM DESCRIPTION	BID UNIT	BID QTY	LABOR	MTL	TOTAL PRICE
1	Water Main Connection					
2	Tapping Sleeve and Gate Valve w/ Street Riser for Shut Off Per TDPUD Spec - Hot Tap by TDPUD	UNIT	1	\$ 900.00	\$ 2,100.00	\$ 3,000.00
3	Meter Vault w/ (2) 3" gate valves and related Hardware - meter by TD & TDPUD (Installation will be in paved area)	UNIT	1	\$ 6,900.00	\$ 8,500.00	\$ 15,400.00
4	4" ductile Between water main tie in and meter	LF	20	\$ 5.00	\$ 26.00	\$ 620.00
5	6" HDPE from water meter to back flow preventer and future location	LF	270	\$ 8.50	\$ 30.00	\$ 10,395.00
6	Required Drawing for TDPUD w/ engineering stamp	UNIT	1	\$ 800.00		\$ 800.00
7	Sanitizing Water Main and testing water samples per TDPUD	UNIT	1	\$ 2,900.00	\$ 680.00	\$ 3,580.00
8	3" Water Meter Supplied by TDPUD	UNIT	1		\$ 74,000.00	\$ 74,000.00
9	Pipeline Trench/Backfill - No rock removal or blasting is included	LF	275	\$ 22.00		\$ 6,050.00
10	Back Flow Prevention Device with Small Structure for protection	UNIT	1	\$ 3,000.00	\$ 9,000.00	\$ 12,000.00
11	Water HYD for Snowmaking -Supply/Receive/Stage/Weld/Install/Test	UNIT	2	\$ 400.00	\$ 450.00	\$ 1,700.00
12	Primary Electrical Site Work					
13						\$ -
14						\$ -
15	Compaction and Repair to Parking lot effected by Utility Installation (Allowance)	UNIT	1	\$ 15,000.00		\$ 15,000.00
16		UNIT	0			\$ -
17						
18	Due to fluctuating market pricing for materials this pricing is only valid for 15 days from date of Bid. Every effort will be made to hold pricing. Once contracts are made and deposit is received pricing will be locked					
19	Total Infrastructure					\$ 142,545.00



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Tahoe Donner

2019 PFM BUDGET SCHEDULE

Date 8/31/2019

Budget 504

Rev.
3/10/2020
4/2/2020

Cross Country Ski Area Pump House & Pipeline Phase 1

	ITEM DESCRIPTION	BID UNIT	BID QTY	LABOR	MTL	TOTAL PRICE
1	Pump House and Secondary Electrical work					
2	200 GPM Pump and Motor with VFD Motor Control, Small Structure, Misc. Plumbing, Valving and Instrumentation. (Does not include connection to supply Disconnect, Transformer or Metering)	UNIT	1		\$ 105,000.00	\$ 105,000.00
3	Meter and Main Disconnect Enclosure w/ Pad and Conduit to Gen-Set	UNIT	1	\$ 9,500.00	\$ 11,000.00	\$ 20,500.00
4	Pad for Gen-Set 10X20	UNIT	1	\$ 3,500.00	\$ 2,500.00	\$ 6,000.00
5	Structure to House Gen-Set Non Conditioned Structure	UNIT	1	\$ 6,500.00	\$ 12,000.00	\$ 18,500.00
6		UNIT				\$ -
7	Air Manifold for Air Compressor Connection	UNIT	1	\$ 1,900.00	\$ 380.00	\$ 2,280.00
8	6" Water Pipeline Supply/Receive/Stage/Weld/Install/Test - Fusion bonded epoxy od only using Scotchkote 6233 w/overcoat 6352 16 mil or similar .25 wall A53B ERW BLK PE DRL	UNIT	300	\$ 5.50	\$ 14.90	\$ 6,120.00
9	6" Air Pipeline Supply/Receive/Stage/Weld/Install/Test - Fusion bonded epoxy od only using Scotchkote 6233 w/overcoat 6352 16 mil or similar .25 wall A53B ERW BLK PE DRL	UNIT	300	\$ 5.50	\$ 14.90	\$ 6,120.00
10	4" Water Pipeline Supply/Receive/Stage/Weld/Install/Test - Fusion bonded epoxy od only using Scotchkote 6233 w/overcoat 6352 16 mil or similar .237 wall A53B ERW BLK PE DRL	UNIT	1865	\$ 4.90	\$ 11.00	\$ 29,653.50
11	4" Air Pipeline Supply/Receive/Stage/Weld/Install/Test - HDPE SDR11		1190	\$ 3.00	\$ 3.50	\$ 7,735.00
12	Water Hydrant with 2 hoses per HYD set - Supply/Receive/Stage/Weld/Install/Test	UNIT	2	\$ 400.00	\$ 950.00	\$ 2,700.00
13	Air Water Hydrant with 4 hoses per HYD set - Supply/Receive/Stage/Weld/Install/Test	UNIT	8	\$ 500.00	\$ 1,600.00	\$ 16,800.00
14	250MCM DB Armor Cable for Fan Gun Feed	LF	725	\$ 1.50	\$ 6.00	\$ 5,437.50
15	200amp Service Disconnect for Fan Guns	UNIT	1	\$ 1,800.00	\$ 2,500.00	\$ 4,300.00
16	BMP's and Reveg (TDA will supply chip mtrl from defensible space)	UNIT	1	\$ 5,700.00	\$ 5,800.00	\$ 11,500.00
17	Misc. Equipment					
18	BMP's and Revege	UNIT	1	\$ 3,600.00	\$ 5,800.00	\$ 9,400.00
19	Forks for transport of MTL	UNIT	1	\$ 4,500.00		\$ 4,500.00
20	Material transport and delivery Trucks	UNIT	1	\$ 2,900.00		\$ 2,900.00
21	Fuel	UNIT	400		\$ 4.25	\$ 1,700.00
22	Misc. Over Head - Mobilize	UNIT	1	\$ 2,200.00		\$ 2,200.00
23	Insurance	UNIT	1	\$ 3,250.00		\$ 3,250.00
24		UNIT	1			\$ -
25	Due to fluctuating market pricing for materials this pricing is only valid for 15 days from date of Bid. Every effort will be made to hold pricing. Once contracts are made and deposit is received pricing will					
26	Total Infrastructure					\$ 266,596.00



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Tahoe Donner

2019 PFM BUDGET SCHEDULE

Date 5/1/2019

Budget 505

Rev.
3/10/2020
4/2/2020

Cross Country Ski Area Pipeline to Moondance Phase 2

Item #	ITEM DESCRIPTION	BID UNIT	BID QTY	LABOR	MTL	TOTAL PRICE
1	Pipeline Trench/Backfill - No rock removal or blasting is included	LF	3670	\$ 17.00		\$ 62,390.00
2	4" Water Pipeline Supply/Receive/Stage/Weld/Install/Test - Fusion bonded epoxy od only using Scotchkote 6233 w/overcoat 6352 16 mil .25 wall A53B ERW BLK PE DRL	LF	3670	\$ 4.90	\$ 11.00	\$ 58,353.00
3	4" Air Pipeline Supply/Receive/Stage/Weld/Install/Test - HDPE SDR11	LF	3670	\$ 3.00	\$ 3.50	\$ 23,855.00
4						
5						\$ -
6						
7	2" Lateral Piping Supply/Receive/Stage/Weld/Install/Test Fusion bonded epoxy od only using Scotchkote 6233 w/overcoat 6352 16 mil .218 wall A53B ERW BLK PE DRL	LF	150	\$ 5.00	\$ 7.00	\$ 1,800.00
8	Air Water Hydrant with 4 hoses per HYD set - Supply/Receive/Stage/Weld/Install/Test	UNIT	24	\$ 425.00	\$ 1,600.00	\$ 48,600.00
9	Anodes-17# Magnesium, Installed	UNIT	12	\$ 40.00	\$ 110.00	\$ 1,800.00
10	Fan guns - SMI POLE KID Fan gun - to be supplied to TDA from SMI in separate contract	UNIT	2		\$ 33,000.00	\$ 66,000.00
11	Air Water Stick Guns - SMI or HKD mobile Stick Gun - to be supplied to TDA from vendor in separate contract	UNIT	10		\$ 4,000.00	\$ 40,000.00
12	Allowance for rock removal	UNIT	1	\$ 16,000.00		\$ 16,000.00
13	Valve Station VB-1 -4" Valve Station w/ 4" 300cls Gear drv Water, 4" 150cls lvr Air. All with service Vic and Typ.Conc. Vault Design	UNIT	1	\$ 3,900.00	\$ 3,900.00	\$ 7,800.00
14	BMP's and Reveg (TDA will supply chip mtrl from defensible space)	UNIT	1	\$ 5,700.00	\$ 5,800.00	\$ 11,500.00
15	Equipment	UNIT	1			\$ -
16	Forks for transport of MTL	UNIT	1	\$ 4,500.00		\$ 4,500.00
17	Material transport and delivery Trucks	UNIT	1	\$ 1,900.00		\$ 1,900.00
18	Fuel - (estimated fuel use 1600gal)	UNIT	600		\$ 4.25	\$ 2,550.00
19	Misc. Over Head - Mobilize	UNIT	1	\$ 2,200.00		\$ 2,200.00
20	Insurance	UNIT	1	\$ 2,100.00		\$ 2,100.00
21	valid for 15 days from date of Bid. Every effort will be made to hold pricing. Once contracts are made and deposit is received pricing will be locked					\$ -
22	Total Infrastructure					\$ 351,348.00



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ROI Study

Tahoe Donner Association
 Capital budgeting—return-on-investment (ROI) analysis
 3/12/2020

Data cell key
User data entry or item description
Formula cells: Totals are calculated and filled in automatically.

Investment overview
Project name: Snowmaking - Cross Country Ski - BASE ZONE & to MOONDANCE
Project sponsor: GPC / FC / Management
Date of request: 4/1/2020

SCENARIO 10yr on last 10yrs

(\$880,000) Capital over the 10 Years	simple ROI, 10 yr metrics
\$1,249,975 NOR over the 10 Years	
\$369,975 Surplus, if capital last 10 years	< before time value of money
(\$880,000) Capital over the 5 Years	simple ROI, 5yr metrics
\$712,575 NOR over the 5 Years	
(\$167,425) Deficit, 1st 5 years only	< before time value of money

Pass Revenue incremental estimate of 5% = \$17,000

MEMBER BENEFIT IS NOT FACTORED IN THIS FINANCIAL Life of asset is greater than 10 years.
 Conservative scenario A1 - has yr 5 and yr 10 - if years 2 and 8 for example, the ROI improves for the 10yrs (time value of money)

Cash flow and ROI statement											
	past season	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20
	0	1	2	3	4	5	6	7	8	9	10
Staff best guess of skier impact with snowmaking for the past 10 years - today's dollars			Mid Jan Open		Barely any snow	Marginal Xmas Closed in Jan		January Snow	March Snow	February Snow	
assume ~ 500 incremental skiers due to SM - Thanksgiving		-	-	-	-	-	-	-	-	-	-
#days incremental DAY skier visits		500	6,000	500	5,000	5,000	500	4,000	6,000	500	500
Revenue Yield per Skier, varies (y)	4.0%	\$ 50.00	\$ 52.00	\$ 54.00	\$ 56.00	\$ 58.00	\$ 60.00	\$ 62.00	\$ 64.00	\$ 67.00	\$ 70.00
Day Skier Revenue (input is Sales per Day Avg)		\$ 25,000	\$ 312,000	\$ 27,000	\$ 280,000	\$ 290,000	\$ 30,000	\$ 248,000	\$ 384,000	\$ 33,500	\$ 35,000
less Cogs	1.0%	(250)	(3,100)	(300)	(2,800)	(2,900)	(300)	(2,500)	(3,800)	(300)	(400)
less Payroll Direct	10.0%	(2,500)	(31,200)	(2,700)	(28,000)	(29,000)	(3,000)	(24,800)	(38,400)	(3,400)	(3,500)
less Payroll Burden	1.5%	(375)	(4,700)	(400)	(4,200)	(4,400)	(500)	(3,700)	(5,800)	(500)	(500)
less Operating Expenses	4.0%	(1,000)	(12,500)	(1,100)	(11,200)	(11,600)	(1,200)	(9,900)	(15,400)	(1,300)	(1,400)
Net Skier Volume DAY SKIER related Impact		20,875	260,500	22,500	233,800	242,100	25,000	207,100	320,600	28,000	29,200
Operating Costs to operate SM ~ 45 days, mostly Dec (ALL YEARS)		(30,000)	(30,000)	(30,900)	(31,800)	(32,800)	(33,800)	(34,800)	(35,800)	(36,900)	(39,100)
Passholder Incremental Pass Sales VOLUME and PRICING impact	4.0%	\$ 17,000	\$ 17,700	\$ 18,400	\$ 19,100	\$ 19,900	\$ 20,700	\$ 21,500	\$ 22,400	\$ 23,300	\$ 24,200
Inflation FACTOR - revenue and costs	3.0%										
Annual Operating Proforma, NET		\$7,875	\$247,300	\$9,100	\$220,100	\$228,200	\$10,900	\$192,800	\$306,100	\$13,300	\$14,300

Costs	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Total	\$880,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Benefits	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Annual benefit flow	(\$880,000)	\$7,875	\$247,300	\$9,100	\$220,100	\$228,200	\$10,900	\$192,800	\$306,100	\$13,300	\$14,300
Cumulative benefit flow	(880,000)	(872,125)	(624,825)	(615,725)	(395,625)	(167,425)	(156,525)	36,275	342,375	355,675	369,975

Discounted benefit flow	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Discounted costs	\$880,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Discounted benefits	0	7,646	233,104	8,328	195,556	196,847	9,129	156,764	241,638	10,193	10,641
Total discounted benefit flow	(880,000)	7,646	233,104	8,328	195,556	196,847	9,129	156,764	241,638	10,193	10,641
Total cumulative discounted benefit flow	(880,000)	(872,354)	(639,250)	(630,923)	(435,367)	(238,519)	(229,391)	(72,627)	169,012	179,205	189,845

Initial CAPITAL investment related	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
THIS IS ESTIMATED COST FOR BASE and TO MOONDANCE		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Initial investment (all capital costs..soft and hard)	\$880,000	0	0	0	0	0	0	0	0	0	0
Ongoing support costs (equip R&M) (in annual oper costs row)	0	0	0	0	0	0	0	0	0	0	0
Total costs	\$880,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

ROI measures		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Cost of capital	3%										
Net present value	\$189,845										
Return on investment		1%	27%	28%	51%	73%	74%	92%	119%	120%	122%
Payback (in years)	Year 10										10yr ROI 21.6%

y - yield varies by customer type, with lift lesson rental packages plus food and beverage and retail, the yields are greater (ie not passholder visits)
 Snowmaking directly impacts beginner skiers, which have higher yield than intermd and advanced skiers. SM impacts our core market/strength, beginners.
 Yield is also higher during Peak Periods, which Christmas to NYE and MLK holidays in particular will benefit from SMkg.

10yr based on last 10yr In this scenario, estimate of if we had snowmaking over last 10 years, what it would look like. \$880,000 investment generates \$ 1,069,845 in todays dollars, over the 10 years. This equates to NPV \$ 189,845 , recovering all the investement in 10years,a 122% ROI.

Tahoe Donner Association
 Capital budgeting—return-on-investment (ROI) analysis
 3/12/2020

Data cell key
User data entry or item description
Formula cells: Totals are calculated and filled in automatically.

Investment overview
Project name: Snowmaking - Cross Country Ski - BASE ZONE & to MOONDANCE
Project sponsor: GPC / FC / Management
Date of request: 4/1/2020
General description of benefits: snow insurance - SCENARIO A1 - 3 in 10 years, snowmaking vital to season's success,

SCENARIO A1		
(\$880,000) Capital over the 10 Years	simple ROI, 10 yr metrics	
\$939,075 NOR over the 10 Years		
\$59,075 Surplus, if capital last 10 years	< before time value of money	
(\$880,000) Capital over the 5 Years	simple ROI, 5yr metrics	
\$293,475 NOR over the 5 Years		
(\$586,525) Deficit, 1st 5 years only	< before time value of money	

Pass Revenue incremental estimate of 5% = \$17,000

MEMBER BENEFIT IS NOT FACTORED IN THIS FINANCIAL Life of asset is greater than 10 years.
 Conservative scenario A1 - has yr 5 and yr 10 - if years 2 and 8 for example, the ROI improves for the 10yrs (time value of money)

Cash flow and ROI statement	YEAR										
	0	1	2	3	4	5	6	7	8	9	10
2 of 10 years { +10,000 skiers} 167 per day for 60 days or 600 per day for 10 days and 88 per day for 45 days											
8 of 10 years, assume ~ 500 incremental skiers due to SM		-	-	-	-	-	-	-	-	-	-
#days incremental DAY skier visits		500	500	6,000	500	500	6,000	500	500	6,000	500
Revenue Yield per Skier, varies (y)	4.0%	\$ 50.00	\$ 52.00	\$ 54.00	\$ 56.00	\$ 58.00	\$ 60.00	\$ 62.00	\$ 64.00	\$ 67.00	\$ 70.00
Day Skier Revenue (input is Sales per Day Avg)		\$ 25,000	\$ 26,000	\$ 324,000	\$ 28,000	\$ 29,000	\$ 360,000	\$ 31,000	\$ 32,000	\$ 402,000	\$ 35,000
less Cogs	1.0%	(250)	(300)	(3,200)	(300)	(300)	(3,600)	(300)	(300)	(4,000)	(400)
less Payroll Direct	10.0%	(2,500)	(2,600)	(32,400)	(2,800)	(2,900)	(36,000)	(3,100)	(3,200)	(40,200)	(3,500)
less Payroll Burden	1.5%	(375)	(400)	(4,900)	(400)	(400)	(5,400)	(500)	(500)	(6,000)	(500)
less Operating Expenses	4.0%	(1,000)	(1,000)	(13,000)	(1,100)	(1,200)	(14,400)	(1,200)	(1,300)	(16,100)	(1,400)
Net Skier Volume DAY SKIER related Impact		20,875	21,700	270,500	23,400	24,200	300,600	25,900	26,700	335,700	29,200
Operating Costs to operate SM ~ 45 days, mostly Dec (ALL YEARS)		(30,000)	(30,000)	(30,900)	(31,800)	(33,800)	(34,800)	(35,800)	(36,900)	(38,000)	(39,100)
Passholder Incremental Pass Sales VOLUME and PRICING impact	4.0%	\$ 17,000	\$ 17,700	\$ 18,400	\$ 19,100	\$ 19,900	\$ 20,700	\$ 21,500	\$ 22,400	\$ 23,300	\$ 24,200
Inflation FACTOR - revenue and costs	3.0%										
Total annual benefits		\$7,875	\$8,500	\$257,100	\$9,700	\$10,300	\$286,500	\$11,600	\$12,200	\$321,000	\$14,300
Implementation filter		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Annual Operating Proforma, NET		\$7,875	\$8,500	\$257,100	\$9,700	\$10,300	\$286,500	\$11,600	\$12,200	\$321,000	\$14,300

Costs	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Total	\$880,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Benefits	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Annual benefit flow	(\$880,000)	\$7,875	\$8,500	\$257,100	\$9,700	\$10,300	\$286,500	\$11,600	\$12,200	\$321,000	\$14,300
Cumulative benefit flow	(880,000)	(872,125)	(863,625)	(606,525)	(596,825)	(586,525)	(300,025)	(288,425)	(276,225)	44,775	59,075

Discounted benefit flow	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Discounted costs	\$880,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Discounted benefits	0	7,646	8,012	235,283	8,618	8,885	239,939	9,432	9,631	246,020	10,641
Total discounted benefit flow	(880,000)	7,646	8,012	235,283	8,618	8,885	239,939	9,432	9,631	246,020	10,641
Total cumulative discounted benefit flow	(880,000)	(872,354)	(864,342)	(629,059)	(620,441)	(611,556)	(371,617)	(362,185)	(352,554)	(106,535)	(95,894)

Initial CAPITAL investment related	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
THIS IS ESTIMATED COST FOR BASE and TO MOONDANCE		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Initial investment (all capital costs..soft and hard)	\$880,000	0	0	0	0	0	0	0	0	0	0
Ongoing support costs (equip R&M) (in annual oper costs row)	0	0	0	0	0	0	0	0	0	0	0
Training costs	0	0	0	0	0	0	0	0	0	0	0
Other costs	0	0	0	0	0	0	0	0	0	0	0
Total costs	\$880,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

ROI measures	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Cost of capital	3%										
Net present value	(\$95,894)										
Return on investment		1%	2%	29%	29%	31%	58%	59%	60%	88%	89%
Payback (in years)	Year 9										

y - yield varies by customer type, with lift lesson rental packages plus food and beverage and retail, the yields are greater (ie not passholder visits)
 Snowmaking directly impacts beginner skiers, which have higher yield than intermd and advanced skiers. SM impacts our core market/strength, beginners.
 Yield is also higher during Peak Periods, which Christmas to NYE and MLK holidays in particular will benefit from SMkg.

A1 In this scenario, every 3rd year, snowmaking makes and incremental 6,000 visits impact. A conservative perspective. The \$880,000 investment generates \$ 784,106 in today's dollars, over the 10 years. This equates to NPV \$ (95,894), recovering all the investment in 10 years, a 89% ROI.
\$ 458,758 NPV WHEN TAKE OUT 15 YEARS with 152% PAYBACK

Revenue volatility when relying on natural snow, & Includes 2 drought year examples of estimated net if we had snowmaking installed

6 year NOR Comparison (from monthly P&Ls not including allocated Overhead) + examples of snowmaking payoff during of drought years

2014-2015				2015-2016		2016-2017		2017-2018			2018-2019		2019-2020		Best month vs worse month spread
Drought / Transition year - Temp Ops				New ACAC facility opens		Snowmageddon		Drought year till Mar then good snow			Good year. Feburried		Great start to the season		
Dec 20 opening				Nov 26 opening		Nov 28 opening		Dec 21 opening			Nov 30 opening		Nov 29 opening		
2014-15 NOR	notes on conditions	estimated > net with snowmaking phases 1&2 to Moondance	2015-16 NOR	notes on conditions	2016-17 NOR	notes on conditions	2017-18 NOR	notes on conditions	estimated > net with snowmaking phases 1&2 to Moondance	2018-19 NOR	notes on conditions	2019-20 NOR	notes on conditions		
NOV	(\$40,206) No snow	(\$40,206)	(\$39,060)	6 days	(\$54,328)	Nov 28 open	(\$57,632)	No snow	(\$57,632)	(\$59,388)	No snow	(\$38,224)	Nov 29 open	(\$21,164)	
DEC	\$78,514 Dec 20 open	\$96,668	\$100,545	good	\$ 111,398	poor coverage	(\$2,782)	6 days. No xmas	\$96,668	\$ 133,781	just ok xmas	\$ 193,335	excellent	\$ 196,117	
JAN	\$12,672 Jan 20 close	\$92,889	\$100,788	good	\$ 120,354	Snowmageddon	\$71,184	11 days open	\$92,889	\$ 141,944	good	\$ 185,778	Thi/excellent	\$ 173,106	
FEB	(\$10,888) closed	\$94,890	\$134,172	good	\$ 133,293	heavy snow	\$45,983	10 days open	\$94,890	\$ 108,532	febuburried	\$ 189,779	Thin/excellent	\$ 200,667	
MAR	(\$7,677) closed	\$58,166	\$23,243	good	\$ 99,978	good	\$111,075	31 days open	\$111,075	\$ 116,332	good		Covid 19	\$ 124,009	
APR	(\$9,531) closed	(\$9,531)	(\$21,284)	10 days	\$ 11,239	16 days	\$12,805	6 days	\$12,805	(\$5,585)	21 days		Covid 19	\$34,089	
TOT	\$22,884	\$292,875	\$298,404		\$ 421,934		\$180,633		\$350,694	\$ 435,616				\$ 706,824	

\$ 269,991 estimated greater net with snowmaking (based on 50% of best year)

\$ 170,061 estimated greater net with snowmaking (based on 50% of best year)

- Worst monthly net in 6 year periodyear
- Best monthly net in 6 year periodyear
- Worst drought years & estimate of impact of snowmaking investment

Revenue Volatility when Relying on Natural Snow
Includes 2 Drought Year Examples of Estimated Net if Snowmaking Installed
(Methodology and Assumptions Explained)

This spreadsheet attempts to demonstrate the insurance value of snowmaking to Moondance hut using historical data with potential ROI implications if data extrapolated.

During several of the past 6 years, for which we have good NOR data, there were 2 years where XC experienced curtailed or closed operations. For those months in 2014-2015 and 2017-2018 where these conditions were experienced we substituted conservative estimates for NOR results assuming XC had operational snowmaking. (No adjustments were made where conditions were marginal but actual NOR was higher than the 50% estimate.) As the spreadsheet shows 2014-2015 would have experienced \$269,991 of additional NOR benefit and 2017-2018 would have experienced \$170,061 of additional NOR benefit.

To arrive at this \$440,052 of additional benefit over this period our assumption is that snowmaking would allow XC to generate NOR at a rate of 50% of the periods highest NOR month. For example: Dec. 2019's NOR of \$193,335 was the best on record. We multiply by 0.5 to arrive at \$96,668. We then compare those closed/low snow actuals to the snowmaking 50% estimate to arrive at the yearly variances for 2014/2015 and 2017/2018 looking at each month the same way.

It is our assumption also that the 50% number is conservative given the potential effects of guaranteed snow on: season pass revenue, lesson revenue given good teaching conditions in the meadow, better day pass and rental revenue from safe beginner conditions out to Moondance and beyond in both otherwise closed and low snow but open years, and assured revenue from advance purchase season long programs.

On the far right of the spreadsheet we compare actual best vs. worst month NOR to arrive at a yearly total of \$706,824 of potential impact from XC operations without snowmaking to Member Equity balance.

9 Year History of Holiday Conditions at XC

year	open	Thanksgiving	Xmas Holidays	MLK Weekend	President's weekend	days open	Season Notes
2011-12	late Jan	closed	closed	closed	open ?	?	Drought
2012-13	21-Dec	closed	good conditions	good conditions	shovelling to stay open	113	Sally yr 1
2013-14	8-Dec	closed	shovelling to stay open	shovelling to stay open	shovelling to stay open	80	Drought - Super tour cancelled
2014-15	20-Dec	closed	snowmobile grooming	closed	closed	31	Drought - Temp ops
2015-16	26-Nov	open	good conditions	good conditions	good conditions	108	ACAC move in
2016-17	28-Nov	open	poor conditions + wet	<i>good - (between storms)</i>	<i>snowmagedon</i>	136	Snowmageddon
2017-18	21-Dec	closed	poor conditions	closed	closed	65	Drought
2018-19	30-Nov	closed	good conditions	good conditions	Febuburried	137	Febuburried
2019-20	29-Nov	open	good conditions	good conditions	good conditions	112	Covid Crisis

Tahoe Donner Association
Operating Fund 10-Year Actuals and CY Budget
 Cross Country Center (110)
 6 WINTER MONTHS (nov-apr)

	<i>WINTER MONTHS (nov-apr)</i>											18/19 Var to 3yrAvg	18/19 Var to BDG	18/19 BUDGET 0
	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19			
	Actual 10	Actual 9	Actual 8	Actual 7	Actual 6	Actual 5	Actual 4	Actual 3	Actual 2	Actual 1	Actual 0			
All Other Revenue	672,502	749,865	746,278	459,193	730,719	421,038	269,967	1,032,626	1,155,654	727,391	1,290,639	318,749	305,039	985,600
GROSS REVENUE	672,502	749,865	746,278	459,193	730,719	421,038	269,967	1,032,626	1,155,654	727,391	1,290,639	318,749	305,039	985,600
COST OF GOODS SOLD	-44,639	-45,915	-45,527	-28,423	-47,515	-25,524	-10,391	-74,545	-70,288	-50,504	-83,127	-18,015	-32,127	-51,000
GROSS MARGIN	627,862	703,950	700,751	430,770	683,204	395,514	259,576	958,082	1,085,366	676,887	1,207,512	300,734	272,912	934,600
Payroll Salaries and Wages (direct payroll)	-186,787	-195,788	-212,303	-136,652	-249,698	-155,871	-133,511	-316,984	-361,314	-254,058	-414,723	-103,938	-86,973	-327,750
Payroll Taxes & Benefits (burden)	-42,896	-42,041	-45,598	-29,531	-55,573	-34,971	-35,719	-75,911	-78,925	-59,107	-75,772	-4,458	-1,140	-74,632
Payroll Total (Direct+Burden)	-229,683	-237,828	-257,901	-166,183	-305,272	-190,842	-169,230	-392,895	-440,239	-313,165	-490,496	-108,396	-88,114	-402,382
Burden % of Direct	47.1%	43.2%	43.1%	45.5%	47.0%	44.0%	54.2%	46.8%	43.3%	48.4%	36.5%	-9.6%	-9.1%	45.6%
Staff Expense	-836	-832	-1,060	-586	-1,385	-838	-2,519	-2,239	-1,904	-2,318	-2,921	-767	-1,021	-1,900
Utilities Expense	-20,181	-22,323	-17,290	-17,928	-17,474	-13,970	-3,947	-34,752	-34,097	-21,089	-27,586	2,393	10,574	-38,160
Supplies & Maintenance Expense	-71,049	-71,970	-93,577	-30,252	-73,550	-30,760	-19,524	-146,403	-117,510	-75,532	-130,404	-17,256	-8,334	-122,070
Insurance Expense	-34,409	-30,389	-27,800	-21,300	-29,968	-33,500	-28,804	-36,187	-34,226	-37,800	-40,400	-4,329	0	-40,400
Administration & Other Expense	-27,677	-34,030	-17,932	-13,432	-17,222	-12,868	-6,749	-18,225	-13,398	-23,027	-19,013	-796	7,237	-26,250
Printing & Postage	-6,462	5,377	-873	-2,184	-308	-32	-543	-774	-92	-3,017	-5,979	-4,685	-3,929	-2,050
Credit Card Fees	-8,668	-10,018	-13,419	-7,538	-11,837	-6,118	-5,376	-28,205	-24,888	-19,595	-45,236	-21,007	-17,486	-27,750
Total Operating Expenses	-169,283	-164,185	-171,951	-93,220	-151,744	-98,086	-67,462	-266,784	-226,115	-182,378	-271,539	-46,447	-12,959	-258,580
TOTAL Payroll&Operating Expense	-398,965	-402,013	-429,852	-259,402	-457,016	-288,928	-236,692	-659,679	-666,354	-495,544	-762,035	-154,843	-101,073	-660,962
NOR before Alloc Overhead	228,897	301,937	270,899	171,368	226,188	106,586	22,884	298,402	419,012	181,343	445,477	145,891	171,839	273,638
Allocated Overhead	-18,407	0	0	0	0	0	0	0	0	0	-71,795	-71,795	0	-71,795
NET OPERATING RESULTS (NOR)	210,490	301,937	270,899	171,368	226,188	106,586	22,884	298,402	419,012	181,343	373,682	74,096	171,839	201,843
as a % of Gross Revenue	45.3%	71.6%	67.2%	44.4%	59.6%	29.5%	17.1%	52.8%	63.0%	-23.2%	56.0%	25.1%	28.0%	28.0%
Annual Assessment Revenue,														
change in Operating Fund														
Balance, exid Transfers	210,490	301,937	270,899	171,368	226,188	106,586	22,884	298,402	419,012	181,343	373,682	74,096	171,839	201,843
Cost Recovery Pctg (pre-alloc overhead)	286.1%	315.8%	303.5%	272.6%	285.1%	254.2%	229.7%	273.6%	296.3%	222.7%	294.8%	30.6%	39.6%	255.2%
Cost Recovery Pctg (post-alloc overhead)	269.1%	315.8%	303.5%	272.6%	285.1%	254.2%	229.7%	273.6%	296.3%	222.7%	277.9%	13.7%	41.4%	236.5%
Total Expense (TE) (cogs+payroll+opexp)	-443,605	-447,928	-475,379	-287,825	-504,530	-314,452	-247,083	-734,224	-736,643	-546,047	-845,162	-172,857	-133,200	-711,962
Payroll Direct % Revenue	58.2%	56.8%	59.4%	85.1%	74.0%	83.5%	98.8%	63.0%	66.9%	99.4%	67.0%	-9.4%	-5.1%	72.2%